

# Opinion

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## What do we really want from Twitter, WhatsApp?

Apart from legal and ethical issues, govt wants WhatsApp to be proactive in removing content but objects to Twitter doing this!

**A** PARLIAMENTARY PANEL wanting to question Twitter CEO Jack Dorsey isn't quite as outrageous as many have made it out to be. If anything affects the life of Indian citizens, Parliament has not just a right, but a duty, to keep itself abreast of the issue, and a good way to do this is to depose individuals/officials; and it is only when Parliament is fully abreast of issues that it can effectively either control government or guide it to do the right thing. Apart from the fact that Indian officials like the RBI Governor are routinely called to depose before Parliament, social media heads like Dorsey and Facebook's Mark Zuckerberg have deposed before the US Congress; given how much of their business comes from India, it is not unreasonable for such a request to be made by India's Parliament. Just asking a Dorsey to depose doesn't mean Parliament is giving him any directives; both sides need to understand one another's perspective and this meeting should help. And just as it is possible that India's lawmakers don't fully understand how Twitter functions or its legal and other compulsions, Twitter probably doesn't fully understand Indian sensitivities—burning the American flag may be considered okay by many Americans, but it is difficult to find an Indian who would feel the same about her flag.

While that process of understanding each other's point of view goes on, both the government—including Parliament—and civil society need to understand the implications of what is being demanded of these social media firms. The BJP and its followers, for instance, are upset over various right-wing handles being suspended by Twitter; that presumably means BJP MPs will try and impress upon Dorsey the need to relook his guidelines/algorithm/process for suspending/blocking. And yet, clause 9 of the recently issued 'intermediaries guidelines' under the Information Technology Act wants an 'intermediary'—like a WhatsApp or a Twitter—to remove any information/data the moment it gets to know the information is unlawful in any sense; the parliamentary panel, in fact, wants to know whether social media firms are merely platforms that are not responsible for what is on them or whether they are media firms with a right to edit and curate content. Indeed, clause 9 of the 'intermediaries guidelines' wants a Twitter/WhatsApp to "deploy technology-based automated tools or appropriate mechanisms, with appropriate controls, for proactively identifying and removing or disabling public access to unlawful information or content". So does the government want Twitter to remove content on its own or not? It can't argue that Twitter cannot remove various right-wing handles if they are guilty of making incendiary posts while, at the same time, wanting a WhatsApp, for instance, to proactively remove content or disable accounts.

Another set of issues that need to be debated, with even the Supreme Court weighing in eventually, is the issue of privacy. If a WhatsApp app is to help the government in tracing where a message originated from—that is part of the 'intermediaries guidelines'—is this a breach of privacy or not? And while the government says it has a process to ensure only genuine requests for tracing messages are sent to a WhatsApp, it is not clear whether this is good enough. After all, there were supposed to be safeguards for Section 66A of the IT Act also, yet two girls in Mumbai were arrested for merely criticising the shutting down of Mumbai after Shiv Sena chief Bal Thackeray died; hardly surprising, then, that the Supreme Court struck down Section 66A. Also, as per the 'intermediaries guidelines', social media platforms have to remove/block content/users as soon as there is a court order—but what happens if this gets struck down by a higher court? Getting Dorsey to Parliament will be relatively easy, but once that is done, what are MPs to tell him to do in unambiguous terms, even if you assume he is willing to do exactly what they want? With a dialogue starting with Twitter, a larger conversation is needed within the country on what can and should be expected of social media platforms since clamping down too hard may be throwing the baby out with the bathwater, more so in a country that boasts of a healthy tradition of dissent and openness.

## SC must uphold transparency

Prashant Bhushan contempt case puts India at a crossroads

**T**HE SUPREME COURT'S notice to lawyer Prashant Bhushan, on separate contempt of court petitions filed by attorney general (AG) KK Venugopal and the Union government, through solicitor general (SG) Tushar Mehta, puts India at a crossroads. The petitions were filed against Bhushan over his allegations on Twitter that, in the matter of the appointment of M Nageswara Rao as the interim chief of the CBI, the Centre may have misled the apex court. It isn't clear how the contents of Bhushan qualify as contempt of court. But the AG asking the SC to set guidelines that determine the contours within which lawyers and media discuss and opine on a case pending in court, and the bench of Justice Arun Mishra and Navin Sinha that issued the contempt notice observing that such discussion/analysis affects both public opinion and the judiciary/judges—and that the public has a right to know, but only "what transpired in court"—makes the eventual judgment in this matter quite far-reaching. Incidentally, the SG favoured strict punishment for Bhushan—and if this is the precedent the apex court finally sets in the matter, all such discussion of sub-judice cases by media and lawyers, whether activism-driven or not, could become punishable. Thus, the apex court needs to take a considered view on the matter.

Justice Mishra is right in saying that the discussion of the particulars of a sub-judice case colour public opinion in the case and also sometimes, as collateral damage, of the individual judges hearing the case. But, the fact is that judges do have a recourse in obiter dictum, where they can set the record straight even while the case is going on. Besides, the judgment, when it does come, presents the studied opinion of the judge(s). What has, in the process of setting the record right in the Bhushan matter, got unexpectedly endangered is the transparency in delivery of justice, especially in matters of public interest.

Bhushan's tweet was based on a letter written to the PM by Leader of Opposition (LoP) Mallikarjuna Kharge, alleging that, contrary to what the AG submitted in SC, the matter of appointing an interim director of CBI was never placed before the meeting of the High Power Committee comprising the PM, the LoP and CJI Ranjan Gogoi's nominee Justice AK Sikri. However, sealed documents submitted to the apex court by the government seem to suggest Kharge misled Bhushan. Even if Bhushan's tweet was incorrect, this was easily fixed by making public the contents of the sealed envelope—in which case, the SC accepting the contents in a sealed envelop helped perpetuate Bhushan's misinformation. Apart from the fact that it is not clear how Bhushan's uninformed critique of the AG and the Centre is contempt of court, the SC has to keep in mind that the greater the level of information that the public has, the lesser the chances of a miscarriage of justice. In celebrated cases like Jessica Lal, it was the public opinion that was generated—through involved people speaking to the press, on- or off-record—that forced retrial and ensured justice was served. Courts can't have a thin skin, they have to keep in mind the larger good, which is more transparency.

## Insect Warning

Insects are fundamental to ecological balance, so their dying out spells grim news for us humans

**T**HE UBIQUITY OF insects means they are a foundational link in food webs and ecosystems. Published in the journal *Biological Conservation*, a literature review, that has compiled and analysed 73 existing studies from around the world published over the past 40 years, found that over 40% of insect species could go extinct in the next few decades, with butterflies, bees and dung beetles most affected. Insects' collective mass—the estimated weight of all insects on Earth combined—is dropping by an estimated 2.5% every year. Insect population collapses have recently been reported in Germany and Puerto Rico, but the review strongly indicates the crisis is global.

The study may be limited in revealing the full scope of the crisis: scientists aren't quite sure how many species of insect exist, and the data in this study comes from only developed countries like the US. But, it makes clear that the problem isn't confined to certain regions, or even to a narrow band of insects. The researchers in the paper outline four broad, global problems leading to insect loss: Habitat destruction; expansion of agricultural pollution, particularly via pesticides, fertilisers, and industrial waste; parasites and pathogens; and climate change. There definitely does need to be a concerted and quick change in the way we go about safeguarding wildlife populations, such as shifting to more ecologically sound food production. But it is clear that, if nothing is done fast enough, the very foundations of our planet's ecology will be threatened, and with that, humans, too.

## ● THE REAL MAINSTREAM

COMPANIES ARE SELLING WASTE-TO-ENERGY PLANTS AS A COMPLETE SOLUTION FOR GARBAGE MANAGEMENT. BUT HOW FEASIBLE IS THIS OPTION?

# To burn or not to burn

**U**RBAN INDIA CURRENTLY produces around 1.5 lakh tonnes of municipal solid waste (MSW) every day. Of this, only about 25% is processed, i.e., recycled, composted or converted into biogas or electricity. The remainder finds its way into dump sites or is burned in open areas. Because of increasing population and affluence, MSW generation is estimated to reach a staggering 4.5 lakh tonnes per day by 2030. How will our cities manage this gargantuan amount of waste, considering that they struggle to manage even the current quantities?

The go-to answer for city planners and policymakers is to burn MSW in waste-to-energy (WTE) plants. The logic put forth to support this technology is that instead of spending time and resources in segregating waste, the best way is to collect unsegregated waste and process them in WTE plants using incineration, pyrolysis or plasma heating to produce electricity or oil. Companies are offering this as a miracle solution to cities across the country. The government seems to have bought this logic as well and has big plans to set up WTE plants. For instance, Niti Aayog has, under the Swachh Bharat Mission, set a target of constructing 800 megawatt (MW) of WTE plants by 2018–19, which is ten times the capacity of all the existing WTE plants put together. It also proposes setting up a Waste-to-Energy Corporation of India, which would construct incineration plants through PPP models. Currently, there are 40-odd WTE plants at various stages of construction.

To meet these targets, several subsidies are given to WTE plants. The ministry of new and renewable energy (MNRE) offers financial incentives by way of interest subsidy to reduce the rate of interest to 7.5%. In addition, financial incentives are provided to urban local bodies (ULBs) for supplying garbage free of cost at the project site and for providing land at a nominal

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rent. There are also incentives for preparing feasibility reports and for promotion, coordination and monitoring of projects. Concessional custom duty is imposed on imported parts. All put together, these subsidies/incentives take care of about 40% of the project cost.

Despite all these plans and subsidies, the big questions for the country are: How feasible are these plants and will they solve our waste problems?

WTE is not a new technology. The first WTE plant came up in Timarpur in Delhi in 1987. It was designed to incinerate 300 tonnes of waste per day (TPD). But it failed and was shut down soon after. Since then, 14 more WTE plants of 130 MW capacity have been installed in the country. Out of these, seven plants with capacity of 66 MW are closed and the remaining seven plants are operational. So, half of all the WTE plants constructed have closed down. The remaining plants are also under scrutiny for environmental violations. In fact, citizen movements against WTE plants are rising. For example, there have been continual protests against the Okhla WTE plant in Delhi for polluting the environment. In 2016, the National Green Tribunal (NGT) slapped an environmental compensation fine of ₹25 lakh on this plant.

So, why are WTE plants not working in India when they are doing reasonably well in developed countries like Germany and Sweden? In fact, Sweden buys

waste from other European countries to burn it in its WTE plants. The fundamental factor is the quality and composition of waste. MSW in India has low calorific value and high moisture content. As most of the waste is unsegregated, it also has high content of inert materials like soil, sand, grit, etc. This waste is not suitable for burning in WTE plants. To burn it, additional fuel is required, which increases the cost of operations as well as pollution. This has been the main reason why WTE plants in Kanpur, Bengaluru, Hyderabad, Lucknow, Vijayawada, Karimnagar, etc., had to be closed down.

The second reason for WTE plants not working well in India is the economics of these plants. Despite all the subsidies, the electricity produced from WTE plants is the most expensive. Compared to ₹3–4 per kWh from coal and solar plants, WTE plants sell electricity at about ₹7/kWh. Discoms are not interested in buying such expensive electricity when cheaper electricity is available. In fact, if subsidies are removed, the electricity produced from these plants will simply not be affordable.

The third reason is the environmental and health impacts of WTE plants. Experiences across the country indicate that these plants are not able to meet environmental norms. The reason again seems to be the highly variable and poor quality of waste which the plants are not able to burn

properly. As they have to handle vast quantities of mixed waste, the house-keeping is extremely challenging, leading to odour and visual pollution. This has led to the NIMBY (not in my backyard) syndrome. People do not want smelly and polluting plants near their homes. In addition, WTE plants have to reject about 30–40% of the waste—which they dump into landfills—because it is either inert or of too poor quality to be combustible. So, WTE plants do not eliminate the need for landfills, though they reduce the quantity of waste sent there.

In sum, the reason why WTE plants don't work in India is because the type of waste we are planning to feed—mixed waste—is unsuitable for this technology. But this doesn't mean that there is no case for WTE plants in India. There is, but it is not for burning mixed waste. The Solid Waste Management Rules, 2016, spell out clearly that only segregated non-recyclable high-calorific fractions like used rubber tyres, multi-layer plastics, discarded textile and paper, etc., are sent to WTE plants. Of the 1.5 lakh tonnes of MSW generated every day, only about 15% can be classified as non-biodegradable, non-recyclable, high-calorific-value waste. This translates into about 25,000 TPD of waste which can be fed to the WTE plant. But the total waste treatment capacity for 40-odd under-construction and proposed WTE plants is over 30,000 TPD. The question we need to ask policymakers and planners is: Where is the waste to burn in WTE plants?

As our population and economy grows, so will our waste. There is clearly a need for different technologies to manage different fractions of waste. WTE plants have a role, but not in the way our planners are envisaging. They should be the last resort to manage high-calorific-value waste that cannot be managed by other technologies. They must, in addition, be operated with the most advanced technologies to contain pollution. Otherwise, we will be creating landfills in the sky instead of on land.

## LETTERS TO THE EDITOR

### Women steal the thunder

Hearty congratulations to the women artists for stealing the thunder at the star-studded Grammys ceremony in Los Angeles. A year after being snubbed in major categories and the head of the Recording Academy sparked outrage for telling them to "step up", the ladies proved their mettle in convincing fashion. Country singer Kacey Musgraves stood out, bagging four awards including the top Album of the Year honours for Golden Hour. Brandi Carlile and pop diva Lady Gaga were not far behind claiming three Grammys each. Rapper Childish Gambino redeemed pride by posting four big wins for his provocative hit, *This is America*  
— Ravi Chander, Bengaluru

### Lower interest rate, interesting...

At a time when potential impediments of the trade war, tariff escalation, financial tightening, Brexit-driven geopolitical turbulence and slowdown in emerging economies post major risks, it is important to attract long-term influx of funds by enforcing a flexible trade policy. The interest rate cut can reduce the income and widen the fiscal deficit, especially when the agenda of public welfare has been prioritised over austerity measures. While a lower rate is unlikely to render a fillip to retail deposits and FPI investments, it is indispensable towards generating quality job growth in the economy. With broad-based investments and increased market participation being the need of the hour, it is important that interest rates follow the global cues to boost economic growth, curb inflation and hedge risks/uncertainty  
— Girish Lalwani, Delhi

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## SAARC nations must cooperate on energy

Geopolitical roadblocks and disagreements between partner countries have stifled the progress of the SAARC framework agreement for energy cooperation (electricity), signed in 2014

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**T**ODAY, HOUSEHOLDS ACROSS south Asia are increasingly gaining access to energy in the form of electricity connections. In this backdrop, the governments of these nations are facing an uphill task of ensuring long-term energy security in electricity (the uninterrupted availability of electricity at an affordable price) to its citizens. The challenge manifests itself in four ways.

Firstly, even though access to electricity has improved in the south Asian region, the quality of supply remains poor with long hours of power outage. Secondly, the distribution of electricity is controlled mainly by public sector units, leading to heavy financial losses for the exchequer. Thirdly, subsidisation of electricity in the form of cross-subsidies for different consumer groups has led to the creation of multiple prices of electricity, in turn leading to inefficiencies. Lastly, the electricity markets of all SAARC nations are undergoing structural transitions, caused by both exogenous (climate change) and endogenous (political economic) factors in their respective countries.

Despite the improvement in access, the usage of electricity (per capita) in south Asia is amongst the lowest in the world. While the world per capita electricity consumption stands at 3105 kWh/year, the SAARC region's electricity consumption is a mere 726 kWh/year. According to a NITI Aayog report in 2017, even with huge investments going towards the electricity sector, India would have to quadruple its electricity generation in the next twenty years to meet its projected electricity demand of 4712 kWh/year in 2047. One way to address this spike in electricity demand is to engage in cross-border electricity cooperation within the SAARC region. Even though the feasibility of this approach is crucially dependent on political will and consensus, the potential benefits of the same make it worthy of a trial. The south Asian region is blessed with

abundant renewables resources, specifically those which can be used for energy generation. The major challenge with renewable energy generation is that of economic viability which hinges on the scalability aspect. Currently, while the entire electricity generation in the south Asian region is about 400 GW, unused hydro potential accounts for nearly 350 GW. Similarly, the potential for wind and solar energy generation is also considerably high across the region. But, unless the demand for energy is increased or integrated across nations within the region, the unused potential will remain high, making the scalability of renewable energy generation a massive hurdle.

The technological advancements in renewable energy generation have made electricity generation economically cheaper than conventional sources of electricity. Last year, in India, auctions conducted for procuring electricity through solar and wind energy saw prices falling below ₹2.4 per unit even while the average cost of producing electricity through coal was around ₹3.2 per unit. A working paper by the Asian Development Bank (ADB) has estimated that the entire SAARC region could potentially gain nearly \$100 billion (gross profits) for a period of 25 years (2015–2040) through enhanced electricity trade.

A major growth dampener for the electricity sector is the weakened institutional setup in the SAARC region. For example, in India, both the Central and state governments have the power to regulate this economically crucial sector. Unfortunately, due to various political factors, state-level electricity reforms have failed to leave an impact on the sector. Increased cooperation amongst SAARC nations would allow for the building of macro institutions housing a variety of stakeholders to bring in more efficient market-based solutions by pooling electricity sources into a common market. The market mechanism

could potentially provide clearer price signals for electricity, allowing for effective spot markets and increased private sector participation in distribution.

The looming concern of climate change has renewed the vigour regarding control of greenhouse gas emissions in the international arena. Increasing sea levels, because of global warming and changing weather patterns, has made the entire south Asian region's agricultural economy and coastal areas highly susceptible. Despite these growing concerns, the electricity sector in most of the SAARC countries are highly dependent on conventional non-renewable sources of generation such as coal, gas, and oil. Though there has been a shift in focus towards renewable energy, except for Bhutan, the energy mix of most SAARC nations is predominantly composed of conventional energy sources. The adverse environmental consequences, coupled with the fiscal strain of this import-heavy choice, make it an unsustainable option. On the other hand, according to a study published in the *Journal of Energy Policy*, replacing coal as a source of electricity with renewables could lead to a 45% reduction of greenhouse gas emissions.

Despite these benefits of cross-border electricity cooperation, the countries in the SAARC region have been unable to take forward the initiative that started in 2000 to its formal ending. Fourteen years of negotiations finally led to the signing of the SAARC framework agreement for energy cooperation (electricity) in 2014. However, geopolitical roadblocks and disagreements between partner countries have stifled the progress of this initiative. The need of the hour is to start a common policy dialogue for developing institutional mechanisms for electricity cooperation in the south Asian region. The establishment of institutions for cross-border electricity trade could help bring about environmental and economic benefits for all nations.

**INDIA'S SUBSTANTIAL DEPENDENCE** on crude oil imports to meet the growing domestic energy demand is making the economy vulnerable to volatilities in international crude oil prices. The steep increase in crude oil prices during the first half of the current financial year has not only drove the trade and current account deficits (CAD) significantly wide, but also turned on the rupee highly volatile. Indian basket crude oil prices have witnessed a steep 25% increase between April 2018 and October 2018. Consequently, the rupee depreciated by 13% from about 65 levels in March 2018 to a high of 74 per dollar in October 2018. The depreciating rupee makes the imports more costly, pushing the CAD into a 'spiralling effect'.

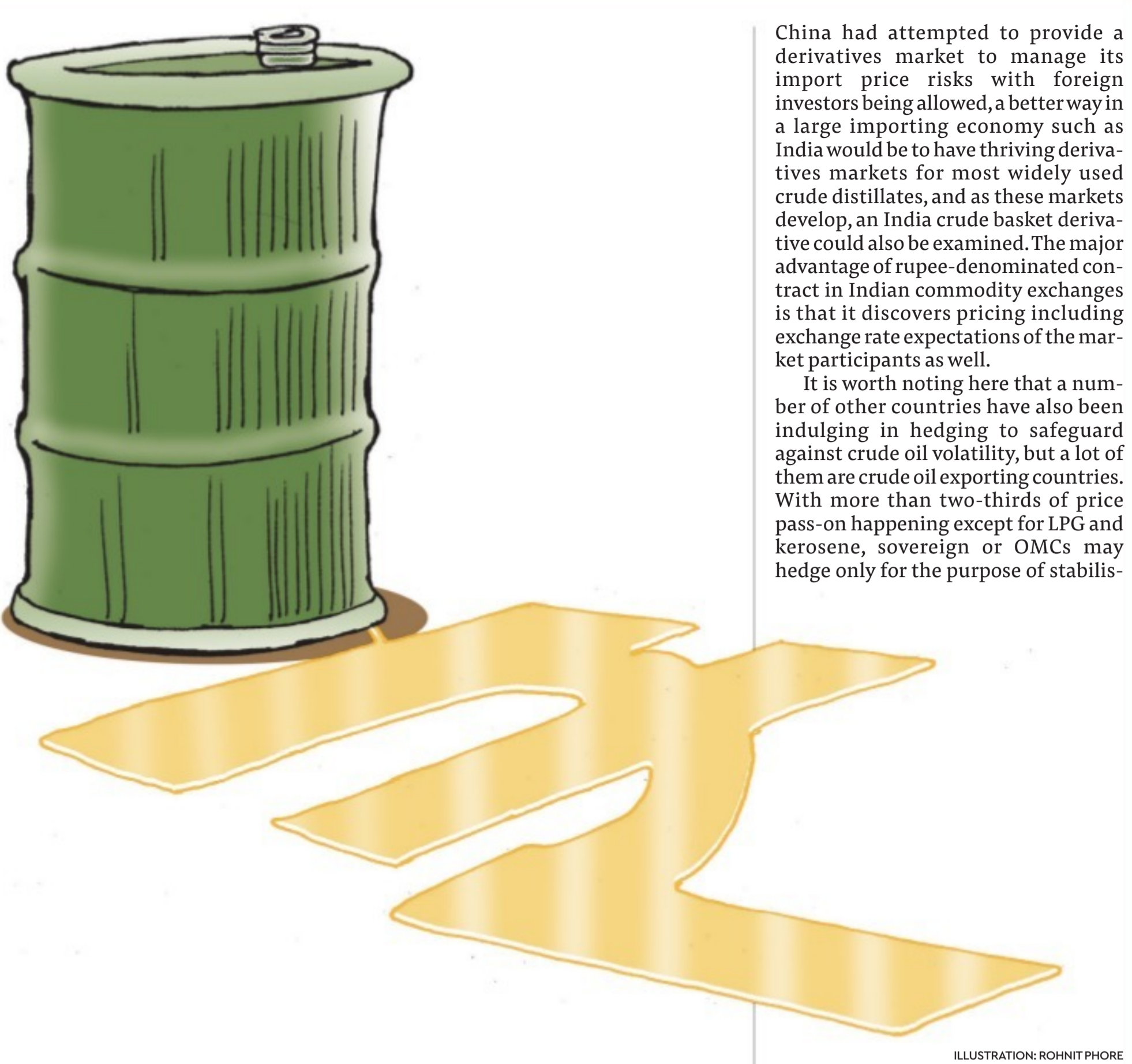
At an average price of \$71.7 per barrel, the import bill of crude oil during the first three quarters of this financial year (April-December 2018) has risen by about 65%, compared with the same period a year ago. At the same time, the crude oil imports in quantity terms have increased only by about 4%. With crude oil being the single largest commodity import bill, it had resulted into a significant increase in the CAD to 2.7% of GDP during the first half FY19, from about 1.8% a year ago.

In addition to the currency effect, the steep rise in crude oil prices is likely to have a considerable impact on the fiscal deficit through increase in petroleum subsidy for LPG and kerosene, which is budgeted at 0.14% of GDP for FY19. The rise in crude oil prices can increase this subsidy burden and hence impact the fiscal discipline as well. The central bank publication, Mint Street Memo #17 of December 2018, estimates that for a \$10 per barrel increase in crude oil prices, it will increase the fiscal deficit by 0.43%.

Apart from the direct impact, the rise in crude oil prices also has an indirect impact on a number of sectors of the economy through increase in input costs, as petroleum products are major raw materials for all the stakeholders of the economy, including agriculture. Further, as the prices of petroleum products such as diesel, petrol and aviation turbine fuel (ATF)—a major cost to the transportation sector—are passed on a daily/monthly basis, it will add to inflation. Petroleum products such as naphtha and petcoke, which are important feedstocks for fertiliser and cement industries, add to the cost increase and hence indirectly nudging inflation.

With the pass-on of more than 75% of the product burden, in terms of daily petrol, diesel, ATF, fuel oil, etc, oil marketing companies (OMC) do not run the risk with the global market volatility. There are two ways we can think of insulating us from the global crude market volatility; one way is through OMCs stabilising their import costs and pass on those benefits to the economy by way of stable and low prices in a rising market. The other way is to make daily price benchmarking—as is done by OMCs currently—as transparent and tenable as possible so that derivative products on it can be launched to help consumers manage their risks in those products.

For the risks to be mopped off the economy, markets with crude distillate derivatives should have foreign portfolio investors as well. As the domestic derivatives markets develop and discover the product prices in advance, it will provide purchasing price indications to OMCs, thereby strengthening the market linkages between consumer expectations and raw material pricing, which otherwise literally does not exist in the current markets. While



China had attempted to provide a derivative market to manage its import price risks with foreign investors being allowed, a better way in a large importing economy such as India would be to have thriving derivatives markets for most widely used crude distillates, and as these markets develop, an India crude basket derivative could also be examined. The major advantage of rupee-denominated contract in Indian commodity exchanges is that it discovers pricing including exchange rate expectations of the market participants as well.

It is worth noting here that a number of other countries have also been indulging in hedging to safeguard against crude oil volatility, but a lot of them are crude oil exporting countries. With more than two-thirds of price pass-on happening except for LPG and kerosene, sovereign or OMCs may hedge only for the purpose of stabilis-

ILLUSTRATION: ROHNIT PHORE

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# Crude oil and currency in locksteps—what is the way out?

There is an urgent need to develop a derivatives market for petroleum products, and in order to do so, the underlying physical market would have to move towards daily transparent pricing

**It's an effective way out for economic stakeholders to protect themselves against volatility that arrives on the shore along with the imported crude**

ing their purchases to pass on the benefits. Under such a scenario, a suitable way, as discussed above, would be to protect against the crude market volatility through active hedging by instruments using suitable derivatives instruments such as futures and options on petroleum products, to which they have exposure, rather than OMCs or sovereign to hedge and pass on the benefits.

In this regard, there is an urgent need to develop a derivatives market for petroleum products, and in order to do so, the underlying physical market would have to move towards daily transparent pricing, if not to an ideal requirement of these products traded in an organised/regulated spot exchange platform. While these markets develop as and when they are allowed and benchmark spot prices for crude products emerge out of them, exchange traded of futures and options contracts on petroleum products such as diesel, petrol and ATF may provide an opportunity for consumers to effectively hedge and protect themselves against the risk arising out of adverse volatility in international crude oil prices. It's an effective way out for the economic stakeholders to protect themselves against volatility that arrives on the shore along with the imported crude.

# Onus on banks to deliver benefit of rate cut

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**P**ROMPTED BY LOW inflation sentiments and evolving macroeconomic configuration, RBI in its sixth bimonthly monetary policy had cut repo rate by 25bps, bringing it down to 6.25%. A quick reversal of interest rate cycle in just 18 months comes at a time when the economy needs pump priming. A more important and widely expected move is the unanimous change in its monetary stance from 'calibrated tightening' to 'neutral' to bring about flexibility in interest rate movement. It paves way for a crucial change of mindset of market players that can accelerate growth. It can also trigger a positive outlook with further rate cuts in the near term.

Despite continued volatility in external sector and upside risk to crude oil prices, inflation is expected to be within the comfort level of RBI's glide path of 4% with a band of +/-2%. Though food prices may see an uptick in the coming season, inflation may not touch threatening levels. Retail inflation having gone down to 2.8% in March, the RBI outlook is now recast to a range of 3.2-3.4% in the first half of FY20 and 3.9% in its third quarter with risks evenly balanced.

Macroeconomic indicators show early signs of growth that can be capitalised with appropriate policy action. The annualised IIP is down to 2.6%, while capacity utilisation in the manufacturing sector is showing a shade higher at 74.8% in Q2, up from 73.8% in Q1. The GVA during the year is expected to be 7% in FY19 compared to 6.9% in FY18. Productivity in agriculture can be placid where shortfall in 'rabi' sowing is to be offset by extended periods of cold weather boosting wheat yield. The RBI Industrial Outlook Survey for Q3 indicates weakening demand conditions in manufacturing, while the Business Expectations Index points towards improvement in Q4. Similarly, the uptick in manufacturing PMI for January 2019 is stacked with increased output supported with new orders. Investment activity is on a recovering edge mainly by the surge in public spending on infrastructure.

Trade deficit from April-November has been struggling, but net FDI inflows during the period inched up compared to corresponding period of the previous year. Foreign portfolio inflows, too, rebounded in November-December. The combined impact helped foreign exchange reserves to cross the psychological mark of \$400 billion. Based on such readings, RBI has projected GDP growth in FY20 to be at 7.4%. It should range between 7.2-7.4% in H1 and 7.5% in Q3.

When RBI policy review is seen together with the Interim Budget leaving more cash with the farm sector in Q4 and the revival in demand for credit, banks can tap business opportunities to post a better turnaround. The year-on-year growth of deposits up to January 18, 2019, is 9.7% as against 4.6% during the corresponding period of the previous year.

With three state-owned banks out of the Prompt Corrective Action and the recent spate of capital infusion, banks can accelerate flow of credit to trade and industry to support growth. The increase in the collateral-free loan to the farm sector from ₹1 lakh to ₹1.6 lakh can benefit small and marginal farmers. More than passing on the benefit of lower interest rates, accelerating bank credit will be significant.

The relaxation in the end-use of ECBs will enable repayment of rupee-term loans of target company by resolution applicants in the Corporate Insolvency Resolution Process under the Insolvency and Bankruptcy Code. It can hasten stressed asset resolution to bankruptcy such funds to stimulate credit. The onus is now with banks to deliver benefits of RBI policy move to stimulate growth.

**With three PSBs out of PCA and the capital infusion, banks can speed up flow of credit to trade and industry to support growth**

# The language of shapes

Do straight lines belong to men, curved ones to God?

**SONALI WASAN SARIN**

The author is an experienced professional in the consumer insights and analytics domain



**I**T ALL STARTED WITH the long drive on a rainy day. I was engrossed in my favourite pastime—a meditation of sorts, if you may call it. With my face extendedly fixed on the window sill and the wind hitting it, I indulged myself in the beauty of greens melting into the blue sky. There was suddenly a feeling of those rooted steadily in the earth, having their moment of glory intermingling with the heavenly counterparts.

And in this period of rumination, came a fresh 'whiff of thought'—why do most things in nature come sans corners? Why do we see God's creations being oval, round, curved, but seldom perfect squares or triangles? Perhaps a spiritual message that imperfection can also be beautiful. But maybe something more and let's keep that for my next rumination session.

While I later found that there was a scientific logic behind the ovals and spirals in nature, there are certain messages in the 'language of shapes'. Most of the curves are feminine in nature and signify harmony, commitment, safety, continuity and completeness, while squares, rectangles and triangles give a more 'mathematics' feel and hence are linked to balance, practicality, purpose and rationality.

So, do marketing rules follow this 'lan-

guage of shapes? Looks like the answer is affirmative, with a lot of psychological theories such as the Gestalt theory governing the design elements and a huge amount of research going into 'sensory priming' or the technique by which exposure to one stimulus subconsciously triggers subsequent stimulus and associations in memory. To explain, I will take an example from my life—dark clouds and rains prime me to go into a 'happy thinking mode'. They clearly take me back to my childhood days when I use to write poetry, especially during rains. I know most people are primed to sleep when it's cloudy and that's the difference in how each individual reacts basis multiple associations in the brain.

Let's link this 'language of shapes' to logos. Logos of financial and insurance companies such as Deutsche Bank, American Express, Visa, Citibank, Wells Fargo use squares to depict trust, stability and safety. Also, in a few cases, squares are used

to convey power and confidence—as in the case of BBC and Microsoft. But at the same instance, squares can be perceived as standard, boring and those that lack innovation. In order to beat that feel, Microsoft makes good use of colours, which depicts diversity and freshness.

While squares and rectangles depict humanness, triangles break the barrier of boring and provide a unique combination of focus, power and innovation. Construction, technology, law, finance and a few banking companies use it. A few notable examples being DLF, Caterpillar, Delta, Axis Bank, Reliance Communications, and Google Drive and Google Play.

A quick scan through your memory will indicate that the logos of BodyShop, Johnson & Johnson, and Forest Essentials are ovals or circles—best used to indicate completeness. While beauty product brands such as Lakme, MAC, L'Oréal, Estee Lauder all use rectangles and squares to depict the safety associated with the brands.

Not only logos, but shapes play an important part of your product and packaging shape as well. If you revisit the games we played as children—chess, Lego, Chinese checkers, gallery probed the mind towards rationality, unstructured games such as ring-a-ring o' roses, dark room and others involved continuity. Before I end this article, I would want to leave you with a thought—why are TV, mobile screens, furniture, shampoo bottles, as well as video game visualisations moving towards curvilinear and softer shapes?

Maybe as Antoni Gaudi, the great architect, said, "The straight line belongs to men, the curved one to God."

# What happens when your bitcoin banker dies?

Apparently you can take it with you after all

**B**ITCOIN WAS INTRODUCED to the world in August 2008, in the aftermath of the financial crisis. According to its technolibertarian fan-base, one of its main attractions was the promise that users could avoid dealing with the hated banks. But after a decade of amateurism, scams and billions of dollars of lost or stolen money, it is clear that many of the ramshackle institutions that play the role of banks in the cryptocurrency world make even their most reckless conventional counterparts look like paragons of good management.

The latest example is QuadrigaCX, a Canadian cryptocurrency exchange that was granted protection from its creditors on February 5. The problem, according to the firm, is not that it has lost its customers' money, but that it cannot get to it. It says that Gerald Cotten, its boss, died unexpectedly in India in December.

Few banks would be brought to ruin by the death of a single member of staff. But QuadrigaCX says that Mr Cotten was in sole charge of handling deposits and payouts, running everything from an encrypted laptop to which only he knew the password. In court documents, Mr Cotten's widow says that "despite repeated and diligent searches, I have not been able to find (the passwords) written down anywhere." QuadrigaCX's 90,000 customers cannot get to around C\$180 million (\$136 million) of bitcoin, Litecoin, Ethereum and



various other cryptocurrencies stored on the exchange. One is thought to have lost access to C\$70 million worth of cryptocurrency.

Discussion of QuadrigaCX online is a swamp of anger, amateur detective work and conspiracy theories. The firm seems to have been in trouble for a while; in January 2018, the Canadian Imperial Bank of Commerce froze C\$28 million held by Costodian, QuadrigaCX's payment processor. The bank tried repeatedly to contact Mr Cotten, to no avail. There are other curiosities. A screenshot supposedly showing a death certificate issued by the government of Rajasthan mispells Mr Cotten's name. Experts consulting bitcoin's public transaction register have struggled to identify the inaccessible deposits. Jesse

Powell, the boss of Kraken, another cryptocurrency exchange, said on Twitter that QuadrigaCX's story was "bizarre and, frankly, unbelievable."

This is not the first time that large amounts of cryptocurrency have been inadvertently removed from circulation. James Howells, a British cryptocurrency enthusiast, amassed 7,500 bitcoins in 2009, when they were nearly worthless, before throwing away the hard drive on which they were stored. By 2013, they were worth millions of dollars. Mr Howells's attempts to recover his hard drive from a Welsh landfill failed. Chainalysis, a firm of cryptocurrency watchers, reckons access to 2.78 million to 3.79 million bitcoins has been lost in similar circumstances. Since the way bitcoin is designed caps the number of coins at 21 million, that is 13-18% of all bitcoins that will ever exist.

The cryptocurrency world has seen bigger collapses than QuadrigaCX's. The biggest was MtGox, which was responsible for around 70% of all bitcoin transactions when it went bust in 2014 after the theft of 850,000 bitcoins, then worth \$450 million. Like QuadrigaCX, it had been run on a wing and a prayer. Some exchanges are better than others, says David Gerard, a cryptocurrency-watcher and sceptic. But too often storing cryptocurrency on an exchange is little better than "keeping your money in a sock under someone else's bed."