# THE FINANCIAL INCLUSION **ADVOCACY CENTRE**

WORKSHOP PRESENTATION PAPER (DRAFT) FINANCIAL INCLUSION IN THE ERA OF COVID-19

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## **Financial Inclusion in the COVID-19 Era**

By

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#### 1. Nature of COVID-19

The novel Coronavirus (SARS-CoV-2), which causes the Coronovirus disease<sup>3</sup> (COVID-19), as of June 8,<sup>4</sup> 2020 has <u>infected</u> around 7.19 million people worldwide and <u>claimed</u> 408,240 lives globally. It is not just a pandemic—it is also a burgeoning (global) economic crisis, especially because of the measures (including lockdowns) adopted to contain its spread. What the world is going to face economically in 2020 is likely to be as bad (if not more) as what the world faced in 1930—the Great Depression, when much wealth was wiped out over a period of ten years. As per <u>international monetary fund (IMF) data</u>, in early January 2020, about 160 member countries were expected to report positive per capita income growth in 2020. Three months later, this has flipped. IMF now expects about 170 countries to report negative per capita income growth in 2020. That is how serious it is.

Indeed, COVID-19 is an extremely severe health and economic crisis that is hugely impacting our lives. There are no two ways about it. Several aspects make COVID-19 a very distinctive crisis. First, it is a highly unsystematic and uncharacteristic fusion of a deadly disease with an economic catastrophe. Second, its burgeoning growth has seen it become a global phenomenon in a very, very short period of time. Third, as economists would call it, it is both a severe supply and demand side shock. Put differently, it is an unparalleled global macro-economic shock of uncertain magnitude and duration. The uncertainty is what makes it so very dangerous. Fourth, its impact is multi-faceted and includes infection, death and loss of loved ones, human distress in many forms (such as job losses, lack of food and nutrition, loss of education, even if it may be temporary), greater indebtedness, severe global recession caused by a deep prolonged (uncertain) contraction in economic activities, brutal corporate (financial) distress, huge stress on the financial systems (thereby making the supply of credit to the real economy a major concern), stoppage of flow of capital due to risk aversion by investors and other stakeholders and so on.

One key point to remember here is that severe acute respiratory syndrome (SARS), the elder brother spread when people fell ill and exhibited symptoms. So, by effective health measures (public as well as private)—including testing, quarantine, isolation and treatment—it was possible to get rid of SARS. Its younger brother, the novel Coronovirus that causes COVID-19 is very different. It spreads asymptomatically. It is highly adaptable and it mutates. So, until and unless we have a cure and/or a vaccine (we still doubt if a vaccine would be that effective as the virus is highly adaptive and mutates), it cannot be contained. Unfortunately, irrespective of what some media say, our interaction with people at the forefront of developing the vaccine suggests that most optimistically, we are a good solid 6-7 months away from having a usable vaccine. Realistically speaking, we should expect the vaccine by about 10-12 months from now. Regarding cures, Gilead's drug Remdisvar and other candidates, while promising, have long ways to go, both in terms of efficacy and sufficient supply.

#### 2. Low Probability High Impact Risks and Risk Management in Financial Services/Inclusion

Most of us did not even anticipate the occurrence of such an event, let alone think about its devastating impact even a few months ago.

This shows a serious lacuna in our risk management process and consequent decision making, based on this process. And the occurrence of a **low probability**, **very high impact (black swan)** event like the current extremely severe health and economic crisis (courtesy, COVID-19) calls for an entirely new and eclectic approach to risk management and decision making at federal, state and local governments, private and public corporations and other stakeholders like multi-laterals, bi-laterals, start-ups, banks, regulators and many other stakeholders.

<sup>&</sup>lt;sup>3</sup> See <u>https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-(covid-2019)-and-the-virus-that-causes-it</u>

<sup>&</sup>lt;sup>4</sup> As of June 8, 2020—<u>https://www.worldometers.info/coronavirus/</u>

What is the key lesson from a risk management perspective for all these stakeholders? The key lesson is that our risk management process must not be bothered just about the high probability and often lower impact risks but it should also wake up to the low probability, high impact (strategic) risks like the present COVID-19 event. Remember, the frequent and less impactful risks can be easily dealt with. Infrequent low probability strategic risks that can have huge impact (like the occurrence of COVID-19) are the ones that put the world in danger and these need to be anticipated and tackled well in advance.

So, all concerned stakeholders—be it federal, state and local governments, policy makers and corporate leaders worldwide, multi-laterals like the IMF or The World Bank, central banks in different countries, multi-nationals corporations, medical professionals, pharmaceutical companies and other stakeholders such as the various national intelligence agencies—must factor in this crucial aspect and start continuously scanning for the low probability, high impact strategic risks that can devastate the whole world (as part of their normal risk management and decision making process). This will help these organizations and all of us strategise better and prepare well in advance to counter such low probability high impact (strategic) risks.

That said, as a start, what are the likely sources of such events, especially looking through the lens of COVID-19? The clear argument emanating from the present COVID-19 crisis is that, we must start to focus on *zoonotic diseases*. That is where the future risks lie and that is what governments, policy makers, huge multi-nationals, multi-laterals and all of us need to factor into our risk management processes and consequent decision making.

Why is this so? According to researchers, there are a number of viruses shrouded in, and waiting to come out, from animals around the world. One researcher, Dennis Carroll<sup>5</sup> argues that there are about 1.67 million viruses on this planet, of which between 631,000 to 827,000 have the capacity to infect humans. And as Dennis clarifies, the word infect must not be taken as synonymous with the ability to cause illness and/or death, although some of these could lead to illnesses and/or death.

Transferring the same to the above context of viruses and their ability to infect humans through zoonotic transmission and thereafter cause illness and death to humans, we can say that the risk of such an event occurring is perhaps low. This is what we would call a rare risk. Rare as it may be, such low probability risks (which happen once in a while) always carry great impact, often with severe consequences as we are currently experiencing with COVID-19.

To reiterate, COVID-19 has taught us a very important lesson. Be it governments globally or private or public sector corporations or other forms of organizations, we need to bring in an eclectic risk management framework that fosters thinking within decision makers on the occurrence of low probability very high impact (strategic) risks and associated events that can wipe us out in entirety. While how to do this will largely be dictated by the strategic context, the fact remains that all forms of organizations identified by Alfred Chandler, Herbert Simon and Max Weber will need the mandatory assistance of such a risk management process that focuses on the occurrence of all low probability very high impact (strategic and black swan type of) risks on a continuous basis. Only this can help secure the future for us, our children and grand children.

<sup>&</sup>lt;sup>5</sup> The core scientific material about viruses and zoonotic spillover have been paraphrased from the work of Dennis Carroll and his fellow scientists. Their contribution has been cited and gratefully acknowledged. See <a href="http://nautil.us/issue/83/intelligence/the-man-who-saw-the-pandemic-coming">http://nautil.us/issue/83/intelligence/the-man-who-saw-the-pandemic-coming</a>

#### 3. On-going Consumption Crisis

Most importantly, COVID-19 has created a huge consumption crisis that is unfolding today. While necessary, lockdowns have limited mobility of most people and they are in vogue in many places in some form or the other. Consumption, by and large, is just for essentials. Meanwhile, the fear of contagion as well as COVID-19 have together (further) curtailed the mobility of people, even locally—forget travel to other towns/cities, states and countries.

#### 4. Supply Chains Disruptions

Domestic and global supply chains have witnessed significant disruption.

During the COVID-19 crisis, manufacturing supply chains have been disrupted in many countries because of their over-dependence on China due to lower cost of production and the overall favourable environment in China for manufacturing including excellent skills that the Chinese possess for manufacturing (see what Apple CEO says). However, having suffered greatly because of lack of access to components, intermediate goods and even finished products due to the COVID-19 crisis and the Chinese lock-down during January – March 2020, many countries are now waking up to the fact that they need to diversify sources of supply and also have fall back domestic suppliers because none of them wants to get locked down again. The key that companies are now looking for is reduction in supplier concentration risk from a single country or geographic source or location.

Thus, given the on-going COVID-19 crisis, the re-engineering of supply chains is going on and the objectives are to ensure lower supplier and buyer concentration risk, greater chain resilience and enhanced chain adaptability. If this re-engineering works out as planned, it should result in several aspects such as the following: (a) vulnerability reduction for primary producers and other chain stakeholders—one important aspect is ensuring seamless flow of materials and components. Most stakeholders in the supply chain became extremely vulnerable to due to dearth of raw materials, intermediate products and finished goods during the COVID-19 shutdown and thereafter; (b) improved and stable returns to various chain actors; (c) productivity increases in the entire chain especially due to automation and use of robotics, artificial intelligence and related tools to offset the cost increases caused by diversification of supplier/buyer concentration risk and also adoption of just-in-case inventory system; (d) newer kind of employment generation across the supply chain, although the skills-sets required may be very different from those necessary in the past; and (e) reliable and consistent supply of quality and affordable goods and services to chain customers at various levels of analysis as well as end users and the like.

## 5. Livelihood Impact(s) on Micro, Small and Medium Enterprises (MSMEs) and Low Income People

Huge numbers of livelihoods have been impacted (especially for MSMEs and informal sector workers) and millions of jobs have been lost by the ill prepared (often late<sup>6</sup>) lockdowns in many countries, which, we believe should have been announced earlier and in a much more calibrated and strategic manner. In fact, one of the authors, Ramesh S Arunachalam, wrote in early January, 2020 that the disease in China could have huge global impact if not controlled immediately. And what these late (lockdown and associated) measures have done is that they have made pre-existing social vulnerabilities only get worse following the spread of COVID-19 and the measures (adopted) to contain its spread.

#### So, what is the net impact, especially on the low income financial services industry?

<sup>&</sup>lt;sup>6</sup> We say late because key public domain information on the spread of the virus was available in early January, 2020. There were (three) articles by the New York Times. Other media outlets also had written about this. Had appropriate action been taken then by various stakeholders, much of the drastic action required later may not have been necessary.

#### 6. Impact on Micro-enterprises

Customers for micro-entrepreneurs—who sell goods and services—have dwindled. Most cannot ply their trades with any significant level of certainty and consistency. Coupled with the supply side shock, it has become very difficult and costly for them to even ply their trades. For example, fish vendors claim that there is not significant harvesting of fish from the sea because of restrictions on movement. Small petty stores don't have inventory to sell locally, even if they were to be bold and get back to their pavement shops.

#### 7. Impact on Small and Medium-sized Enterprises (SMEs)

Moving on to SMEs (whatever be your definition), the demand for their goods has also been impacted hugely, barring certain sectors. While many governments and central banks have tried their best to provide relief to SMEs through guaranteed loans, directed lending facilities, interest rate reduction and so on, SMEs are still reluctant because they are suffering on many counts. Likewise, if you at the amount of money parked by banks with central banks, it is also high demonstrating the reluctance of banks to lend.

Furthermore, other than SMEs making essential products, demand for products made by other SMEs is either low or almost absent. They are unable to ramp up capacity utilization because of this as well as lack of workers and also supply chain disruptions. Even today, the movement of goods across contexts in many countries is not seamless. The net impact of this is that SMEs are reluctant to even borrow in many cases because they ultimately will have to make the loan repayments. Overall, in the face of the demand and other shocks, SMEs are unable and unwilling to even commence production, let alone ramp up production.

On the supply side, (m) SMEs face a reduced labour supply as workers are still unable to come to work due to lockdowns and restricted movement. Also, workers may have gone elsewhere, could be unwell and/or would need to look after their family—all these impact their availability. Without a doubt, while necessary, measures to contain COVID-19, such as lockdowns and quarantines have led to further and more severe drops in labour availability and hence, capacity utilization. That is a critical issue facing (m) SMEs. This apart, supply chains have also been also disrupted leading to severe shortages of components as well as intermediate goods in many (m) SME clusters.

As far as the demand side is concerned, a sudden and significant loss of demand (and revenue as a consequence) for SMEs has crippled their ability to remain viable and going concerns. This loss of demand has also caused severe liquidity shortages as (m) SMEs are incurring costs, with virtually no production—paying salaries (in many cases), maintaining infrastructure and the like. The demand shock is very severe because consumers themselves are experiencing several issues—income loss at the individual level (in many cases), fright of infection and contagion and increased uncertainty about everything. All these have cascading effects and reduce consumption as well as spending. These effects have been exacerbated because in several instances, workers have been laid off (en mass) as large companies and some (m) SMEs have not able to pay salaries, despite wanting to do so. Some sectors, such as aviation, tourism, hospitality, travel and transportation, have been strongly affected, also contributing hugely to (overall) reduced business and consumer confidence. Without question, while 'social (physical)) distancing is a very necessary measure to combat COVID-19, SMEs are more vulnerable to this 'social (physical) distancing' than other companies.

In terms of credit markets, the all around uncertainty is not helping and bankers and FIs are reluctant to lend, despite being flush with funds and we would not blame them. As in other crisis situations, someone has to underwrite their risk for they in many ways are protecting depositor funds, which is also very crucial. In general, the overall confidence is very low and despite, central bank measures of reducing interest rates and governments/central banks providing directed/guaranteed lending facilities, we are afraid that bankers and FIs would need a stronger push to actually lend in real time. Overall,

the impact of COVID-19 on financial markets has been such that there is reduced confidence in lending and therefore, a subsequent reduction of credit lines and the like. While all of these various impacts affect both larger firms and (m) SMEs, the impact on (m) SMEs is especially severe due to their higher levels of vulnerability and lower resilience (because of their size and unique aspects).

#### 8. Impact on Agriculture

Agriculture has been impacted a lot similarly. However, demand for agriculture products has only burgeoned. But lockdowns and continuing voluntary lockdowns, fears of contagion and so on, have meant reduced supply of agricultural products to market and reduced agricultural output in the coming months. This has the potential for endangering food security as well, across countries.

As our global experience—especially across Africa and Asia indicate—a fair amount of those engaged in agriculture are small and marginal producers, who need quality credit {read as Value Chain Financing (VCF) and many more need based financial services} and not just "more credit" to survive. And this is even truer in the COVID-19 era than earlier.

VCF, in generic terms, is typically defined as a flow of financing within a sub-sector, among various value chain stakeholders, for the specific purpose of getting product(s) to market(s). This definition mandates relationships and commensurate exchanges between value chain stakeholders through vertical and horizontal linkages, as well as coordination/cooperation and competitive mechanisms. This is very different from the mere provision of conventional financing, where one of the chain stakeholders (for example, a specific firm/entity and often primary producers) gains access to financial services independent of other stakeholders—this is what dominates the "mass" approach to agriculture financing (especially for small and marginal farmers) across much of Africa and Asia (including India), although there are exceptions.

Furthermore, VCF should not be merely viewed as enhancing access to finance for primary producers in a chain but rather, it must be seen as a broader intervention that can: (a) help create better and enabling infrastructure in the chain; (b) enhance competition among various stakeholders and increase choice within the chain; (c) reduce vulnerability of producers (marginal, small and primary producers) and increase their staying/bargaining/negotiating power vis-à-vis other actors in the chain; (d) act as a catalyst and stimulate access to productivity enhancing technology and practices; (e) facilitate small/marginal and other primary producers to get better returns/rewards through better access to business development services including access to markets; (f) enable product, process, functional and channel improvement/upgrading in the chain, which is critical; and/or (g) address other constraints and the like. In practice, such a broader outlook with regard to VCF (especially for agriculture) is likely to enable achievement of the larger development objectives such as ensuring inclusive growth in a more effective manner. The time is ripe now to get the real *avatar* value chain finance (VCF) to drive a billion dreams (or more) in agriculture.

The key point that we are making is that there is a huge consumption and demand shock that is affecting most societies because of COVID-19 as a result of which consumer behavior has been radically altered. On how demand can enhanced and responsible consumption be slowly built is discussed later but that is an aspect that deserves the full and complete attention of central banks, governments, ministries of finance and other stakeholders. Without solving this, it is unlikely that we can recover economically from COVID-19. So, it is time for all these stakeholders to start focussing on what demand side stimulus can help and how can it be structured to kick start demand and encourage responsible consumption, even as the aggressive health care efforts to control the spread of the pandemic are on-going.

#### 9. Impact on Commercial/Microfinance Banks, Non-bank Financial Institutions (NBFIs), Microfinance Institutions (MFIs), Cooperatives etc—Traditional Financial Institutions (FIs)

Many of the aforementioned institutions are not receiving money from their traditional microfinance and financial inclusion clientele, whose livelihoods have been impacted. They have been mandated to offer moratoriums on weekly and monthly payments, often varying from 3 to 6 months are more. Their liquidity is impacted, although central banks are trying their best to solve this aspect for them. Even if MFIs and banks (commercial banks, microfinance finance banks, small finance banks etc) offer their customers moratoriums, how long can this go on in terms of postponing payments? Where will clients get money to pay back? On what basis, can clients ask for loans? And on what basis will banks/MFIs lend? And who takes the hit (finally)-if and when large scale loan defaults occur-at a later stage. What is the role of investors? Can they and banks keep pumping in money when returns are unlikely? Specifically, what is the role of institutional, individual equity investors, development finance institutions (DFIs), wholesalers, larger banks in terms of absorbing losses and also putting in more money-as compulsory and voluntary lockdowns, fear of contagion and other aspects continue. Lot of non-performing assets (NPAs) are staring at our face down the line! Given that social (physical) distancing has virtually collapsed the joint liability, self help group and solidarity group models of microfinance—all of which depend on social capital, gatherings and outreach services what is the likely future of the microfinance and financial inclusion sector? While short-term survival of microfinance clients and MFIs/MF banks/NBFIs is undoubtedly important, we also need to think of their long-term survival, which is linked to enhancing demand and consumption. Let us not lose sight of that.

Going further, how will their operations change? Many FI efforts are based on the joint liability group (JLG), solidarity group (SG) and self-help group (SHG) models. Social physical distancing renders all of that almost impossible and more in urban areas. Rural areas can perhaps still manage the new protocols. Again, all of this increase costs. Who bears the cost as interest rates are capped in many countries? How will internal audits occur? How will outreach/field workers/auditors go to the field? What safety protocols will they follow? What health protection measures will they be mandated to offer? Will they have mandatory health insurance and personal protective equipments (PPEs) and other safety equipment? Does this not increase fixed costs and who bears the cost increase?

Is this the time to deregulate interest rates? We would say yes because rather than have traditional MFIs, NBFIs and others catering to the financial inclusion sector either go bust or not lend to the sector (as in the case of larger banks), it is better to let them lend to the sector at 30 % APR or so. The alternative is the infamous informal sector money lenders who lend at very high effective interest rates—this often is in the range of 100% to 500%. We have seen this time and again and even today, this is the case in much of the original (undivided) state of Andhra Pradesh (AP), where the crisis of 2010 occurred.

In terms of rural vs urban microfinance, one can see that the impact of COVID-19 will be less in rural areas. That is what it appears to be as at the present. But COVID-19 is still an evolving story. Rural banks and rural finance institutions and MFIs, NBFIs and Banks could have larger operations in rural areas. This is because population density is cause for spread of contagion and urban areas have been hugely impacted. Clearly, urban microfinance portfolio is going much worse off than rural microfinance portfolio. Even in rural areas, weekly meetings may change to monthly meetings. Given the fact that meetings and interactions are going to be lower, less frequent, the greater will be the information asymmetry. Outreach models (including mainstream commercial MFIs that have become banks) which still have a huge % of their portfolio in microfinance Grameen type clients are certainly going to be affected as such banks typically rely on outreach mechanisms and meetings to make collections. We are going to see individual lending come back in a big way but then, hopefully, increasing digitization will reduce this information asymmetry and collection costs. However for this to become a reality, digitization of the entire ecosystem has to occur quickly and supportive enabling digital infrastructure must also be available.

#### What is the likely impact of COVID-19 on different legal forms of financial institutions?

- For-Profit
  - ✓ Banks large banks can withstand perhaps. Have deep pockets!
  - ✓ Alternative Financial Institutions NBFIs and others smaller, less capitalized ones are much at risk unless supported by banks, DFIs and investors.
- Mutual Benefit
  - ✓ Community Development Finance Institutions (Cooperatives, Cooperative Banks) Also at risk as member livelihood, savings and incomes impacted hugely
- Not-for-Profit At a great risk as no equity from institutions or members
  - ✓ Societies No deep pockets
  - $\checkmark$  Trusts No deep pockets

#### **10. Impact on Digital Financial Inclusion and FinTechs**

Cash has always been as a spreader of disease and everyone, nowadays is reluctant to accept cash, where an alternative exists. Contactless payments will be preferred while going forward, at least where options exist. Of course, the poor and low income people will continue to transact in cash as they are still not part of digitization (as their ecosystem does not accept cash) and sometimes, even wary about it due to certain negative experiences with use of digital finance. In this context, we must present one idea that has been talked about significantly as an alternative to the traditional finance institutions and that is the aspect of digital financial inclusion based on digitization. Digitization also requires a full ecosystem that accepts digital money and also enhanced digital infrastructure across the board. It also needs easy and accessible consumer protection mechanisms with regard to digital finance.

And then there is the issue of (increased) pressure on the digital infrastructure. It is already huge and our capacity lags behind usage. Also in many contexts, internet downtime is huge. Indeed, there has been a huge impact on digital infrastructure as many people are working from home (WFH) and broadband speeds are a fraction of what they used to be for various reasons. So, we would be very cautious on the proclaiming digitization as an immediate solution, although, it can work wonders if the much required ecosystem and infrastructure are available in a solid manner quickly.

Coming back to the huge digital divide, large numbers of poor are still left out of the digital process. The world development report (WDR, 2016) talked of a global digital divide of almost 60%. While significant progress has been made thereafter, the problem of digital divide still exists in many contexts. How to enable these potential users to cross barriers imposed by literacy and language and make better use of digital technology to conduct financial transactions? This problem still continues, although disproportionately in different contexts and COVID-19 has created the urgency to fast track the creation of an enabling digital ecosystem with supportive infrastructure quickly and meaningfully.

There are many reasons as to why people are left out from the digitization process: (1) Lack of mobile data and internet connection and financial (process and digital) literacy and the requisite digital infrastructure, especially at the grassroots in many contexts; (2) While people may have bank accounts, these need to be used regularly and continuously; (3) There are many vested interest groups that do not desire a shift towards a cashless economy and they need to be countered; (4) In emerging and developing economies where small (MSME) retailers tend to dominate, investment credit with regard to electronic payment infrastructure must be available; (5) Consumer perception also acts as a barrier. The benefits of cashless transactions are not clear even to those who possess credit cards. Alternatively, cash is generally viewed as a superior and quicker method of transacting. There is also a belief that cash helps a person negotiate better. All of these need to be changed; and (6) Lastly, most consumers (including card users) carry the impression that they might be charged more when they use

cards (instead of cash). This perception also needs to be changed. Without a doubt, all of these need to be tackled expeditiously by countries that desire to move forward rapidly with regard to digital transformation.

Given the above context, in terms of solutions, if you ask us honestly, we feel the strong need for an artificial intelligence (AI)-based, voice-led FinTech application that will help users negotiate mobile banking systems, undaunted by language, digital and process literacy. Two issues dominate the design of such a system: a) The fact that sections of the population that still remain excluded from digital financial systems are still handicapped by a lack of comprehension of the (financial) processes and their workings; and b) The need for digital and process literacy to these people to be imparted, on the go, before they can effectively use the available solutions. The key point to note here is that traditional classroom-type training cannot work effectively here. Training the users, especially the lower rung of low-income people, at best, has to be a parallel process if the users need to be enabled to get on the digital bandwagon straight away. That is why an AI-based voice-led application—that can handhold the user through the transaction and other processes is necessary. In this case, users will be guided by a 'virtual voice', in the language of their choice, every step of the way, telling them what to do. Technology can thus be an enabler!

Thus, while FinTech is still very nascent, as applications of AI, machine learning and deep learning become common place, the ability and potential of FinTech to serve large numbers of low-income people and the poor is huge. Let us make no mistake about that. FinTech must be well supported by central banks through an enabling developmental regulatory framework as it has significant potential to eliminate commonplace frauds, enhance outreach and deepen access. FinTech can do a lot to enhance financial inclusion and lower actual costs of delivery. But again, the digital infrastructure has to become solid. The potential of distributed ledger technology (DLT) for facilitating regulatory compliance is also huge.

In short, FinTech, in its true, full-grown avatar, will disrupt and transform traditional banking and financial inclusion paradigms like never before and let us welcome and usher in a true FinTech revolution with open arms. Indeed, what we are seeing now is just the tip of the iceberg and there is a lot more that needs to happen if FinTech is to become a game changer and push us further forward towards achieving 100% sustained financial inclusion by 2030 as per the United Nations' sustainable development goal (UNSDG #1.3). We do need FinTech, more than ever in the COVID-19 era but an enabling ecosystem and supportive infrastructure are required along with enabling legislation with regard to their regulation and supervision.

While everyone acknowledges that FinTechs will play a very significant role in financial inclusion due to COVID-19, several questions however remain. Some of the key question on regulation and supervision of FinTech entities that need to be considered are:

- 1. How and by whom should FinTech companies be regulated and supervised?
- 2. Is the time ripe for rapid and pragmatic innovation in the regulation and supervision of FinTechs?
- 3. How should central banks and other regulators approach the regulation and supervision of FinTechs? Do FinTechs need a more level playing field as compared to Banks, NBFIs and MFIs, especially given their crucial role in times like today? Should FinTech become eligible for banking licenses?
- 4. What are the upsides and downsides to having enabling regulation and supervision of FinTechs? What would be pragmatic governance and risk management guidelines for FinTechs, especially if they are to have enabling legislation and banking license?
- 5. How would a host country central bank deal with regulating and supervising transnational FinTechs (e.g., third party technology service suppliers located abroad)?
- 6. There are other questions as well: Are FinTechs profitable? Do they follow the start up model? Do they run on equity in terms of meeting operational expenses? Do they make sufficient profits? All of these will determine their regulation and supervision as all of these also impact financial stability.

Having said that, let us ask what FinTech can do for financial stability<sup>7</sup>. Decentralization (and diversification) in the financial system can reduce the effects of financial shocks in most situations. Put differently, the failure of a single and specific kind of firm is less likely to close down the entire financial system—of course, when a large set of systemically important institutions go bust and financial markets are globally inter-connected, then, as in the U.S. subprime (of 2007/8), a lot of devastation can be felt.

#### 11. Regulation and Supervision of the Financial Inclusion Sector

With COVID-19 still being an evolving story and social physical distancing here to stay and lockdowns/voluntary lockdowns continuing, supervision by central banks is undergoing sea change. Regulation too will undergo change to allow for board meetings and board sub-committees to meet and function virtually, as may be required.

The question is how will (regulation and) supervision of commercial banks, microfinance banks, NBFIs, MFIs, FinTechs now be conducted by central banks and/or designated supervisors & examiners?

First, central banks will now be forced to rely more on offsite and online supervision. On site supervision is going to be much lower. This will at least be true of the short term (at least the next one year).

Second, given the size of institutions, the nature of MSME, microfinance and agriculture loans and loan assets, off-site supervision is going to be challenge across the board. The silver lining of course is the fact that board meetings will be virtual and recorded. Hence, central bank supervisors will be able see governance and risk management processes in action. Overall, reduced off-site supervision will impair effectiveness of supervision by central bank supervisors and examiners but can be greatly enhanced by use of technology.

#### 12. Use of RegTech

Given that off-site and online supervision are going to play a greater role, central bankers will require new skills sets and innovative RegTech tools. RegTech can play a meaningful role here as outlined below, especially in the absence of on-site supervision and the past crisis situations.

It becomes evident that in all the past financial crisis situations, central banks (most often the regulators and supervisors) were extremely ill-prepared for the impending crisis. Of course, while their incoherent responses in great measure added to the uncertainty and panic in the financial system, a major problem was that early warning signals were either not there or, at best, not clearly discernible. Sometimes these early warning signals were available but ignored and shrouded by conflicts of interest that were at play. This happened, in particular, because of the seamless exchange of people from the financial services industry to the regulatory domain and vice versa, through what is commonly called as the revolving door and reverse revolving door phenomenon.

In effect, we had what can be called regulatory and supervisory failure coupled with a serious breakdown in accountability and ethics, right from the grass-roots level to the corporate boardrooms, and regulators and supervisors, who (all) sat and watched as Icarus continued to fly high. In turn, this had an impact not just as (disastrous) financial consequences, but it also led to a serious erosion of

<sup>&</sup>lt;sup>7</sup> In this context, financial stability means that financial intermediaries, markets and market infrastructure ensure the seamless flow of funds between savers and investors, and thereby help facilitate growth in economic activity. Alternatively, a financial system can be deemed to be stable when it is able to perform its core functions—of financial intermediation, transmission of payments, pricing of financial instruments and risk allocation—in a smooth, efficient, effective, inclusive and accountable manner. Additionally, the risk-bearing capacity of major financial institutions as well as financial infrastructure ought to be sufficient to withstand (if necessary) the severest of shocks and disruptions in the external environment.

trust in the financial system and all of its constituents, including regulators and supervisors, by the public at large (including customers, depositors, investors, end users and others).

Having set the context, we can safely argue that, as compared to the past financial crisis situations (e.g., the U.S. subprime of 2007/8), today's institutions are larger and riskier. Therefore, we cannot afford to have regulatory and supervisory failure going forward. Part of the problem is that with the burgeoning growth of institutions and their portfolios, as well as clients, the information coming to the regulators and supervisors is what we would call information overload. The larger the bulk in compliance reporting, the lesser the chance of spotting exceptions and the greater the chance of mismanagement (or fraud) leading to a full-blown financial crisis.

The larger point here is that, with many more institutions today and a lot of information flowing in, off-site and online supervision will become an even more difficult task. And the advent of COVID-19 makes central banks less able to use on-site supervision and so, they have to rely almost entirely on off-site supervision. Given this situation of central banks having to rely more on off-site supervision and with the maze of information coming in, off-site supervision will become a very difficult job. Therefore, what can central banks do?

They can use smart RegTech tools that will help them pick up early warning signals about impending crisis situations in the financial services sector, and information on the key aspects that caused the past financial crisis in the first place—things like whether the compensation policy is rewarding the quick deal (short-term) when the risks are medium or long term, or whether conflicts of interest are causing a financial institution (and other stakeholders) to go rogue, or what the real (hidden) leverage of a financial institution is, after taking into account all aspects such as off balance sheet items, etc. All of these are applicable to the past financial crisis situations including the recent banking crisis in many parts of the globe (2018-19), 2008 U.S. subprime and the 2010 Indian microfinance crisis in AP (just examples).

To realize the full potential of RegTech (especially machine and deep learning), two crucial things will however have to happen. One, central banks, as well as other regulators and supervisors, will have to remove any ambiguity in rules and circulars to their constituents. The discretionary power of the regulator and supervisor will also have to go so that the rules governing the game are crystal clear and not subject to interpretation and the whims and fancies of the regulator and supervisor. Two, machine and deep learning (AI), on their part, will have to develop the ability to discern causality (as opposed to mere correlation and association) to have greater predictive ability for regulators and supervisors. It is the fusion of deep domain knowledge of the financial sector and strong technical knowledge with regard to machine and deep learning that can lead to practical, usable regulatory and supervisory tools with enhanced predictive ability.

RegTech is in its infancy and requires significant effort, from both regulators and supervisors and information technology (RegTech) firms, before greater strides can be made with regard to use of machine and deep learning in regulation and supervision (of financial services) and to specifically achieve the objectives set out above—i.e., provide early warning signals of key aspects going wrong and periodic information on exceptions in key factors, both with a view to preempt and prevent a financial crisis.

Let us give you some examples here.

One aspect is the need for smart RegTech tools to isolate the impact of compensation—in financial conglomerates, investment and commercial banks and other financial institutions—in terms of whether they are rewarding the quick deal and short-term gain, without consideration of the long-term consequences. In my opinion, the tool should be able to decipher from the maze of data available whether the compensation system and incentives encouraged the big bet—right from senior management through middle to lower management levels—that, in turn, would have a ripple effect on the organizational culture in terms of enhancing needless risk taking. Learning from past crisis

situations, regulators and supervisors have to be most concerned with this and RegTech would be playing a crucial and proactive role in regulation and supervision if it can help spot these trends early.

The case of the past financial crisis (2008 U.S. subprime, Indian Microfinance crisis of 2010 in Andhra Pradesh)—where compensation systems directly led to the crisis by encouraging short-term performance with unheard of incentives and compensation, when, in reality, the risks were mostly medium- and long-term—is still fresh in our memories. Smart tools from RegTech will go a long way in helping to understand compensation trends and patterns as they arise and help regulators and supervisors (read as central banks and banking supervisors) keep in check excessive risk taking by firms that leads to crisis situations. The presence of such a tool will help make regulation and supervision more effective, efficient and timely in terms of action on the ground.

Yet another example comes from the Financial Crisis Inquiry Commission (FCIC) report:

"In the years leading up to the crisis, too many financial institutions ... borrowed to the hilt, leaving them vulnerable to financial distress or ruin if the value of their investments declined even modestly. For example, as of 2007, the five major investment banks—Bear Stearns, Goldman Sachs, Lehman Brothers, Merrill Lynch, and Morgan Stanley—were operating with extraordinarily thin capital. By one measure, their leverage ratios were as high as 40 to 1, meaning for every \$ 40 in assets, there was only \$ 1 in capital to cover losses. Less than a 3% drop in asset values could wipe out a firm. To make matters worse, much of their borrowing was short-term, in the overnight market—meaning the borrowing had to be renewed each and every day. For example, at the end of 2007, Bear Stearns had \$ 11.8 billion in equity and \$ 383.6 billion in liabilities and was borrowing as much as \$ 70 billion in the overnight market. It was the equivalent of a small business with \$ 50,000 in equity borrowing \$ 1.6 million, with \$ 296,750 of that due each and every day."

The similarity of the above to the NBFC MFIs in India in 2010 which came almost two years later and other banking crisis worldwide (in September 2018) should not be missed. Excessive leverage is bad and regulators need to be able to spot this. And what needs to be noted is that this leverage was well disguised and hidden—in derivatives positions, in off-balance-sheet entities, through window dressing of financial reports, etc.

The larger point here is that if regulators and supervisors could have had access to smart RegTech tools that would have alerted them much earlier, a lot of damage could have been avoided. Thus, a smart tool to help unearth the (real) hidden leverage of all (systemically important) banks and financial institutions would add great value. This again is a fantastic opportunity to create smart tools for better and more effective regulation and supervision of banks and FIs.

The crucial aspect of conflicts of interest, responsible for the 2008 U.S. subprime, 2010 Indian microfinance and other crisis situations, is another case in point. Conflicts of interests are a major regulatory concern because where conflicts of interest exist corruption could rear its ugly head (if the conflicts of interest are not well identified in a timely manner, they cannot be managed appropriately).

Here are some examples of conflicts of interest from the FCIC report with regard to the 2007/8 U.S. subprime crisis: a) conflicts of interest among rating agencies in evaluating collateralized debt obligation (CDO) deals; b) underwriters assisting CDO managers in selecting collateral; c) hedge fund managers selecting collateral from their funds to place in CDOs that they offered to other investors; d) a conflict faced by a large financial conglomerate in offering 'liquidity puts' that gave it huge fees in the short term but placed significant financial risk on it in the long term; e) the settlement that the securities and exchanges commission (SEC) reached with a large investment bank, in which that firm paid \$ 550 million to settle charges filed by the SEC, and acknowledged that disclosures made in marketing a subprime mortgage product contained incomplete (potentially misleading) information; and f) related party transactions due to conflicts of interest.

A decade later and in a different continent (Asia) and country (India), it is strange that the five-star board of one of the largest shadow banks, IL&FS, approved huge payouts to its top three key management personnel in 2017-18—a year in which the consolidated debt of IL&FS rose to a whopping ~Rs 1064 billion and years losses touched ~Rs 18.87 billion. We cannot understand the logic behind this. Perhaps, potential conflicts of interest—across stakeholders—could have been at play.

Again, the larger point we are making here is that the availability of a smart RegTech tool could have helped isolate these aspects as and when they occurred and assisted the concerned central bank to take timely (appropriate) action.

In other words, this is where RegTech could provide a smart tool to help regulators and supervisors sift through all compliance and other data and themselves construct an 'index' of conflicts of interest—for financial conglomerates and institutions—which could serve as the basis for an effective conflicts risk governance framework. This, too, represents a chance to get analytical tools for better regulation and supervision.

To summarize, COVID-19, which has almost reduced the incidence of on-site supervision of banks and FIs (especially, in the days and months to come), conversely, should enhance greater reliance of central banks on off-site and on-line supervision. With larger sized institutions and a whole lot of information coming in, it may be eventually very difficult for the central banking supervisors to make meaningful analysis of the data.

This is where COVID-19 presents an opportunity for the creation and use of smart RegTech tools on lots of aspects, and regulators and supervisors could benefit from such smart tools for understanding issues that caused the 2007/8 U.S. subprime financial crisis, or the 2010 Indian microfinance crisis in Andhra Pradesh or the 2018 banking/financial sector crisis in many countries of the world—be it the IL&FS situation or the case of fraudulent and fake letters of undertaking (LoU) issued by the Punjab National Bank (PNB).

In short, RegTech could provide smart tools for understanding all the issues that caused past financial crisis situations, and there are huge untapped opportunities for information technology (RegTech) firms with the resources, willingness and ability to create path-breaking applications. Thus, RegTech could help develop a large number of useful applications for central banks and other financial sector regulators and supervisors worldwide.

Before we sign off, we would like to quote Cassius from *Julius Caesar*: "The fault, dear Brutus, is not in our stars, But in ourselves."

Just as the above quote argues, all of the financial crisis situations we have encountered—whether the U.S. subprime (2007/8) or the Indian microfinance crisis in Andhra Pradesh in 2010 or the recent financial sector crisis in 2018 in many countries (e.g., the IL&FS crisis or the PNB LoU scam)—were not caused by computer models or algorithms or earthquakes or tsunamis. They were created by human action and inaction. All these crisis situations had early warning signals that the captains of the ship (i.e., the public stewards of the financial system) failed to read and act upon. Theirs was not a mere stumble but rather a huge missed step.

Part of the problem is that the massive burgeoning growth (be it in toxic mortgages or daily/shortterm borrowings secured by these mortgages, or in microfinance loans or other activity as in the case of IL&FS) left the already thin regulatory architecture stranded, as they were perhaps dealing with larger volumes of increasingly complex sets of data than before. And the situation gets compounded today because of COVID-19 which has placed great constraints on the on-site supervision of banks and FIs by central banking supervisors, who will have to almost exclusively rely on off-site and (online) supervision. Under such trying circumstances and especially, given the huge financial sector stress that COVID-19 is likely to cause, RegTech, if structured to ask the right questions and bring out the right insights, could be hugely beneficial for regulators and supervisors who are already overwhelmed by such data. Without a doubt, the time is ripe now for RegTech to take the lead in facilitating better regulation and supervision of traditional and new age financial institutions worldwide. Otherwise, these financial institutions, which are at least perhaps ten times larger and ten times riskier than those present in 2008, could cause newer crisis situations, which in turn could set the economies of individual countries and the world back by at least a decade. And of course, if RegTech is to facilitate effective regulation and supervision in real time, the regulatory and supervisory framework must be made accountable and free of conflicts of interest.

One final word on regulation, central banks and large banks and microfinance associations also need to monitor and help entities manage low probability high impact risks such as zoonotic transmission of diseases—in fact, central banks and governments must get work in getting an effective black swan insurance product that can cater to various stakeholders (including MSMEs) and come into force, whenever there is a black swan event (low probability, high impact event).

#### **13. Sustained Financial Inclusion**

To summarize, in an era where COVID-19 continues to rage and much of the gains in (traditional) financial inclusion are being lost (that is reality), a new framework with a fresh mandate is required of central banks worldwide—a framework that will ensure that the mandate of 100% **sustained** financial inclusion {as per the United Nations Sustainable Development Goals (UNSDG #1)} is well and truly achieved by 2030.

Merely using a digital instrument does not qualify as sustained financial inclusion. Nor is the use of a zero balance bank account. And we can give many other examples. As we have repeatedly said, what we require are **need based high quality financial services** that will help low income and excluded people have **greater sustaining**, **bargaining**, **negotiating and staying power**, which in turn, will enable them to overcome **setbacks**, **life cycle events**, **emergencies** and so on—all of which we have seen in this COVID-19 crisis. Among other things, apart from vulnerability reducing loans (post harvest, post production etc), this will include better access to high quality savings products, impactful insurance (social protection, health, asset, life etc), pensions apart from remittance and other services including micro-equity.

COVID-19 has just simply turned the construct of (real) financial inclusion upside down—whether, West Africa, East Africa, South Africa, India, Philippines, Caribbean, or anywhere else for that matter. There are numerous examples from across the globe concerning various shades of MSMEs, small and marginal farmers, informal sector participants, migrant workers, excluded people and so on. This is why a new framework/mandate for **sustained** financial inclusion is very essential.

Such a framework should help build a world class financial sector that is truly **resilient**, inclusive, stable and accountable. This framework will also require us to overcome the prevalent ambiguity in defining, operationalizing and measuring financial inclusion, an aspect neglected for long. What is now required is a basic mechanism for measuring financial inclusion, so that central banks can track—in real time—accountable progress towards 100% **sustained** financial inclusion by 2030.

And for all of this, we first need to clearly know 'where we are today' with regard to the construct of **sustained** financial inclusion, especially in the post COVID-19 era. Here, we should not forget the dynamic nature of financial inclusion—whereby people are included, excluded, re-included all the time—and COVID-19 is a live on-going example of the same.

COVID-19 has clearly demonstrated that mere financial inclusion cannot help—what is required is sustained financial inclusion, whereby people once financially included stay included thereafter. And the last 40 years have afforded us numerous lessons on how this can be achieved. Let us hope that Central Banks and other stakeholders pick up the cues and move forward accordingly.

#### 14. Suggested (Potential) Solutions

- 1. Allow calibrated opening of the economy (including domestic and international travel) with appropriate safety measures (including social distancing and maintaining a sanitized environment) while simultaneously protecting at risk people (i.e., those with co-morbid conditions like BP, Diabetes, Kidney Disease, Cancer etc, those of older age and those with known levels of low immunity). And of course, continue the on-going successful measures in terms of testing, isolation, quarantine and appropriate treatment (especially for at risk people) along with immunity enhancing measures that work in the short, medium and long term.
- 2. Immediately liberalize and rationalize taxation and remove existing direct and indirect taxes (minus import duties) and substitute it with a tax based on payment system. This will be a huge demand side stimulus and will enable people to save, consume more and responsibly and so on. There is no better news for any citizen on tax reform. In countries where the payment system is well developed, it is eminently possible. The example of India is relevant here. The sum of Direct Taxes (Income + Corporate Tax) + Indirect Taxes {Goods and Services Tax (GST)} is much less than a Banking Transaction Tax (BTT) of 0.60 % as per calculations based on RBI's payment system data. As it is, consumption based taxes are yielding a fraction of what they used to give us and the same will apply to income tax and corporate tax receipts because of the on-going (phenomenal) supply and demand side shocks caused by COVID-19 and the measures taken to contain its spread.
- 3. Boost infrastructure spending (by the government), while reducing the defence spending. Infrastructure is crumbling in many countries and spending on it can create the much needed jobs and ancillary activities to overcome the on-going consumption crisis and enhance demand as soon as possible (ASAP).
- 4. Continuously keep infusing liquidity through several measures within and across economies. Policy rate cuts, capping of funds that can be stored by banks with central banks so that there is an incentive to lend, reduced reserve requirements again providing for liquidity, special funds for MSMEs and low income people (for equity and micro-equity arrangements and managed as public private partnerships), government/central bank {special purpose vehicle (SPV)} guaranteed lending for MSMEs and low income people can play a greater role.
- 5. Lend more to build resilience of broken/disrupted supply chains in essential sectors, agriculture, health care and other areas as these will help in enhancing overall livelihoods. Also ensure delivery of a wide range of need based vulnerability reducing financial services including post harvest and post production loans, social protection, comprehensive health insurance, old age pensions and so on (not exhaustive). Only such products can enhance sustained financial inclusion in the long run by enhancing the staying, negotiating and bargaining power of SMEs and low income people (including entrepreneurs).
- 6. Deliver special packages for badly hit sectors like aviation and transportation, which are so crucial for long run economic prosperity. Everything cannot be done online and the psychological impact of WFH and other aspects must not be underestimated.
- 7. Deregulate interest rates, especially on micro and SME loans as banks, NBFIs, MFIs and other institutions will have to undertake several costly and fixed cost enhancing measures and social distancing procedures in their operations.

- 8. Develop the digital ecosystem quickly so that digital financial inclusion can speed along with enabling regulation for FinTechs, whereby they can enjoy a level playing field with traditional FIs. At the same time, minimum governance requirements for FinTechs must be implemented if they are to be on par with deposit taking banks, FIs and MFIs
- 9. Develop and use RegTech in an enhanced manner for regulation and supervision of all forms of financial institutions to get early warning signals and prevent financial crisis—this is especially crucial in the era of reduced on-site supervision
- 10. Ensure that the goal towards 100% sustained financial inclusion by 2030 as per UNSDG # 1.3 is measured and tracked in a transparent and accountable manner.
- 11. One final word on regulation, central banks and large banks and microfinance associations also need to monitor and help entities manage low probability high impact risks such as zoonotic transmission of diseases—in fact, central banks and governments must get work in getting an effective black swan insurance product that can cater to various stakeholders (including MSMEs) and come into force, whenever there is a black swan event (low probability, high impact event).
- 12. Ensure that for all policy measures initiated, the gap between intended policy and implemented strategy is nil. In other words, ensure proper and effective implementation. Great to have policies on paper but sad to have ineffective implementation.

Thank You!

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