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WEBINAR

The Account Aggregator Framework: A Multidisciplinary Dialogue



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Panel Discussion Report

TABLE OF CONTENTS

EXECUTIVE SUMMARY ON ACCOUNT AGGREGATOR FRAMEWORKS.....	3
OPENING REMARKS.....	6
PANEL DISCUSSION SESSION	17
I. EMPOWERMENT:	17
II. PUBLIC DIGITAL INFRASTRUCTURE.....	22
III. REGULATORY BENEFITS.....	24
IV. REGULATORY CHALLENGES	27
Q&A SESSION	32

EXECUTIVE SUMMARY ON ACCOUNT AGGREGATOR FRAMEWORKS

The panel discussion was structured such that it started off with opening remarks by each panelist followed by a Q&A session and closing remarks. The panelists were as follows:

1. **Mr. Siddharth Shetty** (Volunteer at iSpirt Foundation)
2. **Mr. BG Mahesh** (Co-Founder of DigiSahamati)
3. **Mr. Vinay Kesari** (General Counsel and the founding Team Lead of Policy and Legal at Setu)
4. **Ms. Anubhuti Singh** (Policy Analyst at Dvara Research)
5. **Mr. Rahul Matthan** (Founding Partner at Trilegal)

The Account Aggregator Framework (AAF) is a recent development and takes the form of an NBFC that gives individuals and businesses control of their financial data. It's a financial instantiation of the Data Empowerment and Protection Architecture (DEPA) Framework. DEPA represents an evolution of 'Privacy by Design' from being passive to active.

The AAF is built on open standards, works as a consent manager and ensures high levels of privacy. The data is decentralized, federated and maintains accountability. It also has strong immediate cross-sectoral viability. Digitization has been a strong mandate for the Indian government. As such, the AAF is seeing requisite support from the government, technology and regulatory ends. The AA must be interoperable and non-discriminatory. Uniformity in legal compliance enables this interoperability.

Perspectives and approaches to AAF can differ greatly. While the technologist may look at it as a techno-legal framework, the lawyer must look at it as a smart regulation. For the consumer, it is an aggregated view of their financial life.

There has been a global shift from data protection to data empowerment. A corresponding shift has been from a legal approach to a techno-legal approach that facilitates said empowerment. The third shift is towards a coordinated global approach of technology protocols. The AAF is a structure that can account for and accommodate these shifts.

Currently eight banks are ready to implement this system with five of them having gone live. This brings approximately 300 million bank accounts under the AAF. As such, the Indian effort is the largest implementation of an account aggregator system. The unique benefit of rolling

out AA in the banking sector first is the scale of the sector. This makes problem detection and feedback accumulation easier and can be applied to other sectors later, perhaps even at a lower cost and greater convenience.

Increasing amount of data is being generated and users are unable to keep up with it. The rights-based legal framework to regulate this data still requires users to make informed decisions about consent. Thus, such laws aren't very useful in taking control of data. AAF is a unique technology centric legal approach and has the potential to be beneficial outside of data protection as well.

The first innovation is the consent artefact, which can be used to record consent in an unalterable way and allows revocation of consent. This allows legal rights to be enforceable in a real way. The second innovation is the AA itself. The system of a specific entity created to regulate the interactions between the consent artefact and the consent aggregator is unique. It balances the incentives of various parties and serves the user's interests. The third innovation is interoperability, where FIPs and FIUs communicate through a common registry. The requirement of mandatory interoperability increases the scope for innovation and prevents monopolistic tendencies from harming the user. The India Stack (a paperless, contactless and cashless architecture) has three layers – digital identity, payment slips and the consent layer.

AAF being a technological solution precludes widespread access in a country like India. A strong gender gap continues to exist on access to phones and computers. Smartphone and computer penetration are relatively low with internet infrastructure still being developed. The AAF space may entrench these existing disparities and needs further innovation to be more inclusive.

Applying initially uneven technological solutions may provide significant trickle down and over-time benefits that justify such application. This may happen through feedback loops that identify gaps in the market. Technological solutions grow and accelerate, initially uneven application and low uptake can be remedied. Such innovation in the AA space will also be supplemented by the rapid growth that takes place in technology like smartphones and computers as well as the lower transaction costs financial services providers will now incur. Examples include the UPI system and E-government marketplace during the COVID pandemic. It is thus essential to maintain a long-term view that builds the architecture for solutions rather than the solutions themselves. AA will also allow the underprivileged to gain better access and advice, ultimately leading to increased informational and financial parity.

The Indian problem is unique and needs India specific solutions. Foreign solutions are unable to cater to our unique problems and instead it is the Indian framework that is inspiring solutions overseas. India needs solutions at a large scale and the problems of interoperability that arise from it.

Taking the long-term view and creating infrastructure requires cooperation between competing players. These collectives can address gaps in the market and that's where Self Regulating Organizations (SRO) come into the picture. These organizations can facilitate conversation with policymakers and bind multiple players. This institutional backing is essential to ensure appropriate outcomes. An SRO like Sahamati comes up with operational norms and guidelines which facilitates compliance with the regulator and an optimal end-user experience.

OPENING REMARKS

Mr. Siddharth Shetty's Opening Remarks

The genesis of the Account Aggregator ('AA') framework started a few years ago when we looked at how we could give businesses and individuals control of their data. This is especially important since we saw connectivity permeate hundreds of millions of businesses and individuals and the consequent generation of government, health, and financial data. UPI, for example, generates data at an exponential rate. It became evident that we needed steps in data inclusion, especially in health and finance; we needed to give people control of their data and make sharing easier.

Data sharing today, without control of data, is very insecure- shared via physical copies, taking rounds of various physical branches, going from one portal to another to share data digitally. Unfortunately, today millions of users give away their passwords to enable assisted third-party digital transactions of data. Given the day and age of technology we live in, this is very primitive. Moreover, only 9-10% of MSMEs have access to formal credit. The Bank of International Settlements found that this phenomenon exists not only in India, but also in other developed economies such as Hong Kong and the USA. Reason being that the entire banking system is based on physical collateral. To shift from physical to information collateral, we need to go back to the foundational point – How do we give people access and control of their data? For example, for a COVID test, we take biomarkers to our doctors, which are entirely data driven.

The Data Empowerment and Protection Architecture (DEPA) came to be with the aspiration of giving 1.3 billion Indians control of their data, and it progressed with three pillars. One is the underlying technology – designed on open standards and open protocols, so all the players are aligned with each other. These standards are for concepts like consent and define consent itself, informed consent, and how to revoke, provide, and make consent granular. A lot of the legal principles that speak of informed consent often get encoded within these open protocols. Second, where does the user go to give consent? Does a financial user go to multiple banks or mutual funds to give consent? Or does he go to a consumer of data, where he may be exploited? As such, we need to unbundle consent collection from both entities and place it in a third-party fiduciary, the consent manager. Therefore, the AA is a consent manager for financial data. A consent manager may exist for a variety of data, like health or telecom. This is the real institutional innovation that India has come up with. These fiduciaries live in the ecosystem

today, where the user may discover where their data resides. It is stored in a completely decentralised manner. The identity behind it is also federated, with no unique ID creation unless the user decides to collate data and create one. There is no use of even Aadhar in the entire architecture. The user has a choice to facilitate the flow of data.

A few days before the launch of the AA framework, there was a summit with global policymakers essentially convening to discuss globalising that which has been implemented in India, fully recognising the shifts that are taking place from first, data protection to data empowerment. The second is a shift from a purely legal approach (resulting in market failures) towards a techno-legal approach. The third is a shift from each nation-state taking a siloed approach that has created jurisdictional arbitrage by different companies, much like in the world of taxation, to the need to take a coordinated approach. Coordinated technology protocols while allowing for regulatory extensions that are local to each country. That is, in a broad view, the mind map within which DEPA is rolling out.

The principles underlying the entire consent model are called ORGANS. O is an open standard, R is revocable, G is granular consent, A is the consent being auditable, N is notice, and S is the security of consent. These principles form the foundation of India's data protection bill as well. Once the bill gets passed, it will extend the system to many other data categories- private categories like e-commerce and social media. However, in the interim, the rollout is already happening within the regulated sectors of finance, health, telecom and government data, which is now being made accessible with consent.

Consent does not absolve the data consumers from accountability. They are now more accountable because of the increased transparency created by their tools. Data was shared only for one purpose, and they are now responsible for ensuring that it is only used for that purpose and only stored for that period and nothing else. Thus, accountability remains so that data is not processed to harm the user in case consent was not informed.

An ecosystem has been created that gives users tools that otherwise did not exist, and if they do not have the tools, they have rights that will never be operationalized. That is where DEPA fits in.

Mr. BG Mahesh's Opening Remarks

The Account Aggregator ('AA') we see is the financial instantiation of the DEPA framework. The DEPA Framework can be applied across verticals, like finance, health, travel or any kata.

We, as AAs, are now focused on the users being able to specifically share data, like finance data for banking, insurance, capital market, pension or any of those. We are a collective for the entire AA ecosystem, not for AAs alone. We work with data providers, the users of data, AAs, technology service providers, and lawyers. I want to specify our work with lawyers for a year and a half because everything about public data and data privacy is relatively new. Now that we have implemented this ecosystem and everything has gone live, the usage of AA and how much data people will share will be so high that it becomes crucial to be aware of data privacy in all legal contracts. About 15 days ago, the entire ecosystem went live, eight banks are ready with the implementation, and five banks have gone live. These eight banks can share about 300 million bank accounts of information. We all get excited when we hear of frameworks from abroad, but those include only about 3 million bank accounts of data being shared, and we are 100 times bigger at phase one. This is very important because the entire framework, from start to finish, was done in India. It is an excellent example of Make in India, for India.

Mr. Vinay Kesari's Opening Remarks

I will start with some of the human aspects of this discussion and lead on to the legal and market issues that I think are relevant. Sharing of personal data is honestly one of the most pressing legal challenges in the world right now. One of the dominant themes in the world is technology as a horizontal force becoming more important across many different domains. It could be finance, manufacturing, even healthcare. Technology is not restricted to a vertical domain and is essential horizontally across pretty much everything else.

As technology dominates, the rate of change in all of these other domains, which used to be in their silos, also starts to accelerate massively. In the coming years, breakthroughs in manufacturing or healthcare that would probably have taken decades in the earlier world will soon start happening in just a couple of years. You can see this, for example, with electric vehicles ('EV'). We have had motor cars for well over a century, but in just the last five to ten years, the rate of change has been massive. EVs have started to move from an absolute niche to slowly become mainstream to a point where you have a company as old and large as Mercedes committing to move all-electric by 2030. That would have been unimaginable even 15 years ago, but as technology has come to dominate the automotive industry, these kinds of changes and rates of change become possible. This is going to happen across domains; it is certainly happening in FinTech today.

As humans, we must have the ability to manage these changes, make sense of them, keep track of them, and make sure these changes serve our purposes and keep our interests at heart. However, we are not keeping up because our rate of evolution and the rate at which our brains change is just not as quick. That is something that we cannot look to change immediately. One of the challenges here is the increasing amounts of information generated about us, shared across and between many different types of entities, and used in so many different ways. Some beneficial, some not so beneficial.

The average person, or even the legal expert, is just not equipped to process the implications of this data collection and sharing. So, what are people doing in reaction? Countries are creating more laws to control what can be done with personal data, how it is collected, and they are giving more rights to the end-user; the citizen. This, unfortunately, still leaves the user in a position where they have to make informed decisions about consent. They have to keep track of what consent they have given and where it is being used. They have to utilise completely different mechanisms when it comes to managing these consents or revoking them, depending on which entity has the data. These laws, while they might exist on paper, are often not very useful in achieving the end goal of allowing you (the common user) to take control of your digital life; your data. That has translated to many concepts we have heard about in data protection discourse, like consent fatigue and many other issues we are trying to solve. We do this often through better laws, better contracts, better regulation of entities, and how they (entities) present consents, intake consents, etc.

What we are not doing in many of these cases is trying to fight technology with technology. We need to use technology as an enabler for the user and create a regulated construct where people have digital tools that help them manage the life cycle of personal data and data sharing. That is what brings us to AA, and that is precisely why I have been extremely excited about this idea for quite a few years. I am excited right now because this very long journey that many people have worked hard on is finally seeing the light. What AA does is present a very tightly integrated techno-legal solution to this entire problem. I believe that it is one of the first, if not the first, such solution in the world. A solution not just in the area of data protection, but more generally when it comes to using technology tools to help solve some of the legal problems created by other technical tools, which is really what makes it so momentous.

Without getting into the details of breaking down the AA construct, I think there are three significant innovations the Indian approach is making. One is the consent artefact; two, the fact

that there is a separate entity created and licensed to be a servant of the user; and third, the idea of interoperability.

The consent artefact is the heart of this technical solution because it presents a way to ensure that the user's consent is recorded in an unalterable way, which can be verified at any point in the future. This device makes a lot of the legal rights that a person may have enforceable in a real and cost-effective way. This is because the consent artefact is unalterable; it records every detail of the consent, it can be used to investigate misuse, it can be used for revocation of consent, and it can be used to know what all consents you have given. There is no one else who has taken this approach. I think that is the first and most important distinguishing feature.

The second is the fact that AAs themselves have been created. You could have the consent artefact and mandate the consent artefact without creating consent aggregators, as well. You could simply create a standard and pass a law that any personal data sharing needs to happen based on a consent artefact, leaving the market to figure out who will operationalise all of this. However, here we have AA; an entity created and licensed for this specific purpose. I think this is the right approach because the user ultimately needs an ally to count on. The fact is that incentives are not always aligned between either a financial information provider (FIP) or a financial information user (FIU) and the end-user. So, the AA has a legal responsibility to ensure that they serve only the user's interests.

Finally, interoperability. The fact is that all FIPs and FIUs need to be able to talk to each other through a common registry. The legal requirement or the technical requirements that they all be interoperable is also at the heart of making this successful. It gives this construct the best chance of success because it lets market forces operate, meaning that people will have to innovate on the product. Therefore, it will be tough to leverage network effects and develop a very large model by simply acquiring a large number of FIPs or FIUs. We have seen consent or account aggregation intermediaries in other countries; companies like Plaid have pioneered some of these ideas. However, because of the absence of a regulatory construct, particularly one that emphasises interoperability, it is the kind of market that tends towards monopolies or duopolies. This is not great for the user in the medium term. The fact that interoperability has been mandated here means that we have anticipated that (monopoly) possibility and we have provided for it. This is really what excites me about AA and why I think they are something worth thinking about and working on.

Ms. Anubhuti Singh's Opening Remarks

In my statement, I will be covering topics of consumer inclusion in the system, their empowerment and the underlying infrastructure for evolving tech. I will then end with some regulatory observations when it comes to AAs. I will also attempt to provide a consumer protection lens to everything that I am seeing.

Just for completeness, if I were to put it very simply, AAs are Non-Banking Financial Companies (NBFC), whose purpose is to circulate and exchange information between requesting and providing parties, with due consent from a given user for specific purposes. At the moment, AAs are only being designed for smartphones, and the associated front ends. If we have to come down to it, AAs are a technological solution. Therefore, access to such a technological solution is dictated by those who have and do not have access to critical assets. In this case, at this very moment, at least, it would be either having access to a smartphone or a computer with an active internet connection. We have noted across several policy dialogues over the years that access to ICT infrastructure such as telephones, networks, mobile, computers are all prerequisites for digital inclusion. While there have been significant improvements on this over the last decade, I think several cultural patterns have continued to persist. For instance, as of 2018, we know that the gender gap in mobile phone ownership in India was 26%, while the gender gap in mobile internet usage was even higher at 56%. A recent in-house primary study on access and use of mobile phones by women found that many women have access to phones in India. However, it is often through somebody else's phone, usually the male member of the family. If there is a household phone that has to be shared amongst everybody in the household, the men in the family usually have the primary use and ownership of the phone.

Moving on from just the gender aspect, if you look at the smartphone or phone usage in India, there seem to be about 450 million smartphone users compared to 550 million feature phone users. Amongst feature phone users, 40 to 45% of these feature phone users are using devices that cost less than 1000 rupees, so we can imagine the kind of features that these phones might have. On the other hand, computer ownership continues to be low at a mere 4.4% for rural households and 23.4% for urban households as of June 2018. Common Service Centres (CSC) are where entrepreneurs are contracted to set up internet kiosks in rural areas. The idea was for rural citizens, who might not have access to the internet or mobile phones, to go and use all of the services provided by the government at large. Even if we consider these centres, we know that there are serious penetration and sustainability issues. As of 2018, there were only 2.28

lakh CSCs functioning at the Gram Panchayat level. There remains the plan of establishing about 2.5 lakh CSCs, about one CSC per Gram Panchayat remaining under the Digital India programme. Even where the CSCs are present, as of right now, they are incredibly impeded by erratic network or hardware issues.

Suppose I had to put these two things together. In that case, I do not think I would confidentially be able to say that AAs, or any other technological solution for that matter, specifically enables and empowers marginalised communities. It only further entrenches the barriers to access to resources that already persist. While we talk about AAs and empowering customers by letting them decide whom they can or cannot share their personal information with, we have to understand that masses of the population do not even have access to the channels on which this empowerment is happening. As an urban, empowered, smartphone using citizen of the country I'm incredibly excited to not have my bank bothering me for putting together several documents to get a simple loan. However, as somebody in a very urban area with no smartphone, I think this makes no difference. I will continue to go to the informal lender in my area to get a loan at very high interest rates. With this opening statement, I am trying to take the focus away from AA users (I am one of them, and I am very excited about it). However, I think the idea here is to not forget about those we still have to continue innovating.

Then if I had to talk about enabling infrastructure, as consumer side experts, I do not have strong views on the government or supply-side policies. We do know that India's journey towards digitalisation can be traced back to the 70s, and since then, there have been several improvements for the National Informatics Centre (NIC). We had a couple of initiatives on the ICT front, such as the Rural Wireline Broadband Scheme and the Mobile Infrastructure Scheme. These schemes have been around and have been doing an excellent job of expanding access to the infrastructures that enable access to all the technological improvements that have been happening. The most recent one that I would want to call out is the GI cloud, the MeghRaj, which is an initiative to ensure optimal usage of IT spending by the government while simultaneously giving the impetus to improve the adoption of E-governance initiatives using the cloud. I will not assert that there has been, or has not been, sufficient keep-up by the government to provide the enabling infrastructure, but I can say that it is part of the agenda. I think that is a good thing because as we see more of these services come in, like AA and a public credit registry, we continue to see technology building on top of technology. So, I think the fact that the government is at least thinking about expanding access to the prerequisites is a good thing.

I think I will quickly move on to the regulatory aspects. Initially, there was much talk about how AAs are bringing in the open banking approach that we have heard of from Europe. The activities of AAs in India are somewhat similar to the Account Information Service Providers (AISPs) in other regimes. They provide an online service of consolidation of the use of information of one or more accounts of a particular customer and gives it to them. Similarly, the AISPs in the EU, under the Payment Service Directive 2 (PSD2) provide online services of consolidated information to customers, again on any of the accounts held by them, with the option of sharing this information with payment service providers. These approaches were rooted in regulations and directives first, with technological providers and ecosystem entities priming themselves to facilitate the provision of these entities, which is very similar to what we have seen in India. In India, while the inspiration of AAs could have been that of open banking, at least from the very first mention that I can recollect, which was back in 2015 in an RBI press release which stated that the role of account aggregators was to enable the common man to see all his accounts across financial institutions in a standard format. Currently, I would say that the services being provided by AAs are much broader than just giving a customer the consolidated view of information. Primarily AAs are conduits of information between two regulated entities, the FIA and the FIP, where the AA itself never sees any information. However, how this information is exchanged and accessed is either through one-time consent or enabling periodic consent by the customer. I think that is interesting, as it allows for a broader range of use cases for anybody who might be querying this information.

Then if we have to talk about the laws and sectoral regulations or intervention so far, we know that AAs were created as a joint decision between all the financial regulators in India, that is, the RBI, SEBI, IRDA and PFRDA. However, since then, we have only seen regulations and directions emerging from the RBI and its tech arm, ReBit, for the technical specifications. As such, there have not been any interventions from other sectoral regulations even outside the financial realm. However, we must note that as per the last circulated draft of the Personal Data Protection Bill, consent managers (which account aggregators are in the case of financial sectors) are required to be registered by the Data Protection Authority. So, if this registration exists, we do see a vital requirement for interagency coordination between at least the RBI and the Data Protection Authority that is to be built under the PDP Bill. Specifically concerning the processes, the data flows and the liability structure of AA.

Mr. Rahul Matthan's Opening Remarks

To spice up this afternoon, let me disagree violently with some of the things that Ms. Singh has said. Not because I disagree with her, but we have got to have two perspectives on the issue.

When we talk about technology solutions for social problems, one issue that keeps getting thrown up is that technology is uneven. When you apply an uneven solution to society, you will perpetuate the discrepancies that exist. I do not disagree with that as a statement, but let me contrast that with actual experiences of how things have been done in this country. If you attended the summit that Siddharth (Shetty) spoke about, where we had seven countries present their thoughts on technological approaches. One of the things that the Indian delegate mentioned was quite striking – we are in the third wave of financial inclusion in India. The first wave was when we issued 300 million bank accounts. Mahesh spoke about the numbers when we talk about these things, but in wave one - 300 million at one shot. Then we had UPI, which democratised payment. At each of these stages, the push back was 'technology is uneven', and there are people who are going to be further disadvantaged than they already are. However, today UPI does 3 billion transactions a month. We know that during the pandemic, in the lockdown, the fact that people had access to digital means of payment gave them the ability to do things that the circumstances of the lockdown would otherwise prevent them from doing.

The AA framework offers the third frame of this inclusion, which is the democratisation of lending. If you look at each of these in isolation, they do not seem much, but if you look at what each stage has done by building upon the other, you get a sense of how the acceleration happens. If you think about all this when UPI first launched, the government had to come up with the BHIM app, which was very clunky. There were hardly any people taking it up. Then, with all the other apps coming in, it is just a hockey stick curve. So, if you look at the volume of AA transactions today, do not be disheartened. Do not think that this is any sign of the fact that people do not have the technology and so they cannot use it. The fact is that we are at the BHIM moment of UPI when it comes to DEPA and AA. If history is anything to go by, and often when I write, I try and look at history because it's remarkable how history predicts the future if you find the right period. If you look at three waves of social inclusion, I sense that we are looking at another Cambrian explosion, as it were, of things to do.

So, I am not particularly concerned about the lack of smartphone penetration. I think that is for two reasons. First of all, smartphones are not 50,000 rupees a smartphone anymore. You will get a good smartphone at 5000 rupees that will have all the features that you need. So, when

there is a need for it, I think people will get it regardless of where they are, and they will utilise it, and there are ways in which they can do it. Second, innovation will go down to feature phones as well. I see no reason why, from a technological perspective, that will not be possible.

The second thing we also need to keep in mind is that whenever we sit from this part of the table, which is looking forward at a future that is about to be written, we have many visions and imaginings of what it will look like. History has always shown that it is entirely different. The innovations that we expect seem tame in comparison to the innovations that are created. Just yesterday, I was speaking to someone talking about AA and their idea for an AA. Essentially, they said that when they are looking for a home loan, they have to provide information to the bank every month, and it is just a pain. There is this floating rate of interest and the data asymmetry is just not in their favour. With AA, they can pool together the data of 50,000 such people, all home loan borrowers and get a better sense of what the lenders are doing. If they find the lenders are unfair (when they look at the lowest available rate is across that whole ecosystem), they can pool their resources together. They are now swapping the entire pool, almost securitising it themselves. Usually, banks would securitise a bunch of borrowers but they will securitise themselves to lenders and get the best rate possible. Is that not an empowerment story? Would that have been possible if it was not for the fact that this data is available in this manner, in a completely fungible manner and automatically? The simple submission that I would make is that, as much as we think that we are as happy with the innovations that we can imagine, the innovations that the market will create will surprise us even more.

I want to say that as everyone has been saying so far, this is a techno-legal approach. I think, from a contextual perspective, it is perhaps the wrong way to think about it as a lawyer. I would like you to think about these as smart regulations. Our regulations and laws say that we need notice and consent, but you can say it and then if someone does not provide you notice and consent, your only option is the very unsmart thing to do, which is going to court. However, suppose you use a technology framework to embed these principles of notice, consent, purpose limitation and use limitation into the actual code of the transfer. What you are doing is you are creating smarter regulations. That is why I think, at least as lawyers, we should apply the lens of smart regulation to DEPA as opposed to a techno-legal framework, which is what the technologist will think about DEPA. They will say this is a technology that I built because the law requires me to have this technology. Lawyers need to look at it and say that we have laws and can make them smarter by adding a technology layer on top of it. We have spoken about

how to make regulations smarter and we have spoken about smart contracts for many years. Our current topic, to my mind, is one of the very early examples of smart regulation at the cutting edge of where it is required, which is in the context of digital technologies.

PANEL DISCUSSION SESSION

Continuing from the initial clash on social empowerment and inclusion that developed in the opening remarks of Mr. Matthan and Ms. Singh, the first theme for discussion was the role of empowerment and inclusion in the AA framework.

I. EMPOWERMENT:

- 1. Why is there a need for empowering users with their data, especially in the Indian context? What is the demographic as well as socio-economic realities that drive the objective behind the Data Empowerment and Protection Architecture and Account Aggregators? How do these protocols achieve this empowerment?*

Mr. Siddharth Shetty, in answering the above question, initially stressed on the system underlying the AA framework being based on a set of open technology protocols. Thus, even if the initial implementation of the system is smartphone-centric, future variation in manifestation is expected. An example of this is the current experimentation in the ecosystem with assisted modes of giving consent. This is for individuals who may not own smartphones and wish to aggregate their disparate data. When calling a telehealth service, the operator on the other end can assist in setting up, linking and sharing data in a way that is easily translated and comprehensible. This preserves privacy as data is sent straight from the provider to the data consumer, without the operator receiving access. Similar systems may be built for financial purposes using these open protocols.

Exclusionary gaps do exist and they should be looked at as market innovations waiting to happen. Even today, while AAs are focused on individual users, there is scope for their applicability to MSMEs and larger market players who have different requirements and workflow to individual users. Different platforms in the money management sector essentially serve the same function but serving different user experiences based on scale. Similarly, consent managers are not expected to be restricted to individuals but will also serve MSMEs and enterprises. These would include different authorization chains and workflows from the current individual scenario. That is why a longer-term view (10- 15 years) is essential, as the market will

continue to develop wave-by-wave based on a feedback loop that identifies uncatered to market segments. These gaps could be filled by consent managers or increase in reach by data consumers, able to provide new financial products/experiences due to lower transaction costs. For example, MSMEs were able to finance purchase orders using the Egovernment marketplace, especially when banks shut off access to capital during COVID, by consenting to share high provenance data. This enabled them to get funding for particular orders or invoices and reduced transactional costs.

Thus, we have examples of products that were initially inconceivable. Similar to GPS or the Internet, one cannot anticipate subsequent innovation. However, the underlying philosophy of such architecture is minimal public infrastructure with variation in use cases built by market players. A country like India will have diverse needs in user experience and there is no single entity that can cover it. So, we must create a minimal infrastructure that lowers transaction costs and makes innovation by market players economically viable. This process is not immediate, even UPI only has a penetration of 150-200 million despite having a large volume of transactions. The timeline for the transformation should be over 10-20 years. We should not be looking to build one particular solution that is systematically adopted but rather building the tools and architecture that enable diverse solutions. Such thinking can solve the issue of widespread demographics, like language and abstraction of consent due to differences in literacy. This also enables choice on behalf of the user and their fiduciary.

2. *What is the state of the industry – who are the stakeholders? what is their status? and who all are live in the ecosystem?*

Mr. BG Mahesh answered the above question due to his position and experience working in the industry, giving us context for the subsequent debate on empowerment. He said that the eight involved banks cover 40% of the banking system, with more large banks and NBFCs expected to join by the end of the calendar year. As such, it is the right time for AAs to go cross-sectoral because the currently involved players (banking, NBFC, insurance, pension and capital market) will ensure high penetration in the banking system. Thus, AAs must now focus on getting more sectors on board.

The focus, however, should be on developing use cases that enable the growth and development of infrastructure. Financial services like lending have occurred even without AA but will undergo an improvement with AAs. Such changes to existing use

cases will not bring huge changes unless we can discover new use cases. To do this, clearly identifying the problem is important. Once we identify issues and gaps, we can work on the provider side with FIUs and focus appropriately on the consumer.

3. *While Mr. Matthan and Ms. Singh agreed on the positive effects of AAs, the heart of their disagreement was regarding the access to hardware and the extent to which information asymmetry would impede AA.*

Ms. Singh responded to Mr. Matthan by clarifying her earlier point that focusing on inclusion is not opposed to technological innovation. It is often by thinking about excluded potential users that we can create solutions and use cases. She agreed that UPI was indeed helpful to users during lockdown, but she also pointed out the Aadhar Enabled Payment System (AEPS) role. This system, unlike UPI, can work on a feature phone with just the Aadhar number. During the COVID migrant crisis, this system faced high failure rates due to an unexpected rise in volume. Such failures are precisely why we must focus beyond a select group of users and consider the wider populace. She then added to Mr. Shetty's argument on innovation by mentioning players who wish to create more inclusionary forms of AA. These could include voice-assisted AA or a system that does not require a phone.

Ms. Singh's comparison with Aadhar further deepened the discussion pool due to Mr. Matthan's close experience working with said technology.

Mr. Matthan agreed that systems and technologies are bound to fail, but that is no reason to stop innovating or building systems. The very existence of these systems allows access and inclusion in a way that would not have existed without these systems. The need for digital systems linked to identity, payment etc., was exacerbated in the aftermath of COVID. Europe is currently building a Digital Identities Act to integrate identities across the EU and African countries are considering MOSIP to provide identity solutions. While failures must be minimised, they cannot impede the building of the systems themselves. While the hardship stemming from exclusion shouldn't and cannot be ignored, it cannot be a barrier to innovation.

Mr. Vinay Kesari's addendum to the debate stressed inclusion as a motivating factor for the growth of these (AA) technologies but agreed with Mr. Matthan in wanting immediate implementation without waiting for the technology to become perfectly inclusive. He also clarified the nature of AAs as a tool to improve, rather than supplant existing methods. Lenders look to widen their user base as a principle and will not narrow it due to technology being exclusionary. They will always use physical methods and preserve existing workflows to entertain would-be borrowers. It would be detrimental to replace entirely or remove existing methods, and AAs are additional to existing systems.

4. *How can users maximize the value they can generate from Account Aggregators? Are there factors or strategies they can use while transacting?*

Mr. Kesari said that a complete answer would currently be impossible due to AAs' nascent and evolving nature. Mr. Kesari hopes it evolves by giving users an aggregated view of their accounts, i.e. their financial life. This aggregated view would ideally allow for tools that permit users to take control of their finances. This control is not for the millionaire but for India's underprivileged. Such individuals, who are extremely poor, do not have access to financial products/services that help coordinate and make financial control easier. Products/services like credit and insurance are more difficult to access for the poor as they lack the requisite corpus of funds, awareness of these methods and access to individuals that allow for such awareness. Thus, there exists an informational asymmetry.

Mr. Kesari hopes that low-income individuals using AA can leverage financial tools that provide advice on their cash flows, help individuals make better decisions and ultimately lessen the financial and informational gaps. Everyone cannot afford a financial advisor but a Roboadvisor can focus on gig workers and their unique issues, mitigating risk. This would be the ideal vision for AAs. Even the affluent and educated make bad long-term financial decisions but have access to a huge safety net and a greater resource pool. The aim is to make this privilege accessible to all.

There is also the core idea of taking control of consent and protecting one's data. However, to Mr. Kesari, that is almost secondary because AAs can help Indians solve much more pressing concerns.

5. *Typically, the Make-in-India approach has aimed to focus on the manufacturing sector. But AAs, an indigenously developed solution, help boost activity in the service sector through better access to upstream and downstream services like credit. Drawing from this, we wanted to understand from you if achievements in Make-in-India are more important if they happen in the service sector, such as with AA. Moreover, what do indigenous technical developments like Aadhar and AA mean for the larger policy ecosystem going forward?*

Mr. Mahesh said that it is important for India to create indigenous solutions for India-specific problems. Low penetration of access to formal credit for MSMEs is the problem, and the AA framework can be designed around this use case. Foreign solutions will not be able to solve these problems; it is rather the reverse, where the Indian framework is inspiring other nations. DEPA provides a good framework to branch out from for other nations. When the government, policymakers, regulators and market players come together, we can solve Indian problems. Make In India can help solve not only export-related issues but also domestic problems.

Mr. Shetty dived deeper into Mr. Mahesh's perspective with a first-principles approach to domestic issues. He said we should not use technology only because it has not been invented in India, but we must first identify the issues for a market that involves 1.3 billion people with a lot of diversity and differing state and market balance. With such a lens, we realise that existing frameworks on certain issues (like data) do not solve our issues. At the inception of the AA project 5-6 years ago, there were calls to copy the GDPR framework over adopting an indigenous one. However, recently we have had admissions of the GDPR essentially failing and the creation of new regulations to bridge gaps. So, we must investigate whether the correct legal constructs exist and to do that, we must investigate the existing issues in depth. If the solutions to these issues exist, we embrace them, but if they do not, we must innovate. This innovation is often long, with strong opposition, but eventually, the best solution is bound to surface to the top.

He also pointed out the importance of these indigenous solutions as soft power to be leveraged in foreign policy. It can cut across geopolitics due to the ubiquity of the problem that the solution addresses. This also means that Indian actors who have built with this system can travel to other parts of the world. Globalisation, in the case of Nokia and Ericsson building as per the GSM standard or 5G with Huawei, has worked

on such a common playbook. India has tended to copy solutions from abroad to avoid dealing with the drawbacks of innovation. There is significant pushback against solutions, even existential questions in AA (such as will banks even come aboard this system?). Rather than ready solutions (in terms of contracts or legal constructs), it is more valuable (in some instances) to build from scratch because eventually, the opposition will die down to reveal a well-built solution.

II. PUBLIC DIGITAL INFRASTRUCTURE

1. *Can you educate some of our uninformed audience of the vision of the India Stack project, what its layers and? Where does Account Aggregator fit in with respect to the larger India Stack project?*

Mr. BG Mahesh defined India stack as India's digital public infrastructure. To analogise, all email applications are built on the SMTP framework, and above it, we have Gmail, Yahoo or Hotmail. Similarly, Google Maps exists above the GPS framework.

India stack has three layers – first, digital identity (using Aadhar to open bank accounts and EKYC). Second, payment slips such as the UPI framework on which digital payment apps are built and this infrastructure is handled by NPCI. Third, the consent layer – a major theme in the session, the consent artefact gives an individual modular control over consent. The idea of individuals being in complete control of their data is highly new, as opposed to corporate control of data used to sell products. It is only with the AA system that individuals can gain control of data and choose to benefit from it. In summary, Mr. Mahesh says that the India Stack is a paperless, contactless and cashless layer. (external source by Mr. Mahesh for more information on [India Stack](#))

2. *Account Aggregators are software solutions that can only be accessible and scalable if there is adequate underlying hardware. The most basic layer before moving to the India Stack project's various layers are mobiles, internet access, GPS, and cloud. Do you think the Indian government's policies in ensuring widespread affordable and qualitative access to this layer is adequate or is not in keeping with the pace of software progression?*

Ms. Singh believed digitisation to be a strong mandate for the Indian government, going back to the establishment of NIC in 1970, to provide an ICT framework for the government and public administration. Projects such as Wireline Broadband Scheme and others were implemented under the Universal Service Obligation. These schemes, along with projects like the National Telecom Policy, have tried to deepen digital inclusion. The 2006 National EGovernance Plan (NEGP) similarly sought nationwide, reliable digitisation. CSCs that exist today stem in large part from such initiatives. In 2014, the NEGP was revamped due to poor implementation and uptake of the 2006 scheme. This NEGP 2.0 sought integration of services, cloud technology and language localisation to deliver integrated, interoperable and widespread digital services. We can trace our current foundation of interoperability back to such schemes. The current ecosystem is seeing a lot of development from the government, technology and regulatory end. Despite these developments, there is a huge gap between ownership and access numbers which further intersect with cultural barriers. Therefore, Ms. Singh asserted that we can see a lot of development if we simply speak of government mandates and initiatives, but the core issue stems beyond that.

3. *What role do you see the private sector playing in this regard? Off the top of my head, I can think of the work that Reliance JIO has done in terms of access to low-cost smartphones and the cable that they've placed in a lot of rural areas. So, is that the extent to which you see private sectors being limited?*

Mr. Shetty added the private sector flip side to Ms. Singh's analysis of public sector initiatives. He said that there must be a balance between the private and the public, as an excess of either creates its own set of consequences. Gaps in the market can be addressed either by private entrepreneurs or collectives of market players that take a long-term view. New infrastructure often requires cooperation between competing players but existing forums for cooperation spend their time lobbying. This unfortunate situation also results in low trust between policymakers and market players. That is why organisations like Mr. BG Mahesh's Sahamati are essential to facilitate conversations between competing players and achieve tasks like opening up data. These conversations also allow for lower transaction costs, retention of individuals in the system over the long term, accessibility, consumer protection and grievance redressal. State intervention is asked for when problems cannot be solved, but at the same time, claims are made that the state is incapable of solving issues. This strange relationship with the

state necessitates alternate institutional setups that go beyond individual players and solve for specific interests in the market.

Further, a lot of issues are fine-grained. The state may lay down cable, but nobody is using it due to the internet being expensive. The state has to now come up with PM-WANI, a balance between state and private players, to solve this last leg of connectivity. Private players can provide modems, create apps, provide electricity and come together to create public Wi-Fi under the scheme. Such an attempt cannot happen only with government intervention. Thus, the approach for AAs needs to be more nuanced and collaborative than simply saying the government/private intervention is useful or not.

III. REGULATORY BENEFITS

- 1. Over the years, there has been a shift in data protection and governance from merely legalistic solutions to now architectural and design interventions. This brings us to the concept of Privacy by Design- which is recognized in both the PDP Bill, 2019 and the GDPR. Can you enlighten us on what this concept entails, and how the Account Aggregator's design features achieve this objective?*

Mr. Matthan expounded on the origin of Privacy by Design, saying that it predated the GDPR and was created by Ann Cavoukian, Information and Privacy Commissioner of Ontario, Canada. The idea was to be intentional about privacy in an upfront and non-reactive way.

Building privacy into the design and application of technology by default. Cavoukian's concept was passive – for example, the unchecking of sign-up boxes for newsletters by default instead of prechecked by default. However, the evolution of technology means we can be more intentional and overt about privacy. One of the earlier Indian examples of privacy by design, even before DEPA, was the UPI VPA framework. It allowed financial privacy to be preserved while facilitating bank transactions, designed intentionally to be so.

DEPA is the next instantiation of Privacy by Design in technology infrastructure and has been actively designed with privacy in mind. Mr. Matthan further stressed the importance of the ORGANS framework and its pervasive nature, either explicitly or

implicitly, in most privacy legislation. These frameworks (like DEPA) are the more advanced forms of privacy by design, relative to what Ann Cavoukian came up with.

2. *On the topic of design intervention, the Data Empowerment and Protection Architecture, specifically the Account Aggregator Framework, has also made changes in the institutional design of data sharing (whether this is consent managers, or the registry, or the non-exclusivity agreement between FIPs/FIUs). Can you enumerate these changes, and what their positive implication is on data sharing?*

Mr. Matthan explained that institutional backing was important to deliver appropriate outcomes. The concept of a consent manager is one such example of an institutional framework that helps with targeted delivery. It allows you to register consent to a consent model and make all accounts adhere to it. He further explained why consent managers are such an important innovation.

Firstly, data portability is a right in most modern privacy legislation, allowing the transferability of data. However, without the appropriate institutional framework, the exercise of the right becomes tedious (like approaching every individual bank for data transfer). Consent managers allow you to connect your consent to all the bank accounts and provide authorisation without visiting individual banks. It thus enables a provision that outstrips the need to make individual requests and allows a mechanism of authorisation of transfer once the consent model is recorded. The second element is providing the user with a dashboard of all the transfers of data. The dashboard provides the benefits of making transfers auditable, smooth, transparent, and tailored to users' needs. Without the consent manager, you do not get to see how your data is being transferred among institutions.

Speaking from the perspective of a privacy lawyer, Mr. Matthan highlighted the ability to be double-blind - a feature of DEPA that allows segregation of consent and data flows. To give this powerful feature some perspective, we note that the data travels paths with stops – consent, authorisation, transfer, etc., and actors holding these spots are unaware of each other. The consent manager is data blind, not knowing what passes between the FIP and the FIU. DEPA can be built in a way where the information requester and provider are unaware of each other's identities. The middleman, the consent manager, also has no information on the data passing through. This double-

blind standard is the highest standard for confidentiality and is used in clinical trials. It essentially puts a third, anonymous person in charge of constructing confidentiality-taking consent away from the purview of the two principles or the file transfer protocol. Reciprocity between the FIUs and FIPs is also implemented as a carrot and stick mechanism, allowing access only by ensuring contribution to the framework. Institutional intervention which enforces regulation binds all these features in a single ecosystem; something technology cannot do on its own.

He also spoke of Sahamati's role as a Self-Regulatory Organisation (SRO), which is essential in binding together frameworks like AA. They form the core of the self-regulatory ecosystem that binds organisations and technology binds systems.

3. *Interoperability and data portability – What is the extent of the interoperability among AA? There is the possibility of data portability without function portability. Do AAs have function portability as well or only include data portability?*

Mr. Shetty highlighted two perspectives – interoperability and non-discriminatory. Different banks may employ different account aggregators with different standards of confidentiality and varied features. However, they would work in tandem with each other without any instance of redundancy. Further, AA is a crucial pass through and should not discriminate between requests. The only discrimination can come from the user, as a choice. The user can use an AA at the baseline level to discover and link where their data resides and with which data provider. This, by default, means that the AA is interoperable with every data provider in the ecosystem. To be operable only with specific AAs and denying alternate AA users, creating the need to visit multiple providers, would defeat the point of the system. Therefore, there is interoperability between the AA and the FIP and the AA and the FIU. The legal construct and network rules are instrumental in enabling this interoperability. This uniformity in legal compliances helps preserve interoperability. The AA cannot discriminate on the back end of requests and can merely present information to the user to make an informed decision, like nutritional information on a food product or star ratings on consumer appliances. If a data consumer is known to be subject to leaks and breaches, it may have a 'one-star' rating or there may be a certification process for data consumers, much like TLS certificates, to protect users. Such is the interoperability designed within the technical standards.

Similar interoperability is designed into the procedural guidelines or ecosystem Terms of Service. Mr. Shetty is amazed at this legal construct because there are absolutely no bilateral contracts. This allows any AA that agrees to the terms of service and satisfies RBI guidelines to gain access to the entire network of FIPs. This is especially relevant since one cannot sign contracts with 1000 different FIPs. So, ecosystem Terms of Service establish clear viability but preserve interoperability, even at a legal level. Mr. Shetty thinks this interoperability is core to how market expansion and diverse user management will take place. If not, one risks fragmenting the market.

IV. REGULATORY CHALLENGES

- 1. What is the role that self-regulation, through an entity like DigiSahamati, can play for Account Aggregators? Are there are inherent pitfalls to self-regulation that necessitate the government to intervene?*

Mr. Mahesh said that Sahamati is not yet an SRO. They are a collective of AA - an infrastructural development still in its inchoate stages, making it all the more important for stakeholders to put their heads together for the entire AA ecosystem. This collective is important at a nascent stage to begin common implementation. The standards have come from ReBit, not from Sahamati. However, market players must adhere to these standards or the system risks becoming inefficient. Therefore, Sahamati comes up with operational guidelines and norms. For example, when data is requested, it should be encrypted (instead of clear-text) and sent for the correct period. Adhering to the RBI guidelines can be tricky when the platform starts interacting. A collective ensures that guidelines are being respected and that all norms to combat practical challenges are uniform. A great user experience is also instrumental for success, so the collective has a system of feedback that helps collate several user experiences together and then brainstorm for solutions when a pattern of lacunae becomes tangible. At the nascent stage, errors will prevent the framework from growing and becoming stable without these guidelines.

In terms of pitfalls, one must maintain focus on the end-user and their feedback and discover use cases for innovation. New use cases require updating of standards, which will test whether the ecosystem can keep up with demand. If the ecosystem fails to keep up, the government will step in. The ultimate goal for a framework like DEPA is credit

and data democratization, but what if it is unable to deliver it? The result is never visible and may not come to pass despite setting up appropriate infrastructure. These pitfalls may be avoided if the ecosystem and its players are open to constructive criticism/feedback. Such criticism should also be implemented in a way that allows the end-user to benefit from the feedback. Furthermore, the democratization of data with an attitude that is receptive to constructive criticism helps with the organic updating of programs, and the intended outcome of applications and user experience can pierce through the ecosystem at an efficient rate.

2. *What are the consequences of a Central Bank regulating data intermediaries as NBFCs? Does this spill over into the general digital economy beyond the financial sector? Are there are harms with this?*

For Ms. Singh's final answer, she reiterated her strong stance from a paper written on the same issue. She said there is precedent for sectorial entities controlling information, with RBI's reporting requirements, CICs that deal with financial information etc. So even if there is a broader, horizontal PDP bill, there will be tailored, sector-specific regulation and guidelines.

Therefore, she does not think the consequences of the RBI regulating data intermediaries as an NBFC is harmful or very impactful. However, she points out the need for interagency cooperation, which existed at inception for AAs but currently, only the RBI is making policy decisions. When the AA has larger use cases beyond banking, and into securities, pension etc., the interaction among financial sector regulators will become important. The AAs as consent managers will also have to interact with the Data Protection Authority. Registration requirements and accountability would become smoother in such a nuanced environment with interagency coordination.

She also highlighted the importance of grievance management. She poses the possibility of an event where inconsistencies with the aforementioned data transfer may occur and no particular source of error, and thus accountability, could be tapped down. As such, it is important to define what the recourse mechanism will be. Every AA, therefore, needs to appoint a grievance officer as per the master directions.

3. *Are there comparative data sharing projects in the financial sector around the world? There have been some developments in Bahrain and the EU, can we take any inspiration from them?*

Mr. Matthan pointedly rejected the ability of India to learn from these foreign comparisons due to a simple difference in scale. This scale comes not only from the 300 million bank accounts but the exponential nature of the connections between them and consent managers. Moreover, many banks are seasoned in traditional lending and will adopt new infrastructure only if its innovative and can dispense functions apart from lending. The multiple anticipated use cases have cross-sectoral implications, especially so when the financial DEPA is linked to health DEPA. This further increases the scope of the project. Thus, the lack of inspiration from foreign projects is due to tailoring our infrastructure for large-scale functionality.

The UK's Open Banking is considered a close parallel to the AA framework, but a more comprehensive analysis shows that it barely scratches the surface of what is being done with AAs. Europe is taking similar steps to AA, with the Data Governance Act and intermediate data transfers similar to AA but articulated quite differently. The Australian system, with the consumer data right, has a data transfer framework. They are similar to India in the sense that banks were mobilised to come on board, like what Sahamati has been doing, but there's no consent manager. These similar steps show a commonality in understanding and provide scope for learning. If India had a very small DEPA ecosystem, we could learn from Australia but our large system necessitates a different framework. Conversely, the African Union (if implementation occurs at that level) could learn from the Indian model about scale.

Thus, there are similarities but nothing identical to the Indian model. For Mr. Matthan, the diversity in these models is good but there must be a common basic minimum to enable international interoperability in the future (similar to financial data today).

Mr. Shetty provided an additional perspective to this question of foreign inspiration. He said that India was charting new territory and inspiration could only come from concepts. External inspiration cannot come on the frontier of innovation and we must ourselves decide how we want this system to look. He spoke of a completely interoperable system, rather than the fragmentation he disapproved of earlier. This outlook must then be reflected in legal and technological design as well as the contractual framework. If the bilateral contractual framework cannot support AAs, in his opinion, we should build one from scratch to accommodate AAs. Such is the level of innovation required according to Mr. Shetty.

He bemoaned the mindset of looking to documents like the GDPR and analysing the Indian framework from that perspective. He points out a key lesson here. Even the most diligent designs may fail, and there may be circumstances in which AAs fail technologically and institutionally. Due to the nascency and pioneering nature of the initiative, we should not expect ‘textbook’ answers to questions. We can seek to build from concepts or first principles, but we must shift our perspective of interpreting foreign systems to build systems from scratch. Space must be made for real-time developments and a paradigm that allows a shift from principles that have every chance of failing must be in space. Such absorption can happen only when players on the frontier are receptive to possibilities. Even in building our model, there are gaps, the scope for scepticism and critical writing. He posited a plethora of questions - How do we deal with tech and institutional protections failing? How do we deal with AAs going rogue? What legal constructs will help this system transition into a global data empowerment regime? How would international interoperability work? How do you protect the consumer on an international stage? What happens to data localisation in the case of consent systems? Is the AA incentive aligned with the user?

These are the academic questions to be researched and answered instead of a study of foreign jurisdictions. Mr. Shetty implored a change in the way the AA system is looked at and studied and a broader change in the study of data protection.

4. *What are the different challenges cross-sectoral entities could face to get onto the AA ecosystem? E.g., can you tell us if the time and effort for a bank and insurance company to get onto AA is the same?*

Mr. Shetty expects the challenges of different sectoral entities to stay the same in terms of market incentives, technological gaps, etc. Therefore, the banking system being a gigantic ecosystem (500 million accounts, with much smaller numbers in securities and insurance), most shortcomings would be evident in the initial roll-out and feedback accumulation itself – learnings from which can be applied later to other sectors. So, the challenges across sectors remain the same and a lot of the large players in the banking sector have sister companies in smaller sectors (SBI, HDFC and Kotak run mutual funds). Thus, there is a sufficient flow of information regarding challenges and the ability to address them (like a common shared infrastructure among the securities ecosystem, insurance repositories in the

insurance sector). The solutions built in the banking sector can reduce costs and increase convenience in subsequent financial sectors.

Mr. Shetty then addresses the broadening of horizons to the health and telecom sectors, where he anticipates more challenges and requirements for an effort to crop up.

Q&A SESSION

The following were additional questions asked by the webinar attendees in Zoom chat to our esteemed panel.

- 1. How can the technology be used to improve contract enforcement in India, keeping in mind the intricacies of data protection?*

Mr. Kesari remarked that AAs and the consent artefact specifically help users enforce provisions contained in standard privacy policies, such as revocation of consent. This ensures purpose and storage limitation, and data minimization. In the event of a data fiduciary violating the law or their contract with the user, the user through the consent artefact, has a way to prove what they consented to and hold a data fiduciary accountable.

Mr. Shetty, in adding on to what Mr. Kesari outlined, said that if you take a look at the "consent artefact/contract", the critical question that comes up is how do you ensure that the data is processed only per terms of the consent. Additional technology solutions like Confidential Computing enables much greater privacy guarantees & thus enforcement of the user's consent.

- 2. The most recurring narrative around Account Aggregators has been its labelling as 'UPI for Lending'. To what extent is this parallel accurate, and are there any caveats we must keep in mind?*

Mr. BG Mahesh responded by stating that UPI made payments seamless. The number of payments in the digital ecosystem drastically increased because of UPI. AA will similarly take lending to the next level. Many who did not have access to formal credit now have an opportunity to get access to it because of AA. How? Because they have data that they can share with lenders seamlessly and digitally in a secure way with their consent. Since the lender will receive the entire data digitally, the cost of processing the loan application can be far lesser than their current costs. Sachet based loans will become a reality.

India has approximately a 500-550 million lendable population with credit bureaus who have thin or no files. How can this large user base get access to formal credit? AA can help them get small size loans. The practice of expensive loan taking needs to change.

3. *The insurance sector has a system of insurance repositories that are similar to AAs. A single investment account can help to integrate the capital market holdings across Demat accounts. How many years away are we from integration that would make transactions seamless?*

Mr. BG Mahesh enthusiastically responded by saying such seamless transactions that used the AA framework were not very far at all. Since July 7th, auto loans, small business loans, personal loans are already being given based on the data acquired with the user's consent using AA. It is just a matter of time before other sectors are on boards(on the supply side).

CLOSING REMARKS

Mr. Matthan concluded with an optimistic outlook, saying that we were at the start of the journey for AAs. Despite the project starting in 2017, the scale of the project makes it one for the future and is a potentially momentous occasion. Mr. BG Mahesh echoed Mr. Matthan's sentiments, stating that he anticipates AAs to take off soon. He also reiterated the role of feedback and criticism in making the framework a success. Mr. Shetty highlighted another perspective to Mr. Matthan's comments by reiterating the scope for innovation and growing the knowledge pool.

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