

Nurturing a User-Driven Governance Entity (N.U.D.G.E.) for the Account Aggregator Ecosystem

June 2023

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Legal Policy

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Acknowledgments

The authors are grateful to Pramod Verma (Co-Founder, Foundation of Interoperability in Digital Economy), BG Mahesh (Co-Founder and CEO, DigiSahamati Foundation) and Siddharth Shetty (Co-Founder, DigiSahamati Foundation) for their invaluable inputs and guidance.

We are thankful to Malavika Narayan (Senior Fellow, Future of Privacy Forum), Anubhuti Singh (Policy Analyst, Future of Finance Initiative at Dvara Research) and Shubhangi Pathak (Partner, Tuli & Co) for speaking to us during the initial scoping of the Report.

The authors would like to thank Arghya Sengupta (Founder and Research Director, Vidhi Centre for Legal Policy) and Shreya Garg (Team Lead, Law, Finance and Development, Vidhi Centre for Legal Policy) for their detailed guidance with scoping of the Report as well as comments and insights on the earlier version of the Report.

We are thankful to Meha Chandra (Project Fellow, Corporate Law and Financial Regulation Vertical) and Vidhi interns Shravani Nag and Varun Punera for their research assistance on specific issues during their engagement.

We are also thankful to Hitoishi Sarkar, a Kautilya Society Fellow, for his excellent research assistance throughout drafting the Report.

Errors (if any) rest with the authors.

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Executive Summary

Our Report '**Nurturing a User-Driven Governance Entity (N.U.D.G.E.) for the Account Aggregator Ecosystem**' evaluates the performance of and charts the way ahead for consent-based financial data sharing in India. Initiated in 2015, the Account Aggregator Ecosystem ('**AA ecosystem**') allows consumers to consolidate and move their data across various financial institutions, intermediated by a new class of actors called 'Account Aggregators' ('**AAs**'). We find that despite the undisputable benefits of financial data-sharing, consumer adoption in the AA ecosystem has not taken off so far: best case estimates stand at 4.76 million, accounting for less than 0.1% of the Indian population. Examining the linkages between trust, governance and consumer adoption in building successful population-scale digital infrastructures, we recommend establishing a fit-for-purpose and user-driven governance entity to catapult the AA ecosystem to maturity. The Report comprises six chapters:

In **Chapter I**, we set the context for this Report with a brief account of the importance of population-scale Digital Public Infrastructures ('**DPI/DPIs**'), including data-sharing initiatives, in unlocking the next phase of growth in the Indian digital economy.

In **Chapter II**, we discuss the AA ecosystem in detail. We illustrate the manner in which data exchange takes place, the roles of the participants involved, and the key regulatory and policy instruments applicable. Additionally, we assess the ongoing roles of Reserve Bank Information Technology Private Limited ('**ReBIT**'), which currently acts as a technical standard setting body for the AA ecosystem, and DigiSahamati Foundation ('**Sahamati**'), an industry alliance facilitating harmonious adoption of the AA ecosystem.

In **Chapter III**, we examine the correlation between consumer adoption and governance. Our findings suggest that low consumer adoption is attributable to three reasons: (i) lack of trust; (ii) lack of awareness; and (iii) lack of clear incentives for consumers in the short-to-medium term. All these reasons call for strengthening of the governance framework in the AA ecosystem. We argue that instituting a robust governance framework is crucial in building consumer trust and encouraging adoption, and therefore vital for the overall success of the AA ecosystem.

In **Chapter IV**, we evaluate the Indian experience thus far with governing other successful DPIs: Aadhaar, India's flagship digital identity programme; the Unified Payments Interface ('**UPI**'), India's homegrown real-time payment system; and the Open Network for Digital Commerce ('**ONDC**'), an e-commerce network that seeks to reduce Indian e-commerce's reliance on intermediaries. We also briefly examine the nascent data exchange initiatives in the health and agriculture sectors piloted through the Ayushman Bharat Digital Mission ('**ABDM**') and Agristack respectively. We conclude this chapter by noting a discernible trend in Indian DPI governance: a growing emphasis on user-driven governance models balanced with sufficient and light-touch oversight by the government.

In **Chapter V**, we examine global approaches to governance in relation to open banking and data sharing. We detail the developments, roadblocks and the regulatory impetuses put in place to enable open banking and finance in the United Kingdom and Philippines. We also examine Australia's national data portability initiative and Estonia's data exchange platform: the X-Road. We also briefly examine similar open banking and data sharing initiatives across nine other jurisdictions including Canada, Brazil and Nigeria. Through this chapter, the need for comprehensive data protection laws as a prerequisite to any successful data sharing initiative becomes evident.

In **Chapter VI**, we provide actionable recommendations to build a fit-for-purpose governance model for the AA ecosystem. We make three broad recommendations: (i) enacting a data protection law that holistically governs data sharing and exchange in India; (ii) building a fit-for-purpose and user-driven Governance Entity for the AA

ecosystem under the oversight of the Ministry of Finance (**MoF**); and (iii) creating a centralised body that facilitates coordination across key governance institutions of Indian DPs. We also examine in detail the preferred legal structure for such a governance entity, its functions, and the required corporate governance safeguards to ensure an agile and multi-stakeholder approach to AA ecosystem governance. We believe such a structure can unlock the nascent potential of the AA ecosystem as well as serve as a blueprint for DP governance going forward.

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I. Setting the Context

From the days when a basic telephone connection was a luxury available only to the privileged few to presently being on track to have 1 billion smartphone users by 2026,¹ the transformation of India's digital landscape has been nothing short of extraordinary. As India is poised to host the world's largest economies gathering for the G-20 deliberations,² its digital success story serves as a shining example of the massive benefits and efficiencies that can be unlocked through the deployment of population-scale digital infrastructures, referred to as DPI.

Box 1: What is a DPI?

DPIs are core digital infrastructural facilities that aim to functionally mimic physical infrastructures. They are digital pathways that enable the provision of essential society-wide services.³

DPIs can include but are not limited to digital identity, payments and data exchanges. Indian examples of DPIs include:

- (a) Aadhaar, India's flagship digital identity programme;
- (b) UPI, India's home-grown real-time payment system; and
- (c) Data exchange initiatives such as Account Aggregators framework, AgriStack and the ABDM.

India's digitalisation efforts have greatly benefited from its DPI experiments. Our DPIs are now poised to serve as important reference points for building robust and inclusive digital services delivery initiatives in other developing economies,⁴ given their role in promoting financial as well as digital inclusion of citizens belonging to lower socio-economic backgrounds. For instance, the World Bank estimates that Aadhaar has facilitated financial inclusion in India and has led to an increase in bank-account ownership from 35% in 2011 to 78% in 2021.⁵ Through Jan Dhan-Aadhaar-Mobile trinity, Aadhaar has also played a pivotal role in transparent direct benefit transfers of welfare subsidies to the bank accounts of the underserved.⁶ On the payments front, UPI, India's robust interoperable electronic payment system has allowed Indians to transfer money from one bank account to another bank account digitally and in real time. It has rapidly gained a large share of India's payment ecosystem, so much so that in FY 2022, UPI alone accounted for 52% of the total 8,840 crore financial digital transactions in India.⁷

¹ 'Big bets on smartphones, semiconductors, and streaming service' (*Deloitte*, 2022) <<https://www2.deloitte.com/in/en/pages/technology-media-and-telecommunications/articles/big-bets-on-smartphones-semiconductors-and-streaming-service.html>> accessed 11 February 2023.

² Ministry of External Affairs, 'G-20 and India's Presidency G-20 Development Working Group (DWG) meeting to be held in Mumbai from December 13 - 16, 2022' (*Press Information Bureau*, 10 December 2022) <<https://pib.gov.in/PressReleaseFramePage.aspx?PRID=1882356>> accessed 11 February 2023.

³ While there is no universally accepted definition of a DPI, our understanding is premised on Digital Public Goods Alliance ('DPGA')'s definition of a DPI; DPGA GovStack Community of Practice, 'GovStack Definitions: Understanding the Relationship between Digital Public Infrastructure, Building Blocks & Digital Public Goods' (*DPGA*, May 2022) <<https://digitalpublicgoods.net/DPI-DPG-BB-Definitions.pdf>> accessed 11 February 2023.

⁴ 'Speech of Nirmala Sitharaman, Minister of Finance' (*India Budget*, 1 February 2023) <https://www.indiabudget.gov.in/doc/budget_speech.pdf> accessed 11 February 2023, page 2. ('**Budget 2023-2024**')

⁵ World Bank Group, 'The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19', Group (2021) <<https://www.worldbank.org/en/publication/globalfindex/Report>> accessed 11 February 2023, page 16.

⁶ Commonly referred to as JAM trinity, it comprises the basic savings bank account provided under Pradhan Mantri Jan Dhan Yojana commonly known as the Jan Dhan account, Aadhaar number that helps identify individuals eligible for various government welfare schemes and confirms identity and the individual's mobile number; Leveraging the Power of JAM: Jan Dhan, Aadhar and Mobile' (*PM India*) <https://www.pmindia.gov.in/en/government_tr_rec/leveraging-the-power-of-jam-jan-dhan-aadhar-and-mobile/> accessed 11 February 2023.

⁷ MoF, 'Economic Survey 2022-23' (*India Budget*, January 2023) <<https://www.indiabudget.gov.in/economicsurvey/doc/echapter.pdf>> accessed 11 February 2023, page 369. ('**Economic Survey 2022-2023**')

Besides identity and payments systems, DPIs may also facilitate a seamless flow of information through data exchanges.⁸ Data exchanges allow for easy and secure sharing of information based on consent among a diverse network of users.⁹ They help in addressing the challenges associated with the unavailability of data, low quality of data, it being stored at multiple places and in low quality and lack of interoperability.¹⁰ The opening up of financial data, i.e. open banking or open finance, specifically has the potential to accelerate economic growth and financial inclusion by enabling the creation of relevant and improved financial products for consumers.¹¹ For the financial institutions ('FIs'), this can lead to opening up of newer user segments and improved fraud protection measures.¹²

In the realm of data exchanges, India forayed into consent-based financial data sharing with the launch of the industry-wide AA ecosystem on 2nd September 2021.¹³ AAs are data-blind consent managers that enable consumers, retail consumers as well as enterprises, to move their data between two FIs and tap into the opportunity of aggregating and collating the siloed financial data of consumers across the country. With more than 1.1 billion bank accounts eligible¹⁴ to share data through AAs, the ecosystem promises to put together pieces of a jigsaw puzzle, with the pieces being the myriad financial information of a consumer relating to bank deposits, cash flows, shares and insurance policies and make data sharing with FIs easier.¹⁵ Specifically for the Micro, Small, and Medium Enterprise ('MSME') sector where formal sources of credit have reached only thirty nine per cent of the MSMEs,¹⁶ this opening up of data can enable access to low-cost, low-ticket-size, collateral-free sources of credit through a shift from a traditional asset-based lending approach to a cash-flow based lending approach, by utilising digital trail of all consented transactional data, including cash flows, generated by the enterprise.¹⁷ AAs have the potential to democratise data and shift the power of accessibility and usage from data holders to data users, thereby giving a tremendous boost to India's digital economy.¹⁸ However, to translate these desired objectives into actionable reality, it is crucial to have an enabling and robust governance framework that balances innovation with adequate protection and representation of all users in the ecosystem. The regulatory nudge provided in the early days of the AA ecosystem was essential in getting FIs onboarded,¹⁹ and a similar regulatory endorsement would also be required for strengthening the governance of the AA ecosystem.

Against this backdrop, in Chapter II we lay down the conceptual framework of the AA ecosystem in India, including its journey so far, the manner in which data exchange takes place, the roles of the participants involved, and the key regulatory and policy instruments applicable.

⁸ Samir Saran & Sharad Sharma, 'Digital Public Infrastructure – lessons from India' (*Observer Research Foundation*, February 2023) <<https://www.orfonline.org/research/digital-public-infrastructure-lessons-from-india/>> accessed 11 February 2023.

⁹ 'Co-Develop Digital Public Infrastructure for an Equitable Recovery' (*Rockefeller Foundation*, August 2021) <<https://www.rockefellerfoundation.org/wp-content/uploads/2021/08/Co-Develop-Digital-Public-Infrastructure-for-an-Equitable-Recovery-Full-Report.pdf>> accessed 11 February 2023, page 8. ('Co-Develop DPI Rockefeller Report')

¹⁰ Manvi Khanna et al., 'Unboxing the G20 buzzwords: Digital Public Infrastructures ('DPIs') and Digital Public Goods ('DPGs')' (*Vidhi Centre for Legal Policy*, March 2023) <<https://vidhilegalpolicy.in/blog/unboxing-the-g20-buzzwords-digital-public-infrastructures-dpis-and-digital-public-goods-dpgs/>> accessed 11 March 2023.

¹¹ McKinsey & Company, 'Free the data, unleash growth' (15 July 2021) <<https://www.mckinsey.com/featured-insights/sustainable-inclusive-growth/chart-of-the-day/free-the-data-unleash-growth>> accessed 11 March 2023.

¹² Olivia White et al., 'Financial data unbound: The value of open data for individuals and institutions' (*McKinsey & Company*, 24 June 2021) <<https://www.mckinsey.com/industries/financial-services/our-insights/financial-data-unbound-the-value-of-open-data-for-individuals-and-institutions>> accessed 11 March 2023.

¹³ Sahamati, 'Account Aggregator Ecosystem Go-Live' <<https://sahamati.org.in/blog/account-aggregator-ecosystem-go-live/>> accessed 14 March 2023.

¹⁴ Economic Survey 2022-2023, page 370.

¹⁵ Shreya Garg, 'How RBI is Helping Towards Financial Inclusion' (*Mojo Story*, 11 December 2021) <<https://mojostory.com/pov/rbi-account-aggregators/>> accessed 14 March 2023.

¹⁶ Manvi Khanna & Aakanksha Mehta, 'Account aggregators can rescue MSMEs' (*Deccan Herald*, 27 February 2023) <<https://www.deccanherald.com/opinion/panorama/account-aggregators-can-rescue-msmes-1195342.html>> accessed 14 March 2023.

¹⁷ Standing Committee of Finance, 'Strengthening credit flows to the MSME Sector' (46th Report, March 2022) <https://loksabhadocs.nic.in/lssccommittee/Finance/17_Finance_46.pdf> accessed 14 March 2023.

¹⁸ M Rajeshwar Rao, 'Regulatory Framework for Account Aggregators' (18 October 2021) <https://www.rbi.org.in/Scripts/BS_ViewBulletin.aspx?Id=20562> accessed 14 March 2023.

¹⁹ MoF, 'Finance Minister exhorts all banks to sign up to AA Framework, says it will improve credit flow and promote digital lending; Meeting emphasizes that Benefits of digital banking should reach every nook and corner of the country in a consumer-friendly manner' (*Press Information Bureau*, 22 February 2022) <<https://pib.gov.in/PressReleaseDetail.aspx?PRID=1800334&>> accessed 14 March 2023.

II. Understanding the AA Ecosystem

How did the journey start and who are its participants?

The AA ecosystem was catalysed eight years ago in July 2015 with the Reserve Bank of India ('RBI') Governor announcing the development of a regulatory framework to allow a new kind of Non-Banking Finance Company ('NBFC') to act as a data fiduciary.²⁰ The idea stemmed from the meetings of the Financial Stability and Development Council ('FSDC'). FSDC comprising key financial sector regulators: RBI, Securities and Exchange Board of India ('SEBI'), Pension Fund Regulatory and Development Authority ('PFRDA') and Insurance Regulatory and Development Authority of India ('IRDAI'), called for a unified repository of information on financial assets,²¹ which led to the establishment of the AA ecosystem. It enables consumers to move their data between two FIs, intermediated by a new class of actors called AAs. The key actors²² in this ecosystem that enable consent-based data sharing are:

(a) Financial Information Providers ('FIPs') that hold the data the consumer intends to move. These include banks, NBFCs, asset management companies ('AMCs'), depositories, depository participants, insurance companies, insurance repositories, Goods and Service Tax Network ('GSTN') and pension funds etc.,

(b) Financial Information Users ('FIUs'), which provide newer and innovative financial products and services to the consumer including loans. These could also be banks, NBFCs, fintech companies; and

(c) AAs, that act as consent managers on behalf of consumers moving their data. These consent managers are data blind i.e., they cannot read the consumer data, but merely facilitate structured data sharing and act as a bridge to enable customers to have control over their financial data, by offering the functionality to manage and rescind consent.²³ They allow consumers to securely and easily access and manage their various financial accounts, in one place, without having to log in to multiple different websites or apps to view and manage their accounts.

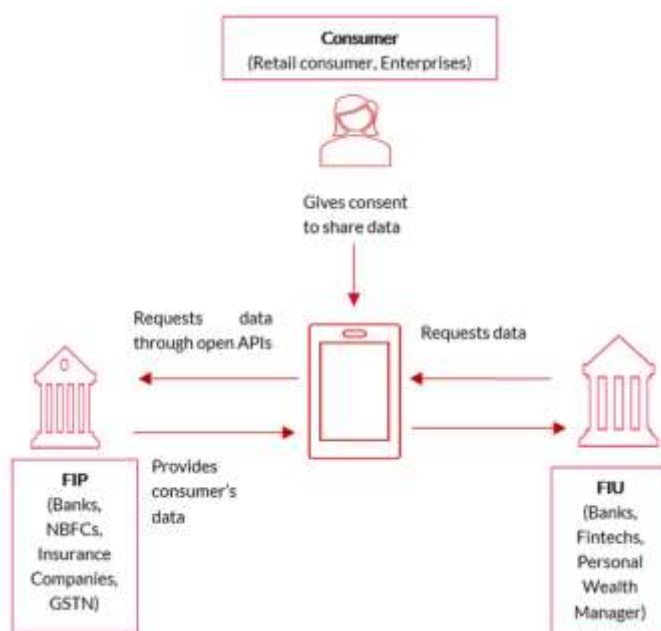


Figure 1: Schematic representation of the AA ecosystem

²⁰ RBI, 'RBI Central Board meets at Chennai: RBI to allow AA NBFCs; to set up Financial Inclusion Advisory Committee' (2 July 2015) <<https://rbidocs.rbi.org.in/rdocs/PressRelease/PDFs/PER27CA273908D3F004B4EBAA3921EE8CFFA27.PDF>> accessed 11 November 2022.

²¹ RBI, '11th Meeting of the FSDC Sub Committee - Kolkata' (12 December 2013) <<https://rbidocs.rbi.org.in/rdocs/PressRelease/PDFs/IEPR119MF1213.pdf>> accessed 11 November 2022.

²² Technology Service Providers ('TSPs') are another set of actors that play a key role in the ecosystem with latest technology, though they do not directly participate in data sharing. They collaborate with FIPs and FIUs and develop the foundation modules that connect FIP and FIU modules to the AAs in the ecosystem; Sahamati <<https://sahamati.org.in/>> accessed 11 March 2023.

²³ MoF, Government of India 'Know all about Account Aggregator Network- a financial data-sharing system' (Press Information Bureau, September 2021) <<https://pib.gov.in/PressReleaselframePage.aspx?PRID=1753713>> accessed 11 March 2023.

Box 2: Early Results from the AA Ecosystem

- *Participants:* Nearly 300 FIs are at different stages of AA ecosystem integration.²⁴ 32 FIs are eligible to share data as FIPs and 144 eligible to utilise data as FIUs.²⁵ The number of operational AAs stand at 10.²⁶
- *Accounts Linked:* 4.76 million consumers have linked their accounts to the AA framework across FIPs.²⁷ More than 1.1 billion bank accounts are eligible to share data on the AA framework.²⁸ Additionally, SEBI has allowed depositories and AMCs to participate as FIPs through their Registrar and Transfer Agents.²⁹ GSTN has been included as an FIP in the AA ecosystem.³⁰ PFRDA has also allowed Central Record Keeping Agencies to participate as FIPs.³¹

The evolving regulatory and policy environment for the AA ecosystem

As the AA ecosystem continues to evolve, it is crucial to note the regulatory and policy environment that presently govern its functioning. In this specific context, we discuss below (i) Master Direction- Non-Banking Financial Company - Account Aggregator (Reserve Bank) Directions, 2016 ('AA Master Directions'), the principal regulatory instrument that enabled the ecosystem's establishment; (ii) ReBIT technical specifications that all ecosystem participants are required to adhere to; (iii) the Data Empowerment and Protection Architecture ('DEPA'), the techno-legal framework put forth by the NITI Aayog that seeks to put consumers in control of their data; and (iv) the growing role of Sahamati in enabling harmonious adoption of the AA ecosystem.

(i) AA Master Directions

Issued in 2016, the AA Master Directions provide a forward-looking framework for the registration and operation of AAs in India.³² Beyond emphasising on explicit consent of the customer, the AA Master Directions require that services to the customer shall only be provided by the AA with appropriate agreements in place.³³ AAs have to ensure proper customer identification³⁴ and only share information with the customers or authorised FIUs.³⁵ We discuss below some of the key features of the AA Master Directions.

²⁴ Sahamati, 'Pragati - The Sahamati Newsletter February 2023' (13 March 2023) <<https://sahamati.org.in/pragati-the-sahamati-newsletter-february-2023/>> accessed 22 March 2023.

²⁵ *ibid.*

²⁶ While the Economic Survey 2022-23 figures state 3.3 million users have linked their accounts on the AA framework, we have relied on the latest available industry figures; Please see: Economic Survey 2022-2023, page 309; Sahamati, 'Current List of AAs' <<https://sahamati.org.in/account-aggregators-in-india/>> accessed 24 March 2023.

²⁷ Sahamati, 'Ecosystem Dashboard' <<https://sahamati.org.in/aa-dashboard/>> accessed 24 March 2023.

²⁸ Economic Survey 2022-2023, page 370.

²⁹ SEBI, 'Participation as Financial Information Providers in Account Aggregator framework', SEBI/HO/MRD/DCAP/P/CIR/2022/110 (19 August 2022) <https://www.sebi.gov.in/legal/circulars/aug-2022/participation-as-financial-information-providers-in-account-aggregator-framework_62157.html> accessed 22 March 2023.

³⁰ 'Account aggregator system for credit access all set to onboard GSTN, PSBs' (*Business Standard*, 23 June 2022) <https://www.business-standard.com/article/economy-policy/account-aggregator-system-for-credit-access-all-set-to-onboard-gstn-psbs-122062201283_1.html> accessed 22 March 2023.

³¹ PFRDA, 'Empowering Subscribers to access and port their Data', PFRDA/2022/26/FT&DA/02 <<https://www.pfrda.org.in/writereaddata/links/empowering%20subscribers%20to%20access%20and%20port%20their%20data9dda9463-a035-4c8c-97c6-f30c46350fd4.pdf>> accessed 11 November 2022.

³² RBI, 'Master Direction -NBFC - AA (Reserve Bank) Directions' (2 September 2016) <<https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=10598>> accessed 11 March 2023. ('AA Master Directions')

³³ *ibid.*, para 5(b).

³⁴ *ibid.*, para 5(d).

³⁵ *ibid.*, para 5(e).

Box 3: Key Features of the AA Master Directions

- *Consent Architecture:* The directions envisage that the customer's financial information is retrieved, shared or transferred based on explicit consent. The information is collected in a standardised electronic format ('**consent artefact**'), and the customer has the right to revoke this consent at any time.
- *Registration:* No company shall commence or carry business of AA without obtaining certificate of registration from the RBI or any other applicable financial regulator.³⁶ The RBI before granting such registration shall satisfy itself of company's resources, capital structure, general character of management, service of public interest etc.
- *Data Security:* Operations of AAs should be entirely based on the required IT framework to guarantee secure data flow. AAs shall establish adequate internal safeguards to prevent unauthorised access, alteration, destruction, disclosure or dissemination of records and data.
- *Customer Grievance Redressal:* Board approved policy specifying the deadlines for redressal of complaints is to be framed by the AA. The contact details of the Grievance Officer have to be published on the website of the AA.
- *Pricing Policy:* Board approved policy specifying the pricing of services is to be framed by the AA. It has to be transparent and publicly available.

(ii) ReBIT Specifications

ReBIT, a wholly-owned subsidiary of the RBI³⁷ set up to serve its IT and cyber security needs, released open Application Programming Interface ('API') specifications³⁸ in 2019 that participants of the AA ecosystem must adhere to, in accordance with the AA Master Directions.³⁹ These specifications are designed to enable the consent-driven and seamless movement of financial data within the AA ecosystem. These specifications make it possible for different financial entities adopting different IT systems to share data in an interoperable manner.⁴⁰

(iii) DEPA

Proposed by NITI Aayog, DEPA is an "evolvable" and "agile" techno-legal framework for effective data governance. Built on the concept of data portability,⁴¹ it seeks to put individuals in control of their data as well as share it with third party institutions with the help of 'data-blind' consent managers in a secure manner.⁴² AAs are a practical use case of DEPA in the financial sector. The broader vision of the DEPA framework is to be cross-sectoral and enable consent-based data sharing across a number of sectors including healthcare, telecom, skills and education to give citizens the ability to leverage their own data to access a host of use cases.⁴³ Besides consent managers, two pillars⁴⁴ of the DEPA framework are:

³⁶ The AA Master Directions provide that "No company shall commence or carry on the business of an Account Aggregator without obtaining a certificate of registration from the Bank. Provided that, entities being regulated by other financial sector regulators and aggregating only those accounts relating to the financial information pertaining to customers of that particular sector will be excluded from the above registration requirement."; *ibid*, para 4.1 (b).

³⁷ M Rajeshwar Rao, 'Regulatory Framework for Account Aggregators' (18 October 2021) <https://www.rbi.org.in/Scripts/BS_ViewBulletin.aspx?Id=20562> accessed 22 March 2023.

³⁸ Reserve Bank Information Technology Pvt. Ltd., 'Account Aggregator Ecosystem API Specifications' (8 November 2019) <<https://api.rebit.org.in/>> accessed 11 March 2023.

³⁹ AA Master Directions, para 9.2.

⁴⁰ *ibid*, para 9.

⁴¹ Vikas Kathuria, 'Data Empowerment and Protection Architecture: Concept and Assessment' (Observer Research Foundation, August 2021) <https://www.orfonline.org/wp-content/uploads/2021/08/ORF_IssueBrief_487_DEPA.pdf> accessed 11 February 2023, at page 12.

⁴² NITI Aayog, 'Data Empowerment and Protection Architecture - Draft for Discussion' (August 2020) <<https://www.niti.gov.in/sites/default/files/2020-09/DEPA-Book.pdf>> accessed 11 February 2023, page 3. ('NITI Aayog DEPA Draft')

⁴³ NITI Aayog DEPA Draft, page 3.

⁴⁴ IndiaStack, 'Data' <<https://indiastack.org/data.html>> accessed 11 February 2023.

a. Data Protection Law

The DEPA framework recognizes a robust data protection law as the bedrock for a secure data exchange framework. While India does not presently have a data protection law, key principles from the DEPA framework in regard to data privacy, consent and consent managers also find their place in the Draft Digital Personal Data Protection Bill, 2022 (“**DPDP Bill**”). The DPDP Bill was published by the Ministry of Electronics and IT (“**MeitY**”) in November 2022 inviting feedback from the public.⁴⁵ It is the latest iteration of India’s data protection legislation after the Personal Data Protection Bill, 2019 was withdrawn. Currently in its draft stage, the DPDP Bill sets out the rights and duties of Digital Nagriks,⁴⁶ as well as the obligations of Data Fiduciaries⁴⁷ while processing the personal data of a Data Principal.⁴⁸

One notable feature of the DPDP Bill is its recognition of consent managers which it defines as “*data fiduciaries which enable a data principal to give, manage, review and withdraw her consent through an accessible, transparent and interoperable platform.*”⁴⁹ These consent managers are accountable to the data principal,⁵⁰ and are required to be registered with the proposed Data Protection Board.⁵¹ Given that AAs are the consent managers in the financial sector ecosystem, these will be bound by the obligations of the DPDP Bill.

b. Consent Artefact

Individual consent is the bedrock for accessing and processing personal data by businesses.⁵² However, the market practices of obtaining and storing an individual's data are fraught with fragmentation, inflexibility and have little to no clarity regarding the scope of consent. Thus, to address this, MeitY put in place a standardised data structure, to store the individual consent called the ‘Consent Artefact’ in March 2017.⁵³ It is a machine-readable electronic document that lays down a standardised and programmable digital template,⁵⁴ specifying the parameters and scope of personal data that a user consents to share with third parties in any data-sharing transaction.⁵⁵ Specifically for the AA ecosystem, the AA Master Directions also require that the standardised consent obtained from the individual shall contain specified⁵⁶ details and shall be capable of being logged, audited and verified.⁵⁷

(iv) Sahamati

Sahamati, a not-for-profit member-driven industry alliance, is working towards harmonious adoption and strengthening of the AA ecosystem. Its functions include the creation of a central registry which is a common

⁴⁵ MeitY, ‘Digital Personal Data Protection Bill, 2022’ (22 November 2022), <https://www.meity.gov.in/writereaddata/files/The%20Digital%20Personal%20Data%20Potection%20Bill%2C%202022_0.pdf> accessed 11 February 2023. (**DPDP Bill**)

⁴⁶The Bill uses the term ‘Digital Nagriks’ for citizens that are active internet users. We use the term Digital Nagriks to refer to Data Principals i.e., individuals to whom such data belongs; *ibid*, chapter 3.

⁴⁷ The DPDP Bill defines Data Fiduciary as “*any person who alone or in conjunction with other persons determines the purpose and means of processing of personal data.*”; *ibid*, s 2(5).

⁴⁸ MeitY, ‘Explanatory Note to Digital Data Protection Bill, 2022’ (November 2022) <<https://www.meity.gov.in/writereaddata/files/Explanatory%20Note%20The%20Digital%20Personal%20Data%20Protection%20Bill%2C%202022.pdf>> accessed 11 March 2023.

⁴⁹ DPDP Bill, 2022, s 7(6).

⁵⁰ *ibid*, s 7(6).

⁵¹ *ibid*, s 7(7).

⁵² ‘What is an Informed Consent & Consent Artefact?’ (*Sahamati*, 27 March 2020), <<https://sahamati.org.in/what-is-an-informed-consent-consent-arteifact/>> accessed 11 March 2023.

⁵³ MeitY, ‘Electronic Consent Framework’ (2017) <<https://dla.gov.in/sites/default/files/pdf/MeitY-Consent-Tech-Framework%20v1.1.pdf>> accessed 11 March 2023. (**MeitY Electronic Consent Framework**)

⁵⁴ On the website of India Stack, consent artefact is defined as “*an electronic consent artefact, which establishes a standardised and programmable digital template for capturing user consent to share their personal data with third parties.*”; IndiaStack ‘Data’ <<https://indiastack.org/data.html>> accessed 11 March 2023.

⁵⁵ MeitY defines consent artefact as “*a machine-readable electronic document that specifies the parameters and scope of data share that a user consents to in any data sharing transaction.*” MeitY Electronic Consent Framework, page 4.

⁵⁶ These include i. identity of the customer and optional contact information, ii. the nature of the financial information requested, iii. purpose of collecting such information, iv. the identity of the recipients of the information, if any, v. URL or other address to which notification needs to be sent every time the consent artefact is used to access information, vi. Consent creation date, expiry date, identity and signature/ digital signature of the Account Aggregator, and vii. any other attribute as may be prescribed by the Bank; AA Master Directions, para 6.3.

⁵⁷ AA Master Directions, para 6.6, 6.7.

directory of all its participants,⁵⁸ assistance for adherence to ReBIT technical standards through certification,⁵⁹ a common set of ecosystem participation terms that provide a transparent environment to all⁶⁰ and providing a channel for dispute resolution.⁶¹ Among other functions that it performs, it collaborates with ecosystem participants and provides a platform through its several working groups to promote growth and innovation in the AA ecosystem in India.⁶²

⁵⁸ Dheeraj Khardwal, 'Overview' (*GitHub*, 19 October 2021) <<https://github.com/Sahamati/aa-common-service/blob/main/central-registry/overview.md>> accessed 11 March 2023.

⁵⁹ Sahamati, 'Certification' <<https://sahamati.org.in/certification/>> accessed 11 March 2023.

⁶⁰ Sahamati, 'Account Aggregator Participation Terms' <<https://sahamati.org.in/participation-terms/>> accessed 11 March 2023.

⁶¹ Sahamati, 'Sahamati's Approach to Dispute Resolution' <<https://sahamati.org.in/odr/>> accessed 11 March 2023.

⁶² Sahamati, 'Sahamati-AA Working Groups' <<https://sahamati.org.in/sahamati-working-groups/>> accessed 11 March 2023.

III. A Case for Strengthening Governance

Thus far, India has had a successful run with creating population-scale DPs that have seen wide adoption. To ensure a similar journey for the AA ecosystem, and for it to achieve its desired objective of empowering millions of consumers with greater access and control over their financial data,⁶³ similar widespread adoption is paramount. This has not been the case so far. Despite the potential of the AA ecosystem to unlock a myriad of fintech innovations, such as enabling cash-flow based lending and thereby serving a vast pool of untapped customers,⁶⁴ the ecosystem has not taken off. Industry figures suggest that only 8.92 million⁶⁵ users have linked their accounts to AAs, despite more than 1.1 billion⁶⁶ bank accounts being eligible to share data. This low rate of adoption is concerning - evidently, a hands-off approach of simply allowing the AA ecosystem to continue functioning, in its current form, has not generated sufficient results. In this chapter, we examine the underlying reasons behind this slow adoption rate. Thereafter, we delve into how strengthening the governance structure of the ecosystem would be a crucial first step in nudging users towards greater adoption.

(i) Need for trust

For any population-scale DP, public trust in the ecosystem is pivotal to greater user adoption. Given the sensitivities involved in sharing financial data, user hesitance in adopting such a system is only natural. Presently, users' rights vis-à-vis data-sharing are not protected by any statute, given the absence of a comprehensive data protection law in India. As such, concerns persist about the potential misuse of financial data and risks associated with execution failure and cyber-security.⁶⁷

Additionally, given the many stakeholders in the ecosystem, a clear division of obligations and responsibilities of the participants, along with mechanisms to resolve disputes and address consumer grievances, is crucial to generating trust.⁶⁸ Presently, these functions are facilitated by Sahamati, an industry alliance that coordinates the roll-out of the AA ecosystem. However, given that neither the AA Master Directions nor any other statutory instrument mandates participants' interactions with Sahamati, its actions do not have a binding effect on participants. In the absence of a concrete, well-defined framework for interactions among participants, therefore, trust in the longevity of the ecosystem is insufficient, which hinders user adoption.

As more people engage with the ecosystem, the need for an effective governance framework with sufficient safeguards to promote responsible data sharing, protect user interests and foster trust in the ecosystem will become more apparent. Moreover, as the ecosystem evolves and attracts newer business models and customer offerings, establishing a robust governance framework that ensures orderly growth, while striking the right balance between innovation and consumer protection, will assume peremptory importance.

⁶³ MoF, 'Know all about Account Aggregator Network- a financial data-sharing system' (*Press Information Bureau*, 10 September 2021) <<https://pib.gov.in/PressReleaselframePage.aspx?PRID=1753713>> accessed 24 March 2023.

⁶⁴ Manvi Khanna & Aakanksha Mehta, 'Account aggregators can rescue MSMEs' (*Deccan Herald*, 27 February 2023) <<https://www.deccanherald.com/opinion/panorama/account-aggregators-can-rescue-msmes-1195342.html>> accessed 24 March 2023.

⁶⁵ Sahamati, 'Ecosystem Dashboard' <<https://sahamati.org.in/aa-dashboard/>> accessed 1 June 2023.

⁶⁶ Economic Survey 2022-23, page 309.

⁶⁷ Nilesh Christopher, 'India's open banking revolution is here, but convenience comes at a price' (*Rest of World*, 10 August 2022) <<https://restofworld.org/2022/newsletter-south-asia-account-aggregators/>> accessed 24 March 2023; V. Anantha Nageswaran et al., 'Account Aggregators: A Gamechanger for Financial Inclusion' (*Indicus Foundation*, January 2022) <https://www.indicus.org/admin/pdf_doc/Account_Aggregators.pdf> accessed 24 March 2023, page 10; PricewaterhouseCoopers, 'Account aggregators - putting the customer in charge' <<https://www.pwc.in/industries/financial-services/fintech/fintech-insights/account-aggregators-putting-the-customer-in-charge.html>> accessed 24 March 2023.

⁶⁸ Timothy Morey et al., 'Customer Data: Designing for Transparency and Trust' (*Harvard Business Review*, May 2015) <<https://hbr.org/2015/05/customer-data-designing-for-transparency-and-trust>> accessed 24 March 2023.

(ii) Need for awareness

Currently, there is a distinct lack of awareness surrounding financial data sharing, and its benefits and uses for consumers.⁶⁹ Although FIUs and FIPs are plugged into the ecosystem, efforts to promote the ecosystem and educate customers have not yet begun in full swing. While Sahamati has been at the forefront of creating awareness,⁷⁰ their primary role as an industry initiative is to onboard FIUs and FIPs.

Additionally, there is a lack of clarity on the costs that consumers may incur within the ecosystem, as well as uncertainty regarding the immediate point of contact for grievance redressal. Existing literature suggests that such lack of awareness can hinder the development and adoption of a DPI.⁷¹ Specifically in the context of financial data sharing, it may lead to users under-rating the value generated by their own data and being unaware of their rights regarding such data.⁷²

(iii) Need for incentives

The success of the AA ecosystem hinges on whether the incentives and value offered are sufficient to ensure continued active participation by a consumer. While the availability of a consolidated financial picture presents sufficient incentive for consumers and businesses to sign up for AA apps, there are presently no direct incentives to ensure their continued participation, or to ensure the provision of consent repeatedly to data-sharing requests. Such incentives are particularly important in the AA ecosystem, given the high probability of “consent fatigue” associated with granular data sharing requests.⁷³ Consent fatigue may not only discourage user participation, but may also lead to uninformed choices, and lead to feel an apparent loss of autonomy with respect to their data.⁷⁴ To increase adoption, it may be helpful to offer additional incentives to consumers. Such incentives were seen to foster successful UPI penetration in the country - for instance, market leaders like Google Pay and PhonePe relied on incentives such as cashbacks to onboard users and get them to transact.⁷⁵

Additionally, experts highlight that with sophisticated consent technologies, there is a risk that the AA ecosystem shall only benefit digitally-savvy consumers, exacerbating existing disparities between rural and urban populations, genders or economic groups. It is essential to explore and implement compatible protocols for feature phones or utilise assisted-tech models to ensure handholding support to consumers with limited access to smartphones or low digital literacy. A successful example of this is the UPI123Pay initiative launched

⁶⁹ Teena Jain Kaushal, 'Awareness must for next phase of growth for Account Aggregators: Finarkein Analytics' Nikhil Kurhe' (*Business Today*, 27 December 2022) <<https://www.businesstoday.in/personal-finance/story/awareness-must-for-next-phase-of-growth-for-account-aggregators-finarkein-analytics-nikhil-kurhe-357870-2022-12-27>> accessed 24 March 2023; Garima Bora, 'The Account Aggregator framework can be SME's UPI. Or is it too early to give credit?' (*Economic Times*, 5 December 2021) <<https://m.economictimes.com/small-biz/sme-sector/the-account-aggregator-framework-can-be-smes-upi-or-is-it-too-early-to-give-credit/articleshow/87994782.cms>> accessed 24 March 2023.

⁷⁰ Sahamati <<https://sahamati.org.in/>> accessed 24 March 2023.

⁷¹ DPGA, 'The Social and Economic Impact of Digital Public Infrastructure based on Digital Public Good' (September 2022) <<https://digitalpublicgoods.net/Bold-Investments-Methodology.pdf>> accessed 24 March 2023.

⁷² Faith Reynolds et al., 'Consumer Priorities for Open Banking' (*Open Banking*, June 2019) <<https://www.openbanking.org.uk/wp-content/uploads/Consumer-Priorities-for-Open-Banking-report-June-2019.pdf>> accessed 24 March 2023.

⁷³ HarvardFXB (Center for Health and Human Rights), 'Responses to the White Paper of the Committee of Experts on Data Protection Framework for India' (8 February 2018) <<https://cdn1.sph.harvard.edu/wp-content/uploads/sites/2464/2019/08/Harvard-Response-WP-Health-Data-Protection.pdf>> accessed 24 March 2023; Mark Dennis Robinson, 'What are the Ethics of Electronic Consent Forms?' (*Bill of Health*, 19 October 2018) <<https://blog.petrieflom.law.harvard.edu/2018/10/19/what-are-the-ethics-of-electronic-consent-forms/>> accessed 24 March 2023.

⁷⁴ Bart W. Schermer et al., 'The crisis of consent: how stronger legal protection may lead to weaker consent in data protection' (*SpringerLink*, 23 March 2014) <<https://link.springer.com/article/10.1007/s10676-014-9343-8>> accessed 11 April 2023.

⁷⁵ Digbijay Mishra, 'Cashback drives surge in WhatsApp Pay transactions on UPI' (*Economic Times*, 21 June 2022) <<https://economictimes.indiatimes.com/tech/technology/cashback-drives-surge-in-whatsapp-pay-transactions-on-upi/articleshow/92343655.cms>> accessed 24 March 2023.

by RBI in 2022, which gives feature phone owners an app that allows them to access most UPI features.⁷⁶ RBI further extended the app's utility by allowing consumers to withdraw money at ATMs using their UPI app.⁷⁷

In the light of the limitations discussed above, it is evident that only by strengthening its governance structure can the AA ecosystem enhance its value proposition and position itself as a trusted consumer-centric DPI for financial data sharing. While the current regulatory environment has prioritised and facilitated innovation, as the ecosystem continues to mature into a population-scale data sharing DPI, a more robust governance framework must be established that protects user interests and fosters trust for the long term success of the AA ecosystem. Such a framework shall foster trust in the AA ecosystem, enable structured interaction between participants, boost public awareness of the ecosystem, and facilitate the creation of attractive incentive structures. Against this backdrop, this Report endeavours to design an agile and effective governance framework for the AA ecosystem.

⁷⁶ RBI, 'Reserve Bank of India launches (a) UPI for Feature Phones (UPI123pay) and(b) 24x7 Helpline for Digital Payments (DigiSaathi)' (Press Release, 8 March 2022) <<https://rbidocs.rbi.org.in/rdocs/PressRelease/PDFs/PR183053473213808441018C93DDA951C5C601.PDF>> accessed 24 March 2023.

⁷⁷ RBI, 'Interoperable Card-less Cash Withdrawal (ICCW) at ATMs' (19 May 2022) <<https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=12321&Mode=0>> accessed 24 March 2023.

IV. Governing DPIs: The Indian Experience

The Indian DPI ecosystem, envisioned as 'India Stack', can be best understood as interconnected yet independent 'blocks of a stack', with each block intending to be a vehicle for financial and social inclusion across a range of sectors at a population scale.⁷⁸ This stack is an intersection of foundational and sector-specific DPIs, introduced gradually over the last decade, with each block building upon the last.⁷⁹

At the core of this stack is the foundational DPI, Aadhaar, the identity layer. Aadhaar has been further leveraged to plug in over 260 million users⁸⁰ into the UPI ecosystem, another DPI which has revolutionised the payments landscape in India.

Layers of the India Stack are designed to be modular and allow for integration and interoperability across different sectors and use cases. The ultimate goal is to unlock the combined potential that identity, payments and data exchange have in accelerating economic growth⁸¹ and fostering a more inclusive, efficient and resilient digital Indian economy.⁸²

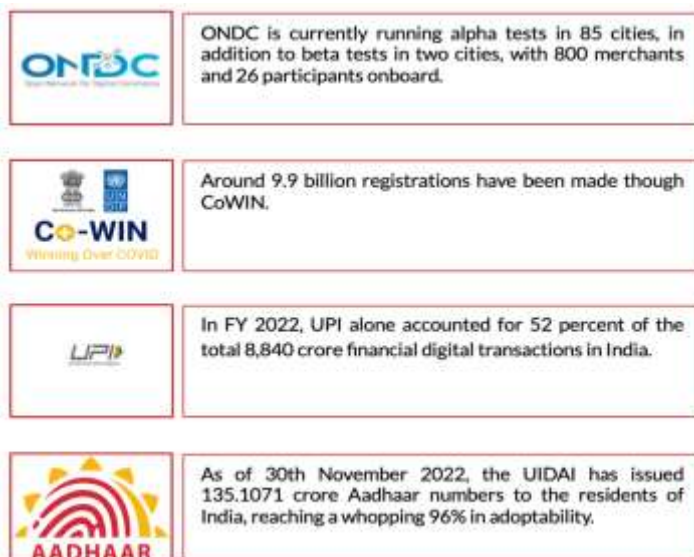


Figure 2: Spotlight on milestones achieved

The next decade in India's DPI journey will witness sector-specific DPIs such as AAs in the financial sector, ONDC in the commerce sector and ABDM in the healthcare sector powering the Indian economy. As these landscape developments take place at their own pace, it becomes imperative to institute future looking and agile governance frameworks that balance innovation, security and inclusion in Indian DPI ecosystems.⁸³ While there is no one-size-fits-all model for such a framework, in this Chapter we aim to examine the governance factors that have contributed to the success of Indian DPIs such as Aadhaar, UPI, ONDC. Additionally, we also aim to examine data sharing initiatives in the health and agricultural sectors.

⁷⁸ IndiaStack, 'FAQ' <<https://indiastack.org/faq.html>> accessed 11 March 2023.

⁷⁹ Deepak Mishra et al., 'Aadhaar: Platform or Infrastructure? Developing a taxonomy for India's Digital Public Ecosystem' (*Indian Council for Research on International Economic Relations*, February 2023) <https://icrier.org/pdf/IPCID-Policy_Brief_3.pdf> accessed 11 March 2023, page 8.

⁸⁰ 'Around 40% Indians use digital formats like UPI for money transfer: Nandan Nilekani' (*Economic Times*, 14 September 2022) <<https://economictimes.indiatimes.com/tech/technology/around-40-indians-use-digital-formats-like-upi-for-money-transfer-nandan-nilekani/articleshow/94203265.cms>> accessed 11 March 2023.

⁸¹ Suraksha P & Aashish Aryan, 'Economic Survey 2023: Digital Public Infrastructure can add up to 100 bps to GDP growth rate, says Chief Economic Advisor V Anantha Nageswaran' (*Economic Times*, 31 January 2023) <<https://economictimes.indiatimes.com/tech/technology/digital-public-infrastructure-can-add-up-to-100-bps-to-gdp-growth-rate-cea-v-anantha-nageswaran/articleshow/97493193.cms>> accessed 11 March 2023.

⁸² IndiaStack, 'Home' <<https://indiastack.org/index.html>> accessed 11 March 2023.

⁸³ The Task Force on DPIs for Economic Transformation, Financial Inclusion and Development set up by the Union Government will also be working on facilitating development of the governance framework; Harikishan Sharma, 'Govt sets up India's G20 task force on digital public infrastructure' (*The Indian Express*, 24 January 2023) <<https://indianexpress.com/article/india/govt-india-g20-task-force-digital-public-infrastructure-8399452/>> accessed 11 March 2023.

	2010	2011-2014	2015	2016	2017-2020	2021
Identity Rails	<i>Aadhaar</i>		<i>eSign</i>	<i>DigiLocker</i>		
Payment Rails				<i>UPI</i>		
Data Sharing Rails				<i>AA Master Directions</i>		<i>AAs ABDM</i>
Open Network					<i>Open Credit Enablement Network⁸⁴</i>	<i>ONDC</i>

Figure 3: Journey of Indian DPI Ecosystem

(i) Aadhaar

In 2009, India started its DPI journey with Aadhaar, with a mission to provide a unique digital identity to Indians.⁸⁵ This 12 digit individual identification number is a foundational document for Indian citizens to digitally authenticate themselves in a low-cost manner and for the government to digitise schemes and welfare programmes.⁸⁶ Forming the bedrock of India Stack, open APIs built on Aadhaar gave impetus to technological innovations such as e-Sign, e-Authentication and DigiLocker.⁸⁷ Hailed as a catalyst in India’s digital and financial inclusion journey, Aadhaar’s governance is one critical factor contributing to its success. We discuss below the broad contours of its governance.

Governance structure of Aadhaar

Unique Identity Authority of India (**UIDAI**) is the autonomous statutory authority responsible for Aadhaar enrolment and authentication, including its operation and management.⁸⁸ Established in 2016 under the provisions of Aadhaar (Targeted Delivery of Financial and Other Subsidies, Benefits and Services) Act, 2016 (**‘Aadhaar Act’**), UIDAI operates under MeitY.⁸⁹ Prior to its establishment as a statutory authority, UIDAI operated as an attached office of the then Planning Commission (now NITI Aayog).⁹⁰ UIDAI’s organisational structure comprises a chairperson,⁹¹ two part time members and a CEO, all of whom are appointed under the provisions of the Aadhaar Act.⁹² The CEO is assisted by officers and employees working at UIDAI’s headquarters and the regional offices.

⁸⁴ It aims at creating a uniform language for lenders and marketplaces to build innovative, financial credit products at scale; Rahul Sanghi, ‘iSPIRT First Open House on OCEN: Summary and Next Steps’ (*iSPIRT*, July 25 2020) <<https://pn.ispirt.in/ispirt-open-house-on-ocen-summary-next-steps/>> accessed 11 March 2023.

⁸⁵ Government of India, Planning Commission, Notification No. A.03011/02/2009-Admn.I (28 January 2009) <https://uidai.gov.in/images/notification_28_jan_2009.pdf> accessed 11 March 2023.

⁸⁶ UIDAI, ‘What is Aadhaar’ <<https://www.uidai.gov.in/en/16-english-uk/aapka-aadhaar/14-what-is-aadhaar.html>> accessed 11 March 2023, Co-Develop DPI Rockefeller Report, page 2.

⁸⁷ Ashutosh Dubey, ‘IndiaStack–Can it drives Indian Fintech Ecosystem’ (*NPCI*, June 2020) <<https://www.npci.org.in/newsletter/innovation-newsletter/topic-of-the-month.html>> accessed 11 March 2023.

⁸⁸ UIDAI, ‘About UIDAI’ <<https://www.uidai.gov.in/en/about-uidai/unique-identification-authority-of-india.html>> accessed 11 March 2023.

⁸⁹ *ibid.*

⁹⁰ *ibid.*

⁹¹ The position of UIDAI chairperson is vacant as of 2 March, 2023. UIDAI, ‘UIDAI Headquarter’ <<https://uidai.gov.in/en/contact-support/uidai-headquarter/chairman-uidai.html>> accessed 11 March 2023.

⁹² Aadhaar Act, s 12.

Box 4: What worked for Aadhaar?

- *Dedicated institution:* Creation of a dedicated entity to spearhead Aadhaar deployment i.e., UIDAI, a statutory body, facilitated Aadhaar's wide-scale adoption.

(ii) UPI

Building on the momentum of Aadhaar, India took a massive leap in its DPI journey with UPI. UPI is India's *sui generis* payment infrastructure⁹³ built over the existing Immediate Payment Service infrastructure ('IMPS').⁹⁴ Launched in 2016⁹⁵ UPI is a free,⁹⁶ interoperable electronic payment system that allows real-time, peer-to-peer money transfer from one bank account to another bank account digitally.⁹⁷ What sets apart UPI is its ability to integrate multiple bank accounts in a single mobile application and seamlessly integrate several banking features into one comprehensive platform, making it the most popular digital payment method in India.⁹⁸ The feature of interoperability has further made it easier for UPI to be adopted internationally as well as expanded in other countries.

A UPI transaction involves interaction of multiple participants including the National Payments Corporation of India ('NPCI'), licensed banks,⁹⁹ third-party applications like PayTM and Gpay and bank account holders.¹⁰⁰ Acting as a facilitator, NPCI ensures seamless communication between participants for effecting a UPI transaction. NPCI is also the accountable institution for overseeing and ensuring the seamless operation of UPI. Unlike Aadhaar which is managed solely by a statutory authority, the governance of UPI is distinct. We discuss below the novel approach adopted to foster collaboration, encourage adoption and drive innovation in the UPI ecosystem.

Governance of UPI

NPCI,¹⁰¹ a joint initiative of the RBI and Indian Bank Association,¹⁰² owns and operates UPI. NPCI was established in 2008 as a not-for-profit company under Section 25 of the Companies Act, 1956 ('CA 1956') (now Section 8 of the Companies Act, 2013 ('CA 2013')).¹⁰³ It gets statutory backing under the Payment and

⁹³ Economic Survey, page 369.

⁹⁴ IMPS was launched in 2010 by NPCI to provide for real time interbank electronic fund transfer that could be accessed on multiple channels such as mobile, internet, ATM; NPCI, 'IMPS (Immediate Payment Service) Product Overview' <<https://www.npci.org.in/what-we-do/imps/product-overview>> accessed 11 March 2023.

⁹⁵ NPCI, 'NPCI's Unified Payments Interface (UPI) set to go live' (25 August 2016) <[https://www.npci.org.in/PDF/npci/press-releases/2016/NPCIsUnifiedPaymentsInterface\(UPI\)settogoliveAugust252018.pdf](https://www.npci.org.in/PDF/npci/press-releases/2016/NPCIsUnifiedPaymentsInterface(UPI)settogoliveAugust252018.pdf)> accessed 11 March 2023.

⁹⁶ Government mandated a zero-charge framework for UPI transactions with effect from January 2020, RBI released a Discussion Paper on charges in Payment Systems last year to seek comments from stakeholders regarding a sustainable funding model for UPI; RBI, 'Discussion Paper on Charges in Payment Systems' (17 August 2022) <<https://www.rbi.org.in/Scripts/PublicationsView.aspx?id=21082>> accessed 11 March 2023 ('RBI Discussion Paper on Charges in Payment Systems'). At present UPI being a public good continues to remain free of cost. Government offered reimbursement of around INR 1300 crores, which appears inadequate as well as is being largely appropriated by the bank. 'Who pays for UPI transactions? Banks, PSPs want their share of penny' (*The Federal*, 25 August 2022) <<https://thefederal.com/business/who-pays-for-upi-transactions-banks-psps-want-their-share-of-penny/>> accessed 11 March 2023.

⁹⁷ NPCI, 'UPI Product Overview' <<https://www.npci.org.in/what-we-do/upi/product-overview>> accessed 11 March 2023.

⁹⁸ *ibid.*

⁹⁹ Banks and payment banks with an RBI-approved mobile banking license and IMPS capability are eligible for UPI. NPCI, 'India's Unified Payment Gateway for real-time payment transactions' <<https://www.npci.org.in/PDF/npci/upi/Product-Booklet.pdf>> accessed 11 March 2023.

¹⁰⁰ These include customers as well as merchants who are on boarded by a bank.

¹⁰¹ NPCI, 'UPI Roles & Responsibilities' <<https://www.npci.org.in/what-we-do/upi/roles-responsibilities>> accessed 11 March 2023.

¹⁰² An industry alliance of banking companies operational in India set up in 1946. As of April 2018, the total membership is 231. IBA, 'IBA - Vision' <<https://www.iba.org.in/about-us.html>> accessed 11 March 2023.

¹⁰³ NPCI, 'About Us' <<https://www.npci.org.in/who-we-are/about-us>> accessed 11 March 2023.

Settlements Systems Act, 2007 ('PSS Act') to operate as a retail payments organisation.¹⁰⁴ Right from the deputation of the first CEO of NPCI from RBI¹⁰⁵ to the NPCI board¹⁰⁶ mandatorily consisting of one RBI nominee director at all times,¹⁰⁷ the institution functions under the strong regulatory oversight of the RBI. This has been vital to its success as not only does it ensure accountability but also fosters trust in the UPI ecosystem, which is instrumental in driving wider adoption.

Unlike traditional regulator-led approaches, NPCI's governance model includes representation from industry stakeholders. It was initially promoted by ten banks, that include private-sector, public-sector banks and foreign banks.¹⁰⁸ It now includes¹⁰⁹ banks representing all sectors, payment system operators ('PSOs'), NBFCs providing wider stakeholder representation. Besides the shareholding pattern,

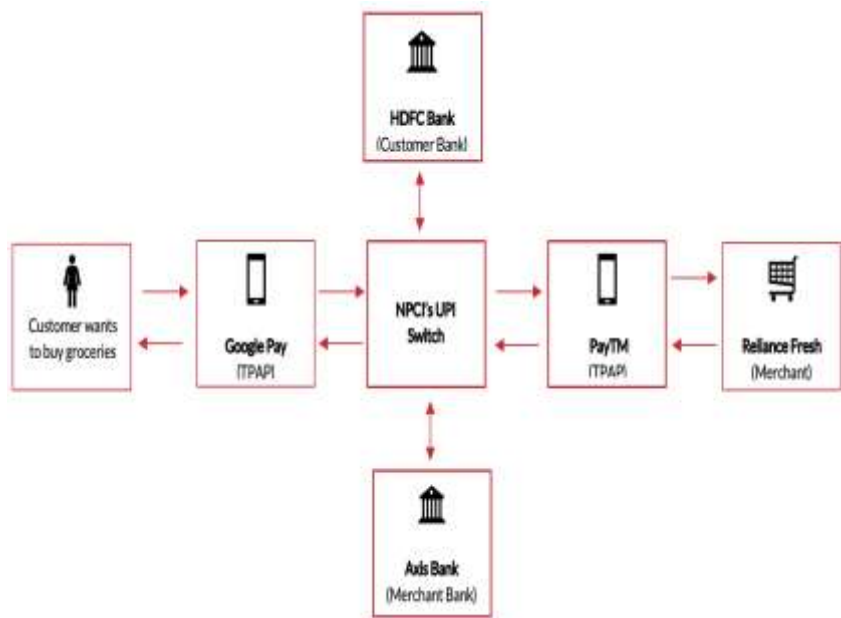


Figure 4: Process flow of person to merchant transaction via UPI

- a. The NPCI has a Board Diversity Policy which sets out the approach that the institution should follow to ensure that representatives from diverse backgrounds and experiences participate in decision-making.¹¹⁰ NPCI board which is responsible for its day-to-day management comprises one RBI nominee director, one non-executive chairman, three independent directors, out of which one specifically represents the interests of users of NPCI services, six nominee directors representing promoter banks and three nominee directors representing shareholder banks.¹¹¹ The presence of nine directors representing banks, amongst a total of sixteen directors on the NPCI's board, is noteworthy.
- b. UPI Steering Committee which is created¹¹² to discuss and deliberate on business, operational and technical issues of the UPI Network, comprises participants from banks as well as third-party applications.¹¹³

¹⁰⁴PSS Act, s 4; RBI, 'Certificates of Authorisation issued by the Reserve Bank of India under the Payment and Settlement Systems Act, 2007 for Setting up and Operating Payment System in India' (20 February 2023) <<https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/86706.pdf>, <https://m.rbi.org.in/scripts/publicationsview.aspx?id=12043>> accessed 20 April 2023.

¹⁰⁵ William Cook & Anand Raman, 'National Payments Corporation of India and the Remaking of Payments in India' CGAP, Working Paper (May 2019) <https://www.cgap.org/sites/default/files/publications/2019_05_07_NPCI_Working_Paper.pdf> accessed 11 March 2023, page 18.

¹⁰⁶ Meaning Board of Directors of the NPCI.

¹⁰⁷ NPCI, 'Board of Directors' <<https://www.npci.org.in/who-we-are/board-of-directors>> accessed 11 March 2023; Articles of Association, NPCI, article 126 (i).

¹⁰⁸ The ten core promoter banks are State Bank of India, Punjab National Bank, Canara Bank, Bank of Baroda, Union Bank of India, Bank of India, ICICI Bank Limited, HDFC Bank Limited, Citibank N. A. and HSBC; NPCI, 'About Us' <<https://www.npci.org.in/who-we-are/about-us>> accessed 11 March 2023.

¹⁰⁹ In 2016 and 2020, the shareholding was made more broad-based and shares were allotted to regional rural banks, cooperative banks, small finance banks, payment system operators, payment banks etc. via private placement to include representation from all sectors. NPCI, 'About Us' <<https://www.npci.org.in/who-we-are/about-us>> accessed 11 February 2023.

¹¹⁰ NPCI, 'Board Diversity Policy' <https://www.npci.org.in/PDF/npci/corporate-governance/Board_diversity_policy.pdf> accessed 11 February 2023.

¹¹¹ Board composition includes 1 RBI nominee director, 1 non-executive chairman, 1 managing director, 3 independent directors, 7 nominee directors representing promoter banks, 3 nominee directors representing shareholder banks; NPCI, 'Board of Directors' <<https://www.npci.org.in/who-we-are/board-of-directors>> accessed 11 February 2023.

¹¹² NPCI, 'UPI Procedural Guidelines' (July, 2016) <http://www.slbcmadhyapradesh.in/docs/UPI_Procedural_Guidelines24_12_2016.pdf> accessed 11 February 2023, page 12.

¹¹³ NPCI, 'UPI & Services Steering Committee' <<https://www.npci.org.in/what-we-do/upi/steering-committee>> accessed 11 March 2023.

Additionally, NPCI has set up a separate entity, NPCI International Payments Limited ('NIPL'), which is a wholly owned subsidiary of NPCI for its international expansion activities. It is a for profit, unlisted public limited company.¹¹⁴

Box 5: What worked for UPI?

- *Dedicated institution:* Building on the success of Aadhaar, UPI's deployment was also spearheaded by NPCI, a not-for-profit company, established jointly by the Indian Banking Association and the RBI.
- *Light-touch regulatory support:* NPCI has been recognised as a PSO by the RBI. Additionally, NPCI's board of directors also includes one RBI nominee director at all times.
- *Industry-driven approach to governance:* The shareholder representation of NPCI, its board structure as well as the UPI Steering Committee, reflect an industry-driven approach to governance. However, amongst the many industry participants, the NPCI is primarily driven by banks given its origin and establishment.

However, with UPI, the need to shift to self-sustaining models have also been felt.¹¹⁵ To this end, the RBI released a Discussion Paper¹¹⁶ examining ways to equitably share costs associated with the UPI, going forward.

(iii) ONDC

UPI has already brought a massive revolution in the realm of digital payments. A similar shift is now underway in digital commerce with the coming of ONDC. This cutting-edge DPI aims to democratise digital commerce and move exchange of goods and services from a platform-centric approach to a network-centric approach.¹¹⁷ A platform-centric approach leads to skewed bargaining power in favour of the platform and higher entry barriers and lower margins for the sellers.¹¹⁸ This 'flow of value' paradigm intends to reduce overwhelming reliance

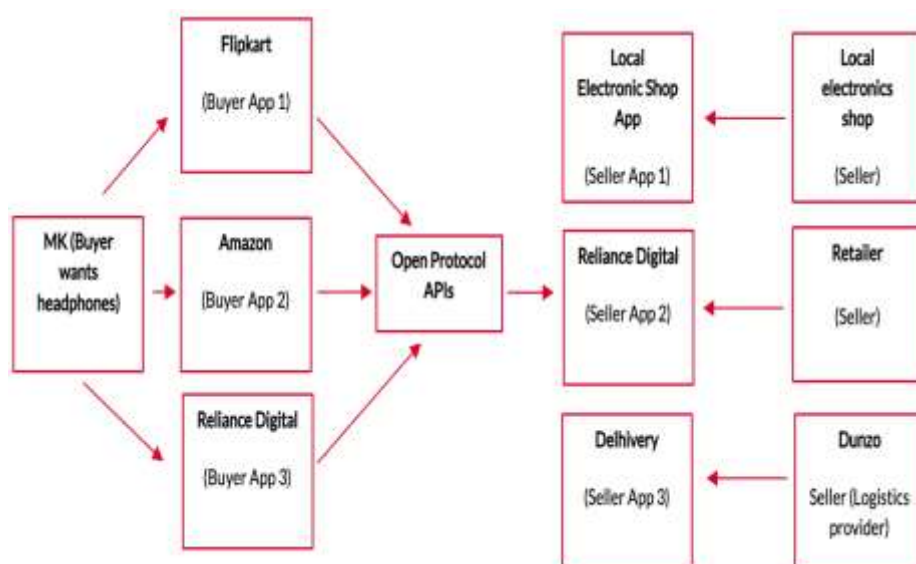


Figure 5: Process flow for buyer seller interaction on the ONDC network

¹¹⁴ NPCI, 'About NIPL' <<https://www.npci.org.in/who-we-are/group-companies/npci-international>> accessed 11 March 2023.

¹¹⁵ At present UPI being a public good continues to remain free of cost. To compensate the participants, government has been offering reimbursements which appear inadequate as well as being largely appropriated by the banks; 'Who pays for UPI transactions? Banks, PSPs want their share of penny' (*The Federal*, 25 August 2022) <<https://thefederal.com/business/who-pays-for-upi-transactions-banks-psps-want-their-share-of-penny/>> accessed 11 March 2023.

¹¹⁶ RBI released a Discussion Paper on charges in Payment Systems last year to seek comments from stakeholders regarding a sustainable funding model for UPI; RBI Discussion Paper on Charges in Payment Systems.

¹¹⁷ ONDC, 'Building Trust in the ONDC Network' (Consultation Paper, 29 September 2022) <https://ondc-static-website-media.s3.ap-south-1.amazonaws.com/res/daea2fs3n/image/upload/ondc-website/files/ONDC_Building_Trust_Consultation_Vf_utbodw/1664541553.pdf> accessed 11 March 2023, page 34 ('ONDC Consultation Paper'); ONDC 'ONDC: Democratizing Digital Commerce in India' (Strategy Paper, January 2022) <https://ondc-staticwebsitemedia.s3.ap-south1.amazonaws.com/res/daea2fs3n/image/upload/ondcwebsite/files/ONDCStrategyPaper_ucvfjm/1659889490.pdf> accessed 11 March 2023, page 8. ('ONDC Strategy Paper')

¹¹⁸ ONDC Consultation Paper, page 9.

on one platform and make goods and services equitably available to all.¹¹⁹ It is an interoperable network¹²⁰ comprising different entities called 'Network Participants',¹²¹ namely

- a. Buyer Apps that give functionality to the buyers to place orders,
- b. Seller Apps¹²² that offer products or services to buyers and
- c. Gateways that perform the search and discovery function.¹²³

The ONDC Network ('**Network**'), still in its early stages, is expected to experience exponential growth in the next 5 years and is being developed based on the principles of participatory governance which we discuss in detail below.

Governance of ONDC

The Network is managed and operated by the ONDC Entity ('**ONDC Entity**') which is incorporated as a not-for-profit company under Section 8 of the CA 2013. The ONDC Entity is a government backed company and was established by the Department of Promotion of Industry and Internal Trade ('**DPIIT**') under the Ministry of Commerce and Industry. It has adopted a participant-driven approach for governance to ensure that the network remains accountable and responsive to the evolving needs of its users. This is reflected in the active involvement of the private sector participants as well as users at various levels.

a. Shareholding and Board Structure

ONDC, is a market and community-led initiative and majority shareholding¹²⁴ of the ONDC Entity is primarily held by private and public sector banks.¹²⁵ In order to ensure financial independence, the initial funding has been obtained through allotment of shares.¹²⁶ Although ONDC is currently free of cost, in future it intends to charge a small fee from platforms for smooth operations.¹²⁷ Its board composition, which is diverse and participant-led, includes representatives from banks, *ex-officio* government nominees from the Ministry of Commerce and Industry, the Ministry of Consumer Affairs, the Ministry of MSMEs, and also includes independent members from the industry as well as civil society.¹²⁸

b. User Council and Consultations

In order to formalise continuous participation of the stakeholders in governance, a User Council comprising representatives from Network Participants and civil society will be constituted as part of the ONDC Entity.¹²⁹ The User Council will decide its own rules of business and meet regularly to fulfil its responsibilities. Primarily the User Council will play a key role in periodically reviewing and providing guidance on various aspects¹³⁰ of functioning and governance of the Network. By serving as a liaison between Network Participants and consumers on one side and the Network on the other, the User Council will ensure that interests of the

¹¹⁹ *ibid.*

¹²⁰ ONDC represents a complete network of digital commerce that is open and based on the BeckN protocol. It is interoperable and existing digital commerce and logistic platforms of many different configurations connect and operate seamlessly on it.

¹²¹ All existing digital commerce applications and platforms can voluntarily choose to adopt and be a part of the ONDC network; ONDC Strategy Paper, para 2.7.1.

¹²² These can be of two types, a. Marketplace sellers i.e., Aggregators that do not own any inventory and are merely marketplaces and b. Inventory sellers i.e., sellers that own the inventory; ONDC Consultation Paper, page 9.

¹²³ *ibid.*

¹²⁴ The shareholders of ONDC Entity comprise Quality Council of India (initial promoter), Protean e-Gov (initial promoter), public and private sector banks, depositories, both the stock exchanges, development banks; ONDC, 'About Us' <<https://ondc.org/about/>> accessed 11 March 2023.

¹²⁵ ONDC Strategy Paper, page 21.

¹²⁶ BQ Prime, 'ONDC Will One Day Have a Revenue Model, Says CBO Shireesh Joshi' (*YouTube*, 15 October 2022) <<https://www.youtube.com/watch?v=-RTUV6Rze4E>> accessed 11 March 2023.

¹²⁷ Shouvik Das, 'ONDC to charge 'small fee' from platforms after growth period: Koshy' (*LiveMint*, 16 December 2022) <<https://www.livemint.com/news/india/ondc-to-charge-small-fee-from-platforms-after-growth-period-koshy-11671199743810.html>> accessed 11 March 2023.

¹²⁸ ONDC, 'About Us' <<https://ondc.org/about/>> accessed 11 March 2023.

¹²⁹ ONDC Consultation Paper, page 33.

¹³⁰ These include a. network policies and procedures; b. conducting compliance and audits; c. developing new functionalities of the Network d. instituting new policies and procedures and governance, technology and policy of ONDC; ONDC Consultation Paper, page 33.

consumers and Network Participants are represented and the policies of the Network are continually evolving to align with their interests. While the User Council is in the process of being set up, ONDC will continue involving Network Participants and other stakeholders through regular consultations for development of policies as well as functionalities.

Thus, User Council together with regular participant consultation is touted to be the “*bedrock of ONDC’s responsive and participatory governance framework.*”¹³¹

Box 6: ONDC’s approach to user-driven governance

- *Dedicated institution and light-touch regulatory support:* The ONDC Network is managed and operated by the ONDC Entity, which is a not-for-profit company, that was established by DPIIT under the Ministry of Commerce and Industry.
- *User-driven and multi-stakeholder approach to governance:* Moving a step forward from NPCI’s industry-driven governance model, the ONDC entity is user-driven and incorporates a multi-stakeholder approach to governance. This is evident from the constitution of the ONDC’s board which includes members from diverse pockets of the industry, the government as well as civil society; and from the User Council which is being set up within the ONDC entity.

Data sharing initiatives in the health and agriculture sector

(i) ABDM

DEPA has also found its way in the healthcare sector through the ABDM under the Ministry of Health and Welfare (**‘MoHFW’**).¹³² The National Digital Health Mission was piloted in six union territories and launched as ABDM nationwide in 2021 to leverage technology for ensuring adequate high-level healthcare to the citizens.¹³³ ABDM intends to deploy digital tools for improving the efficiency of the healthcare system in the country by solving the persisting challenges in the current healthcare ecosystem.¹³⁴ These include limited teleconsultation with healthcare professionals, fragmented health records, difficulties in obtaining health insurance claims from the insurance companies and absence of standard procedures for teleconsultation, healthcare professional verification, appointments etc.

The ABDM is built on layered architecture consisting of foundational, health data exchange, Unified Health Interface (**‘UHI’**) and end user applications layers.¹³⁵ The foundational layer leverages existing DPIs, such as Aadhaar and UPI, to offer cross-domain capabilities. For instance, creation of a Health ID by patients (called ABHA number)¹³⁶ requires utilising Aadhaar authentication for identity verification. The health data exchange layer encompasses core digital infrastructure required to offer interoperability between various kinds of health data. These building blocks include: (a) ABHA number, (b) Healthcare Professionals and Health Facility Registry¹³⁷ and (c) Health Information Exchange and Consent Manager.¹³⁸ The UHI layer, envisioned as an open protocol, aims to expand interoperability to digital health services such as teleconsultation, booking ambulances, and discovering pharmacies.¹³⁹ The end user applications comprises the applications and platforms developed

¹³¹ *ibid.*

¹³² NITI Aayog DEPA Discussion Draft.

¹³³ ABDM, ‘Frequently Asked Questions’ <<https://abdm.gov.in/faq>> accessed 11 March 2023.

¹³⁴ *ibid.*

¹³⁵ National Health Authority (**‘NHA’**), ‘Consultation Paper on Unified Health Interface’ (Consultation Paper, 2021) <https://abdm.gov.in:8081/uploads/UHI_Consultation_Paper_60a9201c1d.pdf> accessed 11 March 2023. (**‘UHI Consultation Paper’**)

¹³⁶ Each patient will be given an ABHA number which will enable the patient to have their health records available digitally and each ABHA number will be linked to a personal health record address through appropriate consent. ABDM, ‘About’ <<https://abdm.gov.in/abdm>> accessed 11 March 2023.

¹³⁷ The former is the master data of information on doctors, nurses, paramedical staff and other healthcare professional cadres. The latter consists of one record and a unique identifier for each healthcare facility (hospitals, clinics, diagnostic centres, pharmacies etc.) across all systems of medicine in India.

¹³⁸ It enables the exchange of interoperable health records between the patient and care providers.

¹³⁹ UHI Consultation Paper, page 20.

by the government or private sector through which patients, healthcare providers, insurers, researchers, policymakers, etc., access trusted healthcare and services.

Governance of ABDM

The National Health Authority ('NHA'), an attached office of the MoHFW has been entrusted with implementing the ABDM¹⁴⁰ in coordination with state ministries and departments. Its primary responsibility is to design strategy and build interoperable technological infrastructure for creating the National Digital Health Ecosystem.¹⁴¹ While NHA's role is limited to filling the vacuum in digital space and does not extend into functions of other authorities,¹⁴² it is responsible for developing self-financing models for ABDM. To ensure secure processing and safeguarding of personal data of individuals, it has formulated a Health Data Management Policy.¹⁴³

NHA was reconstituted as a fully functional autonomous body pursuant to a cabinet decision¹⁴⁴ replacing the National Health Agency which was functioning as a registered society.¹⁴⁵ The Governing Board, chaired by the Union Minister for Health and Family Welfare and headed¹⁴⁶ by a Chief Executive Officer who serves as its member secretary and oversees NHA's operations. The Governing Board includes representation from domain experts as well as states on a rotational basis.¹⁴⁷

(ii) Agristack

In the agriculture sector, Agristack is being developed to create a national digital ecosystem that would elevate the efficiency and productivity of the sector along with improving the welfare and income of farmers.¹⁴⁸ The project, still in its initial stages, is being developed by the Department of Agriculture, Cooperation and Farmers Welfare ('DoACFW') based on its concept paper on India Digital Ecosystem of Agriculture ('IDEA').¹⁴⁹ The DoACFW prepared a detailed Concept Paper on the principles and framework of IDEA and comments were invited from subject experts, farmers, farmer producers organisations and the general public. The Agristack would adopt an ecosystem approach¹⁵⁰ and would be built as an open source conforming to open standards.¹⁵¹ A unique farmer ID, core registries and directories, unified farmer service interface (similar to UPI) that will enable the data providers and data consumers to exchange data will be some of the building blocks of the Agristack.¹⁵² In the process towards building Agristack, the DoACFW is undertaking pilot projects with leading technology companies and Agtechs to develop proof of concepts.¹⁵³

¹⁴⁰ Besides ABDM, NHA is also the apex body responsible for implementing India's flagship public health insurance/assurance scheme called "Ayushman Bharat Pradhan Mantri Jan Arogya Yojana." ABDM, NHA <<https://abdm.gov.in/nha>> accessed 11 February 2023.

¹⁴¹ This also includes developing common standards and languages which NHA shall be coming up with in a consultative manner; ABDM, 'NHA' <<https://abdm.gov.in/nha>> accessed 11 February 2023; ABDM, 'Collaboration' <<https://abdm.gov.in/collaborations>> accessed 23 March 2023; NHA, 'A brief guide on ABDM and its various building blocks' <https://abdm.gov.in:8081/uploads/ABDM_Building_Blocks_v8_3_External_Version_eabbc5c0f3_4_a96f40c645.pdf> accessed 23 March 2023, page 7.

¹⁴² For instance, regulation of healthcare professionals shall continue to be done by respective councils.

¹⁴³ NHA, MoHFW, 'ABDM: Draft Health Data Management Policy' (April 2022) <https://abdm.gov.in:8081/uploads/Draft_HDM_Policy_April2022_e38c82eee5.pdf> accessed 23 March 2023. ('NHA Health Data Management Policy').

¹⁴⁴ Cabinet, 'Cabinet approves restructuring of National Health Agency as "National Health Authority" for better implementation of Pradhan Mantri - Jan Arogya Yojana' (*Press Information Bureau*, 2 January 2019) <<https://pib.gov.in/PressReleaseDetail.aspx?PRID=1558213>> accessed 23 March 2023. ('NHA Press Release')

¹⁴⁵ ABDM, 'NHA' <<https://abdm.gov.in/nha>> accessed 23 March 2023.

¹⁴⁶ ABDM, 'Organization Chart' <<https://abdm.gov.in/organization-chart>> accessed 23 March 2023.

¹⁴⁷ NHA Press Release.

¹⁴⁸ Budget 2023-2024, page 6.

¹⁴⁹ DoACFW, 'Consultation Paper on IDEA' (Consultation Paper, 1 June 2021) <https://agricoop.nic.in/sites/default/files/IDEA%20Concept%20Paper_mod01062021_1.pdf> accessed 23 March 2023. ('IDEA Consultation Paper')




¹⁵⁰ The Task Force and Working Group had suggested following an ecosystem approach for developing Agristack.

¹⁵¹ Budget 2023-24, page 5.

¹⁵² IDEA Consultation Paper, page 15.

¹⁵³ Ministry of Agriculture and Farmers Welfare, 'Agristack Project' (*Press Information Bureau*, 13 December 2022) <<https://pib.gov.in/PressReleaseDetail.aspx?PRID=1883173>> accessed 23 March 2023.

Processing key takeaways from the governance of Aadhaar, UPI and ONDC

		
<p>Creation of a dedicated institution to spearhead Aadhaar deployment i.e., UIDAI, a statutory body, facilitated Aadhaar’s wide scale adoption.</p>	<p>Building on the success of Aadhaar, UPI’s deployment was also spearheaded by NPCI, a not-for-profit company, established jointly by the Indian Banking Association and the RBI.</p> <p>NPCI has been recognised as a PSO by the RBI. Additionally, NPCI’s board of directors also includes one RBI nominee director at all times.</p> <p>The shareholder representation of NPCI, its board structure as well as the UPI Steering Committee, reflect an industry-driven approach to governance. However, amongst the many industry participants, the NPCI is primarily driven by banks given its origin and establishment.</p> <p>A sustainable funding model for NPCI’s shareholders in relation to the expenditure incurred to operate the UPI is yet to be worked out.</p>	<p>The ONDC Network is managed and operated by the ONDC Entity, which is a not-for-profit company, that was established by DPIIT under the Ministry of Commerce and Industry.</p> <p>Moving a step forward from NPCI’s industry-driven governance model, the ONDC Entity is user-driven and incorporates a multi-stakeholder approach to governance. This is evident from the constitution of the ONDC’s board which includes members from diverse pockets of the industry, the government as well as civil society; and from the proposed User Council within the ONDC Entity.</p>

Insights from India’s experience so far can provide meaningful insights to direct the future course of India’s DPI story. While there is no one-size-fits-all approach, there is a discernible trend of moving towards more participatory and inclusive governance. In the following chapter of the Report, we discuss diverse governance approaches adopted globally for open banking, open finance and data exchange initiatives.

V. Global Approaches to Open Banking, Open Finance and Data Sharing

The trend towards safe and secure sharing of data, especially financial data, is gaining momentum globally. While most jurisdictions have a positive approach, there is variation in terms of the stage of adoption of open banking and data sharing. Many international jurisdictions are still at an exploratory stage with governments and central banks either evaluating the merits of open banking or open finance in their particular jurisdiction or laying the groundwork for its implementation. Full-fledged regulatory developments are happening in only a few of them. In this specific context, this chapter takes a stock of the regulatory developments¹⁵⁴ with regard to open banking and open finance in the UK and Philippines as well as the data-sharing initiatives in Australia and Estonia. We have chosen these four jurisdictions as our aim is to present some important findings in terms of precautions and safeguards that may be necessary for a sound AA ecosystem in India. Additionally, we shall also be giving a snapshot of open banking initiatives in nine other jurisdictions.

(i) UK

Background

The UK has been a pioneer in open banking¹⁵⁵ and this journey started in 2016 with the Competition and Markets Authority ('CMA') publishing a report on the UK's retail banking market.¹⁵⁶ The report revealed that established larger banks did not have to compete hard enough to get access to customers while the newer banks found it difficult to access the market and expand their reach.¹⁵⁷ Thus, open banking was initiated by the CMA as a corrective action to remedy this gap ('CMA-9 Order').¹⁵⁸ The 9 largest banks in the UK ('CMA-9'), were required to create and fund the Open Banking Implementation Entity ('OBIE'), incorporated as a not-for-profit company, i.e. Open Banking Limited¹⁵⁹ ('OBL'), to enable the safe and secure sharing of financial data. The Payment Services Regulations 2017, which implemented the Second Payment Services Directive in the UK¹⁶⁰ took open banking even further by making it mandatory for all Account Servicing Payment Service Providers ('ASPSPs') to share data.¹⁶¹

¹⁵⁴ A desk review into open banking, open finance and open data initiatives of 13 jurisdictions has been conducted. These include the UK, Australia, Philippines, Estonia, Canada, Brazil, Singapore, US, Nigeria, Hong Kong, Indonesia, Bahrain and New Zealand.

¹⁵⁵ Over 5 and a half million consumers now use services powered by Open Banking technology in the UK. 'Open banking passes the 5 million users' milestone' (*Open Banking*, 16 February 2022) <<https://www.openbanking.org.uk/news/open-banking-passes-the-5-million-users-milestone/>> accessed 23 March 2023.

¹⁵⁶ CMA, 'Retail banking market investigation' (*GOV.UK*, 26 February 2016) <<https://www.gov.uk/cma-cases/review-of-banking-for-small-and-medium-sized-businesses-smes-in-the-uk>> accessed 23 March 2023.

¹⁵⁷ Open Banking, 'About OBIE' <<https://www.openbanking.org.uk/about-us/>> accessed 23 March 2023.

¹⁵⁸ CMA, 'Retail banking market investigation' (*GOV.UK*, 2 February 2017) <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/600842/retail-banking-market-investigation-order-2017.pdf> accessed 23 March 2023.

¹⁵⁹ Open Banking, 'Annual Report 2020' (2020) <<https://assets.foleon.com/eu-west-2/uploads-7e3kk3/48197/obie-ra-artwork-10096a5716bf30-2.5853a6c2c203.pdf>> accessed 23 March 2023, page 30.

¹⁶⁰ Implemented from 13 January 2018. Directive (EU) 2015/2366 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC (EU Directive) [2015] L337/35 <<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32015L2366&from=EN>> accessed 23 March 2023.

¹⁶¹ The participants of the open banking ecosystem include ASPSPs i.e., banks, building societies, credit card issuers, e-money institutions etc. other PSPs and Third Party Payment Providers ('TPPs') i.e. fintechs.

Governance of open banking in the UK

The governance structure of the OBIE which functions under the regulatory oversight of CMA, Financial Conduct Authority ('FCA') and His Majesty's Treasury ('HMT') was set out by the CMA-9 order.¹⁶² The ecosystem which now extends far beyond CMA-9 with more than 330 regulated firms under its ambit¹⁶³ was also required to have an Implementation Trustee appointed by CMA to ensure the independence of the OBIE.¹⁶⁴ This Implementation Trustee also served as the executive chair of the OBL Board.¹⁶⁵ Additionally, the CMA-9 Order established an advisory group, the Implementation Entity Steering Group ('IESG'), to review the policies and standards to be adopted by the OBIE.¹⁶⁶ Although the Implementation Trustee was expected to pursue consensus at IESG, as the chair, they also had the power to impose a decision if consensus could not be reached to ensure momentum. Considering the concentration of power with a new Implementation Trustee, two non-executive directors were appointed to balance the power dynamics.¹⁶⁷

Roadblocks in OBIE governance and transition to Future Entity

In light of allegations of mismanagement¹⁶⁸ levelled against the OBIE, the CMA ordered an investigation chaired by Alison White, pursuant to which an investigation report ('Alison White Report') highlighting the drawbacks of the OBIE was published in 2021.¹⁶⁹ In 2022, the CMA recommended that a new 'Future Entity' succeed the OBIE. This would be governed by principles of independence, accountability, consumer and SME focus, and adaptability.¹⁷⁰ These principles were further developed setting out High-Level Principles for Future Governance of Open Banking.¹⁷¹ The High-Level Principles recognise sustainable funding as one of the principles to govern the working of the Future Entity and state that the new model should be broader than the current model which solely relies on membership contributions.¹⁷² As per the CMA recommendations, the Future Entity shall be accountable to the Joint Regulatory Oversight Committee ('JROC'), a cross-authority committee led jointly by the FCA, Payment System Regulator ('PSR'), HMT and the CMA.¹⁷³

Open finance and data sharing across sectors

Given the early success of open banking in the UK, the Government decided to foray into other sectors of finance

¹⁶² CMA, 'CMA publishes findings of 'Lessons Learned' review into Open Banking' (*GOV.UK*, 27 May 2022) <<https://www.gov.uk/government/news/cma-publishes-findings-of-lessons-learned-review-into-open-banking>> accessed 23 March 2023.

¹⁶³ CMA, 'Corporate report: Update on Open Banking' (*GOV.UK*, 5 November 2021) <<https://www.gov.uk/government/publications/update-governance-of-open-banking/update-on-open-banking>> accessed 23 March 2023.

¹⁶⁴ CMA, 'Retail Banking Market Investigation Roadmap Completion Decision' (*GOV.UK*, 15 May 2020) <https://assets.publishing.service.gov.uk/media/63bed8958fa8f513b40f866c/BANKING_PROVIDERS_Roadmap_Completion_Decision_pdf> accessed 23 March 2023.

¹⁶⁵ David Porteous, 'Governing DPI: Lessons from Open Banking in the UK' (*Integral*, 22 November 2021) <<https://www.integralsolutionists.com/governing-dpi-lessons-from-open-banking-in-the-uk>> accessed 23 March 2023.

¹⁶⁶ The steering group comprises representatives from CMA-9, Pay.UK, the Payment Systems Regulatory, Industry Representatives, the Information Commissioner's Office, HM Treasury and the FCA as well as Independent Representatives for both Consumers and Small Businesses; 'Implementation Entity Steering Group' (*GOV.UK*, 15 November 2016) <<https://www.openbanking.org.uk/wp-content/uploads/2021/04/IESG-Minutes-15-November-2016.pdf>> accessed 23 March 2023, page 4.

¹⁶⁷ Open Banking, 'The OBIE appoints new CEO to provide strategic, financial and operational leadership' (3 February 2022) <<https://www.openbanking.org.uk/news/ceo-announcement/>> accessed 23 March 2023.

¹⁶⁸ Kalyeena Makortoff, 'Chair of UK open banking body resigns over bullying report' (*The Guardian*, 1 October 2021) <<https://www.theguardian.com/business/2021/oct/01/chair-of-uk-open-banking-body-resigns-over-bullying-report>> accessed 23 March 2023.

¹⁶⁹ Alison White, 'Investigation of Open Banking Limited Independent report by Alison White' (*GOV.UK*, 1 October 2021) <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1022451/Independent_report.pdf> accessed 23 March 2023.

¹⁷⁰ CMA, 'The Future Oversight of the CMA's Open Banking remedies' (*GOV.UK*, 24 March 2022) <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1086515/Consultation_response_publication.pdf> accessed 23 March 2023.

¹⁷¹ These include, Purpose, Regulatory Collaboration and Oversight, Stakeholder Interest, Leadership: Independent and accountable, High standards of corporate governance, Reporting, Ongoing Monitoring and sustainable funding; CMA, 'Corporate report: Update on Open Banking' (*GOV.UK*, 5 November 2021) <<https://www.gov.uk/government/publications/update-governance-of-open-banking/update-on-open-banking>> accessed 23 March 2023.

¹⁷² CMA, 'Corporate report: Update on Open Banking' (*GOV.UK*, 5 November 2021) <<https://www.gov.uk/government/publications/update-governance-of-open-banking/update-on-open-banking>> accessed 23 March 2023.

¹⁷³ CMA, 'Next steps on future oversight of Open Banking announced' (*GOV.UK*, 25 March 2022) <<https://www.gov.uk/government/news/next-steps-on-future-oversight-of-open-banking-announced>> accessed 23 March 2023.

beyond banking such as insurance, pensions and investments.¹⁷⁴ Stakeholder feedback was requisitioned on the proposed Open Finance Framework in 2019 by the FCA.¹⁷⁵ In 2021, the feedback statement was released that identified some of the key building blocks for this Framework.¹⁷⁶ These included:

- a. Requirement for a legislative and regulatory framework for open finance,
- b. Building open finance in a cohesive and interoperable manner that is based on common and agreed standards,
- c. Implementation entity that shall be funded and governed equitably and sustainably to ensure successful implementation of Open Finance.¹⁷⁷

A Smart Data Working Group ('**Smart Data Group**') was set up by the Department of Business, Energy and Industrial Strategy to support the development of systems and standards that facilitate the opening up of data across a range of sectors.¹⁷⁸ The Smart Data Group released a Report in 2021 that envisions a cross-sectoral ecosystem for sharing customer data with authorised third parties at the customer's request based on the principles of interoperability.¹⁷⁹ It also sets out the key principles that will lead the design of cross-sector coordination and collaboration for a robust data-sharing ecosystem.¹⁸⁰ One of the possible institutional options it mentions for going cross-sectoral is through the establishment of a Smart Data Council ('**SDC**') which would bring together all bodies leading sectoral delivery of smart data initiatives.¹⁸¹ It is floated to be a voluntary, non-statutory council with a wide cross-sector membership to pool research and findings to develop a cross-sector picture of adoption, capabilities and challenges for smart data innovations.¹⁸²

Existing data protection framework in the UK

The regulatory framework for data protection in the UK comprises the Data Protection Act, 2018 ('**UK DPA**') and the UK General Data Protection Regulation ('**UK GDPR**'). The UK GDPR came into effect on 01 January 2021¹⁸³ and is based on the EU General Data Protection Regulation ('**GDPR**').¹⁸⁴ It is supplemented by the UK DPA which provides for the processing of personal data of individuals, law enforcement agencies, and intelligence services.¹⁸⁵ For processing of personal data, the UK DPA defines consent as "*a freely given, specific, informed and unambiguous indication of the individual's wishes by which the individual, by a statement or by a clear affirmative action, signifies agreement to the processing of the personal data.*"¹⁸⁶ Under the UK DPA, the rights of data subjects include: (i) the right to access their personal data,¹⁸⁷ (ii) rectification of inaccurate personal data,¹⁸⁸ and (iii) the right to erasure or restriction of processing of their data.¹⁸⁹

¹⁷⁴ FCA, 'Open Finance Feedback Statement' (March 2021) <<https://www.fca.org.uk/publication/feedback/fs21-7.pdf>> accessed 23 March 2023, page 3. ('**FCA Open Finance Feedback Statement**')

¹⁷⁵ FCA, 'Call for Input: Open Finance' (17 December 2019) <<https://www.fca.org.uk/publications/calls-input/call-input-open-finance>> accessed 23 March 2023.

¹⁷⁶ FCA Open Finance Feedback Statement, page 30.

¹⁷⁷ *ibid*, page 30.

¹⁷⁸ Department for Business, Energy and Industrial Strategy, 'Smart Data working group' (*GOV.UK*, September 2020) <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/916102/smart-data-working-group-tor.pdf> accessed 23 March 2023; Secure consumer data sharing is one of the key objectives of the UK Government's National Data Strategy.

¹⁷⁹ Department for Business, Energy and Industrial Strategy, 'Smart Data Working Group Spring 2021 report' (*GOV.UK*, June 2021) <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/993365/smart-data-working-group-report-2021.pdf> accessed 23 March 2023. ('**Smart Data Working Group Spring Report**')

¹⁸⁰ Smart Data Working Group Spring Report, page 23.

¹⁸¹ *ibid*, page 8.

¹⁸² *ibid*, page 27.

¹⁸³ United Kingdom Information Commissioner's Office, 'About the DPA 2018' <<https://ico.org.uk/for-organisations/guide-to-data-protection/introduction-to-dpa-2018/about-the-dpa-2018/#2>> accessed 29 March 2023.

¹⁸⁴ General Data Protection Regulation (2016/679) <<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R0679>> accessed 29 March 2023.

¹⁸⁵ United Kingdom Information Commissioner's Office, 'How does the DPA 2018 work?' <<https://ico.org.uk/for-organisations/guide-to-data-protection/introduction-to-dpa-2018/about-the-dpa-2018/#2%3E>> accessed 29 March 2023.

¹⁸⁶ UK DPA, s 84(2) <https://www.legislation.gov.uk/ukpga/2018/12/pdfs/ukpga_20180012_en.pdf> accessed 29 March 2023.

¹⁸⁷ *ibid*, s 45.

¹⁸⁸ *ibid*, s 46.

¹⁸⁹ *ibid*, s 47.

Box 7: Key takeaways from the governance of open banking in UK

- *Dedicated institution:* Open banking in the UK was initiated as a corrective action. The nine largest banks in the UK were required to create and fund OBIE which was incorporated as a not-for-profit company, the OBL.
- *Improvement in the governance structure:* Due to allegations of mismanagement as well as concerns about the dominance of CMA-9 banks in the OBIE, it is proposed to transition to a Future Entity that would be governed by principles of independence, accountability, adaptability and would represent all relevant industry participants and end-users, including consumer and smaller business interests.
- *Open finance and cross-sectoral data sharing:* Given the positive outcomes of open banking in the UK, the government decided to foray opening up of data into other sectors. The Smart Data Group proposed the creation of an SDC as a voluntary council with a wide cross-sector membership develop a cross-sector picture of adoption, capabilities and challenges for smart data innovations.

(ii) Philippines

Background

The Philippines' Open Finance journey started in 2020 with a survey of regulated financial institutions to better understand open finance for promoting competition as well as increasing financial inclusion. Thereafter, the central bank of the country ('**Bangko Sentral**') released a draft circular on Open Finance for public consultation.¹⁹⁰ The purpose of the public consultation was to inform Open Finance Framework processes and guide the process of developing and setting up a Governing Body.¹⁹¹ The draft circular outlined a tiered approach to adoption of open finance, depending on the sensitivity and type of data.¹⁹²

Governance of open finance in Philippines

(i) *Setting up of OFOC:* In 2021, the Bangko Sentral adopted the Open Finance Framework ('**the Philippines Framework**').¹⁹³ The Philippines Framework recognized the importance of establishing an Open Finance Oversight Committee ('**OFOC**') as an industry-led body responsible for the governance of the Philippines Framework and its participants.¹⁹⁴

(ii) *Functions of OFOC:* The OFOC would be a self-regulatory body and would define functions, roles and responsibilities of itself and participants.¹⁹⁵ Additionally, the OFOC is expected to take on a quasi-regulatory role by adopting policies and guidelines for governing the Philippines Framework and its participants in accordance with applicable laws.¹⁹⁶ The OFOC shall also be responsible for putting in place an economic model for the ecosystem¹⁹⁷ and establishing consumer grievance redressal mechanisms¹⁹⁸. The OFOC would participate in setting technical and financial standards for the Philippines Framework, coordinating with other relevant regulators and managing consent and privacy for all participants of the Philippines Framework.¹⁹⁹

¹⁹⁰ Bangko Sentral NG Pilipinas, 'Guidelines for Adoption of Open Finance Framework' (23 December 2020) <https://www.bsp.gov.ph/Regulations/Issuances%20of%20Policy%20Exposure%20Drafts/Open%20Finance%20Circular_Final%20Draft_%20120720.pdf> accessed 2 April 2023.

¹⁹¹ *ibid.*

¹⁹² *ibid.*

¹⁹³ Bangko Sentral NG Pilipinas, 'Open Finance Framework' (17 June 2021) <<https://www.bsp.gov.ph/Regulations/Issuances/2021/1122.pdf>> accessed 2 April 2023. ('**Philippines Open Finance Framework**')

¹⁹⁴ *ibid.*, pages 3-6.

¹⁹⁵ *ibid.*, page 4.

¹⁹⁶ *ibid.*, page 4 para c.

¹⁹⁷ *ibid.*, page 4 para c (8).

¹⁹⁸ *ibid.*, page 4 para c.

¹⁹⁹ *ibid.*, page 4 para c.

(iii) *Regulatory Oversight*: It would function under direct oversight of Bangko Sentral and the latter retains the right to deploy its range of supervisory tools, including suspension or revocation of authority of OFOC²⁰⁰ to protect the safety of the ecosystem and the general public.²⁰¹

(iv) *Constitution*: The OFOC would comprise representatives from each bank classification, NBFCs, electronic money issuers, operators of payment systems, third party providers and other relevant sectors, as may be added by Bangko Sentral.²⁰² At present the Bangko Sentral has recognised a seven member Open Finance Oversight Committee Transition Group (**'OFOC-TG'**) for a term of two years as the interim governance body to lead the implementation of Open Finance Framework.²⁰³

Existing data protection framework in Philippines

The Data Privacy Act, 2012 (**'Philippines DPA'**) is the governing law for data protection in the Philippines. The rights of data subjects under the Philippines DPA include the right to: (i) access information in respect of their personal data including the identity of their personal information controller; (ii) correction or removal of inaccurate data; and (iii) indemnity for any damage caused due to unlawful or unauthorised collection and use of personal data.²⁰⁴ The Philippines DPA further outlines the safeguards and measures to be undertaken by a 'personal information controller' to ensure the protection of personal information²⁰⁵ and the penalties for unauthorised processing of personal data.²⁰⁶ The provisions of the Philippines DPA are implemented by an independent body, National Privacy Commission, established under the provisions of the Philippines DPA.²⁰⁷ Additionally, the Cybercrime Prevention Act, 2012 provides for the safeguarding of information stored on computers and communications systems from misuse and unlawful access.²⁰⁸

Box 8: Key takeaways from the governance of open finance in Philippines

- *Dedicated institution under regulatory oversight*: OFOC, an industry-led self-regulatory body (when constituted) will be responsible for the governance of open finance in the country and function under the regulatory oversight of the central bank i.e., Bangko Sentral.
- *Multistakeholder approach to governance*: OFOC would comprise representatives from each bank classification, NBFCs, electronic money issuers, operators of payment systems, third-party providers and other relevant sectors, as may be added by the Bangko Sentral.
- *Interim governance*: Currently, the implementation of open finance is being led by the interim governance body, OFOC-TG.

(iii) Australia

Background

The Consumer Data Right (**'CDR'**) is Australia's national data portability initiative.²⁰⁹ It gives consumers the right to access their own data or share it with an accredited data recipient to whom the consumer has given permission

²⁰⁰ This includes suspension of any or all of its generally authorised activities.

²⁰¹ Philippines Open Finance Framework, page 4.

²⁰² *ibid*, page 3.

²⁰³ Lee C. Chipongian, 'BSP creates open finance transition group' (*Manila Bulletin*, 6 January 2022) <<https://mb.com.ph/2022/01/06/bsp-creates-open-finance-transition-group/>> accessed 2 April 2023.

²⁰⁴ Philippines DPA, s 16 <<https://www.privacy.gov.ph/data-privacy-act/>> accessed 29 March 2023.

²⁰⁵ *ibid*, s 20.

²⁰⁶ *ibid*, s 25.

²⁰⁷ Philippines DPA, s 7; NPC has promulgated the Implementation Rules and Regulations for the Philippines DPA; <<https://www.privacy.gov.ph/implementing-rules-regulations-data-privacy-act-2012/>> accessed 29 March 2023.

²⁰⁸ Cybercrime Prevention Act, 2012 <<https://www.officialgazette.gov.ph/2012/09/12/republic-act-no-10175/>> accessed 29 March 2023.

²⁰⁹ Department of the Treasury (Australia), 'Statutory review of the Consumer Data Right: Report' (29 September 2022) <<https://treasury.gov.au/sites/default/files/2022-09/p2022-314513-report.pdf>> accessed 2 April 2023, page 3. (**'Australian CDR Statutory Review Report'**)

to access.²¹⁰ It was introduced in response to several government reviews to develop a right and standards for consumers to access and transfer their information in a usable format.²¹¹ CDR in Australia, is designed as an opt-in service to give the consumer to choose whether or not to share data, with consumers having full visibility into who their data is being shared with along with the purpose for which it is being shared.²¹² It is an economy-wide right, that was rolled out across the banking sector first in a phased manner.²¹³ The CDR has since been expanded to the energy sector, where the initial data sharing has already begun²¹⁴ and will further be expanded to the telecommunications sector. A new sector will be assessed and designated every year.²¹⁵

Governance of CDR in Australia

Australian CDR was initiated by the Treasury, which has been leading the development of CDR policy. This includes the creation of rules and advice to the government on which sectors CDR should apply to in the future.²¹⁶ Within the Treasury, the Data Standards Body ('**DSB**')²¹⁷ develops technical and consumer experience standards that prescribe how data is shared under CDR.²¹⁸

The Treasury works closely with 2 regulators, (i) Australia Competition and Consumer Commission ('**ACCC**') and (ii) Office of the Australian Information Commission ('**OAIC**').²¹⁹ The ACCC has laid down the Competition and Consumer (CDR) Rules, 2020 ('**CDR Rules**')²²⁰ which outline the conditions for accreditation, obligations of the accredited persons,²²¹ rights of the CDR consumers and other rights and obligations of each system participant. The ACCC is responsible for ensuring that providers comply with the CDR Rules as well as taking enforcement action, if necessary. The OAIC is responsible for regulating privacy and confidentiality under the CDR including the redressal of complaints arising therefrom.

The 2022 Report by the Australian Government resulting from its 'Statutory Review of the Consumer Data Right', however, has highlighted that the lack of a centralised implementation entity to lead the CDR work across sectors leads to back and forth between regulators and results in a perceived lack of ownership.²²²

Existing data protection framework in Australia

In Australia, the Privacy Act, 1988 ('**Australia PA**') and the Privacy (Credit Reporting) Code, 2014 apply to the collection, processing and storage of personal, financial and credit information to the financial sector.²²³ Currently small businesses with a turnover of less than \$3 million are not subject to the Australia PA.²²⁴ The Australia PA includes the thirteen 'Australian Privacy Principles' that are the cornerstone of privacy protection.

²¹⁰ CDR, 'What is CDR?' <<https://www.cdr.gov.au/what-is-cdr>> accessed 2 April 2023; ACCC, 'The Consumer Data Right' <<https://www.accc.gov.au/focus-areas/the-consumer-data-right>> accessed 2 April 2023.

²¹¹ CDR, 'About' <<https://www.cdr.gov.au/about#:~:text=to%20CDR%20data,-Background,information%20in%20a%20usable%20format>> accessed 2 April 2023.

²¹² CDR, 'What is CDR?' <<https://www.cdr.gov.au/what-is-cdr>> accessed 2 April 2023.

²¹³ Phase 1 products were simpler such as savings account, current accounts, term deposits etc. Phase 2 products were various kinds of loan instruments. Phase 3 products included business finance, investment loans etc. There was also a distinction of major authorised deposit-taking institutions ('**ADIs**') and non-major ADIs. Major ADIs were supposed to start with phased manner roll out first i.e., in July 2020 and Non-major ADIs were supposed to start with phased manner roll out from July 2021; CDR, 'Phasing in the banking sector' (July 2022) <<https://www.cdr.gov.au/sites/default/files/2022-07/CDR-Phasinginthebankingsector.pdf>> accessed 2 April 2023.

²¹⁴ CDR, 'CDR in the energy sector' <<https://www.cdr.gov.au/rollout/cdr-energy-sector>> accessed 2 April 2023.

²¹⁵ CDR, 'Rollout' <<https://www.cdr.gov.au/rollout>> accessed 2 April 2023.

²¹⁶ CDR, 'Consumer Data Right Sectoral Assessment' (March 2022) <<https://treasury.gov.au/sites/default/files/2022-03/c2022-253782-explainer.pdf>> accessed 2 April 2023.

²¹⁷ Consumer Data Standards, 'About' <<https://consumerdatastandards.gov.au/about>> accessed 2 April 2023.

²¹⁸ Working Groups have been established to support the DSB in designing and testing the open standards it develops; Consumer Data Standards, 'Working Groups' <<https://consumerdatastandards.gov.au/workinggroups/>> accessed 2 April 2023.

²¹⁹ CDR, 'Consumer Data Right Sectoral Assessment' (March 2022) <<https://treasury.gov.au/sites/default/files/2022-03/c2022-253782-explainer.pdf>> accessed 2 April 2023.

²²⁰ ACCC, 'Competition and Consumer (Consumer Data Right) Rules 2020' (4 February 2020) <<https://www.accc.gov.au/system/files/CDR%20Rules%20-%20Final%20-%206%20February%202020.pdf>> accessed 2 April 2023.

²²¹ These obligations include: a. Data protection obligations laid down in Schedule 2, b. Have internal dispute resolution mechanism, c. membership of a recognised external dispute resolution scheme in relation to CDR consumer complaints.

²²² Australian CDR Statutory Review Report, page 35.

²²³ Deloitte, 'Open banking: privacy at the epicentre' <<https://www2.deloitte.com/content/dam/Deloitte/au/Documents/financial-services/deloitte-au-fs-open-banking-privacy-epicentre-170718.pdf>> accessed on 29 March 2023, page 3.

²²⁴ Australia PA, s 6D, 6E and 7 <<https://www.legislation.gov.au/Details/C2022C00361>> accessed 29 March 2023.

They govern standards, rights and obligations around: (i) management of personal information including its collection, use and disclosure, (ii) the integrity of personal information including its quality, security and correction, (iii) the rights of access to personal information²²⁵ and (iv) accountability of the organisation using the information.²²⁶ The Information Privacy Act, 2014 regulates the collection and handling of personal data by public sector agencies and contracted service providers.²²⁷ Most Australian states have an equivalent data protection framework that also covers public sector agencies.²²⁸

Box 9: Key takeaways from the governance of CDR in Australia

- *Purely regulatory initiative:* Australian CDR is a cross-sectoral initiative which was initiated by the treasury which works closely with two regulators i.e., ACCC and OAIC.
- *Detailed roles and responsibilities of participants laid down:* The ACCC has laid down CDR Rules which outline the detailed rights, obligations and liabilities of each participant of the CDR ecosystem.
- *Lack of front-door institution leading to mismanagement:* There is no one centralised implementation entity performing cross-sectoral functions which led to inter-regulatory coordination issues.

(iv) Estonia

Background

The backbone of Estonia's digital infrastructure²²⁹ is X- Road, a data exchange platform that facilitates secure exchange of information over the internet across disparate IT systems.²³⁰ Launched in 2001, it is built upon open and interoperable standards that has made public and private databases in the country interoperable at a national level.²³¹ X-tee,²³² Estonia's internal data exchange platform is based on X-Road which enables the exchange of data amongst different government departments, citizens, and other private sector stakeholders. It has created an ecosystem of improved services in the country as well as has made service delivery for citizens much more efficient.²³³ For instance, citizens can file taxes online using the e-tax system, reducing the administrative burden and saving time.²³⁴

Beyond Estonia, X- Road has also expanded in other European, South American (example Mexico, Brazil, Argentina) and Asian (example Japan, Vietnam, Cambodia) countries.²³⁵ Additionally, cross border capabilities and data exchange between two countries using the same version of X-Road is being enabled through the Nordic Institute for Interoperability Solutions ('NIIS').²³⁶ Through the Federation Agreement between two X-Road ecosystems, each member ecosystem can utilise X-Road services with the other, as if they were members of the same ecosystem, thus facilitating seamless and secure cross border data exchange.

²²⁵ Australia PA, s 14 read with Schedule 1.

²²⁶ OAIC, 'Australian Privacy Principles' <<https://www.oaic.gov.au/privacy/australian-privacy-principles>> accessed 29 March 2023.

²²⁷ Information Privacy Act, 2014 <<https://www.legislation.act.gov.au/View/a/2014-24/current/html/2014-24.html>> accessed 29 March 2023.

²²⁸ OAIC, 'State and territory privacy legislation' <<https://www.oaic.gov.au/privacy/privacy-legislation/state-and-territory-privacy-legislation/state-and-territory-privacy-legislation>> accessed 29 March 2023.

²²⁹ E-Estonia, 'Enter e-Estonia: The coolest digital society' <https://e-estonia.com/wp-content/uploads/e-estonia-211022_eng.pdf> accessed 2 April 2023.

²³⁰ Omidyar Network India, 'Estonia X Road: Open Digital Ecosystem Case Study' (*Open Digital Ecosystems*) <https://opendigitalecosystems.net/pdf/01-Estonia-Case-Study_vF.pdf> accessed 2 April 2023, page 7. ('Estonia Case Study')

²³¹ *ibid.*

²³² Republic of Estonia, Information System Authority, 'Data exchange layer X-tee' <<https://www.ria.ee/en/state-information-system/data-exchange-platforms/data-exchange-layer-x-tee>> accessed 2 April 2023.

²³³ Estonia is the only country in the world that provides 99% of its state services online.

²³⁴ e-Estonia, 'Ease of doing business' <https://e-estonia.com/solutions/ease_of_doing_business/e-tax/> accessed 2 April 2023.

²³⁵ Giulia Guadagnoli, 'A conversation with Petteri Kivimäki on X-Road' (*European Commission*, 9 August 2021) <<https://joinup.ec.europa.eu/collection/open-source-observatory-osor/news/open-source-international-cooperation>> accessed 2 April 2023.

²³⁶ X-Road, 'Trust Federation' <<https://x-road.global/trust-federation>> accessed 2 April 2023.

Governance of X Road

Originally developed in Estonia by the Information System Authority ('RIA'), under the Ministry of Economic Affairs and Communication, the X-Road technology is now owned²³⁷ and managed by NIIS. NIIS was established in 2017 by Estonia and Finland²³⁸ and is responsible for developing the cross-border capabilities of X-Road and achieving cross-border cooperation.²³⁹ Iceland became the third member of NIIS after it joined the association in 2021.²⁴⁰ As established in the articles of association ('AoA') of NIIS, if the membership falls below two, the organisation would stand dissolved.²⁴¹ NIIS, as a not-for-profit organisation, is funded through its membership fees and other means of financing.²⁴² The governance structure of the NIIS separates the strategic and technical functions.

(i) *Strategic Functions*: General Meeting is the highest body in the governance structure which is responsible for strategic decision-making, for instance, membership.²⁴³ All members of the NIIS may participate in the general meeting, at present, it consists of three members representing each country i.e. Estonia, Finland and Iceland.²⁴⁴ The Management Board also serves a strategic function and is responsible for managing and representing NIIS.²⁴⁵ It consists of up to three members and is elected for a term of 3 years.²⁴⁶ It has been agreed by all members of NIIS that the Management Board shall have a single member, the CEO, who shall be responsible for the day-to-day management of the organisation.²⁴⁷

(ii) *Technical Functions*: Advisory Group and X-Road Working group are informal organs of NIIS that implement the technical functions. The Advisory Group supports the CEO as well as facilitates the transfer of information between the operational and general meeting.²⁴⁸ X-Road Working Group works on the management and development of X-Road source code.²⁴⁹

It is pertinent to note that X-tee, Estonia's internal data exchange layer, is governed by the RIA in Estonia internally and facilitates secure data exchange amongst public and private stakeholders within Estonia.²⁵⁰ The RIA, although not a sector-specific body, has been pivotal in driving wide-scale digitisation of the Estonian Government in accordance with the Estonian Digital Agenda 2030.²⁵¹

Existing data protection framework in Estonia

Data protection in Estonia is primarily governed by the GDPR which has been implemented into Estonian law by virtue of the Personal Data Protection Act, 2018 ('**Estonia PDPA**'). The Estonia PDPA provides a robust framework for processing of personal data focusing on the rights of the data subjects, including their right to obtain information in respect of the personal data concerning them and the legal basis for its processing,²⁵² and the right to request rectification and erasure of inaccurate and incomplete personal data.²⁵³ The Estonian Data

²³⁷ NIIS owns the X-Road product and maintains Product Roadmap and Product Backlog. Petvikim, 'X-Road Development' (GitHub, 20 July 2022) <<https://github.com/nordic-institute/X-Road-development>> accessed 2 April 2023.

²³⁸ NIIS, 'History of NIIS' <<https://www.niis.org/history>> accessed 2 April 2023.

²³⁹ NIIS, 'Digital society solutions and cross-border cooperation' <<https://www.niis.org/>> accessed 2 April 2023.

²⁴⁰ NIIS, 'History of NIIS' <<https://www.niis.org/history>> accessed 2 April 2023.

²⁴¹ NIIS, 'Articles of Association' <<https://www.niis.org/articles-of-association>> accessed 2 April 2023, article 4.8

²⁴² *ibid*, article 4.1.

²⁴³ *ibid*, article 2.2.

²⁴⁴ Representatives of the Ministry of Finance on behalf of **Finland**, the Ministry of Economic Affairs and Communication on behalf of **Estonia**; The Ministry of Finance and Economic Affairs on behalf of **Iceland**. NIIS, 'Governance' <<https://www.niis.org/governance>> accessed 2 April 2023.

²⁴⁵ Nordic Institute for Interoperability Solutions, 'Articles of Association' <<https://www.niis.org/articles-of-association>> accessed 2 April 2023, Article 3.12.

²⁴⁶ NIIS, 'Articles of Association' <<https://www.niis.org/articles-of-association>> accessed 2 April 2023, article 3.12.

²⁴⁷ NIIS, 'Governance' <<https://www.niis.org/governance>> accessed 2 April 2023.

²⁴⁸ *ibid*.

²⁴⁹ David Eaves et al., 'Best Practices for the Governance of Digital Public Goods' (*Harvard Kennedy School*, April 2022) <https://ash.harvard.edu/files/ash/files/best_practices_for_the_governance_of_digital_public_goods.pdf> accessed 2 April 2023.

²⁵⁰ Estonia Case Study, page 3.

²⁵¹ Republic of Estonia, Information System Authority, 'RIA Strategy 2021-2025' <<https://www.ria.ee/en/authority-news-and-contact/authority-and-management/ria-strategy>> accessed 2 April 2023.

²⁵² Estonia PDPA, s 24 <<https://www.riigiteataja.ee/en/eli/523012019001/consolide>> accessed 29 March 2023.

²⁵³ *ibid*, s 25.

Protection Inspectorate has been appointed as the supervisory authority for the implementation of and compliance with the Estonia PDPA.²⁵⁴ Apart from the Estonia PDPA, the Estonian data protection framework comprises, *inter alia*, the Public Information Act, 2000 which ensures that everyone has the right to access information disseminated for public use,²⁵⁵ the Cybersecurity Act, 2018 which provides for the maintenance and liability of network and information systems as well as the notification and resolution of cyber incidents,²⁵⁶ and the Electronic Communications Act, 2004 which ensures the protection of the rights of users of electronic communications services.²⁵⁷

Box 10: Key takeaways from the governance of X-Road in Estonia

- *Accountable institution:* For developing the cross-border capabilities of X-Road and achieving cross-border cooperation, X-Road is managed by NIIS. Domestic deployment of the Estonian X-tee is managed and regulated by the RIA.
- *Separation of strategic and technical functions:* Within NIIS, there is a clear separation of strategic functions and technical functions in the governance structure. General Meeting and Management Board perform the strategic function while Advisory Group and X-Road Working Group implement the technical functions.

²⁵⁴ *ibid*, s 51.

²⁵⁵ Public Information Act, 2010, s 1 <<https://www.riigiteataja.ee/en/eli/514112013001/consolide>> accessed 29 March 2023.

²⁵⁶ Cybersecurity Act, 2018, s 1 <<https://www.riigiteataja.ee/en/eli/523052018003/consolide>> accessed 29 March 2023.

²⁵⁷ Electronic Communications Act, 2004, s 1 <<https://www.riigiteataja.ee/en/eli/501042015003/consolide>> accessed 29 March 2023.

Processing key takeaways from the UK, Philippines, Australia and Estonia

UK	Philippines	Australia	Estonia
<p>Open banking in the UK was initiated as a corrective action, with the nine largest banks required to create and fund OBIE, incorporated as OBL.</p> <p>Due to allegations of mismanagement as well as concerns about the dominance of CMA-9 banks in the OBIE, it will transition to a Future Entity that would be governed by principles of independence, accountability, adaptability and would represent all relevant industry participants and end-users, including consumer and smaller business interests.</p> <p>The positive outcomes of open banking have led the government to explore open finance and cross-sectoral data sharing, with the Smart Data Group proposing the creation of an SDC as a voluntary council with cross-sector membership to develop a comprehensive picture of smart data innovations.</p>	<p>OFOC, an industry-led accountable institution, is proposed to be responsible for the governance of open finance in the country and will function under the regulatory oversight of the Bangko Sentral.</p> <p>It is slated to follow a multistakeholder approach to governance and comprise representatives from each bank classification, NBFCs, electronic money issuers, operators of payment systems, third-party providers, and other relevant sectors as added by the Bangko Sentral.</p>	<p>The Australian CDR is a cross-sectoral initiative initiated by the Treasury which works closely with regulators ACCC and OAIC.</p> <p>The ACCC has established detailed CDR Rules that outline the roles and responsibilities of each participant.</p> <p>However, there is lack of a centralised implementation entity performing cross-sectoral functions which led to inter-regulatory coordination issues.</p>	<p>NIIS is the accountable institution responsible for developing cross-border capabilities and managing X-Road.</p> <p>It has a clear separation of strategic and technical functions, with the General Meeting and Management Board handling the strategic functions and the Advisory Group and X-Road Working Group handling the technical functions.</p>

Snapshot of open banking, open finance and data sharing initiatives in other jurisdictions

S. No.	Jurisdiction	Recent Developments
1.	Canada ²⁵⁸	Canada's Open Banking journey started in 2018 with the Minister of Finance setting up an 'Advisory Committee on Open Banking' to review the merits of open banking in the country. ²⁵⁹ In 2021, the Committee released its Final Report (' Canadian Banking Report ') which presented recommendations to implement a secure open banking framework in Canada in a phased manner. Phase 1 involves the development of technical standards, carrying out stakeholder consultations and establishing accreditation frameworks and Phase 2 involves establishing a 'fit for purpose entity' to manage and deploy open banking initiatives across Canada. Specifically in the context of Phase 2, the Report discusses future governance principles with appropriate roles for government and industry. ²⁶⁰
2.	Brazil ²⁶¹	In 2019, the Central Bank of Brazil (' CBB ') issued a Communique outlining fundamental requirements of the open banking regime in the country that would be implemented in a phased manner. ²⁶² A Joint Resolution was released in 2020 ²⁶³ by the CBB which provided for the implementation of open banking by FIs, payment institutions and other institutions licensed by the CBB. According to it, the CBB will establish the initial structure responsible for the governance of open banking's implementation process in Brazil ²⁶⁴ and participate in the drafting of the convention relating to the technological standards, standardisation of data, dispute resolution, rights and obligations of participants. ²⁶⁵ This initial structure consists of three levels: (i) Deliberative Council which is responsible for deciding the strategic issues necessary for the implementation of the project in the country, (ii) Technical Groups which are responsible for developing studies and technical proposals for implementation of open banking and (iii) Secretariat which is responsible for organisation and coordination of the structure's working agenda. ²⁶⁶

²⁵⁸ Please note that sharing of financial data through open banking under the regulatory initiative has not yet started in Canada.

²⁵⁹ Financial Consumer Agency of Canada, 'Open banking' (*Government of Canada*) <<https://www.canada.ca/en/financial-consumer-agency/services/banking/open-banking.html>> accessed 2 April 2023.

²⁶⁰ Government of Canada, 'Final Report Advisory Committee on Open Banking' (April 2021) <<https://www.canada.ca/content/dam/fin/consultations/2021/acob-ccsbo-eng.pdf>> accessed 2 April 2023.

²⁶¹ The open banking initiative has been rebranded as open finance in Brazil to reinforce the strategy of broad coverage of the scope of the ecosystem and the data sharing has already started in the ecosystem in a phased manner. Open Finance, 'Biannual Report' (15 August 2022) <https://ob-public-files.s3.amazonaws.com/20221003_Biannual_Report_OFB.pdf> accessed 2 April 2023.

²⁶² Normas Brasil, 'Comunicado DC/BACEN n° 33455 DE 24/04/2019' (26 April 2019) <https://www.normasbrasil.com.br/norma/comunicado-33455-2019_376986.html> accessed 2 April 2023.

²⁶³ Banco Central Do Brasil, 'Joint Resolution No. 1' (4 May 2020) <https://www.bcb.gov.br/content/config/Documents/Open_Banking_CMN_BCB_Joint_Resolution_1_2020.pdf> accessed 2 April 2023.

²⁶⁴ *ibid*, article 46(1).

²⁶⁵ *ibid*, article 46(2).

²⁶⁶ Ministry of Economy/ Central Bank of Brazil/ Collegiate Board, 'Circular No. 4.032' (23 June 2020) <<https://www.in.gov.br/web/dou/-/circular-n-4.032-de-23-de-junho-de-2020-263186825>> accessed 2 April 2023; This 'initial' Governance Framework still appears to be in place and a definitive framework replacing the same has not been laid down yet. Open Finance, 'Overview' <https://www.bcb.gov.br/en/financialstability/open_finance> accessed 2 April 2023.

3.	<i>Singapore</i>	In 2013, the Monetary Authority of Singapore (' MAS ') published a playbook in collaboration with the Association of Banks in Singapore. This guide included a framework for governance, implementation, design principles for APIs and a list of over 400 recommended APIs. ²⁶⁷ In 2018, ASEAN Financial Innovation Network ²⁶⁸ introduced APIX which was an API guidance and collaboration platform to encourage banks to open up their data and services. ²⁶⁹ A leap forward in Singapore's open banking space was taken through Singapore Financial Data Exchange ²⁷⁰ ('SGFindEX'). Launched in 2020 ²⁷¹ by MAS and Smart Nation and Digital Government Group, with the support of the Ministry of Manpower, it enables customers to retrieve and share their financial data ²⁷² from government agencies and private sector organisations with an organisation of the customer's choice. ²⁷³
4.	<i>US</i>	The current work in the US with regard to open banking is largely market driven. It is the US Financial Data Exchange (' USFDX '), a not-for-profit company with an international presence, ²⁷⁴ that is dedicated to unifying the financial industry around a common, interoperable and royalty-free standard for the secure access of user-permissioned financial data, aptly named the FDX API. ²⁷⁵ It was only in 2021 that the Consumer Financial Protection Bureau (' CFPB ') started working on a Final Proposal ²⁷⁶ to implement Section 1033 of the Dodd-Frank Wall Street Reform and Consumer Protection Act ²⁷⁷ that forms the foundation of sharing financial data in the US. ²⁷⁸
5.	<i>Nigeria</i>	In 2021, the Central Bank of Nigeria (' CBN ') issued a Regulatory Framework for Open Banking (' Regulatory Framework ') in Nigeria. ²⁷⁹ It laid down the guiding principles for API specifications, roles and responsibilities of participants as well as CBN, along with the customer rights and redressal mechanism . In 2022, CBN thereafter issued the Exposure Draft of the Operational Guidelines for Open Banking. ²⁸⁰ This was

²⁶⁷ The Association of Banks in Singapore, 'Finance as a Service: API Playbook' (25 September 2013) <<https://abs.org.sg/docs/library/abs-api-playbook.pdf> > accessed 2 April 2023.

²⁶⁸ A not-for-profit entity that was jointly formed by the MAS, International Finance Corporation and the ASEAN Bankers Association.

²⁶⁹ Zhi-Ying Barry, 'The State of Open Banking in Singapore' (Forrester, 27 September 2020) <<https://www.forrester.com/press-newsroom/the-state-of-open-banking-in-singapore/>> accessed 2 April 2023.

²⁷⁰ It is stated as the world's first DPI to use a national digital identity i.e. Sing Pass and a centrally managed online consent system.

²⁷¹ MAS, 'Singapore Financial Data Exchange' <<https://www.mas.gov.sg/development/fintech/sgfindex>> accessed 2 April 2023.

²⁷² This includes information such as deposits, credit cards, loans, insurance policy details and investments. Monetary Authority of Singapore, 'Singapore Financial Data Exchange' <<https://www.mas.gov.sg/development/fintech/sgfindex>> accessed 2 April 2023.

²⁷³ The access to SGFindEX is through financial planning applications or websites of participating insurers, banks as well as through a free government financial planning digital service (MyMoneySense).

²⁷⁴ Operational in USA and Canada currently, however, intends to expand in other countries as well. Financial Data Exchange, 'About FDX' <<https://financialdataexchange.org/FDX/FDX/About/About-FDX.aspx?hkey=dffb9a93-fc7d-4f65-840c-f2cfbe7fe8a6>> accessed 2 April 2023.

²⁷⁵ Financial Data Exchange, 'About' <<https://www.financialdataexchange.org/FDX/FDX/About/FAQs.aspx>> accessed 2 April 2023.

²⁷⁶ The Bureau published an Advance Notice of Proposed Rulemaking concerning implementation of section 1033, accepting comments until February 2021. CFPB, 'Consumer Access to Financial Records' (*Office of Information and Regulatory Affairs*, 2022) <<https://www.reginfo.gov/public/do/eAgendaViewRule?publd=202204&RIN=3170-AA78>> accessed 2 April 2023; On 9th July, 2021 Biden issued an Executive Order on Promoting Competition in the American Economy. It encouraged CFPB to come up with a regulation on Open Banking in the country. The White House, 'Executive Order on Promoting Competition in the American Economy' (9 July 2021) <<https://www.whitehouse.gov/briefing-room/presidential-actions/2021/07/09/executive-order-on-promoting-competition-in-the-american-economy/>> accessed 2 April 2023.

²⁷⁷ Section 1033 of the Dodd-Frank Wall Street Reform and Consumer Protection Act provides, among other things, that subject to rules prescribed by the CFPB a consumer financial services provider must make available to a consumer information in the control or possession of the provider concerning the consumer financial product or service that the consumer obtained from the provider.

²⁷⁸ CFPB, 'Advance notice of proposed rulemaking Dodd-Frank Act Section 1033 - Consumer Access to Financial Records' (22 October 2020) <<https://www.consumerfinance.gov/rules-policy/notice-opportunities-comment/archive-closed/dodd-frank-act-section-1033-consumer-access-to-financial-records/#:~:text=Section%201033%20of%20the%20Dodd,control%20or%20possession%20of%20the>> accessed 2 April 2023.

²⁷⁹ CBN, 'Circular to all Deposit Money Banks and Payment Service Providers' (Circular Ref: PSM/DIR/PUB/CIR/02/001) <<https://www.cbn.gov.ng/Out/2021/PSMD/Circular%20on%20the%20Regulatory%20Framework%20on%20Open%20Banking%20in%20Nigeria.pdf>> accessed 2 April 2023.

²⁸⁰ CBN, 'Exposure Draft- Operational Guidelines for Open Banking in Nigeria' (May 2022) <https://cbn.gov.ng/Out/2022/CCD/OPERATIONAL%20GUIDELINES%20FOR%20OPEN%20BANKING%20IN%20NIGERIA_APPROVED%20EXPOSURE%20DRAFT.pdf> accessed 2 April 2023.

		developed in collaboration with industry stakeholders. On March 7, 2023, the CBN issued the Operational Guidelines which aligns with the provisions of Regulatory Framework. It has mandated all stakeholders to ensure strict compliance with the Guidelines. ²⁸¹
6.	<i>Hong Kong</i>	Following a public consultation, the Hong Kong Monetary Authority ('HKMA') launched the 'Open API Framework for the Hong Kong Banking Sector' ²⁸² in 2018 to allow for open banking in a phased manner. ²⁸³ The focus herein has been on the retail banking segment. ²⁸⁴ The scope of opening up beyond retail banking to the SME sector is being explored. ²⁸⁵
7.	<i>Indonesia</i>	In its Payment Systems Blueprint 2025, the Bank of Indonesia ('BoI') identifies five key areas of implementation to be done by five working groups. ²⁸⁶ The first of which is open banking to promote digital transformation in the banking sector and build interlinks between banks and fintech. This initiative will be commenced through standardising open API, which comprises data, technical, security, and governance standardisations and ensuring interoperability. The fourth of which is the establishment of public infrastructure for the exchange of payment data and information that guarantees open access and personal data protection of the consumer. ²⁸⁷ Towards this end, it launched the National Open API Payments Standard ('SNAP') in 2021 to foster a competitive payment system infrastructure in the country that promotes innovation. ²⁸⁸
8.	<i>Bahrain</i> ²⁸⁹	The Bahrain Open Banking Framework ('Bahrain OBF') was launched in 2020 by the Central Bank of Bahrain ('CBB'). ²⁹⁰ It provides a common set of technical and customer experience standards across the open banking participants and was the first step towards simplifying adoption of open banking in the country. The existing Bahrain regulations for data security, storage, dispute will be applicable for open banking as well. ²⁹¹ These standards have been developed in consultation with the industry participants. The Open Banking module of the CBB Rulebook is the directory of all rules, regulations and guidelines applicable on account information service providers and payment information service providers. ²⁹²

²⁸¹ CBN, 'Operational Guidelines for Open Banking in Nigeria' (March 2023) <<https://www.cbn.gov.ng/Out/2023/CCD/Operational%20Guidelines%20for%20Open%20Banking%20in%20Nigeria.pdf>> accessed 13 March 2023.

²⁸² HKMA, 'Open API Framework for the Hong Kong Banking Sector' (18 July 2022) <<https://www.hkma.gov.hk/media/eng/doc/key-information/press-release/2018/20180718e5a2.pdf#page=4&zoom=100,117,336>> accessed 2 April 2023. ('**HKMA Open API Framework for Banking Sector**')

²⁸³ HKMA, 'Phased Approach' <<https://www.hkma.gov.hk/eng/key-functions/international-financial-centre/fintech/open-application-programming-interface-api-for-the-banking-sector/phase-approach/>> accessed 2 April 2023.

²⁸⁴ HKMA Open API Framework for Banking Sector, paragraph 7.

²⁸⁵ HKMA, 'The Next Phase of the Banking Open API Journey' (2021) <https://www.hkma.gov.hk/media/eng/doc/key-functions/ifc/fintech/The_Next_Phase_of_the_Banking_Open_API_Journey.pdf> accessed 2 April 2023.

²⁸⁶ Bank of Indonesia, 'Indonesia Payment Systems Blueprint 2025' (28 November 2019) <<https://www.bi.go.id/en/publikasi/kajian/Documents/Indonesia-Payment-Systems-Blueprint-2025.pdf>> accessed 2 April 2023.

²⁸⁷ *ibid*, page 42.

²⁸⁸ Bank of Indonesia, 'National Open API Payment Standard' <<https://www.bi.go.id/en/layanan/Standar/SNAP/default.aspx>> accessed 2 April 2023.

²⁸⁹ The implementation of the Bahrain OBF is taking place in a phased manner; CBB, 'CBB issues circular regarding the second phase of Bahrain Open Banking Framework' (15 September 2021) <<https://www.cbb.gov.bh/media-center/cbb-issues-circular-regarding-the-second-phase-of-bahrain-open-banking-framework/>> accessed 2 April 2023.

²⁹⁰ CBB, 'CBB launches the Bahrain Open Banking Framework' (28 October 2020) <<https://www.cbb.gov.bh/media-center/cbb-launches-the-bahrain-open-banking-framework/>> accessed 2 April 2023.

²⁹¹ CBB Admin, 'FAQs' (*Confluence*, 27 October 2020) <<https://bahrainob.atlassian.net/wiki/spaces/BH/pages/314638589/FAQs>> accessed 2 April 2023.

²⁹² CBB, 'Open Banking Module' (July 2021) <https://cbben.thomsonreuters.com/sites/default/files/net_file_store/Vol_5_Ancillary_OB_July_2021.pdf> accessed 2 April 2023.

9.	<i>New Zealand</i>	Only in November 2022, the Government announced formal plans of launching open banking in the country. ²⁹³ Similar to Australia's approach of data sharing, the country will be coming up with a Consumer Data Right Framework for its citizens. The developments are at a nascent stage and the first sector for the roll out would be the banking sector. ²⁹⁴
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²⁹³ Chapman Tripp, 'Open banking one step closer to reality in New Zealand' (11 November 2022) <<https://chapmantripp.com/trends-insights/open-banking-one-step-closer-to-reality-in-new-zealand/>> accessed 2 April 2023.

²⁹⁴ Ministry of Business, Innovation and Employment (New Zealand), 'Government progresses work on open banking' (10 November 2022) <<https://www.mbie.govt.nz/about/news/government-progresses-work-on-open-banking/>> accessed 2 April 2023.

VI. Designing a Governance Framework for the AA Ecosystem

We have thus far evaluated the Indian experience with governing successful DPIs such as Aadhaar, UPI and the ONDC, the factors that have contributed to the success of these DPIs, and key learnings from any institutional shortcomings. A growing consensus on instituting a user-driven and multi-stakeholder approach to DPI governance in India is apparent from our findings in Chapter IV.

We have also examined global approaches to governance in relation to open banking, open finance and data sharing in Chapter V across thirteen jurisdictions with diverse geo-political and economic institutional realities. The need for a comprehensive data protection law as a pre-requisite to instituting successful data exchange frameworks is evident. Based on our findings, we aim to make actionable recommendations towards building a secure and agile governance framework for the AA ecosystem. Beyond the AA ecosystem, we hope that our recommendations serve as a starting point for future conversations on DPI governance in India.

Our recommendations are broadly divided into three categories:

Recommendation 1 – Enacting a robust data protection framework to safeguard users’ rights

Recommendation 2 – Building a fit-for-purpose and user-driven Governance Entity for the AA ecosystem

Recommendation 3 – Creating a central facilitative body responsible for key governance institutions across all DPI ecosystems.

Recommendation 1- Enacting a robust data protection framework to safeguard **users’ rights**

The success of any DPI involving data exchange rests primarily on trust, and therefore the security and privacy standards involved in such data exchange. Two building blocks for an effective consent-based data exchange are (i) a data protection law that clarifies the rights of the data principal; and (ii) technology that enables a user-friendly implementation of the data protection law.²⁹⁵ While India presently does not have a data protection law, AAs collect and manage consumers’ consent using the ‘consent artefact’ – a machine-readable electronic document that specifies the parameters and scope of data share that a user consents to in any data sharing transaction – specified by the MeitY.²⁹⁶

Data Protection Law in India

Given the nature of the data processed and the risks to privacy involved, our survey of global best practices²⁹⁷ reveals that an overarching data protection law that clarifies the rights, duties and liabilities of all participants is

²⁹⁵ Bank for International Settlements, ‘BIS Papers No. 124: The design of a data governance system’ (May 2022) <<https://www.bis.org/publ/bppdf/bispap124.pdf>> accessed 29 March 2023, page 10 (**‘BIS Paper on the design of data governance system’**); A Manasvi and Beni Chugh, ‘Designing a consent artefact for digital financial services to cater to constrained users.’ (*Dvara Research Blog*, 2021) <<https://www.dvara.com/research/blog/2021/11/08/designing-a-consent-artefact-for-digital-financial-services-to-cater-to-constrained-users/>> accessed 29 March 2023.

²⁹⁶ MeitY Electronic Consent Framework.

²⁹⁷ Please refer to Chapter V.

a prerequisite to instituting successful data exchange models.²⁹⁸ For instance, Estonia's data exchange layer is governed by the Personal Data Protection Act, 2018. Similarly, open banking initiatives in the UK, Australia and Philippines are governed under the Data Protection Act 2018, the Privacy Act 1988 and the Data Privacy Act 2012, respectively.²⁹⁹

While the Supreme Court of India has recognised privacy as a fundamental right through its judgement in *K S Puttaswamy v Union of India*,³⁰⁰ India is yet to enact a holistic data protection law that governs the rights and duties of data principals i.e., the individuals to whom data belongs. While there are sectoral/ regulator-specific safeguards in place presently,³⁰¹ such narrow mandates may throttle the potential of the AA ecosystem and related innovation to flourish in a cross-sector and cross-border fashion.

A draft Data Protection Bill, 2019 that was introduced in the Parliament of India was consequently withdrawn in August 2022.³⁰² A new draft DPDP Bill was released for public comments by the MeitY in November 2022.³⁰³ The DPDP Bill seeks to clarify the role and responsibilities of consent managers, data fiduciaries and data processors vis-à-vis the data principal and proposes the establishment of a Data Protection Board ('DPB') of India for enforcement purposes.³⁰⁴ The DPDP Bill presently awaits introduction in the Parliament of India.

Consent Artefact

The AA Master Directions mandate that AAs shall collect consent from consumers using the consent artefact,³⁰⁵ which aims to build in *privacy by design*, insofar collection and management of consent is concerned. The consent artefact represents an electronic way for consumers to provide granular and revocable consent under the ORGANS³⁰⁶ framework. While the consent artefact is a giant leap in the direction of privacy-enhancing technologies, the artefact, in its present form and specifications, comes with a few limitations.³⁰⁷

For instance, where consent is provided for a particular purpose, the consent artefact cannot ensure that the data so obtained is used only for the specified purpose. Similarly, once the purpose for which the consent was provided has been fulfilled, the consent artefact cannot ensure that the data expires or is not stored for other purposes.³⁰⁸ When consent is revoked, the artefact cannot ensure that the data transferred before such revocation is digitally deleted. In the absence of a data protection framework, there are presently no legal obligations to ensure that storage and purpose limitations are met and that the data so collected is consequently erased.

²⁹⁸ The Centre for Internet & Society, 'Rethinking Data Exchange & Delivery Models Principles for Privacy Preserving Data Sharing in Digital Governance' (31 March 2021) <<https://cis-india.org/internet-governance/rethinking-data-exchange-delivery-models-pdf>> accessed 29 March 2023; BIS Paper on the design of data governance system, page 10.

²⁹⁹ Please refer to Chapter V.

³⁰⁰ *K S Puttaswamy v Union of India*, (2017) 10 SCC 1.

³⁰¹ See for instance: RBI Master Direction on 'Digital Payment Security Controls' (18 February 2021) <<https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=12032&Mode=0>> accessed 1 April 2023; RBI Master Direction on 'Information Technology Framework for the NBFC Sector' (8 June 2017) <https://m.rbi.org.in/Scripts/BS_CircularIndexDisplay.aspx?Id=11946> accessed 1 April 2023; SEBI Circular on 'Cyber Security & Cyber Resilience framework for Stock Brokers / Depository Participants' (3 March 2018), <https://www.sebi.gov.in/legal/circulars/dec-2018/cyber-security-and-cyber-resilience-framework-for-stock-brokers-depository-participants_41215.html> accessed 1 April 2023; IRDAI (Insurance Web Aggregators) Regulations, 2017 <<https://irdai.gov.in/document-detail?documentId=394279>> accessed 1 April 2023.

³⁰² Soumyarendra Barik, 'Govt withdraws data protection Bill to bring revamped, refreshed regulation' (*The Indian Express*, 4 August 2022) <<https://indianexpress.com/article/india/government-withdraws-data-protection-bill-8068257/302>> accessed 29 March 2023.

³⁰³ DPDP Bill, 2022.

³⁰⁴ Sunetra Ravindran et al., 'Comments on the Draft Digital Personal Data Protection Bill, 2022' (*Vidhi Centre for Legal Policy*, December 2022) <<https://vidhilegalpolicy.in/research/comments-on-the-draft-digital-personal-data-protection-bill-2022/>> accessed 29 March 2023.

³⁰⁵ AA Master Directions, para 6.3.

³⁰⁶ ORGANS in this instance is an acronym. It stands for **Open**: data owner can see all details regarding data shared, **Revocable**: can revoke (in most cases with exceptions e.g. data owner can't revoke data sharing permissions from a lender where he/she has running business loan), **Granular**: exact data to be shared can be controlled, **Auditable**: all active/ revoked/ requested data permissions visible to the data owner, provides **Notice**: new data requests come to data owner in real-time and **Secure** by design: data can't be shared without a digital signature from the data owner.

³⁰⁷ Rahul Matthan, 'A new framework for consent to ensure data privacy' (*LiveMint*, 6 August 2019) <<https://www.livemint.com/opinion/columns/opinion-a-new-framework-for-consent-to-ensure-data-privacy-1565111736679.html>> accessed 29 March 2023.

³⁰⁸ *ibid*.

The AA ecosystem does not presently envisage the exchange of non-personal or anonymised personal data. If non-personal/ anonymised personal data exchange was to be envisaged in the future, we recommend that the differential privacy protection standards applicable to anonymised personal data and non-personal data respectively, and the nature of consent associated with it, be clearly laid down. For this purpose, we recommend that the Governance Entity proposed to be established in accordance with recommendation 2, release a Financial Data Management Policy that outlines the obligations of all actors in the AA ecosystem vis-à-vis users' data. It is of note that similar data management policies with respect to data sharing models for agriculture and health have been released by the Government of Telangana³⁰⁹ and NHA.³¹⁰

We, therefore recommend that the Government of India swiftly enact a personal data protection law that holistically governs data exchange in India and safeguards users' right to privacy. We additionally recommend that clear guidelines on the differential privacy protection standards for exchange of personal, non-personal and anonymised personal data be set out clearly through a Financial Data Management Policy that outlines the obligations of all actors in the AA ecosystem vis-à-vis users' data.

Recommendation 2: Building a fit-for-purpose and user-driven Governance Entity for the AA ecosystem

Building and scaling successful DPIs requires creating dedicated institutions that act as nodal bodies for DPI deployment, and as repositories of technical and sector-specific expertise for each DPI. Such institutions allow for better coordination amongst stakeholders thereby bolstering both business and consumer trust vis-à-vis the DPI.³¹¹ Trust encourages wider end-user adoption of the DPI, which in turn generates network effects and a positive feedback loop that leads to an increase in the utility of the DPI while simultaneously encouraging further adoption of the DPI.³¹² Such bodies also play a central role in envisioning short-term and long-term strategies for sector-wide, cross-sector and cross-border deployment, and in making tailored incentives to further drive adoption and scale.³¹³

While DPI governance is at an exploratory stage internationally, there is emerging consensus on building dedicated institutions to govern DPIs. For instance, domestic deployment of the Estonian X-Road is managed and regulated by the RIA, constituted under the Ministry of Economic Affairs and Communications.³¹⁴ Other open-banking initiatives such as those in the UK and Philippines as discussed in Chapter V are also overseen or proposed to be overseen by dedicated nodal bodies.

India has also built numerous dedicated nodal bodies to manage DPI ecosystems. An early milestone in India's DPI journey was Aadhaar,³¹⁵ implemented through its institutional home, the UIDAI. The primary responsibility of the UIDAI is deploying Aadhaar enrolment and authentication. As of 30th November 2022, the UIDAI has issued 135.1071 crore Aadhaar numbers to the residents of India, reaching 96% in adoptability.³¹⁶ Newer DPIs in India such as the UPI and ONDC are driven and governed by the NPCI and ONDC Entity respectively.

³⁰⁹ Agriculture & Cooperation (A&C) Department, Government of Telangana, 'Agricultural Data Management Policy 2022: Draft Release for Public Consultation' (July 2022) <<https://invest.telangana.gov.in/wp-content/uploads/2022/07/Draft-Telangana-Agriculture-Data-Management-Policy-2022-vEnglish.pdf>> accessed 29 March 2023.

³¹⁰ NHA Health Data Management Policy.

³¹¹ Kriti Mittal et al., 'Creating 'Good' Digital Public Infrastructure' (*Observer Research Foundation*, 26 October 2022) <<https://www.orfonline.org/expert-speak/creating-good-digital-public-infrastructure/>> accessed 29 March 2023. ('ORF Creating Good DPI')

³¹² DPGA, 'The Social and Economic Impact of Digital Public Infrastructure based on Digital Public Goods: Methodology Document' (September 2022) <<https://digitalpublicgoods.net/Bold-Investments-Methodology.pdf>> accessed 29 March 2023, page 3; Digital Regulation Platform, 'Explanation of externalities on digital platforms' (28 August 2020) <<https://digitalregulation.org/explanation-of-externalities-on-digital-platforms/>> accessed 29 March 2023; ORF Creating Good DPI.

³¹³ ORF Creating Good DPI; Omidyar Network India, 'Principles for Responsible ODEs' (*Open Digital Ecosystems*), <<https://www.opendigitalecosystems.net/principles.html>> accessed 29 March 2023.

³¹⁴ RIA, 'Tasks and structure of the authority' <<https://www.ria.ee/en/authority-news-and-contact/authority-and-management/tasks-and-structure-authority>> accessed 29 March 2023.

³¹⁵ ORF Creating Good DPI.

³¹⁶ UIDAI, 'About UIDAI' <<https://uidai.gov.in/en/about-uidai/unique-identification-authority-of-india.html>> accessed 29 March 2023.

We therefore recommend establishing a dedicated Governance Entity to lead the ongoing deployment and maintenance of the AA ecosystem.

We discuss the necessary features that such a Governance Entity may entail below:

(i) User-driven governance balanced with light-touch governmental oversight

Our findings from Chapters IV and V indicate that user-driven approaches to governance (i.e., governance by participants of an ecosystem), coupled with a light-touch governmental oversight, have risen in popularity in India and around the globe. Examples of such models in India include the NPCI, established jointly by the Indian Banking Association and the RBI, the ONDC, driven by participants with backing from the DPIIT, and the UK's OBIE comprises banks along with a nominee director from the HMT. Particularly for DPI ecosystems where there is a need to balance innovation and inclusiveness, such hybrid models of governance help overcome information asymmetries, reduce red-tapism associated with exclusive governmental control, and allow for swifter decision-making.³¹⁷ User-driven models can also aid with assimilation of technical knowledge with local practical knowledge, and thereby communalise knowledge-building and innovation.³¹⁸ Active citizen participation along with sufficient government backing also reinforce legitimacy, trust and accountability in the ecosystem.³¹⁹

Considering the cross-regulatory nature and adoption of the AA ecosystem, along with a multitude of financial regulators presently involved (i.e., the RBI, SEBI, PFRDA and IRDAI), we recommend that the MoF, given its mandate and regulatory scope, play an active role in establishment and oversight of the Governance Entity. Oversight by the MoF shall also mitigate risks of turf wars between financial regulators in the future, and can also provide a fillip to cross-border deployment of the AA ecosystem, an agenda that lies outside the primary scope of Indian financial regulators.

We recommend that the Governance Entity be primarily user-driven (i.e., driven by the participants of the AA ecosystem) balanced with light-touch oversight by the MoF. We also recommend that the Governance Entity be recognised as the nodal body for the AA ecosystem under the AA Master Directions.

(ii) Representative and multi-stakeholder approach to decision-making

While user-driven models come with numerous benefits, such models are susceptible to mission capture by the most powerful stakeholders in the ecosystem, which can lead to decreased levels of competition and innovation. For instance, while the UPI has seen tremendous success, concerns regarding the position of the large promoter banks of the NPCI vis-à-vis smaller players in the ecosystem such as small banks, PSOs and other fintech players exist.³²⁰ To remedy the same, the RBI had proposed the setting up of a New Umbrella Entity to develop and manage new payment methods, standards and technologies.³²¹

³¹⁷ Department of Economic and Social Affairs, United Nations, 'Participatory Governance and the Millennium Development Goals (MDGs)' (June 2008) <<https://publicadministration.un.org/publications/content/PDFs/E-Library%20Archives/2008%20Participatory%20Governance%20and%20MDGs.pdf>> accessed 29 March 2023.

³¹⁸ *ibid*, Industrial Development Organization, United Nations, 'Approaches to Participatory Policymaking Processes: Technical Report' (March 2022) <https://www.unido.org/sites/default/files/files/2022-03/PPM_WEB_final.pdf> accessed 29 March 2023.

³¹⁹ European Committee on Democracy and Governance, 'Study on the Impact of Digital Transformation on Democracy and Good Governance' (26 July 2021) <<https://rm.coe.int/study-on-the-impact-of-digital-transformation-on-democracy-and-good-go/1680a3b9f9>> accessed 29 March 2023.

³²⁰ Monisha Purwar, 'Who should bear the cost of UPI?' (*Financial Express*, 4 September 2022) <<https://www.financialexpress.com/industry/banking-finance/who-should-bear-the-cost-of-upi/2654749/>> accessed 29 March 2023.

³²¹ Dvara Research, 'Comments to the Reserve Bank of India on the Draft Framework for Authorisation of a Pan India New Umbrella Entity (NUE) for Retail Payment Systems dated 10 February 2020' <<https://www.dvara.com/research/wp-content/uploads/2020/03/Dvara-Research-Response-to-RBI-NUE-Framework.pdf>> accessed 29 March 2023; Department of Payment and Settlement Systems, RBI, 'Framework for authorisation of pan-India Umbrella Entity for Retail Payments' <<https://rbidocs.rbi.org.in/rdocs/notification/PDFs/FRAMEWORKKCC3A86B01E974EB3BDD6930ED922B31C.PDF>> accessed 29 March 2023.

The ONDC therefore, taking from the shortcomings of the NPCI, envisages a more representative and multi-stakeholder approach to governance with a market + community driven model by ensuring representatives on its board from the Government of India, civil society, and from diverse pockets of the industry.³²²

The proposed structure of OFOC in Philippines is pertinent to note here. To ensure diverse stakeholder representation, the OFOC is slated to comprise representatives from each bank classification, NBFCs, electronic money issuers, operators of payment systems, third-party providers and other relevant sectors as may be added by the Bangko Sentral.³²³ In UK, given the concerns raised about the irrefutable dominance of CMA-9 banks in the OBIE, the High-Level Principles for the future governance of open banking require the Future Entity to which OBIE will transition to represent and take account of all users in the ecosystem, including consumer and smaller business interests.

Given the diverse range of users in the AA ecosystem, it is imperative that the Governance Entity recognizes the different classes of stakeholders involved, their unique interests and their relative bargaining positions. The Governance Entity should, by design, foster representation and distribute the decision-making ability across all classes of actors in the AA ecosystem.³²⁴ The Governance Entity should also have sufficient safeguards to ensure that no single stakeholder assumes control over the AA ecosystem.

We recommend that the Governance Entity while remaining user-driven is structured to account for representation from different classes of stakeholders with diverse and competing interests. Safeguards should be put in place to mitigate mission capture by powerful players in the ecosystem.

(iii) Functions of the Governance Entity

Given the multi-stakeholder nature of the AA ecosystem, defining clear roles, responsibilities and liabilities is essential to avoid mismanagement and conflict of interest. For instance, in India, NPCI has defined clear roles and responsibilities including liabilities of all stakeholders in this UPI ecosystem under its Procedural Guidelines for UPI.³²⁵ These Procedural Guidelines have been framed under the PSS Act and are binding on all participants. Besides membership rules and requirements, they also define the roles and responsibilities of stakeholders such as Payment Service Providers ('PSPs'),³²⁶ TSPs³²⁷ etc. For instance, a PSP has to ensure that transactions from a mobile handset to a bank server are secure and encrypted, that there is round-the-clock connectivity of their network, and that they abide by the dispute management procedures adopted by NPCI etc.

Similarly, the ONDC Entity has formulated the ONDC Network Participant Agreement and the ONDC Network Policy defines the rules of play on the ONDC Network.³²⁸ For instance, with regard to onboarding, the ONDC Network Policy describes how to join the network and specifies the eligibility criteria as well as the onboarding process. The ONDC Network Policy also specifies the general roles and obligations of Network Participants and specific roles and obligations of Gateways, Buyer Side Apps and Seller Side Apps.³²⁹ Additionally, ONDC has also specified a Code of Conduct and Ethics for all ecosystem participants.³³⁰

³²² Please refer to Chapter IV.

³²³ Philippines Open Finance Framework.

³²⁴ Adele Barzelay et al., 'Promoting trust in data through multistakeholder data governance' (*World Bank*, 13 December 2021) <<https://blogs.worldbank.org/opendata/promoting-trust-data-through-multistakeholder-data-governance>> accessed 29 March 2023.

³²⁵ NPCI, 'UPI Procedural Guidelines' (July 2016) <http://www.slbcmadhyapradesh.in/docs/UPI_Procedural_Guidelines24_12_2016.pdf> accessed 29 March 2023.

³²⁶ UPI Procedural Guidelines, Annexure 7, Roles and Responsibilities of PSPs.

³²⁷ UPI Procedural Guidelines, Annexure 9, Roles and Responsibilities of TSPs.

³²⁸ ONDC, 'Governance and Policies' <<https://ondc.org/governance-and-policies/>> accessed 29 March 2023.

³²⁹ The roles and obligations of Network Participants include a. compliance with the Network Participation Agreement and Policy, b. Ensure services are operational, c. Enable ONDC Protocol specifications, d. Obtain necessary consents and e. Ensure confidentiality of data; ONDC, 'Chapter 2, Business Rules' <<https://ondc-static-website-media.s3.ap-south-1.amazonaws.com/ondc-website-media/downloads/governance-and-policies/CHAPTER+%5B2%5D+Business+Rules.pdf>> accessed 29 March 2023.

³³⁰ ONDC, 'Chapter 4, Code of Conduct & Ethics' <<https://ondc-static-website-media.s3.ap-south-1.amazonaws.com/ondc-website-media/downloads/governance-and-policies/CHAPTER+%5B4%5D+Code+of+Conduct+%26+Ethics.pdf>> accessed 29 March 2023.

Examples of global best practices include the CDR Rules, 2020³³¹ in Australia that govern the rights, obligations and liabilities of each participant of the CDR ecosystem and the Central Bank of Nigeria's guidelines to operationalise open banking³³² which lays down detailed roles and responsibilities of open-banking participants.

We also recommend that the entity is in charge of updating and developing technical standards for the underlying API, carrying out certification process for AAs and FIUs/ FIPs to test ecosystem interoperability and preparedness, providing guidance to ongoing innovations in the AA ecosystem, setting up appropriate grievance redressal mechanisms and dispute resolution mechanisms for all users in the ecosystem, and carrying out consumer awareness programmes to boost adoption both within and across sectors.

Additionally, given the promise the DPIs hold to bridge the wealth gaps and bolster financial inclusion for the underserved,³³³ the Governance Entity should: (i) explicitly state financial inclusion as one of the policy objectives for participants, including identification of target segments by the participants that it is catering to (for example MSMEs), (ii) lay down the minimum financial inclusion targets for adherence, including steps taken to prioritise inclusive user-centric design principles and (iii) build up institutions and processes that support and drive the adoption of DPI.

We recommend that the AA Master Directions empower the Governance Entity to establish clear roles, liabilities and responsibilities for all users of the AA ecosystem through detailed codes of conduct. We also recommend that the entity institute robust grievance redressal and dispute resolution mechanisms. Given that performing governance functions and developing technical specifications are bound to have significant overlaps in decentralised and open-source networks like the AA ecosystem, we also recommend that the Governance Entity subsumes the technical functions presently carried out by ReBIT vis-à-vis the AA ecosystem.

The growing role of Sahamati

As illustrated in Chapter II, Sahamati, a not-for-profit member-driven industry alliance, is working towards harmonious adoption of the AA ecosystem. Sahamati offers to its members, i.e., FIPs, FIUs and AAs technical certification required to test ecosystem interoperability and preparedness;³³⁴ access to a central registry containing public information such as public IP addresses and public keys provided by all participants which other participants need to interact in an interoperable manner;³³⁵ a code of conduct and participation terms that clarify the roles and responsibilities of the participants; and a robust online dispute resolution mechanism between various members.³³⁶ While Sahamati currently performs many of the functions envisaged for the Governance Entity, it presently lacks regulatory/ statutory backing to enforce the same. As such, Sahamati's ability to generate trust and drive end-user adoption in the AA ecosystem is presently limited.

Given Sahamati's ongoing role in leading the deployment of the AA ecosystem, we recommend that Sahamati be suitably restructured to transition into the Governance Entity with features, powers and functions detailed in this Chapter.

³³¹ ACCC, 'Competition and Consumer (Consumer Data Right) Rules 2020' (4 February 2020) <<https://www.accc.gov.au/system/files/CDR%20Rules%20-%20Final%20-%2006%20February%202020.pdf>> accessed 29 March 2023.

³³² CBN, 'Operational Guidelines for Open Banking in Nigeria' (May 2022) <https://cbn.gov.ng/Out/2022/CCD/OPERATIONAL%20GUIDELINES%20FOR%20OPEN%20BANKING%20IN%20NIGERIA_APPROVED%20EXPOSURE%20DRAFT.pdf> accessed 29 March 2023.

³³³ 'Building & Securing Digital Public Infrastructure - A Playbook for Local and Regional Governments' (UN-Habitat) <<https://unhabitat.org/programme/legacy/people-centered-smart-cities/building-securing-digital-public-infrastructure-a>> accessed March 6, 2023; Co-Develop DPI Rockefeller Report.

³³⁴ Sahamati, 'Certification' <<https://sahamati.org.in/certification/>> accessed 29 March 2023.

³³⁵ Dheeraj Khardwal, 'Sahamati/aa-common-service' (*GitHub*, 19 October 2021) <<https://github.com/Sahamati/aa-common-service/blob/main/central-registry/overview.md>> accessed 29 March 2023.

³³⁶ Sahamati, 'Sahamati's Approach to Dispute Resolution' <<https://sahamati.org.in/odr/>> accessed 29 March 2023.

(iv) Financial Sustainability

As with any infrastructure, building and operating DPIs require substantial up-front costs as well as costs for continual development, expansion, governance and maintenance over time. As such, sustainability of the AA ecosystem and that of the Governance Entity go hand in hand. While the designing of a revenue model that ensures a fair value exchange in the AA ecosystem is outside the scope of this Report, we would nonetheless like to highlight the importance of inbuilding financial viability for the Governance Entity in line with our findings from domestic and international DPIs.

There is academic consensus on the need to build in financial sustainability into DPI ecosystems such that both costs and benefits of the DPI are distributed fairly across all users of the ecosystem,³³⁷ and thereby create incentives for innovation and continued participation.³³⁸ However, instituting such a model, especially after a DPI ecosystem matures, has been a tricky endeavour.

For instance, running the Global Positioning System ('GPS') worldwide costs US taxpayers 2 billion USD annually, a sum that is often criticized for being an unnecessary outlay of US taxpayers' money.³³⁹ The need to shift to self-sustaining models has also been felt with UPI, which is currently free for end-users.³⁴⁰ Banks, as shareholders of the NPCI, continue to bear the largest chunks of expenditure related to UPI,³⁴¹ and continue to demand subsidies from the Government of India to offset some of the losses.³⁴² To this end, the RBI has recently released a consultation paper discussing ways to equitably share costs associated with the UPI, going forward.³⁴³

The ONDC Entity, however, learning from the successes and shortcomings of the UPI, has clarified that it intends to charge users a small percentage of the transaction as a fee in the future.³⁴⁴ Internationally, open-banking initiatives, such as those in Philippines, the UK and Canada, have also emphasized the need for similar sustainable revenue models for their respective governance bodies to ensure the longevity of the ecosystem.

It is important to note that, as a first step in the right direction towards financial sustainability, the AA Master Directions allow AAs to charge a fee to its users.³⁴⁵ Given that pricing policies are best left to be decided by market forces, we recommend that the Governance Entity plays only a light-touch role in ensuring that such price polices evolve in a sustainable and inclusive manner. We however recommend that the Governance Entity be structured to allow such pricing to cover substantial portions of the expenses is in relation to maintenance of the underlying technical infrastructure. We also recommend that the entity's structure allow for capital to be efficiently raised for expansion related activities.

We, therefore, recommend that the Governance Entity's structure allows for its ongoing functions and activities to be funded in a sustainable manner. In order to minimise risks of mission capture, it is also imperative that the entity is structured to ensure that profits are not the primary motive for establishment.

³³⁷ David Eaves et al, 'Best Practices for the Governance of Digital Public Goods' (*Harvard Kennedy School*, April 2022) <https://ash.harvard.edu/files/ash/files/best_practices_for_the_governance_of_digital_public_goods.pdf> accessed 29 March 2023.

³³⁸ New America, 'Financing Digital Public Infrastructure' <<https://www.newamerica.org/digital-impact-governance-initiative/reports/financing-digital-public-infrastructure/introduction>> accessed 29 March 2023.

³³⁹ Eltosdelights, 'Who Pays for The GPS Services Everyone Is Enjoying Freely All Over the World?' (*Opera News*, 2022) <<https://ng.opera.news/ng/en/digital-technology/7116e812f5870733337eee4706175e49>> accessed 29 March 2023.

³⁴⁰ David Eaves, Richard Pope, et al, 'Government as a Platform: How Policy Makers Should Think about the Foundations of Digital Public Infrastructure' (*Kennedy School Review*, 14 January 2020) <<https://ksr.hkspublications.org/2020/01/14/government-as-a-platform-how-policy-makers-should-think-about-the-foundations-of-digital-public-infrastructure/>> accessed 29 March 2023, para 6.

³⁴¹ Monisha Purwar, 'Who should bear the cost of UPI?' (*Financial Express*, 4 September 2022) <<https://www.financialexpress.com/industry/banking-finance/who-should-bear-the-cost-of-upi/2654749/>> accessed 29 March 2023.

³⁴² 'UPI transactions are rising, but who will foot the bill?' (*Economic Times*, 7 September 2022) <<https://bfsi.economictimes.indiatimes.com/news/fintech/upi-transactions-are-rising-but-who-will-foot-the-bill/94032077>> accessed 29 March 2023; Naina Sood, 'Govt. cuts subsidy for fintechs, banks on UPI transactions', (*YourStory*, 1 February 2023) <<https://yourstory.com/2023/02/govt-cuts-subsidy-for-fintechs-banks-on-upi-transactions-budget-2023>> accessed 29 March 2023.

³⁴³ RBI Discussion Paper on Charges in Payment Systems.

³⁴⁴ Laxitha Mundhra, 'ONDC May Start Charging A Small Fee From Platforms Within A Year' (*Inc42*, 17 December 2022) <<https://inc42.com/buzz/ondc-may-start-charging-a-small-fee-from-platforms-within-a-year/>> accessed 29 March 2023.

³⁴⁵ AA Master Directions, para 3.1.(i).

(v) Legal Structure of the Governance Entity

In light of the above-discussed characteristics of the AA ecosystem and the functions envisaged for the Governance Entity, it is imperative that the legal structure of the entity, to the best extent possible, allows for: a) user-driven management of day-to-day affairs along with a multi-stakeholder approach to governance; b) agility in functioning and decision-making; c) transparency and accountability; and d) sustainability in revenue and funding wherein profit-making is not the primary motive. While evaluating the sustainability in revenue and funding of different legal structures is outside the scope of this Report, we have evaluated the remaining abovementioned features of nine different permissible legal structures³⁴⁶ for the Governance Entity in the table below.

In the table, we have used the '✓' wherever the legal structure, by and large, allows for a particular governance feature to be embodied. Similarly, we have used the '✗' symbol for when the legal structure does not favour a said governance feature; and the '~' symbol for instances where such sweeping assessments cannot be made given the legal structure's characteristics may differ from case to case. For a detailed analysis of each of these structures, please see **Annexure-A** of the Report.

	User-driven and multi-stakeholder governance	Profit is not the primary motive	Agility in decision making	Transparency and accountability
Trust	✗	~	✗	✗
Registered Society	✓	✓	~	✗
Cooperative Society	✓	✗	~	✗
MSCS	✓	✗	~	✗
Private Company	✓	✗	✓	✓
Public Unlisted Company	✓	✗	✓	✓
Public Listed Company	✓	✗	✗	✓
Statutory Body	✗	✓	✗	✓
Section 8 Company	✓	✓	✓	✓

Of the legal structures evaluated above, it is evident that a Section 8 company, i.e., a not-for-profit company, is the most feasible structure for the Governance Entity given its compatibility with the above discussed governance features. Not-for-profit structures mitigate risks of mission capture given the requirement against generating profits, allow for a user-driven governance through shareholding and allows multistakeholder approach to decision-making through its board. The structure of a company also accords agility and flexibility in

³⁴⁶ We have also evaluated as to whether the Governance Entity may be set up as Self-Regulatory Organisation ('SRO'). Our research indicates that the laws governing SROs in the Indian financial sector are regulator-specific and therefore fragmented. For instance, the RBI has issued different frameworks for SRO establishment for micro-finance lenders [See: 'Press Release – Self-Regulatory Organization (SRO) for NBFC-MFI' (26 November 2013) <https://www.rbi.org.in/scripts/BS_PressReleaseDisplay.aspx?prid=30052> accessed 19 April 2023] and for payments systems operators [See: 'Framework for Recognition of a Self-Regulatory Organisation for Payment System Operators' (22 October 2020) <<https://www.rbi.org.in/Scripts/NotificationUser.aspx?id=11986&Mode=0>> accessed 19 April 2023. Similarly, SRO requirements for SROs by SEBI are specified in the 'SEBI (Self-Regulatory Organisations) Regulations, 2004' (19 February 2004) <[https://www.sebi.gov.in/sebi_data/commondocs/sroregu_h.html#:~:text=\(1\)%20A%20Self%20Regulatory%20Organization,Securities%20Laws%20by%20its%20members](https://www.sebi.gov.in/sebi_data/commondocs/sroregu_h.html#:~:text=(1)%20A%20Self%20Regulatory%20Organization,Securities%20Laws%20by%20its%20members)> accessed 19 April 2023. Given the fragmented nature of SRO recognition in India and given the sector-specific instruments that impose varying eligibility and compliance standards, we believe that an SRO status would not be feasible.

functioning. Examples of such not-for-profit companies incorporated in Indian DPI ecosystems include the NPCI and the ONDC Entity.³⁴⁷ As companies, these institutions have carried out day-to-day operations and expansion related activities with business-like efficiency,³⁴⁸ raised capital swiftly and creatively, created incentives to bolster innovation within their respective ecosystems, all while being subject to the various corporate governance safeguards stipulated under the CA 2013. We, therefore, recommend setting up the Governance Entity as a not-for-profit company under Section 8 of the CA 2013.

We also recommend that the composition of the Governance Entity's board be set out in the AoA to include fair and proportionate representation from the MoF, financial regulators and market participants from diverse pockets of the AA ecosystem. Given that the shareholding pattern of the Governance Entity will largely comprise those with business interest in the ecosystem, we recommend that the AoA mandate the appointment of experts representing consumer and civil society interest as independent directors under section 149(6) of the CA 2013.³⁴⁹ To this end, AoA of the entity may specify the minimum number/ proportion for nominee directors representing the Government of India's interest through the MoF, regulators' interest and for independent directors representing consumer and civil society interests that must hold office at all times.

Additional corporate governance safeguards may include forming separate risk management, nomination committees, excessive disclosure requirements, audit committees³⁵⁰ and advisory councils³⁵¹ of subject matter experts as the ecosystem matures, which may be prescribed by the AA Master Directions from time to time.

However, it is important to note that given not-for-profits rely primarily on grants and philanthropy, sustainability in the Governance Entity's funding and revenue streams will remain precarious. For a brief overview of the primary sources of funding for each of these nine legal structures, refer to **Annexure-B** of the Report. The lack of a sustainable financial runway may affect scalability and the overall efficiency of the Governance Entity in the long run. As such, the Governance Entity should be allowed to suitably transition into a Social Impact Company ('SIC'), a hybrid-structure that allow companies to pursue social development goals while being allowed to earn a conditional profit. We therefore recommend that sufficient agility is accounted for in the organisational structure of the entity for it to transition to an SIC as and when the Ministry of Corporate Affairs ('MCA') operationalises a framework for the same.³⁵² Please refer to **Annexure-A** of the Report for analysis of essential features of a SIC.

We recommend that the Governance Entity be established as a not-for-profit company under the CA 2013 to allow the entity to function with business-like efficiency, while maintaining a non-profit motive. Sufficient flexibility must be built-in for the Governance Entity to transition into an SIC if a legal framework for the same is operationalised in the future.

³⁴⁷ Please refer to Chapter II of this Report.

³⁴⁸ Arundhati Ramanathan, 'NPCI, The God of Many Things' (*The Ken*, 26 February 2018) <<https://the-ken.com/story/npci-god-many-things/>> accessed 29 March 2023

³⁴⁹ Section 149(6) of the CA 2013 provides for the appointment of non-executive directors, which includes independent directors.

³⁵⁰ The Brazilian Institute of Corporate Governance (IBGC), 'Code of Best Practice of Corporate Governance' <<https://www.oecd.org/corporate/ca/corporategovernanceprinciples/1824495.pdf>> accessed 29 March 2023.

³⁵¹ For instance, ONDC will institute a User Council, which is considered to be the foundation of participatory governance in ONDC. The User Council will consist of representatives of Network Participants and civil society members. It will devise its own rules of business and meet regularly to check recent developments and devise policies accordingly.

³⁵² MCA, 'Report of the High-Level Committee on Corporate Social Responsibility 2018' (07 August 2019) <https://www.mca.gov.in/Ministry/pdf/CSRHLC_13092019.pdf> accessed 19 April 2023, page 80.

Recommendation 3: Creating a central facilitative body responsible for key governance institutions across all DPI ecosystems

In addition to dedicated governance bodies in the short to medium term, an agile DPI governance framework requires creating a central facilitative body in the long term that continually revisits all DPG and DPI initiatives to ensure their expansion and integration with the wider digital economy.³⁵³ Such an approach is crucial in the building of “stacked” DPIs that makes each layer more impactful and powerful than each DPI alone.³⁵⁴ A facilitative body can aid regular information exchange between the various ministries of the Government of India, the DPB proposed to be established under the DPDP Bill, 2022 and regulators of other sectors amongst which DPIs have been rolled out. Such a body will also be pivotal in promoting a whole-of-government approach³⁵⁵ to DPI deployment.³⁵⁶

Previously, a central facilitative body was set up by the Government of India in 2010, to enhance inter-regulatory coordination, institutionalise and strengthen the mechanism for maintaining financial stability, and promote financial sector development through the FSDC.³⁵⁷ It includes representation from the MoF and each of the financial sector regulators i.e., RBI, SEBI, PFRDA, IRDAI. Over time, the FSDC was expanded to include³⁵⁸ representatives from other ministries such as MCA and MeitY as well as other regulators like Insolvency and Bankruptcy Board of India and International Financial Services Centres Authority.

Internationally as well, the benefits of having a centralised facilitative body for DPI governance are well acknowledged. In the UK, the Smart Data Group Report 2021, with the stated aim of bringing together all bodies leading sectoral delivery of smart data initiatives, has proposed the creation of a SDC. The SDC is floated to be a voluntary, non-statutory council with a wide cross-sector membership to pool in research and findings to develop a cross-sector picture of adoption, capabilities and challenges for smart data innovations.³⁵⁹ It is of note that the SDC is proposed to complement the OBIE which is in charge of mobilising smart data initiatives in the UK's banking sector.

In Australia, the 2022 Report by the Australian Government arising from its ‘Statutory Review of the Consumer Data Right’ has also highlighted the gap and need for cross-sectoral functions in the Australian Consumer Data Right Board.³⁶⁰ In the USA, recommendations to create a federal body for streamlining their government's approach to free and open-source software are also gaining traction.³⁶¹

In the Indian context, in addition to the aforementioned functions, we recommend creating a centralised body with a horizontal and sector-agnostic mandate to ensure:

³⁵³ Australian CDR Statutory Review Report, pages 35-38.

³⁵⁴ DPGA, ‘Unpacking concepts & definitions – digital public Infrastructure, building blocks, and their relation to digital public goods’ <<https://digitalpublicgoods.net/blog/unpacking-concepts-definitions-digital-public-infrastructure-building-blocks-and-their-relation-to-digital-public-goods/>> accessed 29 March 2023, para 4.

³⁵⁵ The whole-of-government approach involves collaboration between the different public bodies that extends beyond their respective fields of competence with a view to providing the public with a combined response from a single body; Knowledge for Policy European Commission, Glossary Item ‘Whole-of-Government Approach’ <https://knowledge4policy.ec.europa.eu/glossary-item/whole-government-approach%C2%A0_en> accessed 29 March 2023.

³⁵⁶ OECD, ‘Digital Government Strategies for Transforming Public Services in the Welfare areas’ <<https://www.oecd.org/gov/digital-government/Digital-Government-Strategies-Welfare-Service.pdf>> accessed 29 March 2023, pages 44-45.

³⁵⁷ MoF, ‘Creation of Financial Stability and Development Council’ (F. No. 14/33/2010-EM, 30 September 2010) <<https://dea.gov.in/sites/default/files/Gazette%20Notification%20December%202010.pdf>> accessed 29 March 2023.

³⁵⁸ Department of Economic Affairs, ‘Structure of Financial Stability and Development Council’ <https://dea.gov.in/sites/default/files/Structure%20of%20Financial%20Stability%20and%20Development%20Council_1.pdf> accessed 29 March 2023.

³⁵⁹ Smart Data Working Group Spring Report, pages 23-30.

³⁶⁰ Australian CDR Statutory Review Report, pages 35-38.

³⁶¹ Nagle F, ‘Strengthening Digital Infrastructure: A Policy Agenda for Free and Open Source Software’ (*Brookings*, 19 May 2022) <<https://www.brookings.edu/research/strengthening-digital-infrastructure-a-policy-agenda-for-free-and-open-source-software/>> accessed 16 January 2023.

- ongoing interoperability between various DPI initiatives (for example: UPI, ONDC, and ABDM);
- lead strategic and timely rolling out of DPI initiatives across cross-sections of Indian economy as well as internationally;
- improve coordination and information exchange amongst the various institutions responsible for various DPIs in India to minimise building and investing in duplicative, siloed structures and instead move toward a shared, interoperable infrastructure and datasets;³⁶² and
- carrying out periodic Regulatory Impact Assessments of the legal frameworks applicable to various DPIs to continually implement lessons learned and update regulatory tools.

Given that instituting inter-regulatory and inter-authority consultations has remained a key problem in India, we recommend that the proposed DPB create a central facilitative body that ensures effective coordination and information exchange between various institutional homes of Indian DPIs to unlock the full potential of all Indian DPI ecosystems.

³⁶² David Eaves, Richard Pope et al, 'Government as a Platform: How Policy Makers Should Think about the Foundations of Digital Public Infrastructure' (*Kennedy School Review*, 14 January 2020) <<https://ksr.hkspublications.org/2020/01/14/government-as-a-platform-how-policy-makers-should-think-about-the-foundations-of-digital-public-infrastructure/>> accessed 29 March 2023, para 6.

Annexure-A

S. No.	Entity	Essential Features of the Entity
1.	Trust ³⁶³	<p>Legal framework There are two kinds of trusts: public trusts and private trusts. Private trusts can be set up and are regulated under the Indian Trusts Act, 1882. Public trusts can be set up and are regulated under the Charitable and Religious Trusts Act, 1920; the Religious Endowments Act, 1863; and the Charitable Endowments Act, 1890 as well as various state-specific legislations.³⁶⁴</p> <p>Type of entity A trust is an obligation annexed to the ownership of property.³⁶⁵ Regardless of being public or private in nature, a trust is not a separate juristic person and the limitation of liability principle does not apply.</p> <p>Approach to governance Legal ownership of trust assets is vested by the author/ settlor in the trustees on behalf of the beneficiaries, giving the trustee exclusive control over such assets. Since the trustees are decided by the author of the trust, this reposes excessive power in the hands of the author. Trustees are bound to fulfil the purpose of the trust in accordance with the directions of the author/ settlor except if the same are modified by consent of all the beneficiaries of the trust given at the time of the trust's creation.³⁶⁶ Failure to do so may lead to the trustee being held liable for breach of trust.³⁶⁷ The autonomy of trustees in managing the trust property is circumscribed by the provisions of the trust deed.³⁶⁸ As the decision-making only vests in the author of the trust, there is lack of multi-stakeholder representation.</p> <p>Primary motive for setting up</p>

³⁶³ The term 'Trust' in common parlance also includes Infrastructure Investment Trusts ('InvITs'). InvITs are private trusts set up under the SEBI (Infrastructure Investment Trusts) Regulations, 2014. They are 'pooling vehicles' regulated by the SEBI which allow retail and institutional investors to invest their money in infrastructure projects and earn a dividend as income: SEBI, 'Frequently Asked Questions for Infrastructure Investment Trusts' <https://www.sebi.gov.in/sebi_data/faqfiles/may-2022/1652786847771.pdf> accessed 4 April 2023.

³⁶⁴ For instance, the Maharashtra Public Trusts Act, 1950; Gujarat Public Trusts Act, 2011; and the Madhya Pradesh Public Trusts Act, 1951.

³⁶⁵ Indian Trusts Act, 1882, s 3 <<https://legislative.gov.in/sites/default/files/A1882-02.pdf>> accessed 4 April 2023.

³⁶⁶ *ibid*, s 11.

³⁶⁷ *ibid*, s 23.

³⁶⁸ *ibid*, s 36 and s 20.

S. No.	Entity	Essential Features of the Entity
		<p>The object of setting up a private trust is to benefit an individual or a specified group of persons, whereas in a public trust, the beneficial interest is vested in the public at large or an indefinite and unascertainable body of individuals.³⁶⁹ A public trust is usually set up for religious or charitable purposes. A trust may be set up for any lawful purpose, including for profit or not-for-profit, religious or charitable purposes.</p> <p>Degree of agility The power of decision-making rests majorly with the author of the trust. The consent of all the beneficiaries is required to modify the intention of the author of the trust, thus, a trust lacks agility in decision-making.³⁷⁰</p> <p>Extent of transparency and accountability The Indian Trusts Act, 1882 does not prescribe any requirement for periodic disclosures, filings and there exists no competent inspection authority for oversight of trust. Thus, it lacks transparency and accountability.</p>
2.	Registered Society	<p>Legal framework Societies are registered and regulated under the Societies Registration Act, 1860 ('SR Act') and various state legislations.³⁷¹</p> <p>Type of entity A society is not a separate body corporate or juristic person. It is not capable of owning any property or suing or being sued in its own name.³⁷²</p> <p>Approach to governance In the case of a society, any seven or more persons may, by subscribing their names to a memorandum of association, form themselves into a society for the purposes specified under the SR Act,³⁷³ which can then entrust the management of its affairs and operations to its governing body. Governing body of a society is elected in accordance with the bye-laws of the society. Thus, a society can adopt multi-stakeholder approach to governance.</p> <p>Primary motive for setting up</p>

³⁶⁹ *Commissioner of Endowments v Vittal Rao*, (2005) 4 SCC 120, para 21.

³⁷⁰ Indian Trusts Act, 1882, s 11.

³⁷¹ For instance, the Andhra Pradesh Societies Registration Act, 2001; the Tamil Nadu Societies Registration Act, 1975; and the West Bengal Societies Registration Act, 1961.

³⁷² SR Act, s 5 and s 6 <https://www.mca.gov.in/Ministry/actsbills/pdf/Societies_Registration_Act_1860.pdf> accessed 5 April 2023; *Illachi Devi v Jain Society*, (2003) 8 SCC 413, paras 21 -23.

³⁷³ SR Act, s 1.

S. No.	Entity	Essential Features of the Entity
		<p>Registered societies can be set up for charitable purposes only.³⁷⁴</p> <p>Degree of agility Agility in decision-making depends on the rules, regulations and bye-laws of a society. Thus, it varies for each registered society.</p> <p>Extent of transparency and accountability The incorporation, regulation, and winding up of unincorporated trading, literary, scientific, religious and other societies and cooperative societies falls under the purview of the State List of the Seventh Schedule to the Constitution of India.³⁷⁵ The SR Act has been repealed/ amended by most state governments and may differ in its applicability to such states. Societies are registered by registrars appointed by the states. Considering societies are governed by different state legislations, there is lack of uniformity in the disclosure and filing requirements. The central SR Act also lacks adequate disclosure and filing requirements. Thus, there is lack of transparency and accountability.</p>
3.	Cooperative Societies	<p>Legal framework Cooperative societies are regulated by the Cooperative Societies Act, 1912 ('CS Act') and various state legislations.³⁷⁶</p> <p>Type of entity The registration of a cooperative society adorns it with the status of a body corporate.³⁷⁷ Thus, it is capable of having perpetual succession and a common seal, with the power to hold property, to enter into contracts, to institute and defend suits and other legal proceedings etc.</p> <p>Approach to governance In the case of a cooperative society, the liability of a member is generally limited by shares.³⁷⁸ Some state legislations specify that the Central Government/ State Government or a registered cooperative society itself are qualified to become members of the cooperative society and claim an interest in the shares of the society exceeding a nominal monetary amount, subject to a ceiling.³⁷⁹ However, each</p>

³⁷⁴ *ibid*, preamble.

³⁷⁵ The Constitution of India 1950, sch VII list II entry 32: 'Incorporation, regulation and winding up of corporations, other than those specified in List I, and universities; unincorporated trading, literary, scientific, religious and other societies and associations; co-operative societies.'

³⁷⁶ For instance, the Maharashtra Co-operative Societies Act, 1960; the Delhi Cooperative Societies Act, 1972; and the Haryana Cooperative Societies Act, 1984.

³⁷⁷ CS Act, s 18 <<https://legislative.gov.in/sites/default/files/A1912-02.pdf>> accessed 5 April 2023.

³⁷⁸ *ibid*, s 13.

³⁷⁹ Maharashtra Cooperative Societies Act, 1960, s22 <<https://mahapanan.maharashtra.gov.in/Site/Upload/GR/MCS%20Bare%20Act%20and%20Rules.pdf>> accessed 5 April 2023; Delhi Cooperative Societies Act, 1972, s 6 <<https://legislative.gov.in/sites/default/files/A1972-35.pdf>> accessed 5 April 2023.

S. No.	Entity	Essential Features of the Entity
		<p>state has different rules for appointment and the functions of members of the committee i.e., the governing body of the cooperative society.³⁸⁰ Thus, a varied approach to governance is adopted by each state and cooperative society.</p> <p>Primary motive for setting up Co-operatives are set up to work towards mutual business benefits and increasing profits for its members.³⁸¹</p> <p>Degree of agility Each state has separate rules and regulations for making bye-laws and amendments thereof, allotment of shares, raising funds, appointment, suspension and removal of members of the committee, conducting meetings etc. Thus, agility in decision-making of a cooperative society varies in each society and each state.³⁸²</p> <p>Extent of transparency and accountability Each state has different rules on disclosure requirements, formation and maintenance of registers and filing of returns.³⁸³ Though most states mandate keeping of proper books of accounts by societies and cooperative societies and provide powers to the registrar for conduct of audit, inspection and investigation into the affairs of a society and cooperative society, the provision of furnishing financial statements and audited accounts is rarely enforced. Databases of financial accounts of societies is hard to maintain due to the outmoded technology used by many registrars.³⁸⁴</p>
4.	Multi-state Cooperative Societies ('MSCS')	<p>Legal framework MSCS are incorporated and regulated by the Multi-State Cooperative Societies Act, 2002. ('MSCS Act')</p> <p>Type of entity MSCS, on being registered, are treated as body corporates with perpetual succession and a common seal, and with power to hold property, to execute contracts, and to sue and be sued in their own name.³⁸⁵</p> <p>Approach to governance</p>

³⁸⁰ CS Act, s 43(1)(f).

³⁸¹ *ibid*, s 4.

³⁸² *ibid*, s 43(1).

³⁸³ *ibid*, s 43(1).

³⁸⁴ MCA, 'Report of the Expert Group on Societies Registration Act, 1860' <https://www.mca.gov.in/Ministry/pdf/final_report_Expert_Group_15_sept_2012_sub.pdf> accessed 5 April 2023, page 11.

³⁸⁵ CS Act, s 18; MSCS Act, s 9 <<https://mscs.dac.gov.in/Guidelines/GuidelineAct2002.pdf>> accessed 5 April 2023.

S. No.	Entity	Essential Features of the Entity
		<p>The Central/ State Governments have the right to place nominee directors on the board of a MSCS on the basis of share capital subscribed to.³⁸⁶ The Central/ State Government may, on receipt of request from a MSCS and with a view of promoting cooperative movement, subscribe to the share capital of a MSCS and/ or provide loans/ financial assistance/ subsidies to a MSCS.³⁸⁷ This may enable a multi-stakeholder approach involving representation from both public and private players in an ecosystem.</p> <p>Primary motive for setting up MSCS are set up for benefit of the members. Certain portion of the net profits of a MSCS can be distributed to its members by way of bonus or dividend.³⁸⁸ The bye-laws of a MSCS may even provide for distribution of patronage bonus to its members in consonance with the transactions of a member with the MSCS.³⁸⁹</p> <p>Degree of agility Agility in decision-making depends on the bye-laws of the MSCS.</p> <p>Extent of transparency and accountability The Central Registrar may inspect the constitution, working and financial condition of a MSCS only under certain conditions as specified under the MSCS Act. Such inspection can only be conducted after giving notice of not less than fifteen days to the MSCS.³⁹⁰ The MSCS (Amendment) Bill, 2022 has been sought to be introduced due to weak governance practices of MSCS, and instances of financial malpractices, delay in holding elections of members of the board, lack of active participation of members, etc.³⁹¹</p>
5.	Private Company	<p>Legal framework Companies are incorporated and regulated under the CA 2013. Section 2(68) of the CA 2013 defines private companies.</p> <p>Type of entity A company, when incorporated, becomes a body corporate that has perpetual succession with power to hold, acquire and dispose property, is capable of entering into a contract, sue or be sued in its own name.³⁹²</p>

³⁸⁶ MSCS Act, s 48.

³⁸⁷ Multi-State Cooperative Societies Rules, 2002, rule 23 <<https://mscs.dac.gov.in/Form/Rules2002.pdf>> accessed 05 April 2023 ('MSCS Rules').

³⁸⁸ MSCS Act, s 62 and s 63.

³⁸⁹ MSCS Rules, rule 24.

³⁹⁰ MSCS Act, s 79(1).

³⁹¹ Lok Sabha Secretariat, 'Report of the Joint Committee on the Multi-State Co-Operative Societies (Amendment) Bill, 2022' (March 2023) <[https://loksabhadocs.nic.in/Isscommittee/Joint%20Committee%20on%20the%20Multi-State%20Co-operative%20Societies%20\(Amendment\)%20Bill,%202022/17_Joint_Committee_on_the_Multi-State_Co-operative_Societies_\(Amendment\)_Bill_2022_1.pdf](https://loksabhadocs.nic.in/Isscommittee/Joint%20Committee%20on%20the%20Multi-State%20Co-operative%20Societies%20(Amendment)%20Bill,%202022/17_Joint_Committee_on_the_Multi-State_Co-operative_Societies_(Amendment)_Bill_2022_1.pdf)> accessed 5 April 2023, page 3.

³⁹² CA 2013, s 9.

S. No.	Entity	Essential Features of the Entity
		<p>Approach to governance The board of directors of a company is appointed by the shareholders of a company. A private company can issue securities <i>inter alia</i> by way of private placement which ensures that shareholding is acquired by a selected group of persons who have been identified by the board of directors. Thus, there is a risk of concentration of power with the majority shareholders. However, the board may have nominee directors, independent directors and observers. Thus, governance can involve multiple stakeholders representing the interest of different classes of shareholders.</p> <p>Primary motive for setting up The board of directors has a fiduciary responsibility to act in the interest of the company and its shareholders. The primary purpose of a private company is to maximize shareholders' profits. Earned profits are distributed amongst shareholders as dividend or reserved for future expansion of the company and its business objectives.</p> <p>Degree of agility Private companies are also exempted from significant compliance burden³⁹³ that is applicable to public unlisted and public listed companies. For instance, a private company can convene a meeting overnight to cater to urgent matters related to the company, if agreed in the articles. There is no stringent requirement of notice.³⁹⁴ Thus, there is agility in decision making.</p> <p>Extent of transparency and accountability Companies are required to conduct at least four board meetings in a year, with maximum of one hundred and twenty-days gap between subsequent board meetings.³⁹⁵ The documents of each meeting including general meeting documents, if any conducted, are available for public inspection. The annual returns, board report and balance sheet of the company is also available for public inspection. Thus, there exist sufficient safeguards to ensure transparency and accountability.</p>
6.	Public Unlisted Company	<p>Legal framework Companies are incorporated and regulated under the CA 2013. Section 2(71) of the CA 2013 defines public unlisted companies.</p>

³⁹³ Private companies have been exempted from certain compliances which are required to be fulfilled by public companies; MCA Notification, G.S.R. 464(E) (05 June 2015) <https://www.mca.gov.in/Ministry/pdf/Exemptions_to_private_companies_05062015.pdf> accessed 5 April 2023 ('**Private Companies MCA Notification**'). For instance, the board of directors of a private company are exempt from requiring consent of the shareholders via a special resolution for exercising certain powers such as selling/ leasing/ disposing their undertaking, borrowing money, etc.; CA 2013, s 180 read with Private Companies MCA Notification. The prohibition on a company from advancing any loan to any of its directors or to any other person in whom the director is interested is not applicable to certain classes of private companies; CA 2013, s 185 read with Private Companies MCA Notification.

³⁹⁴A general meeting can be convened after giving shorter notice than 21 days if at least 95% of the members entitled to vote accord their consent which is easier in case of private companies because of lesser number of shareholders; CA 2013, s 101(1).

³⁹⁵ CA 2013, s 173.

S. No.	Entity	Essential Features of the Entity
		<p>Type of entity A company, when incorporated, becomes a body corporate that has perpetual succession with power to hold, acquire and dispose property, is capable of entering into a contract, sue or be sued in its own name.³⁹⁶</p> <p>Approach to governance The board of directors of a company is appointed by the shareholders of a company. Companies in India generally tend to be promoter-driven and have very concentrated shareholding with only a few shareholders holding majority shares in a company. The majority shareholders may be capable of influencing the decisions of the board of directors, thus dominating minority shareholders in the process. The CA 2013 provides for protection of minority shareholder rights, thus furthering the interests of different participants in the system.</p> <p>However, the board may have nominee directors, independent directors and observers. Similar provisions to ensure participation of multiple stakeholders can also be included in the articles of the company. Thus, governance can involve multiple stakeholders representing the interest of different classes of shareholders.</p> <p>Primary motive of setting up The board of directors has a fiduciary responsibility to act in the interest of the company and its shareholders. Profits are distributed amongst shareholders as dividend or reserved for future expansion of the company and its business objectives.</p> <p>Degree of agility A public unlisted company occupies a unique position in terms of degree of operational flexibility situated between public listed companies and private companies. A public unlisted company is a more agile vehicle than a public listed company since the SEBI (Listing Obligation and Disclosure Requirement) Regulations, 2015 ('LODR Regulations') are not applicable to it, thereby significantly reducing its compliance and disclosure burden. At the same time, a public unlisted company has more stringent compliance requirements than a private company.³⁹⁷ For instance, if a public unlisted company wants to convene a general meeting with less than twenty-one days' notice, it must obtain consent from at least 95% the members entitled to vote.³⁹⁸ Considering public companies have a large set of shareholders, receiving consent of 95% of members is likely to be cumbersome. In contrast, private companies are subject to CA 2013 notice requirements in respect of general meeting only if their articles of association do not provide otherwise.³⁹⁹ Additionally, the time</p>

³⁹⁶ ibid, s 9.

³⁹⁷ Private Companies MCA Notification read with CA 2013, s 62(1)(b).

³⁹⁸ CA 2013, s 101(1).

³⁹⁹ Private Companies MCA Notification read with CA 2013, s 101.

S. No.	Entity	Essential Features of the Entity
		<p>periods applicable in terms of further issue of shares, within which the notice is to be sent and offer is to be accepted for a public unlisted company, can be reduced by a private company in case ninety per cent of members have given their consent to the same.⁴⁰⁰</p> <p>Extent of transparency and accountability In addition to the filing requirements prescribed for a private company mentioned above, public companies have stricter compliance and disclosure requirements. Thus, there exists transparency and accountability in their functioning.</p>
7.	Public Listed Company	<p>Legal framework Companies are incorporated and regulated under the CA 2013. Section 2(71) of the CA 2013 defines public listed companies and additionally SEBI regulations including SEBI LODR Regulations and the SEBI (Substantial Acquisition of Shares and Takeovers) Regulations, 2011 apply to listed companies.</p> <p>Type of entity A company, when incorporated, becomes a body corporate that has perpetual succession with power to hold, acquire and dispose property, is capable of entering into a contract, sue or be sued in its own name.⁴⁰¹</p> <p>Approach to governance The board of directors of a company is appointed by the shareholders of a company. Companies in India generally tend to be promoter-driven and have very concentrated shareholding with only a few shareholders holding majority shares in a company. The majority shareholders may be capable of influencing the decisions of the board of directors, thus dominating minority shareholders in the process. However, in a public listed company, since the equity is listed on the stock exchange, it provides equal chance for public at large to have stake in the company. Moreover, the CA 2013 provides for protection of minority shareholder rights, thus furthering the interests of different participants in the system. The board is mandated to have nominee directors, independent directors, observers along with several committees⁴⁰² discharging specific functions. Thus, governance can involve multiple stakeholders representing the interest of different class of shareholders.</p> <p>Primary motive for setting up</p>

⁴⁰⁰ Private Companies MCA Notification read with CA 2013, s 62(1)(a)(i) and s 62(2).

⁴⁰¹ CA 2013, s 9.

⁴⁰² A public listed company is required to form an audit committee, risk management committee, stakeholders' relationship committee and nomination and remuneration committee.; LODR Regulations, regulations 18 to 21.

S. No.	Entity	Essential Features of the Entity
		<p>The board of directors has a fiduciary responsibility to act in the interest of the company and its shareholders. Primarily shareholder welfare-driven, profits earned are distributed amongst shareholders as dividend or reserved for future expansion of the company and its business objectives.</p> <p>Degree of agility There are stringent compliance and extensive disclosure requirements applicable to a public listed company. Convening meetings of shareholders is more cumbersome, due to onerous requirements, thereby reducing operational flexibility and agility. For instance, it is mandatorily required to provide electronic voting facility to all shareholders for all shareholder meetings.⁴⁰³ A general meeting can only be convened after giving notice of at least twenty-one days.⁴⁰⁴</p> <p>Extent of transparency and accountability Public listed companies are required to comply with the LODR Regulations which include abundant general and financial disclosures, ensuring greater transparency and accountability. For instance, public listed companies are mandated to maintain a functional website containing the basic information about the listed entity including financial statements and other related documents.⁴⁰⁵</p>
8.	Statutory Body	<p>Legal framework Statutory bodies are established and regulated by their specific statutes. For instance, UIDAI is established under Section 11 of the Aadhaar Act, the Institute of Chartered Accountants of India is established under the Chartered Accountants Act, 1949 etc.</p> <p>Type of entity Statutory bodies like RBI, UIDAI and ICAI have been established as a body corporate.⁴⁰⁶ Thus, they can be established as a body corporate and can have separate legal entity status.</p> <p>Approach to governance Statutory bodies lack representation from private stakeholders. The decision-making power lies with the government and its officials. While there exist provisions for public consultations but there is no binding value of such consultations. It is pertinent to note that SEBI</p>

⁴⁰³ LODR Regulations, regulation 44 <https://www.sebi.gov.in/legal/regulations/feb-2023/securities-and-exchange-board-of-india-listing-obligations-and-disclosure-requirements-regulations-2015-last-amended-on-february-07-2023-_69224.html> accessed 5 April 2023.

⁴⁰⁴ A general meeting can be convened after giving shorter notice if at least 95% of the members entitled to vote accord their consent. Considering public listed companies have diverse shareholders, receiving consent of 95% of members is highly unlikely; CA 2013, s 101(1).

⁴⁰⁵ LODR Regulations, regulation 46.

⁴⁰⁶ Aadhaar Act, s 11; Chartered Accountants Act, 1949, s 3 <https://www.mca.gov.in/Ministry/pdf/CA_AmendmentAct_2011_07092016.pdf> accessed 5 April 2023; RBI Act, 1934, s 3 <https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/RBIAM_230609.pdf> accessed 5 April 2023.

S. No.	Entity	Essential Features of the Entity
		<p>and RBI have had a questionable record with respect to seeking public consultations and comments, despite being mandated by the statute.⁴⁰⁷</p> <p>Primary motive for setting up The statutory bodies are set up for protecting public interest in a particular sector and lack profit motives. For instance, SEBI was set up with a mandate to protect the interest of investors, to regulate and to promote the development of the securities market.⁴⁰⁸ UIDAI was set up to ensure good governance and efficient targeted delivery of subsidies and benefits to Indians.⁴⁰⁹</p> <p>Degree of agility The parent statute that establishes the statutory body lays down the functions and procedures of statutory bodies. Thus, it lacks the operational flexibility required for quick decision-making. For instance, the procedure of appointment of members of UIDAI is laid down in the Aadhaar Act and the position of chairman and 2 part time members out of total 4 members that comprise the UIDAI is vacant.⁴¹⁰</p> <p>Extent of transparency and accountability While statutory bodies come within the purview of Right to Information Act, 2005,⁴¹¹ there have been concerns regarding independence, transparency and accountability measures adopted by various statutory bodies.⁴¹² Different statutes lay down different compliance and disclosure requirements and have different oversight, thus, sweeping statements cannot be made.</p>
9.	Section 8 Company	<p>Legal framework Companies are incorporated and governed under the CA 2013. Section 8 of the CA 2013 discusses the formation of companies with charitable objects/ not-for-profit motive.</p>

⁴⁰⁷ Arpita Pattanaik & Anjali Sharma, 'Regulatory governance problems in the legislative function at RBI and SEBI' (*The Leap Blog*, 23 September 2015) <<https://blog.theleapjournal.org/2015/09/regulatory-governance-problems-in.html#gsc.tab=0>> accessed 5 April 2023.

⁴⁰⁸ Lalita Som & Faisal Naru, 'Regulatory Policy in India: Moving towards Regulatory Governance' (*OECD, France*, 2017) < <https://www.oecd-ilibrary.org/docserver/b335b35d-en.pdf?expires=1680696582&id=id&accname=guest&checksum=1BAC7EFE8F687DECF97034138CB6C14D>> accessed 5 April 2023.

⁴⁰⁹ UIDAI, 'Vision & Mission' <<https://uidai.gov.in/en/about-uidai/unique-identification-authority-of-india/vision-mission.html>> accessed 05 April 2023.

⁴¹⁰ UIDAI, 'Organizational Structure' <<https://uidai.gov.in/en/about-uidai/unique-identification-authority-of-india/organizational-structure.html>> accessed 5 April 2023.

⁴¹¹ Department of Legal Affairs, Ministry of Law and Justice, 'Frequently Asked Questions (FAQs) on RTI' <<https://legalaffairs.gov.in/sites/default/files/FAQs.pdf>> accessed 5 April 2023.

⁴¹² Saket Singh, 'Transparency in Functioning of Statutory Bodies – Need for Legislative Intervention' (*SCC Online Blog*, 21 June 2022) <<https://www.sconline.com/blog/post/2022/06/21/transparency-in-functioning-of-statutory-bodies-need-for-legislative-intervention/>> accessed 5 April 2023.

S. No.	Entity	Essential Features of the Entity
		<p>Type of entity A Section 8 company enjoys all the privileges, and is subject to all the obligations, of limited companies.⁴¹³ A company, when incorporated, becomes a body corporate that has perpetual succession with power to hold, acquire and dispose property, is capable of entering into a contract, sue or be sued in its own name.⁴¹⁴</p> <p>Approach to governance A Section 8 company is incorporated as a company limited by shares or by guarantee.⁴¹⁵ Unlike public and private companies, the requirements of having minimum directors and maximum directors is not applicable to a Section 8 company.⁴¹⁶ Moreover, they are exempt from the requirement of appointing independent directors and concerned consequential provisions.⁴¹⁷ Section 8 companies are required to appoint women directors in case they come within the purview of prescribed classes of companies⁴¹⁸ as well as appoint a resident director.⁴¹⁹ While Section 8 companies need to have an audit committee,⁴²⁰ they need not constitute a nomination and remuneration committee and stakeholder’s relationship committee, which are otherwise prescribed under Section 178 of the CA 2013.⁴²¹ Notwithstanding the exemptions under CA 2013, a Section 8 company has the flexibility to enshrine a multistakeholder approach to governance in its shareholding as well as board composition as has been demonstrated by the NPCI and ONDC Entity. Moreover, it can make such requirements non-negotiable by enshrining principles of multistakeholder approach in its AoA</p> <p>Primary motive for setting up A Section 8 company is set up for not-for-profit purpose such as promotion of commerce, art, science, sports, social welfare, etc. It can apply its profits in the promotion and espousal of such social objectives. Further, it is not permitted to distribute any dividend to its members.⁴²²</p> <p>Degree of agility</p>

⁴¹³ ibid, s 8(2).

⁴¹⁴ ibid, s 9.

⁴¹⁵ Institute of Company Secretaries of India, 'FAQs on Section 8 Companies (The Companies Act, 2013 Series)' (August 2016) <www.icsi.edu/media/webmodules/publications/FAQs_on_Section_8_Companies.pdf> accessed 12 April 2023, page 6. ('**ICSI FAQ Section 8 Company**')

⁴¹⁶ Under Section 149 of CA 2013, a public company must have a minimum of three directors and a private company must have minimum of two directors. Both kinds of companies can have a maximum of fifteen directors; MCA Notification, G.S.R. 466(E) (5 June 2015) <https://www.mca.gov.in/Ministry/pdf/Exemptions_to_Section8_companies_05062015.pdf> accessed on 12 April 2023 ('**Section 8 MCA Notification**').

⁴¹⁷ Section 8 MCA Notification read with CA 2013, s 149.

⁴¹⁸ CA 2013, s 149(1) read with the Companies (Appointment and Qualification of Directors) Rules, 2014, rule 3.

⁴¹⁹ ICSI FAQ Section 8 Company, page 19.

⁴²⁰ ICSI FAQ Section 8 Company, page 23.

⁴²¹ ICSI FAQ Section 8 Company, page 23.

⁴²² ibid, CA 2013, s 8(1).

S. No.	Entity	Essential Features of the Entity
		<p>A Section 8 company enjoys a higher level of agility and flexibility in decision-making due to less stringent compliance requirements. The board of directors of a Section 8 company is required to only meet once every six months, as compared to four times in a year.⁴²³ Further, such company can convene a general meeting by giving minimum fourteen days' notice as compared to minimum twenty one days' notice for other classes of companies.⁴²⁴ Section 8 companies are also exempt from the stringent requirements of preparation, signing, and keeping of minutes of every general meeting, board meeting, meeting of any committee of the board, as well as resolutions passed through postal ballot. In case the articles of association of a Section 8 company provide for confirmation of minutes by circulation, such minutes may be recorded within thirty days of the conclusion of any meeting. Further, a Section 8 company is not required to observe the secretarial standards with respect to general and board meetings.⁴²⁵ A Section 8 company is also permitted to appoint more than fifteen directors without passing a special resolution.⁴²⁶ The board of a Section 8 company may exercise its powers in respect of borrowing money, investing its funds, or granting loans/ guarantee/ security in respect of loans by circulation instead of at a meeting.⁴²⁷</p> <p>Extent of transparency and accountability Section 8 companies are required to satisfy certain event-based as well as monthly, quarterly, and annual compliances under the CA 2013 which include <i>inter alia</i> the filing of various forms, returns and information with the Registrar which are all available for public inspection. They are required to prepare and keep books of account and financial statements for every financial year which give a true and fair view of the state of the affairs of the company at their registered office⁴²⁸ and are subject to regular audits. Thus, there exist sufficient safeguards to ensure transparency and accountability.</p>
10.	SIC	<p>SICs are a hybrid vehicle proposed by the MCA which advocate for achievement of social development goals while being allowed to earn a conditional profit.⁴²⁹ The distribution of such profit would be subject to a ceiling and dependent upon achievement of social outcomes having a tangible social impact. The creation of such SICs has been proposed along the lines of 'Community Interest Companies' in the UK and 'Public Benefit Corporations' in the USA.⁴³⁰</p> <p>Legal framework SICs are at the stage of conceptualisation and do not have any statutory force in India as of now.</p>

⁴²³ CA 2013, s 173(1) read with MCA Notification, G.S.R. 466(E) (5 June 2015) <https://www.mca.gov.in/Ministry/pdf/Exemptions_to_Section8_companies_05062015.pdf> accessed 5 April 2023.

⁴²⁴ *ibid*, s 101(1).

⁴²⁵ *ibid*, s 118.

⁴²⁶ *ibid*, s 149(1).

⁴²⁷ *ibid*, s 179(3).

⁴²⁸ *ibid*, s 128.

⁴²⁹ MCA, 'Report of the High-Level Committee on Corporate Social Responsibility 2018' (7 August 2019) <https://www.mca.gov.in/Ministry/pdf/CSRHLC_13092019.pdf>, page 80.

⁴³⁰ *ibid*, page 80.

S. No.	Entity	Essential Features of the Entity
		<p>Type of entity An SIC is proposed to be set up as a company. Therefore, it shall have a separate legal status and the principle of limitation of liability shall apply.</p> <p>Approach to governance SICs are proposed to be set up as companies which may have representation from different stakeholders and players in the ecosystem. Thus, SICs may encourage multi-stakeholder participation.</p> <p>Primary motive for setting up SICs are being proposed to be set up with the express object of pursuing social outcomes or not-for-profit motives. They may be allowed to earn a conditional profit, which would be contingent upon achievement of desired social outcomes. Further, a ceiling on the quantum of profits which can be distributed is being proposed.</p> <p>Degree of agility SICs are at the stage of conceptualization. Due to lack of any regulatory framework surrounding SICs in India at present, a comment on their operational agility cannot be made since the nature of the compliances they will need to fulfil will determine their operational flexibility.</p> <p>Extent of transparency and accountability SICs are at the stage of conceptualization. Due to lack of any regulatory framework surrounding SICs in India at present, a comment on their transparency and accountability cannot be made since the requirements of disclosures laid down will determine the nature of transparency and accountability.</p>

Annexure-B

S. No	Entity	Sources of Funding for the Entity
1.	Trust	In India, not-for-profit organisations can also be structured as public charitable trusts. ⁴³¹ Public trusts primarily rely on donations and voluntary contributions from individuals, philanthropic grants from private organisations government funding, membership fees and subscriptions, and financial aid from international organisations for their funding. ⁴³² They can also be set up as for-profit 'pooling vehicles'. For instance, SEBI-regulated Alternative Investment Funds collect funds from investors and invest the same in accordance with a specified investment policy ⁴³³ and InvITs allow retail and institutional investors to invest their money in infrastructure projects and earn a dividend as income. ⁴³⁴
2.	Registered Society	A registered society can be set up for specific charitable/ non-profit purposes only. ⁴³⁵ Not-for-profit organisations structured as registered societies have various sources of financing including through membership fees and subscriptions, philanthropic grants, and voluntary contributions from individuals, private sector organisations, government agencies and international agencies. ⁴³⁶
3.	Cooperative Society	Similar to a registered society, a cooperative society has various sources of funding including traditional methods as well as modern methods. Traditional methods include, subscription by members to the equity share capital of a cooperative society in case of a cooperative society with share capital, ⁴³⁷ reserve fund, ⁴³⁸ term loans from commercial banks and financial institutions, ⁴³⁹ and membership fees. ⁴⁴⁰ Modern modes of funding include venture capital financing and seed capital assistance, ⁴⁴¹ and funding from international sources subject to different state laws relating to co-operative societies, the bye-laws of each society, and applicable Indian law. ⁴⁴² State governments are empowered to make rules for further raising of funds through issue of shares or debentures. ⁴⁴³

⁴³¹ In case of private trusts, legal ownership of trust assets/ funds is vested by the author/ settlor in the trustees on behalf of the beneficiaries; ICAI, 'Handbook on Cooperative Society & Non Profit Organisations' (January 2013) <<https://kb.icai.org/pdfs/PDFFile5b28bdce1c309.30940167.pdf>> page 3. ('**ICAI Handbook on Cooperative Society and NPOs**')

⁴³² Ibid, pages 41 and 42.

⁴³³ SEBI, 'Frequently Asked Questions (FAQs): SEBI (Alternative Investment Funds) Regulations, 2012' <https://www.sebi.gov.in/sebi_data/attachdocs/1471519155273.pdf> accessed 13 April 2023.

⁴³⁴ SEBI, 'Frequently Asked Questions for Infrastructure Investment Trusts' <https://www.sebi.gov.in/sebi_data/faqfiles/may-2022/1652786847771.pdf> accessed 13 April 2023.

⁴³⁵ SR Act, s 20.

⁴³⁶ ICAI Handbook on Cooperative Society and NPOs, page 42.

⁴³⁷ ICAI, 'Various Types of Finances for Co-Operatives and Non Profit Organizations' (February 2013) <[https://kthemani.com/download/co-operative_&_npo_sector_/\[I\]%20Various%20Types%20Of%20Finances%20For%20Co-Operatives%20&%20%20NPOs.pdf](https://kthemani.com/download/co-operative_&_npo_sector_/[I]%20Various%20Types%20Of%20Finances%20For%20Co-Operatives%20&%20%20NPOs.pdf)>, page 11. ('**ICAI Handbook on types of Finances**')

⁴³⁸ A certain portion of the net profits in any year are required to be carried to a reserve fund. CS Act, s 33.

⁴³⁹ ICAI Handbook on types of Finances, page 30.

⁴⁴⁰ CS Act, s 12.

⁴⁴¹ ICAI Handbook on types of Finances, pages 41 and 49.

⁴⁴² Ibid, page 58.

⁴⁴³ CS Act, s 43(2)(e).

4.	MSCS	Similar to a cooperative society, sources of funding for a MSCS include subscription by members to the equity share capital of the MSCS, reserve fund, ⁴⁴⁴ membership fee, ⁴⁴⁵ and funding from international sources subject to applicable Indian law. ⁴⁴⁶ The MSCS Act further provides that the Central/ State Government may, on receipt of request from a MSCS and with a view to promoting cooperative movement, subscribe to the share capital of a MSCS and/ or provide loans/ financial assistance/ subsidies to a MSCS. ⁴⁴⁷ The bye-laws of the MSCS may provide for the sources and manner of fundraising by an MSCS. ⁴⁴⁸ The board of an MSCS is specifically empowered to raise funds. ⁴⁴⁹
5.	Private Company	Typically, the initial authorised capital of a private company is determined and infused by the promoters, in lieu of which the promoters receive the shares of the company. Primarily, companies require two kinds of capital: working capital and fixed capital. Working capital is the capital needed for day to day operations and recurring costs of the company. Fixed capital is the capital required to invest in assets of the company, for instance machinery, land etc. Private companies rely on broadly two forms of capital: equity capital and debt capital to fulfil their working capital and fixed capital requirements. Equity capital is raised by a private company by selling ownership stake (equity shares) in the company to either pre-existing shareholders or new investors through private placement, rights issue or preferential allotment. ⁴⁵⁰ However, it is to note that shareholders of a private company cannot exceed two hundred in number. ⁴⁵¹ A private company can also raise capital in the form of debt, including loans from financial institutions, issuance of bonds and debentures to investors. ⁴⁵²
6.	Public Unlisted Company	Similar to private companies, a public unlisted company can also raise capital by allotment of shares to existing shareholders or selected members through private placement, rights issue or preferential allotment. ⁴⁵³ The number of shareholders is unrestricted in public unlisted companies, thus, such companies can receive capital in lieu of shares from numerous shareholders. Similar to private companies, public unlisted companies can also raise capital in the form of debt by availing loans from financial institutions. In addition to loans, public unlisted companies can also issue bonds and debentures to its investors. ⁴⁵⁴
7.	Public Listed Company	A public listed company can raise capital by issuance of equity to public at large through public offer, either initial public offer or further public offer or to selected members via private placement. The stock of public listed companies is traded on the stock exchange. Such companies can easily raise large sums of money as shareholders are public at large and shares can be bought and sold in public stock exchanges.

⁴⁴⁴ A MSCS is required to transfer an amount of at least 25% out of its net profits to a reserve fund, and at least 10% to a reserve fund for meeting unforeseen losses, every year; MSCS Act, s 63.

⁴⁴⁵ MSCS Act, s 28.

⁴⁴⁶ ICAI Handbook on Cooperative Society and NPOs, page 58.

⁴⁴⁷ MSCS Act, s 61.

⁴⁴⁸ *ibid*, s 10(2)(m).

⁴⁴⁹ *ibid*, s 49(2)(k).

⁴⁵⁰ Suneeth Katarki & Pallavi Kanakagiri, 'Capital Raise made Easy' (*Mondaq*, 8 January 2015) <<https://www.mondaq.com/india/securities/365284/capital-raise-made-easy>> accessed 13 April 2023.

⁴⁵¹ CA 2013, s 42

⁴⁵² Nishith Desai Associates, 'Debt Funding in India' (January 2019) <https://www.nishithdesai.com/fileadmin/user_upload/pdfs/Research%20Papers/Debt_Funding_in_India.pdf> accessed 13 April 2023.

⁴⁵³ *ibid*.

⁴⁵⁴ *ibid*.

		Additionally, public listed companies can also obtain loans from financial institutions and raise capital via issuance of debt instruments like bonds and debentures. ⁴⁵⁵
8.	Statutory Body	A statutory body is mostly funded by the government entirely and is subject to allocation and control by the Government. ⁴⁵⁶ There is no requirement of revenue generation to continuously fund the operations of the body, as funding is left entirely to the public sector. ⁴⁵⁷
9.	Section 8 Company	A Section 8 company is established for not-for-profit purposes and any profits it earns are solely applied towards promoting its charitable objectives. ⁴⁵⁸ Its primary sources of funding include philanthropic grants from individuals and entities, government grants and corporate social responsibility funding. ⁴⁵⁹ It can also derive its funding in the form of equity capital and debt. ⁴⁶⁰ While a Section 8 company cannot raise capital by allotment of preference shares, ⁴⁶¹ there is no specific exemption on raising capital via allotment of equity shares like other classes of companies. ⁴⁶² Additionally, there is no restriction on Section 8 companies for borrowing funds from its own members ⁴⁶³ or financial institutions ⁴⁶⁴ and issuing debentures. ⁴⁶⁵

⁴⁵⁵ *ibid.*

⁴⁵⁶ Jeffrey Saviano, Silvana Rodriguez, et al., 'Financing Digital Public Infrastructure: Approaches to Sustain Digital Transformation' <https://d1y8sb8igg2f8e.cloudfront.net/documents/Financing_Digital_Public_InfrastructureE_UcTkOMH.pdf> accessed 13 April 2023.

⁴⁵⁷ Rahul Matthan & Shreya Ramann, 'Financing Digital Public Infrastructure: The India Story' (*Observer Research Foundation*, 26 October 2022) <<https://www.orfonline.org/expert-speak/financing-digital-public-infrastructure/>> accessed 13 April 2023.

⁴⁵⁸ CA 2013, s 8(1).

⁴⁵⁹ Vinod Kothari Consultants, 'Utilisation of Accumulated Surplus by S.8 Companies' <<https://vinodkothari.com/2022/05/utilisation-of-accumulated-surplus-by-section-8-companies/>> accessed 13 April 2023.

⁴⁶⁰ *ibid.*

⁴⁶¹ Preference shareholders are given preferential treatment for distribution of dividends. Since a Section 8 company is prohibited from distributing dividends to its shareholders, it is prohibited to allot preference shares as well.

⁴⁶² Asian Venture Philanthropy Network, 'Getting Started in Venture Philanthropy in Asia: Legal Framework Profile for India' (April 2014) <<https://avpn.asia/wp-content/uploads/2014/04/AVPN-GSOPA-LEGAL-INDIA.pdf>> accessed 13 April 2023, page 27.

⁴⁶³ Vinod Kothari Consultants, 'Utilisation of Accumulated Surplus by S.8 Companies' <<https://vinodkothari.com/2022/05/utilisation-of-accumulated-surplus-by-section-8-companies/>> accessed 13 April 2023.

⁴⁶⁴ However, they are generally kept outside the purview of lending portfolios of commercial banks given they can only utilise funds towards furthering their foundational objectives; *ibid.*

⁴⁶⁵ *ibid.*

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