



# The Path Forward For Digital Assets Adoption In India

*A policy perspective on the state of play of digital assets globally and recommendations for Indian Policymakers*

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## Executive Summary

The Supreme Court verdict in the “Internet And Mobile Association of India (IAMAI) versus RBI” case (IAMAI case)<sup>1</sup> offers policymakers the opportunity to develop a thoughtful and globally aligned regulatory framework for the digital assets ecosystem in India. This policy paper offers an overview of the global digital assets landscape and a template for an India specific legal framework.

RBI issued its first warning about digital assets (referred to in the advisories as, “virtual currencies” (VCs)), in 2013. In April of 2018, it formally foreclosed regulated entities subject to its jurisdiction from dealing with or facilitating VC. In the meanwhile, global standard-setting bodies like the Financial Action Task Force (FATF) and progressive regulators like the Monetary Authority of Singapore (MAS) and United Kingdom’s (UK) Financial Conduct Authority (FCA), among others, have continued to monitor the progress of digital assets and study their evolution from an outlier ecosystem seeking to disrupt traditional finance, to a mature sub-set of financial markets. They have created token taxonomies and risk-based proportionate regulatory frameworks to leverage beneficial use-cases facilitated by digital assets. On the other hand, they have shunned sledgehammer measures like bans and adapted their existing regulatory structures to mitigate the risks posed by digital assets.

In this paper, we note that India’s policymakers should utilize the opportunity afforded by the Supreme Court verdict to follow the lead of other progressive regulators and enact a transparent, principles-based and proportionate regulatory framework for the digital asset ecosystem in India. We offer the salient elements of such a legal framework comprised of:

- Core Principles that should inform it
- A classification of digital assets to allocate (scarce) regulatory resources better
- Amendments to a set of financial sector laws that interface with the digital assets ecosystem

Alongside, the paper also lays down two measures Indian policymakers may implement over the short and medium term.

- Reforms in connection with Gujarat International Finance Tec-City (GIFT City)
- Reform in RBI’s Regulatory Sandbox Framework

The proposed regulatory framework for digital assets should be informed by the following principles:

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<sup>1</sup> Writ Petition (Civil) No. 528 of 2018

**Technology-agnostic:** Regulations should not explicitly or otherwise prefer/nudge users towards any particular technology. In context, it means that financial services embedding Distributed Ledger Technology (DLT)/digital assets in their solution should not be treated as inferior to financial services embedding legacy architectures for any reason including regulatory parity.<sup>2</sup>

**Principles-based regulation:** Prescriptive regulation of digital assets risks obsolescence because the underlying technology is continually evolving. Principles-based regulation is future-proof given the context. Moreover, it guides actors about regulatory goals, leaving the process for the parties to figure out

**Risk-adjusted/proportionate:** The regulatory framework should be adjusted for the potential risks posed by digital assets and targeted to mitigate these risks.

The underlying theme while designing a regulatory framework should be to balance innovation and economic benefits associated with digital assets and risk management. Moreover, to borrow from Justice Brennan, “sunlight is the best disinfectant”. Policy options like foreclosing banking system access to digital assets service providers, or other forms of outright (direct) prohibition of businesses dealing with digital assets will have the effect of pushing this ecosystem outside the regulatory perimeter, and perversely, further reducing the visibility regulatory authorities have on transactions in digital assets. Such a “shadow crypto economy” is a far greater source of risk to financial stability and law and order of a country. Indeed, one of the greatest lessons of the Global Financial crisis of 2008 was that “shadow banks” operating outside the regulatory perimeter were the principal vectors that caused it. Thus, foreclosures and bans are counter-productive policy tools. (As we discuss in greater detail below, risks attendant to digital assets are best mitigated through reporting and record-keeping mandates of anti-money laundering (AML/CFT) laws).

The other side of the foregoing recommendation, is to have extensive consultations with stakeholders in the digital assets ecosystem and the wider public before taking any policy action touching upon digital assets in India. Public and private consultations are a recognized preface to enacting any legal or regulatory policy and serve to achieve 3 objectives; (a) to clarify legal/regulatory perimeter/expectations, (b) to test regulatory proposals, and (c) to refine the proposals in light of the feedback.<sup>3</sup> Moreover, there is a wealth of precedent available in India’s financial and technological policy that may be followed here; in the past, both the Data Privacy Bill and the Indian Bankruptcy Code

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<sup>2</sup> See the recommendations regarding the RBI Regulatory Sandbox for a “live” example of exclusionary treatment. See Section VII below.

<sup>3</sup> See Global Cryptoasset Regulatory Landscape Study Cambridge Center for Alternative Finance (2019) p.39 available at, [https://www.jbs.cam.ac.uk/fileadmin/user\\_upload/research/centres/alternative-finance/downloads/2019-04-ccaf-global-cryptoasset-regulatory-landscape-study.pdf](https://www.jbs.cam.ac.uk/fileadmin/user_upload/research/centres/alternative-finance/downloads/2019-04-ccaf-global-cryptoasset-regulatory-landscape-study.pdf)

have had the benefit of public consultations, as does the Telecom Regulatory Authority of India (TRAI) regulation of net neutrality. Accordingly, we urge India's policymakers to initiate a similar process of public consultations in connection with any proposed policy action touching upon digital assets in India.

Given the borderless nature of DLT and digital assets, we encourage Indian policymakers to collaborate with global policymakers and implement a globally consistent and harmonized set of regulations. Lack of harmonization with global rules may lead to regulatory arbitrage, thereby creating additional risks and regulatory hurdles.

We recommend the following policy measures towards enacting a comprehensive digital asset policy in India.

**First:** Adopt a digital asset taxonomy consistent with global practice in this regard. As the paper elaborates, India should consider the following classification for digital assets and codify into the proposed law.

1. *Payments/Exchange token:* to describe non-fiat native digital assets that are used as means of exchange and have no rights that may be enforced against any issuer. *For example: Bitcoin (BTC), XRP and ETH*
2. *Utility tokens:* to describe those digital assets that create access rights for availing service/a network usually offered through a DLT platform
3. *Security tokens:* to describe tokens that create rights mirroring those associated with (traditional) securities like stock (shares), bonds, collective investment schemes.

**Second:** Enact a facilitative legal framework for digital asset service provider ecosystem at the Gujarat International Finance Tec-City (GIFT). Broadly put, International Financial Services Centers (IFSC/IFSCs) are established with the motivation of attracting international financial services' consumers transacting in non-local currencies and offering them a seamless regulatory context so they can utilize the service providers operating out of it. Global IFSC market is competitive and governments that have set up these enclaves have kept the applicable legal frameworks up-to-date and flexible for facilitating financial innovation. Notifying a digital exchange regulation regime within the GIFT will offer it a competitive edge and attract mature participants in the digital asset ecosystem to GIFT for developing several use-cases.

**Third:** Modify clause 6.3 of RBI's regulatory sandbox (RS) framework to remove "crypto currency", and "crypto asset services" from negative list and offer service providers using this new technology, an opportunity to test the value proposition in Indian context. The RS is a formal regulatory program for market participants to test new products, services and business models with consumers in a live environment and

subject to oversight. However, as the RS program presently stands, innovation in connection with digital assets and digital assets services is in the indicative excluded list notified by the RBI.<sup>4</sup> The effect is that market participants cannot test products, services and business models that use native digital assets. Pertinently, the foreclosure of each of these activities impacts every use-case implicating them including services like cross-border payments where utilizing them has been shown to be more efficient.

**Finally**, amend the following financial sector laws as a step towards creating a facilitative legal framework for digital assets:

Empower the Securities & Exchange Board of India, through appropriate amendments to relevant law, to license, regulate and supervise digital asset exchanges, and the “overlying” digital asset service provider ecosystem.

Exempt digital assets and the underlying distributed ledger technology from the law governing payments in India, the Payments & Settlement Systems Act, 2007 (PSSA). The law was enacted keeping payment systems with central counterparty in mind, and distributed ledger technology by definition has no central counterparty. Retro-fitting PSSA meant for traditional financial architectures, to service providers using distributed ledger technologies would inject the very inefficiencies in payment flow, these technologies are meant to solve for.

At present, the treatment of digital assets under the Foreign Exchange Management Act (FEMA) is ambiguous. This uncertainty will potentially inhibit using digital assets classified as payment/exchange tokens as a means of exchange for purchase of legitimate and often innovative goods and services. Amend the Foreign Exchange Management Act to recognize use of exchange/payment tokens for purchase of goods and services abroad, up to a defined limit with full visibility of authorized dealer banks over the transaction. Likewise, FEMA should be amended to recognize purchase of digital assets as legitimate end-use against outward remittance of funds from an Indian bank and declare that neither would be in violation of FEMA subject to prescribed compliances.<sup>5</sup>

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<sup>4</sup> Regulation 6.3 (“crypto currency, crypto asset services and Initial Coin Offerings” all form part of the excluded set of activities).

<sup>5</sup> Without being exhaustive, these compliances may include mandates about purchase of digital assets being on recognized digital asset exchanges or FATF-compliant jurisdictions. A regulator may also notify a “permissible” list of digital assets that may be eligible to be purchased.

# I. Introduction

## Digital Assets & DLT: A Primer

New technologies, supported by advances in cryptography and network computing are driving transformational changes in the way goods, assets and services are exchanged.<sup>6</sup> Distributed ledger technology and digital assets that are native to these ledgers and serve to transfer value are an important development in this regard.

Variously referred to as, “digital assets”, “virtual currencies” or “cryptocurrencies” (because early proponents of these digital assets were vocal about their potential as “currency” that could be an alternative to fiat currency), these digital assets coupled with the distributed ledger technology offer a competing architecture to traditional finance that is premised upon one central counterparty as the ledger-keeper - the ultimate source of truth (depending upon context the central counterparty could be a Central Bank, a stock exchange, or a payment system operator).

In contrast, distributed ledger technology (DLT) operates in an environment without any central operator. In fact, DLT system is an umbrella term to designate a multi-party system that operates in an environment without any central operator or authority.

The Bank of England defines DLT as:

*“A database architecture which enables keeping and sharing of records in a distributed and decentralized way, while ensuring its validity through consensus-based validation protocols and cryptographic signatures”*

It is easy to infer from the above definition that DLTs rely on multiple points (“nodes”) in its database architecture to record and validate information.

DLTs are broadly categorized further as, Permissioned DLTs and Non-Permissioned DLTs, based on the degree of ease with which users can access the “node”. But it is important to note that it is a continuum and not a binary. There are several intermediate variants along the way from permissionless to permissioned, depending upon the degree of centripetal force the system has. Permissioned DLTs make access to the “node” contingent on the approval of one party or a group of (trusted) parties. On the other hand, permissionless DLTs are (predominantly) open access in that any user can acquire a “node” on the network.

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<sup>6</sup> See Virtual Currencies & Beyond: Initial Considerations p. 5 available at, <https://www.imf.org/external/pubs/ft/sdn/2016/sdn1603.pdf>

Moreover, the digital assets on these DLTs are “bearer” assets and thus can be used as settlement currency within the DLT to transfer value from one point to the other on the network. (In other words, the presence of native digital assets make the DLT a token based system relative to traditional finance, most of which is account-based).

Finally, since the DLTs lack a central counterparty, every DLT is premised upon a “validation of authenticity” protocol to effect settlement finality. Simply put, these are “decision rules” of a given decentralized system. Several types of these protocols have evolved ranging from the Proof-of-work, proof-of-stake to Consensus.<sup>7</sup>

Before we proceed further, a quick detour into these mechanisms. Proof-of-work is the decision rule that Bitcoin employs. It’s core software does not tell us which valid transaction came before another valid transaction. But this order is nonetheless important to determine who paid whom first. The Bitcoin ecosystem decides whose account of the state of “ledger” to be authoritative based on proof-of-work mechanism. Summarily, it is an adversarial system where participants compete to solve a math problem. Whoever “wins” in this contest gets to decide the authentic state of the decentralized ledger. While this decision-rule makes the system robust and guarantees against malfeasance, it is inefficient in that this “contest” collectively consumes copious amounts of energy collectively.<sup>8</sup>

To mitigate against this inefficiency, some DLTs rely on a low-energy intensive, proof-of-stake mechanism. Proof-of-stake, as the name indicates, requires participants to have “skin in the game”, in the decentralized system they seek to be arbiters of by “staking” (putting up) a defined number of units upfront. These units are usually the native digital asset of the DLT concerned. By ensuring they have economic value locked in, in the decentralized ledger, this mechanism ensures participants have stake in maintaining the integrity of the ledger.

Finally, there is a decision rule that simply relies on social consensus. Among the three discussed here, social consensus based decision rules about the authentic state of the ledger is the most efficient (in terms of energy and the time cost). It involves a given server, “s” forming its own sub-group of trusted nodes that it relies on to authenticate; and the overall “system-wide” consensus is deemed to subsist if a given % of total nodes on the network agree on a state of the ledger. For example, XRP ledger relies on this form of decision rule to authenticate the state of ledger.

While a distributed ecosystem and native bearer assets enable DLTs to solve for many traditional finance use-cases involving value transfer more efficiently than hitherto

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<sup>7</sup> See, Why Permissionless Matters available at, <https://coincenter.org/entry/open-matters> ( p. 17-22 for detailed commentary. This summary draws on this work for discussing the mechanisms of authenticating the state of the ledger).

<sup>8</sup> Energy inefficiency and the impacts on climate change have been among the other principal reasons policymakers have been hesitant to embrace bitcoin (and by association), other digital assets.

possible, the use of cryptography in the design of these digital assets poses risks including money laundering, terrorist financing, capital flight and tax evasion, which concerns to regulatory authorities globally.

Accordingly, early response of regulators, especially Central Banks, to emergence of digital assets ranged from caution to downright bans. Notably RBI (India) attempted to foreclose its regulated constituents from facilitating digital asset service providers in any form, prior to the Supreme Court judgement in IAMA case.<sup>9</sup>

### The India Story & Agenda for Reform

The RBI circular foreclosing regulated entities (banks, NBFCs, payment companies) from offering services to digital asset service providers was issued in April 2018. The circular was challenged in the Supreme Court by a group of petitioners including the IAMA.

The Supreme Court of India (SC) recently pronounced its judgement in the IAMA case in which it held that the RBI circular foreclosing the banking system from offering its services to any company dealing with the virtual currencies was a disproportionate restriction on fundamental right to trade and hence set aside the circular. (See “Figure 1” for a timeline of events leading up to the SC order and beyond).

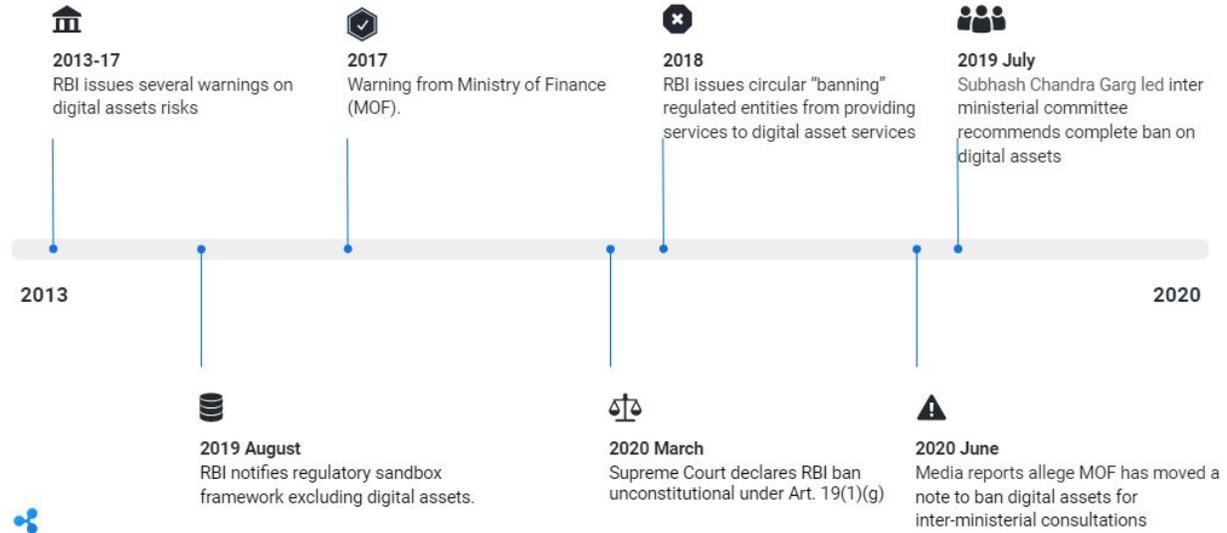


Figure 1: Timeline leading up to Supreme Court Judgement and beyond

<sup>9</sup> Others, like MAS (Singapore), FSA (Japan) and FCA (UK) have engaged with the digital assets ecosystem and developed legal frameworks to leverage the good and constrain the bad and the ugly. (the expression is borrowed from Ravi Menon, “Crypto Tokens: The Good, the Bad and the Ugly” available at, <https://www.bis.org/review/r180321c.htm> ).

The petitioners contended, among other things, that RBI lacked jurisdiction to regulate digital assets as they (as RBI too had suggested several times) were not currencies or legal tender. And in the alternative, if the RBI had the jurisdiction, the measure of foreclosing access to the entire banking system was disproportionate relative to the objective sought to be achieved under existing law.

The Court held that RBI had jurisdiction to regulate digital assets because digital assets had several features of a currency. The Court supported the reasoning on the grounds that RBI had the statutory powers to regulate in connection with the monetary system of the country and that included objects that were used “as currencies”. However, the Court further held that the RBI exercised the power to regulate disproportionately by foreclosing entities dealing with digital assets from accessing the banking system altogether without any apparent effort to show the damage they had caused to the “regulated entities” under RBI’s jurisdiction, and in the absence of any cohesive stance on the regulatory framework by Government of India.<sup>10</sup>

The SC verdict offers Indian policymakers the opportunity to develop a thoughtful and globally aligned regulatory framework for the digital assets ecosystem in India. This policy paper is motivated by the objective of providing a template for this framework. Specifically, a comprehensive law governing digital assets rather than piecemeal judicial verdicts is a better way forward; accordingly, this paper will offer:

- Classification of digital assets
- The notion that native digital assets and blockchain (DLT) both taken together offer the opportunity for transformational change in financial services use-cases
- Comparable digital assets policy frameworks from other countries
- A set of core principles that should inform the omnibus law governing digital assets and a set of draft amendments to existing legal frameworks governing the financial sector in India
- Set out some short and medium term goals for policymakers

In line with the objectives, this policy paper is divided into the following sections: *section II* makes an argument for leveraging both blockchain (and broadly, DLT) and the native digital assets as opposed to just the blockchain. *Section III* describes why digital assets should interest Indian policymakers, highlighting two use-cases; *Section IV* shows how the risks emanating from digital assets can be mitigated by regulatory toolkit deployed in traditional finance. *Section V* lays out the taxonomy (classification) of digital assets *Section VI* surveys key legal and regulatory measures of several jurisdictions that have enacted a digital assets regulatory regime with a view to take

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<sup>10</sup> It appears from RBI’s response to a Right to Information query that for now, the status quo set by the Supreme Court ruling will continue. The RBI was reportedly contemplating seeking a review of the Supreme Court Order. See [https://www.coindesk.com/india-banks-cryptocurrencies-rbi-central-bank?utm\\_source=newsletters&utm\\_medium=blockchainbites&utm\\_campaign=&clid=00011000001tNM7UAN](https://www.coindesk.com/india-banks-cryptocurrencies-rbi-central-bank?utm_source=newsletters&utm_medium=blockchainbites&utm_campaign=&clid=00011000001tNM7UAN)

lessons. *Section VII* sketches out the potential elements of India's digital assets regulatory framework and some short and long term goals. *Section VIII* concludes.

## II. Why Digital Assets \*&\* Distributed Ledger Technology (DLT) Matter Together

The other theme that has come to dominate policy thinking in India is to relegate digital assets (termed, "VCs"/"crypto assets") outside the regulatory perimeter but promote the underlying blockchain technology (more broadly DLT).

But as this section will suggest, DLTs can be more than just robust data repositories. True innovation of a DLT lies in broad applications of programmable value and information e.g. digital assets. Digital assets can be native to the DLT (like Bitcoin to the Bitcoin Blockchain protocol, or XRP to the XRP ledger), or they can be derivative; representations of financial (like stocks, bonds) or real (land, commodities), assets.

Digital assets solve for many problem-statements on a DLT. Saliently:<sup>11</sup>

- To promote liquidity & divisibility (asset token with a real commodity underlying)
- As a settlement/bridge token for cross-border payments(XRP)
- Micro payments within a given ecosystem (use of XRP in gaming or publishing)
- As incentive to manage and retain the integrity of the ledger (bitcoin)

Moreover, DLT with native digital assets is far more consequential in the pursuit of certain social goals, and as such regulators should recognize their potential. Note that we have used the expression, *native digital assets*, deliberately to differentiate them from catch-all expressions like "cryptocurrency"/"virtual currency" because as is evident above, digital assets have use-cases other than the currency use-case. To illustrate this point, consider XRP on XRP ledger.

Say for example, an Indian migrant working on an oil rig in Uzbekistan wants to send a remittance home to India. The conventional way in which this money moves, he will deposit the "Som" equivalent with his bank in Uzbekistan. Note that the Uzbekistan-India corridor is not the most liquid and active remittance corridor. So, the spread between the Uzbek Som and Indian Rupee will be high. The funds deposited will travel through a maze of banking relationships to the recipient Indian bank, and the World Bank estimates that it presently may take 4-8 days and 7% of the value to

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<sup>11</sup> See Blockchain And Digital Assets Primer available at, <https://medium.com/galaxy-digital-research/blockchain-digital-assets-primer-95eae3643d11>

execute.<sup>12</sup> All this friction and deadweight cost has negative implications on financial inclusion and financial deepening goals in “receive” markets like India.

Now, consider XRP, a native digital asset that is embedded on the XRP ledger. It can solve this friction by enabling the Uzbek bank (after executing KYC and related compliances, in connection with the Indian migrant) to straight through process the funds to its Indian counterpart using XRP as a bridge asset. It is designed as a bearer asset (token) and thus the ownership to it can be transferred by moving an equivalent number of XRP<sup>13</sup> to the intended recipient account, over the XRP ledger at near real time and converting XRP into equivalent INR. This route minimizes costs, time and risks that the prevalent models of cross-border banking retain. As a corollary, many friction points like minimum account balances and different time zones as also operational and settlement risks, are avoided in cross-border payments using XRP. (The closest analogy from traditional finance here is that of a bank-note. Bank-notes are tokens issued directly by the Central bank and can be settled by physically transferring possession. XRP operates like a banknote on the XRP ledger). (As we will highlight below, Ripple has productized this concept by introducing a feature called ‘On Demand Liquidity’ within RippleNet. This feature saves financial institutions, including banks and payment providers from cost related to trapped liquidity or working capital).

Tying this strand to India; as we have noted above, Indian policymakers seem to have relegated native digital assets to policy vacuum. Forcing native digital assets outside the regulatory perimeter disables India’s consumers from leveraging the benefits digital assets like XRP and open DLTs offer and inhibits the pace at which we seek to achieve social goals like financial inclusion.

As would be evident from the discussion below on digital asset taxonomies, many jurisdictions, both developed and emerging ones, have developed a nuanced understanding of native digital assets and DLTs and created digital asset taxonomies and legal frameworks around them. The SC’s decision in the IAMA case offers lawmakers the opportunity to develop taxonomies and legal framework that will enable India to extract the advantages and ring-fence the negatives.

In the next section, we will walk through a few use-cases and adjacent social objectives that digital assets and DLTs help policymakers achieve to illustrate the benefits of creating a regulatory framework around them.

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<sup>12</sup> See footnote 15 below.

<sup>13</sup> Equivalent number of XRP to the Som deposited by the migrant worker with his Uzbek bank.

### III. Why Should Digital Assets Interest Policymakers? Some Use-Cases

Digital assets have been a promising technology breakthrough, showing the potential to transform many sectors of the global economy. However, for any technology, success is based on its use case and ability to solve real-world problems. While the initial intent behind Bitcoin was to complement (or perhaps replace) fiat currencies, it is clear now that Bitcoin or for that matter any other digital asset cannot replace fiat currencies. Similar to other breakthroughs like the internet, the initial use case is not indicative of the technology's ultimate potential. A variety of use cases have emerged as DLT and digital assets technologies have matured.

#### Minimize Friction & Promote Competition In Cross-Border Payments

Around 258 million of the world population live outside their country of birth. Global remittances are to the tune of \$600 billion with about \$470 billion out of it flow from developed markets to Emerging markets.<sup>14</sup> Even so, international remittances are costly, full of friction and therefore slow. Data from the World Bank indicate that the average cost of global remittance is about 7%.<sup>15</sup> A lot of this friction is the result of processes followed in cross-border payments, for long a domain of incumbent banks (termed, "Correspondent Banks"). A definition cited by BIS defines "Correspondent banking" as the provision of current or other liability account and related services to other financial institutions (including affiliates), used for the execution of third party payments and trade finance as well as its own cash clearing, liquidity management, short-term borrowing and investment needs in a particular currency".<sup>16</sup>

As the above definition brings out, banks use correspondent relationships, a patch-work of bilateral *accounts-based* spread across the world, to process payments originating from their corporate and retail clients. Although fairly proliferated, the market structure of correspondent banking injects significant friction, delay and costs in processing payments for the respondent banks.<sup>17</sup>

This materially affects small businesses and retail consumers hitherto relying on these banking networks in consequential ways. For instance, empirical research has found

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<sup>14</sup> See How Digital Remittances Can help drive Sustainable Development. available at, <https://www.weforum.org/agenda/2019/04/how-digitalizing-remittances-can-help-families-around-the-world/>

<sup>15</sup> See Paying Across Borders- Can Distributed Ledgers Bring Us Closer Together? available at, <https://blogs.worldbank.org/psd/paying-across-borders-can-distributed-ledgers-bring-us-closer-together>

<sup>16</sup> See Consultative Report: Correspondent Banking p.6, available at <https://www.bis.org/cpmi/publ/d136.pdf> ("Consultative Report")

<sup>17</sup> See Consultative Report footnote 16

that remittances have a significant impact on financial inclusion parameters of the recipient.<sup>18</sup>

Digital assets issued on distributed ledgers that serve the same end-use as the incumbent correspondent banking model can offer a compelling alternative, consistent with KYC and AML/CFT compliance. Illustratively, consider Ripple’s On demand liquidity (ODL) solution that Ripple launched on the busy US-Mexico corridor. Financial Institutions involved saved 40-70% of the foreign exchange costs they would otherwise have incurred in remitting those funds through traditional (read: account-based) pipes. The average end-to-end remittance time was found to be around two minutes.<sup>19</sup>

Global multilateral bodies have recognized the potential digital assets and DLTs have in faster cross-border payments. It is pertinent to point out that the World Bank researchers have cited Ripple’s ODL solution as one of the ways in which cross-border payments innovation can be brought about.<sup>20</sup>

### *Expanding Reach Through Ripple’s On-Demand Liquidity solution*

Ripple aims to maximize the efficiency and reach of cross-border payments. One crucial component of this objective is creating a scalable liquidity solution, supplementing the account-based process with a digital asset – XRP – to enable efficient, scalable reach to low-volume corridors. XRP is a tool that acts as a bridge between fiat currencies, maximizing their liquidity along with banks’ payment reach.

On-Demand Liquidity (ODL) is a Ripple enterprise hosted software solution that enables financial institutions to facilitate faster and less costly cross-border payments by leveraging the digital asset XRP.<sup>21</sup>

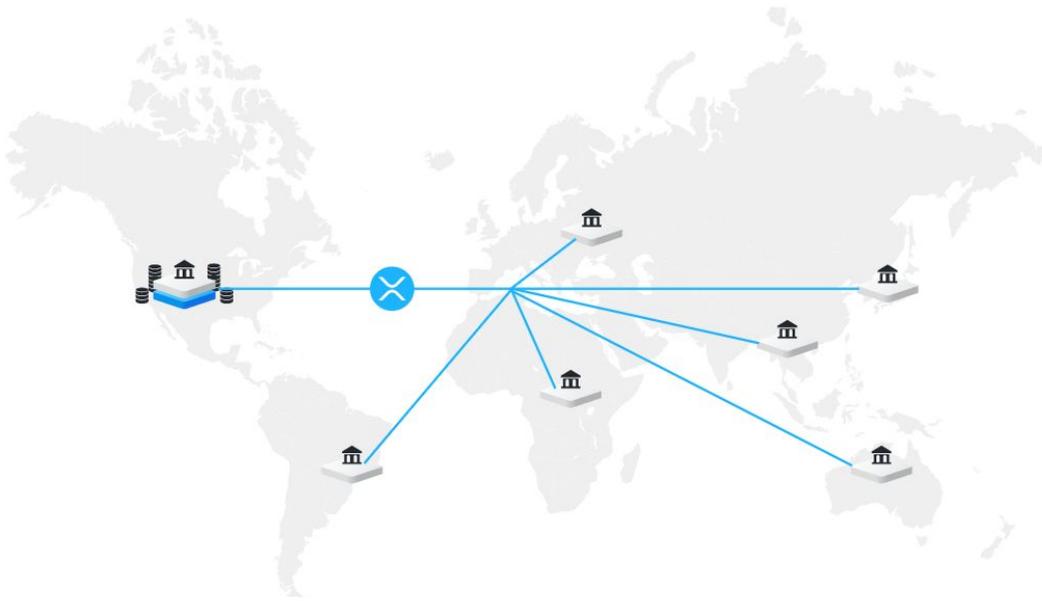
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<sup>18</sup> See generally The Use of Remittances and Financial Inclusion available at, <https://www.gpfi.org/sites/gpfi/files/documents/11-The%20Use%20of%20Remittances%20and%20Financial%20Inclusion.pdf> (p.19)

<sup>19</sup> See footnote 15

<sup>20</sup> See footnote 15

<sup>21</sup> XRP is the digital asset native to the XRP Ledger, an open-source, decentralized ledger that exists independently of Ripple and trades in a robust global market.



ODL solves the aforementioned challenges by leveraging blockchain technology to enable fast payment reach without the need for financial institutions to pre-fund accounts overseas. By utilizing XRP, ODL reduces or eliminates several of the costs and risks associated with the traditional pre-funded model, resulting in lower costs and faster payments for consumers. Additionally, ODL payments are typically completed within two minutes, versus one to three days using traditional technology. The solution is designed to minimize risk exposure and meet financial institutions' expectations for licensed software.

*Why XRP?*

XRP was built for enterprise payments, making its performance metrics of speed, cost and scalability far superior to alternative options. Below is a comparison of XRP characteristics and performance metrics to those of other notable digital assets.<sup>22</sup>

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<sup>22</sup> Comparison performance metrics are as of Q4 2018.  
Sources: <https://ripple.com/xrp/market-performance/>, [Blockchain.info](https://blockchain.info/), [ETHERscan.io](https://etherscan.io/), [bitinfocharts.com](https://bitinfocharts.com/)

	Speed per transaction	Cost per transaction	Scalability transactions per second
● XRP	3.6 secs	\$0.0004	1,500 TPS
● BTC	3,186 secs	\$0.89	32 TPS
● ETH	87 secs	\$0.17	16 TPS
● BCH	3,383 secs	\$0.04	64 TPS
● LTC	918 secs	\$0.13	56 TPS

### *How On-Demand Liquidity Works*

On-Demand Liquidity (ODL) software connects and coordinates the licensed financial institutions in a transaction to enable a cross-border payment. A financial institution will use Ripple software to initiate a payment in its local currency, convert the payment to the destination currency and deliver funds to the beneficiary overseas.

To eliminate pre-funding in the receiving country, ODL leverages the digital asset XRP as a real-time bridge between the sending and receiving currencies. A financial institution uses ODL to convert the local fiat currency into XRP on a digital asset exchange in the sending jurisdiction. The XRP is sent to an approved digital asset exchange in the receiving jurisdiction where it is converted into that jurisdiction's fiat currency. The funds are then credited into the beneficiary's account either at the exchange or over the local payment rail.

*Below is an illustrative flow of funds utilizing On-Demand Liquidity*



The financial institutions contract independently with the digital asset exchanges used to facilitate the transaction and ensure such exchanges meet their particular due diligence requirements.

The FX exposure of the payment – including the exposure to XRP – is approximately 90 seconds, down from 1 to 3 days using traditional technology, but can vary based on the withdrawal processing time of the local exchange. The end-to-end payment process is coordinated by the ODL software and typically takes less than two minutes.

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XRP’s digital nature and ability to be transferred globally in seconds allows it to provide real-time access to the foreign market. This reduces cost and risk in the payment, while expanding real-time reach to new markets.

Ripple only partners with exchanges that have the requisite regulatory clearances from respective regulators and provides ODL services to financial institutions. It is typically treated as a common technology vendor, subject to the financial institutions’ vendor management programs. The financial institutions maintain their relationships with the originators and their existing compliance responsibilities.

Ripple does not hold funds or interface with customers who are sending funds. XRP is used as an FX tool between the financial institutions. Retail payment customers will never own, hold or transact in XRP as part of the On-Demand Liquidity product experience.

India, being one of the biggest “receive market” is the dominant use-case for cross-border payments and remittances, But none of the efficiency enhancing benefits would be available to parties, especially, small businesses and retail account holders

<sup>23</sup> Total payment time can vary depending on the speed of the local payment rail.

without a clear regulatory framework for digital assets.<sup>24</sup> Implementing a regulatory framework for digital assets is therefore an important first step in that direction.

## Micro-Payments

A micro-payment is an e-commerce transaction involving very ultra low value payments in exchange for a service delivered; think, application download, web-based content, or a small sketch. Traditional payment rails have high transaction costs that mean payments below a certain level do not get processed at all. Account-based payment systems incur “deadweight costs” of regulatory compliance and reconciliation of two ledgers and that means they can only operate at a given scale.

In other words, they cannot support micropayments as a use case. As we have already discussed, digital assets that are embedded in distributed ledgers are “bearer” assets that can be used to settle transactions “on-chain”. Since there is no need for reconciliation across two ledgers, the settlement is instantaneous with almost no settlement risk. As a corollary, the cost of transferring value is vanishingly small as to not matter. These structural features mean certain digital assets (like XRP and Bitcoin Cash) support micro-payments. While these payments are very small, this is a non-trivial feature in that entire business offerings can potentially be unbundled and priced in discrete sets.

This can be especially helpful for homepreneurs illustratively; imagine a home-preneur selling chocolates. With micro-payments, they can price each piece of chocolate rather than make them and sell them by grams/kilograms. As a corollary, not only can they economize on the effort incurred in making and packing them, they can also sell their merchandise to newer sets of consumers (for instance, those that want to have their chocolates on-the-go and thus are inclined to buy one or two pieces, but not by grams/kilograms!).

Digital assets-based micropayments can be used for web monetization, creating an efficient and automatic way to compensate content creators, pay for API calls, and support crucial web infrastructure. A micropayments at scale architecture also supports consumer to developer payments in the sense that developers that upload incremental features to digital products/platforms and applications on Google/Apple stores can charge their consumers for these discrete additions.

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<sup>24</sup> See footnote 15 (“Regulatory uncertainty and... confusion about crypto assets and the underlying DLT technology is impeding the development of a framework..”)

## IV. Old Risks In New Avatar:

While a distributed ecosystem and native bearer assets enable DLTs to solve for many traditional finance use-cases involving value transfer more efficiently than hitherto, the pseudonymity in the design of these digital assets brings out risks including such risks as money laundering, terrorist financing and tax evasion, and as such have been a concern to regulatory authorities globally.

However, given the borderless nature of digital assets and distributed ledgers on which they reside, international standard-setting bodies developed early research agendas to study the policy implications of this development. As this section will illustrate, their work over the last half a decade reveals that regulators already have the toolkit to mitigate many of the risks posed by use of digital assets in financial services. On the other hand, the digital asset industry ecosystem also has evolved from pitching itself as a challenger of status-quo to partnering with the incumbent financial services industry and its regulatory agencies. The corollary impact to this changing alignment is that the global financial ecosystem is in a position to leverage the upside and yet mitigate the downside risks posed by digital assets.

From a regulatory standpoint, we can think about the risk vs. mitigant(s) scenario as illustrated in the following grid:

Feature	Risk	Mitigants/Regulatory Toolkit
Digital Assets Facilitate Anonymity / Asset transfers independent from regular banking channels	Money Laundering / Terrorist Financing / capital controls violation	Customer Due Diligence / Reporting / Record-keeping Mandate to digital asset service providers under AML/CFT laws.
Volatility	Capital erosion for inexperienced investors	Entry barriers for investor including accredited investor certification; expansion of digital asset derivative product offerings (futures/options/swaps that playback to spot markets) / Market-makers by digital asset exchanges

Volatility	Financial Stability / Solvency risk	Prudential standards for regulated entities that accept retail deposits; prescribing risk weights/ accounting treatment for digital assets on regulated entity books
Investment asset “use-case”	Market integrity / investor protection	Two-layered licensing, supervision and surveillance; Self-regulation/digital asset exchanges at the base layer and capital market regulator at the upper layer.  Regulations mandating prospectus filings before issues to the public.  Client funds segregation mandates to ensure fraud/ bankruptcy remoteness
Embedded in technology	Operational / cyber security risks	ISO standards certification / Tech audits by counterparties / SRO/ “living wills” mandate to ensure business continuity upon failure.  1:1 reserves/back-stops for assets in wallets (through escrow accounts with regulated entities).

As the grid indicates, digital assets and DLT are just a new wrapper for several risks that Indian and global financial market regulators have known for years through their traditional finance supervision. Indian regulators should therefore consider adapting that toolkit to regulate digital assets and service providers therein rather than excluding them from regulatory perimeter altogether. The following sections will walk the reader

through digital asset taxonomies adopted by regulators globally, and the several regulatory templates for digital assets that have emerged over the past half a decade.

## V. Taxonomy of Digital Assets

The terminology around digital assets is evolving. A casual survey of regulatory usage would reveal that jurisdictions use several expressions ranging from “virtual currency”, “cryptocurrency”, “cryptoassets” to “digital assets” to describe tokens issued on distributed ledger technologies. The “currency” overhang owes its provenance to the fact that the first digital assets like bitcoin were marketed and projected as having a “currency” use-case; a competitor to fiat currencies as it were. That overhang still persists; as we noticed above, RBI continues to use the terms “VC”, “cryptocurrency”, “crypto asset” in a “one-size-fits-all” reference.

In reality, as we discuss below, definitions have evolved and so has taxonomy. As we will also see, global standard-setting bodies and financial regulators have moved to work with the industry (including through regulatory sandbox mechanisms) to ring-fence the risks and capture the advantages digital assets hold. In contrast, India’s approach to digital assets has thus far been exclusionary. Without building nuance in our policy arsenal, India risks failing to leverage them towards achievement of important social objectives like financial inclusion, lowering barriers to commerce and business growth.

### Cross-Country Review of the Taxonomy:

This subsection will try to illustrate through examples, how countries across the world are practically defining and classifying “digital assets”.

#### Singapore:

Digital payments tokens are regulated by the Monetary Authority of Singapore (MAS) under the Payments Services Act.<sup>25</sup> A review of the applicable laws and the MAS commentary suggests that Singapore has adopted the following token taxonomy:

- *Digital payment token*: any representation of value that is expressed as its own unit of account, and is accepted as a means of exchange between sections of the public.
- *Security token*: Any token that the MAS determines to have characteristics of a “capital market product”<sup>26</sup> is regulated as security.

<sup>25</sup> See <https://sso.agc.gov.sg/Acts-Supp/2-2019/Published/20190220?DocDate=20190220> (for the bare text).

<sup>26</sup> As that expression is defined in the Securities and Futures Act, it is defined as “superset” of the word security. See The Virtual Currency Regulation Review-2 available at, <https://thelawreviews.co.uk/edition/the-virtual-currency-regulation-review-edition-2/1197599/singapore> (digital

## United Arab Emirates (UAE) - Abu Dhabi Global Markets (ADGM)

ADGM is a “financial free market zone” in Abu Dhabi, within the UAE. ADGM guidance appears to reveal that it uses “digital assets” as the umbrella expression and then carves out the subsets under it. Digital assets are further divided into 4 types:

- *Digital securities*: Digital tokens with characteristics of a “security” under the applicable law. (These are equivalent of “security tokens”)
- *Crypto asset*: A tradeable digital representation of value that can be and functions as medium of exchange or unit of account or a store for value, but does not have legal tender status in any jurisdiction.<sup>27</sup>
- *Utility tokens*: The third, residual type of digital asset is the utility token. These tokens can be redeemed for access to a specific product or a service, usually provided on a DLT. These tokens are outside the remit of securities laws, being deemed to be commodities, in terms of their legal character.
- *Fiat token*: Digital tokens that are fully (1:1) backed by fiat currency are referred to as fiat token.

## United Kingdom

The United Kingdom (UK) constituted a “Crypto Asset Task Force” (CATF) in March 2018 to lay out the UK’s policy and regulatory approach to crypto assets and distributed ledger technology in financial services. Following the publication of the CATF Report, the Financial Conduct Authority (FCA) came up with its own consultation document on the interaction of the types of crypto assets identified with the FCA’s regulatory perimeter. The FCA Consultation reveals the FCA as having accepted the following token taxonomy:

- *Exchange tokens*: The FCA defines these as the type of crypto assets that are usually decentralized and primarily used as a means of exchange. These tokens confer limited or no rights on the token holder and there is no issuer to enforce these rights against.<sup>28</sup>
- *Utility Tokens*: The FCA defines utility tokens as tokens that give users access to current or future products or services that are not rights under “specified investments”, and are also not e-money tokens.

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assets that create ownership or security interest over assets or property of the issuer, or those that evidence debt owed by the issuer may be determined to be a capital market product).

<sup>27</sup> See ADGM Guidance Regulation of Crypto Asset Activities available here, [https://en.adgm.thomsonreuters.com/sites/default/files/net\\_file\\_store/Guidance\\_Regulation\\_of\\_Crypto\\_Asset\\_Activities\\_in\\_ADGM\\_Explanatory\\_Draft\\_140519.pdf](https://en.adgm.thomsonreuters.com/sites/default/files/net_file_store/Guidance_Regulation_of_Crypto_Asset_Activities_in_ADGM_Explanatory_Draft_140519.pdf) for detailed definition.

<sup>28</sup> See the discussion on “exchange token” available at <https://www.fca.org.uk/publication/policy/ps19-22.pdf>

- *Security tokens*: The FCA defines these tokens as giving the user (holder) rights akin to “specified investments”. These tokens are regulated as “securities” under securities law.
- *E-money tokens*: e-money tokens are tokens that fall within the ambit of electronic money as defined in the Electronic Money Regulations. Electronic money is defined as:
  - Electronically stored monetary value that represents a claim on the issuer
  - Issued on receipt of funds for the purpose of making payment transactions
  - Accepted by a person other than the issuer

The FCA has further noted that *Utility Tokens* and *Exchange Tokens* fall outside their regulatory perimeter and are hence categorized as *Unregulated Tokens*.<sup>29</sup>

## Japan

Japan introduced changes to the applicable laws<sup>30</sup> that entered into force in May, 2020. We see the following token taxonomy in Japan.

- *Crypto assets*: defined as a means of payment for purchase of goods, lease of goods or as consideration for services rendered, electronically recorded and not denominated in fiat currency. (Japanese law defines crypto assets exclusive of Electronically recorded transferable rights, defined below).
- *Electronically recorded transferable rights (ERTR)*: Digital assets that are issued with the expectation of profits in the form of dividends. This is the Japanese law equivalent of a security token, as they are called elsewhere.<sup>31</sup>
- *Utility tokens*: Digital assets that are used solely to access an online platform or as a means of payment for goods and services on the platforms.<sup>32</sup>

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<sup>29</sup> See Guidance on CryptoAssets available at <https://www.fca.org.uk/publication/policy/ps19-22.pdf> (p. 14)

<sup>30</sup> The Payment Services Act, and the Financial Instruments & Exchange Act. See Section VI for a detailed analysis of the regulatory framework in Japan.

<sup>31</sup> See Anderson, Mori and Tomotsune, Financial Services & Transaction Group Newsletter available at, [https://www.amt-law.com/asset/pdf/bulletins2\\_pdf/190523.pdf](https://www.amt-law.com/asset/pdf/bulletins2_pdf/190523.pdf) (p.4)

<sup>32</sup> See footnote 31 at p. 10 (discussing utility tokens).

## VI. Benchmarking Regulatory Templates for Digital Assets

We surveyed the regulatory frameworks applied in ADGM, Japan, Singapore, United Kingdom and South Africa to establish benchmarks for India. The choice of these jurisdictions was influenced by the fact that the comparators either have developed digital asset regulation regimes or are (as is the case with South Africa), proposing one. As such, India can draw eclectically from their respective approach.

### Abu Dhabi Global Markets (ADGM)

ADGM's created a separate framework for regulating digital assets (referred to as, "crypto assets" in the ADGM terminology) *the Spot Crypto Asset Framework* and a distinct license for operating a crypto asset business ("**OCAB**") within that framework.

The motivation driving creation of Spot Crypto Asset Framework is the recognition that digital assets businesses present risks beyond their opacity (like money laundering and terrorist financing), and encompass risks flowing from technology governance, consumer protection, disclosure/transparency, safe custody and market integrity.

ADGM regulates market intermediaries (crypto asset service providers) under the OCAB framework and requires them to be licensed under the appropriate law. Accordingly, operating a crypto asset exchange or custodian business, dealing in crypto assets and managing crypto assets belonging to other persons, among other activities, require an OCAB license.<sup>33</sup>

At the same time, a codified specialized regime for digital assets allows it to exempt certain activities from the ambit of the OCAB license upfront. Accordingly, any technology service providers not involving provision of financial services are exempted from the OCAB license. Illustratively, development, distribution or use of software necessary for "mining" digital assets is exempted from the licensing perimeter. This clear exemption from regulatory remit is an incentive for innovation around the technology layer the digital assets business relies on. At the same time, mere transmission of crypto assets and certain de minimis lines of business, like loyalty schemes denominated in crypto assets are exempted from the licensing requirements. All OCAB holders are subject to AML/CFT reporting and record-keeping mandates.

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<sup>33</sup> See ADGM Guidance Regulation of Crypto Asset Activities available here, [https://en.adgm.thomsonreuters.com/sites/default/files/net\\_file\\_store/Guidance\\_Regulation\\_of\\_Crypto\\_Asset\\_Activities\\_in\\_ADGM\\_Explanatory\\_Draft\\_140519.pdf](https://en.adgm.thomsonreuters.com/sites/default/files/net_file_store/Guidance_Regulation_of_Crypto_Asset_Activities_in_ADGM_Explanatory_Draft_140519.pdf) (p.9).

## Japan<sup>34</sup>

Japan introduced a digital assets regulation framework starting 2017, and amended it as recently as May 2020. The Payments Services Act (PSA) in Japan regulates “virtual currency exchange services” and requires businesses offering virtual currency exchange services to register with the Financial Services Agency in Japan. The FSA determines granting registration to the applicant broadly based on its assessment of the applicant’s ability to operate a virtual currency exchange service “properly and with certainty” and to comply with the PSA.

In addition, these service providers must also comply with certain “going concern” rules. Saliently, segregation of own funds from client funds (to preserve bankruptcy remoteness), risk-mitigation of client funds retained in hot wallets (through back-up in an off-line wallet), and reporting, record-keeping and KYC mandates under the AML/CFT regulations.

The latest amendments to the PSA expand the remit of regulation to other digital asset service providers, like custodian wallets. These entities were not previously regulated but are subject to PSA, effective May 1, 2020. Further, the Japanese securities law<sup>35</sup> was amended effective May 1 to bring “delivery-based crypto asset derivative businesses” within its remit.

The Japanese regulatory framework discussed above is complemented by the “Japanese Virtual Currency Exchange Association” and the “Japanese STO Association” self-regulatory organizations (SRO) of Crypto asset exchange service providers and brokerages, respectively. Consistent with the generally prevalent role of SROs in traditional finance, these organizations act as liaison between the regulators and the industry; they generally telegraf the regulator’s expectations about industry regulation through adoption of best practices to pre-empt regulation altogether.

## Singapore

Singapore enacted the Payment Services Act that entered into force in January 2020. The Payments Services Act is a comprehensive law covering services along the payments value-chain. As we discussed in Section V, it encompassed digital payment tokens (DPT) within its remit.

The law adopts a risk-based approach and aims to regulate consistent with the risks posed by a given financial service activity. Consistent with that core principle, the policy of the law is to subject all DPT service providers to AML/CFT regulation.

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<sup>34</sup> We relied on translation and commentary by Morrison & Foerster on the reforms in Japanese laws for the purposes of this subsection available here, [https://www.mofo.com/resources/insights/200423-japanese-cryptocurrency-update.html#\\_ftnref45](https://www.mofo.com/resources/insights/200423-japanese-cryptocurrency-update.html#_ftnref45)

<sup>35</sup> The Financial Instrument & Exchange Act available at, <https://www.fsa.go.jp/common/law/fie01.pdf> (english translation).

Accordingly, it mandates these intermediaries to identify and verify their customers, keep records and report suspicious transactions to the appropriate authority under the Act. Furthermore, according to the FAQs released by MAS, it intends to require any digital payment token service provider that facilitates their transfer, or offers custodial wallet services to apply AML/CFT measures to mitigate the risks posed by these services.

In 2017, MAS released guidance that said, if the digital tokens classified as “capital markets product” within the meaning of Securities & Futures Act (SFA), MAS would regulate the offer or issue of such digital tokens. The expression, “capital markets product” is a super-set of “securities” under the SFA. In other words, MAS would treat such digital assets as securities. The corollary to being determined as such is that dealing in these digital tokens would be subject to licensing requirements under SFA and other mandates like prospectus registration before issue of these tokens to the general public.<sup>36</sup>

## United Kingdom

Following the report of the Crypto Asset Taskforce, the FCA put out a guidance establishing its own perimeter respecting regulation of digital assets.<sup>37</sup>

As we discussed in Section V above, the UK classifies digital assets between 4 classes, exchange token, utility token and security token and e-money token. The FCA has determined that exchange tokens and utility tokens are presently outside its regulatory perimeter. As a corollary, the FCA guidance further states that digital asset service providers like exchanges that deal in digital assets or offer exchange services with fiat currency or other digital assets, are outside the regulatory perimeter.

However, exchanges will be subject to reporting obligations under the AML/CFT laws. Likewise, certain other digital asset service providers<sup>38</sup> will also be subject to reporting requirements under the AML/CFT laws. This is pursuant to the 5th Anti Money Laundering directive of the EU that is transposed into UK law effective January 2020.

On the other hand, security tokens that have the features akin to “specified investments” are deemed to be securities and are regulated at parity with traditional financial securities like stock, bonds and pooled market instruments (units in a collective investment scheme) Likewise, any advisory services offered in connection with security tokens, or in connection with instruments who derive their value from underlying utility/exchange tokens are also subject to license and regulation.

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<sup>36</sup> See The Virtual Currency Regulation Review- Edition 2, Singapore available here,

<https://thelawreviews.co.uk/edition/the-virtual-currency-regulation-review-edition-2/1197599/singapore>

<sup>37</sup> See Guidance on Crypto Assets available at, <https://www.fca.org.uk/publication/policy/ps19-22.pdf> (“Guidance”)

<sup>38</sup> Activities subject to AML/CFT regulation include, Peer to Peer “Crypto” Exchanges, “Crypto Asset” ATMs, transferring of crypto assets on behalf of another, among others. See “Guidance” footnote 37 at p. 36

Finally, the FCA’s “Innovate” office offers guidance to businesses, if they are unclear as to whether the digital asset they seek to issue, or whether the service they seek to offer in connection with digital assets, falls within or without the regulatory perimeter. Given the flux and the pace of innovation in the digital assets business, the “Innovate” office is a replicable model.

## **South Africa**

The InterGovernmental Fintech Working Group (IFWG) consisting of financial and adjacent regulators released a position paper on regulating “crypto assets” recently. Saliently consistent with the trend of regulatory action, the IFWG has recommended classifying digital assets along the lines of, digital assets/currency, security tokens, asset backed tokens and utility tokens.

They recommended that security tokens would be subject to the local securities laws in line with the fact that they have attributes and payoffs similar to securities known to traditional markets. Finally, mirroring the global trend further, the IFWG has recommended that Crypto Asset Service Providers (exchanges and custody service providers) be made subject to the local AML/CFT law.<sup>39</sup>

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<sup>39</sup> The Financial Intelligence Center Act, 2001 available at, [https://www.fic.gov.za/Documents/FIC%20Act%20with%202017%20amendments%20\(1\)%20\(1\).pdf](https://www.fic.gov.za/Documents/FIC%20Act%20with%202017%20amendments%20(1)%20(1).pdf)

## VII. Setting the Agenda: What Should India's Digital Asset Regulatory Framework Look Like

As section IV demonstrates, smart regulation that unlocks value from financial innovation managing the attendant risks is possible. With that in mind, we propose the following five recommendations for developing the digital asset ecosystem in India, over the short term, medium term and long haul, respectively.

1. Creating a “digital assets taxonomy” modelled on the global template distilled in Section V
2. Clarify the legal character of each type of digital asset
3. Enacting a separate legal framework governing digital assets and digital asset service providers in GIFT City
4. Modifying the extant regulatory sandbox framework enacted by the RBI that excludes digital assets
5. Creating an enabling legal framework governing digital assets/service providers by amending/enacting certain financial sector laws

### **Recommendation #1: Adopt Digital taxonomy Model: Adopt the following digital assets taxonomy model**

1. *Payments/Exchange token*: to describe non-fiat native digital assets that are used as means of exchange and have no rights that may be enforced against any issuer.
2. *Utility tokens*: to describe those digital assets that create access rights for availing service/a network usually offered through a DLT platform
3. *Security tokens*: to describe tokens that create rights mirroring those associated with (traditional) securities like stock (shares), bonds, collective investment schemes.

### **Recommendation #2: Clarify the legal character of digital assets as Commodities (except, security tokens). Regulate security tokens as “securities”**

In the IAMA case, the Supreme Court interpreted that RBI had jurisdiction over “virtual currencies” because they satisfied some, though not all, attributes of “currency”. On the other hand, RBI itself has stated several times that “virtual currencies” are not “currency” as defined under law. Digital assets thus lack a coherent legal attribution within Indian law.

We ask that policymakers clear this uncertainty in the proposed legal framework by clearly characterizing digital assets other than security tokens, as commodities. This is consistent with global precedent in this regard, notably ADGM<sup>40</sup> and the UK.<sup>41</sup> Security tokens should be clarified to be regulated at par with securities, consistent with global practice.<sup>42</sup>

### **Recommendation #3: GIFT City Legal Framework for Digital Assets**

Enact a facilitative legal framework for digital asset service provider ecosystem at the Gujarat International Finance Tec-City (GIFT).

GIFT City hosts the first International Financial Services Center (IFSC) in India. IFSCs are financial services enclaves established under the Special Economic Zones Act, 2005. IFSCs are envisaged as jurisdictions that provide financial services to non-residents and residents to the extent permitted by law, in any currency except the Indian Rupee. Financial services within IFSCs are regulated by a plenary unified regulator (Authority) established under the International Financial Services Centres Authority Act, 2019. GIFT has a special status in that the Authority has jurisdiction over defined financial activities in the territory covered by GIFT. This is similar to ADGM where the Financial Sector Regulatory Authority has jurisdiction.

Broadly put, IFSCs are established with the motivation of attracting international financial services' consumers transacting in non-local currencies and offering them a seamless regulatory context so they can utilize the service providers operating out of the IFSCs. As will be evident, the global IFSC market is competitive and governments that have set up these enclaves have kept the applicable legal frameworks up-to-date and flexible for facilitating financial innovation.

Aside from making GIFT a more attractive proposition for global clientele that can leverage digital assets to conduct cross-border business more efficiently, the legal framework, when operational, can also enable the domestic regulators, a natural sandbox like set-up to observe the benefits and risks that digital assets bring to financial services and adopt it at a broader scale domestically down the road. The unified regulatory powers of the Authority would also help govern the multifarious aspects of digital assets under a single umbrella.

### **Recommendation #4: Modification of RBI Regulatory Sandbox (RS) Negative List**

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<sup>40</sup> See p.24 above.

<sup>41</sup> See AA v. Persons Unknown [2020]4 WLR 35

<sup>42</sup> As that expression is defined in 2 (h) of the Securities Contract Regulation Act. For global practice, see Singapore and Japan above, in Section V.

Modify clause 6.3 of the extant RS framework to remove “cryptocurrency”, and “crypto asset services” from the negative list and offer service providers using this new technology, an opportunity to test the value proposition in Indian context.

RBI notified an “Enabling Framework for Regulatory Sandbox” in August 2019<sup>43</sup> Consistent with global regulatory motivations and practice around sandboxes, the RBI framework is purposed towards fostering responsible innovation in financial services, promoting efficiency and bringing benefits to consumers.

The regulatory sandbox (RS) is a formal regulatory program for market participants to test new products, services and business models with consumers in a live environment and subject to oversight. However, as the RS program presently stands, innovation in connection with digital assets and digital assets services is in the indicative excluded list notified by the RBI.<sup>44</sup> The effect is that market participants cannot test products, services and business models that use native digital assets. Pertinently, the foreclosure of each of these activities impacts every use-case implicating them including services like cross-border payments where utilizing them has been shown to be more efficient. We recognize that technological prowess offered by the digital assets ecosystem is not without attendant risks. However, we point out that as the RS framework (definitionally) contemplates ex ante risk mitigants for participating consumers and experiments take place under regulatory guidance, including these services in the positive list will enable parties/regulators to explore the upside and mitigate the attendant down-side risks. While we recognize each jurisdiction has the power to decide the remit of its sandbox, it is pertinent to point out that the “Crypto Asset Regulatory Working Group of South Africa”, a country part of the BRICS group along with India, has adopted a similar approach.<sup>45</sup>

### **Recommendation #5: Enact a Legal Framework for Digital Assets in India**

Enact a facilitative legal framework for digital assets in India based on

- (i) the following Core Principles and
- (ii) amendment of specific Indian financial services laws

Core Principles:

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<sup>43</sup> See Enabling Framework for Regulatory Sandbox available at, <https://www.rbi.org.in/Scripts/PublicationReportDetails.aspx?UrlPage=&ID=938>

<sup>44</sup> Regulation 6.3 (“crypto currency, crypto asset services and Initial Coin Offerings” all form part of the excluded set of activities).

<sup>45</sup> See the Crypto Inter-Regulatory Working Group Position Paper available at, [http://www.treasury.gov.za/comm\\_media/press/2020/20200414%20IFWG%20Position%20Paper%20on%20Crypto%20Assets.pdf](http://www.treasury.gov.za/comm_media/press/2020/20200414%20IFWG%20Position%20Paper%20on%20Crypto%20Assets.pdf) (Recommendation 21).

1. *Technology-agnostic*: The law should not explicitly or otherwise prefer/nudge users towards any particular technology. In context, it means that financial services embedding DLT/digital assets in their solution should not be treated inferior to financial services embedding legacy architectures in the name of regulatory parity.<sup>46</sup>
2. *Principles-based regulation*: Prescriptive regulation of digital assets ecosystem risks obsolescence because technology underlying the use-cases is in a state of flux and innovation. Principles-based regulation guides actors about regulatory goals, leaving the process for the parties to figure out.
3. *Risk-adjusted/proportionate*: The legal framework should be adjusted for the potential harms that could arise from the digital asset service concerned and targeted to mitigate that risk. A good template here is the way Singapore (MAS) has regulated DPT service providers; noting the risk of money laundering through exchanges dealing in DPTs, MAS has mandated reporting and record-keeping for these intermediaries under the Payment Services Act.

Policymakers may consider amending the following laws to include digital assets in the legal structure

- **Prevention of Money-Laundering Act, 2002**

Notify digital asset exchanges and digital asset custody service providers as “Reporting Entities” under the PMLA.

The very features of digital assets that offer significant potential in solving for friction in movement of assets across borders, makes them a potential vehicle for money laundering and terrorist financing. Digital assets offer privacy to the user, are bearer assets that reside natively on the DLT they are issued on and thus offer instantaneous settlement transferring value near-real time. Privacy and native digital existence that enables these digital assets seamless cross-border movement make them attractive “vectors” to launder money. Global standard-setting bodies including FATF therefore have recommended that digital asset service providers be regulated under national AML/CFT laws for records retention, reporting and KYC (while on-boarding clients) objectives.<sup>47</sup>

Digital asset exchange service providers would act as the first layer of protection by requiring users looking to deal in digital assets or exchange their fiat currency with a given digital asset traded on the exchange. This is also consistent with the benchmark legal frameworks we covered in the previous

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<sup>46</sup> See the recommendations regarding the RBI Regulatory Sandbox for a “live” example of exclusion.

<sup>47</sup> Recommendation 15 of the FATF Guidance, available at <https://cfatf-gafic.org/index.php/documents/fatf-40r/381-fatf-recommendation-15-new-technologies>

section that subjected both digital asset exchange service providers and digital asset custody service providers to AML/CFT compliance.

- **Securities & Exchange Board of India (SEBI) Act, 1992**

Amend Sections 11 and 12 of the SEBI Act to empower SEBI to regulate digital asset exchanges through a “digital asset exchange service provider license”.

Introduce related changes in the several sub-clauses of Clause (2) of Section 11 to empower SEBI to regulate other digital asset service providers including dealers, advisers, investment managers offering services in connection with investment in digital assets or derivative products with digital assets as underlying.

One of the biggest “use-case” of digital assets is as an investment asset. Digital asset exchanges that offer avenues to buy, sell and exchange digital assets have emerged to supply that demand. As investors trade on these digital asset exchanges in the same manner as they trade on traditional securities exchanges, they face similar market externalities that we witness on traditional secondary markets.

To mitigate these market failures, digital asset exchange service providers should be licensed and regulated by SEBI. SEBI is a good fit for regulating digital asset exchanges for several reasons:

- a. Institutional know-how in regulating and supervision of traditional securities exchanges/securities market intermediaries for close to two decades. Digital asset exchanges operate similarly and offer similar products to traditional exchanges and bring together overlaying service providers of the same type.
- b. As a corollary of the above, the harms that investors face in dealing on digital asset exchanges are the same. (Illustratively, fraud, pump and dump schemes, collective investment schemes offering digital asset derivatives that present fiduciary violation risks; market conduct rules, in other words).

Existing securities exchanges may be exempted from a “de novo” licensing process but should be required to seek authorization for introducing a digital for trading on its platform, as it would be a new product line.

- **Payments & Settlements Systems Act, 2007 (PSSA)**

Exempt DLT-based payments systems from the ambit of the PSSA.

The PSSA empowers the RBI to authorize and regulate payments systems in India. The Act contemplates a systems provider<sup>48</sup> to operate it, reflecting the fact that it is intended to regulate traditional financial payments infrastructures that relied on one central counterparty; in this case, the “system operator”. The Act requires any person seeking to operate a payment system to get authorization from RBI.<sup>49</sup>

The above provision reinforces the view that PSSA was intended to regulate a payment system operated by a trusted central counterparty. It appears unsuitable therefore to be a licensing and regulatory framework for payments effected using digital assets and DLTs (where by definition, there is no central counterparty).

There is a risk that DLT systems used to process payments would be characterized as “payments systems” under PSSA and deemed to be illegal or be subject to regulation, Retro-fitting PSSA meant for traditional financial architectures, to emerging technologies (that operate without any central counterparty) would inject the very inefficiencies in payment flow, these technologies are meant to solve for.

- **Foreign Exchange Management Act, 1999 (FEMA)**

Digital assets are not “currency” within FEMA. They may however be termed, “goods” under FEMA and its progeny regulation according to one view.<sup>50</sup> If this is correct, transfer of digital assets by an Indian resident to a foreign recipient would count as export and the seller would be required to receive the monies through normal banking channels.<sup>51</sup> Such characterization will inhibit adoption of digital assets classified as payment/exchange tokens as a means of payment/exchange for purchase of goods and services/other digital assets .

In so far as the drawal of foreign exchange to purchase digital assets abroad is concerned, now that the circular of April 2018 has been declared by the Supreme Court to be violative of Article 19, it may be legal for Indian residents to use the funds from their bank account to purchase digital assets abroad. That would depend upon the willingness/comfort of an Indian bank to facilitate the purchase of digital assets (given the uncertainty around whether this is recognized “end-use” and in any case, the RBI may still notify a more moderately worded and targeted circular to foreclose such end-use of funds altogether).

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<sup>48</sup> Section 2 (1) (q)

<sup>49</sup> Section 4 (1)

<sup>50</sup> See <https://thelawreviews.co.uk/edition/the-virtual-currency-regulation-review-edition-2/1197586/india>

<sup>51</sup> See footnote 50

We therefore ask that FEMA be amended to recognize use of exchange/payment tokens for purchase of goods and services abroad, and any other cross-border movement of digital assets (with due reporting to authorized dealer banks) upto a defined limit. Likewise, we also ask that FEMA be amended to recognize purchase of digital assets as legitimate end-use against transfer of funds from an Indian bank up and clarify that neither would be in violation of FEMA subject to prescribed compliances.<sup>52</sup>

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<sup>52</sup> Without being exhaustive, these compliances may include mandates about purchase of digital assets being on recognized digital asset exchanges or FATF-compliant jurisdictions. A regulator may also notify a “permissible” list of digital assets that may be eligible to be purchased.

## VIII. Conclusion

Digital assets have come a long way since the pseudonymous person(s) Satoshi Nakamoto published the white paper on Bitcoin.<sup>53</sup> Their initial use-case and the “pitch” has evolved from alternative currency seeking to disrupt the incumbent monetary stack, into an emerging sub-set of financial services market. Many of these digital assets serve the investment use-case; others may be even more consequential as they facilitate other finserv use-cases like payments. As with any asset class, digital assets offer benefits to the financial architecture caveated with downside risks. However, global regulators and standard-setting bodies have now studied digital assets for more than half a decade and adapted their traditional toolkit to regulate the negatives.

While India’s policy ecosystem has not been lock-step with other jurisdictions, the recent Supreme Court judgement offers India’s policymakers the opportunity to design a facilitative legal framework for digital assets premised on technological-neutrality and risk-based approach. As we have argued, policy options like foreclosing banking system access to digital assets service providers, or other forms of outright (direct) prohibition of businesses dealing with digital assets will have the effect of pushing this ecosystem outside the regulatory perimeter, and perversely, further reduce the visibility regulatory authorities have on transactions in digital assets. Such a “shadow crypto economy” is a far greater source of risks to financial stability and law and order of a country.

The other side of the coin is to have extensive consultations with stakeholders in the digital assets ecosystem and the wider public before taking any policy action touching upon digital assets in India. There is a wealth of precedent available in India’s financial and technological policy that may be followed here; in the past, both the Data Privacy Bill, the Indian Bankruptcy Code have had the benefit of public consultations, as does the Telecom Regulatory Authority of India regulation of net neutrality. We urge India’s policymakers to initiate a similar process of public consultations in connection with any proposed policy action touching upon digital assets ecosystem in India.

To summarize, the regulatory goal should be to harness the upside and mitigate the downside risks, through moderate regulation. This white paper offers them a blueprint for achieving that goal. We trust it serves as a catalyst for building rigorous discourse and meaningful reform of policy concerning the digital assets ecosystem in India.

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<sup>53</sup> See Bitcoin: A Peer to Peer Electronic Cash System available at, <https://bitcoin.org/bitcoin.pdf>