



**VIRTUL  
DIGITAL  
ASSETS**

**Sector in Focus:**

**Web3 - Virtual digital assets**

# Virtual Digital Assets (VDAs)

## Virtual Digital Assets in a nutshell

- VDAs or crypto-assets are digital money secured by cryptography and based on a network distributed across many computers. They are designed to be used over the internet without any central authority. Therefore, they are uninsured and hard to convert into a form of tangible currency (like the Rupee or US Dollars).
- Popular VDAs around the globe include Bitcoin (BTC), Ethereum (ETH), Tether (USDT), USD Coin, BNB (issued by Binance), etc.

## Blockchain – Tech. Backbone

- VDAs are largely **built on Blockchain Technology**, which is a set of connected blocks stored as an online ledger. Each block contains a set of transactions that have been independently verified by each member of the wide network.
- Their architecture helps in maintaining a **secure and decentralized record of transactions**, guaranteeing the fidelity and security of a record of data, and generating trust without the need for a trusted third party.

## Reasons for Growing Popularity

- Eliminate the need for traditional intermediaries such as banks when funds are transferred between two entities, reducing time and transaction fee.
- The possibility of devaluation of currency, which banks carry out during economic crises, does not exist in the VDA ecosystem.
- The “money” cannot be confiscated or accounts frozen in the VDA ecosystem, as is possible in the traditional banking set up.

## Emerging Challenges

- Many countries view VDAs as a medium to fund illegal activities such as terrorism, drugs, money laundering, etc. Countries with no regulations in place prefer to prohibit their usage and place bans on transactions.
- VDAs are still not regulated in India and the legal framework around them are still in the development phase. Government recently imposed a 30 percent tax on income from Virtual Digital Assets (VDAs) indicating acceptance, however a formal policy intervention is needed to accept VDA as a medium of exchange in the country.
- Cross Border transactions or interoperability across payment systems is a major concern for countries issuing their own Central Bank Digital Currencies (CBDCs).

## Top VDAs in Numbers

*Closing rate on 23-Nov-22			Prev. 8 Months comparison	
Ticker	Name	Price*	Change	% Change
ETHUSD	Ethereum (USD)	1163.88	-2136.7	-64.74%
BTCUSD	Bitcoin (USD)	16496.69	-29274.07	-63.96%

Overall trend of VDAs has been on a declining slope, influenced by the impact of inflation, end of pandemic-era effect, volatility among risk assets, war in Ukraine and recently FTX, a leading VDA exchange filing for bankruptcy. These factors make VDAs volatile and risky assets, making them vulnerable to price changes.



# The new oil – Ethereum?

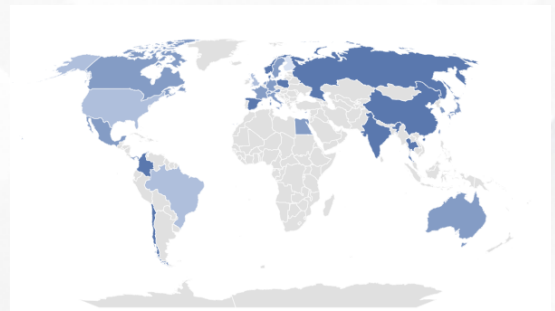
## What is the “Merge”?

- The birth of **‘Ethereum 2.0’**, following the ‘Merge’ is a very significant development in the VDA ecosystem. The Merge is an upgrade to the Ethereum blockchain, which powers innovations in the VDA ecosystem. The Ethereum Merge has shifted the Ethereum security mechanism from energy intensive **proof-of-work (PoW) to proof-of-stake (PoS)**, which in turn has majorly impacted the VDA economies of the blockchain and has several implications for the VDA market.
- Major advantages of the Merge include reduction of the energy-intensive proof-of-work system which will **cut carbon footprint by an estimated 99.95%**, with the implementation of the proof-of-stake mechanism. Further, the validation time for a block is lesser, with lower fees. This system is much more secured as no hacker can have more than 50% of digital asset on the network.

## Satiable Blockchain for FINTECH

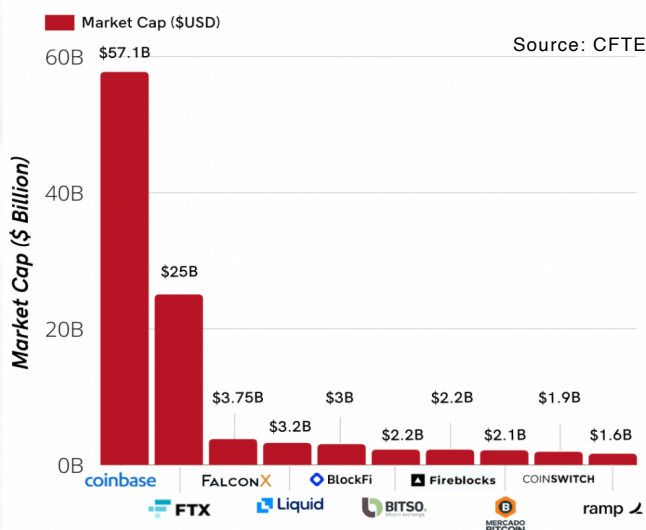
- There are several blockchain development frameworks and development platforms that can be shortlisted for their core benefits.
- **Corda Blockchain Framework** is privacy-focused permissioned blockchain, widely adopted by the financial services community, with database capabilities and a unique consensus mechanism.
- It is a permissioned and private blockchain, supporting interoperability. If any external participants are required to provide view/verify access, it can be expanded to hybrid cloud.

### GLOBAL LANDSCAPE OF CORDA



79 FINTECH Implementations  
(2015-2019)

### Largest Cryptocurrency Fintech Unicorns



- The fintech blockchain market is expected to touch a valuation of \$36 Bn by the end of 2028. DeFi or Decentralized Finance is an interesting emerging blockchain-based technology which reduces control of banks on financial services, opening avenues for digital ledgers to send, store and manage money. DeFi companies leveraging blockchain elements have the potential to open alternatives to everyday financial elements thus making middlemen redundant.
- Blockchain has the potential to enable the smartphone equipped population without bank accounts to be able to access microcredit using VDA.

- Blockchain introduces transparency in transactions, safe and secure dealings with tamper-proofing against manipulations, maintains data privacy across different layers of business networks, supports programmability to create tamper-proof smart-contracts thereby boosting efficiency and trust.

# Global and Local Trends

## Global Trends

- The global VDA exchange market was valued at **USD 30.18 Bn in 2021** and is expected to grow at a **CAGR of 27.8%** from 2022 to 2030.
- Recently, VDAs are **trading volatile**, tracking feeble global equities after major economies like the US and Europe sparked recession fears.
- With El Salvador and Central African Republic adopting VDA, a systemic shift towards greater adoption is underway.
- Decentralized Finance (DeFi) with smart contracts and Non-Fungible Tokens (NFTs) also hold immense potential.

## Trends in India

- India's new tax rules mandate exchanges to levy a **1% TDS on VDA transactions**, thereby reducing their net gains to avoid slippage.
- Of late, India's conservative position on VDA currency has been vindicated by the negative experiences of various VDA funds, with the latest being Singapore's Three Arrows VDA fund.
- With the latest crash in VDA assets, India's prediction was lauded by many experts saving significant investors from economic ruin. Contextually, VDA value has tumbled nearly 60% so far in 2022.

## Latest Developments in India

- In the Union Budget 2022-23, the government introduced a **30% tax on income from the transfer of virtual digital assets**. The government also added that gifts in virtual digital assets (VDAs) would be taxed on the recipient side. To track the transactions, the minister proposed to levy a **1% TDS** on payment made in relation to transfer of virtual digital assets above a monetary threshold. This tax comes from similar taxes levied on income from lottery, puzzles, game shows, etc.
- On 7<sup>th</sup> Oct. 2022, an announcement was made by the **RBI**, India's central bank on launching a **Digital Rupee** or Central Bank Digital Currency (CBDC) as a vision towards having its own digital version of currency. This digital Rupee is expected to attract the full faith and interest of investors, as the central bank will act as a guarantor and regulate it like regular currency coins and notes. The move has attracted mixed reactions from the VDA platforms in India, a few expecting growth by higher signups and transactions on digital assets, a move in the direction of government's acceptance of digital assets whereas a few highlighted their concerns over high direct tax on transactions and income and no central policy in place, which makes the sector ambiguous, and users shift to global trading platforms for transactions.
- With the rise in VDA trading in the country, India's focus on **implementing green blockchain** has become the need of the hour as the country is already stressed with frequent power cuts in non-urban areas and high dependence on fossil fuels for power generation. VDA mining should be greener to reduce the electricity consumption in mining VDAs and move towards the use of more energy efficient "proof-of-stake" mechanism consuming 99.9 percent less energy leaving a positive impact on India's carbon footprint.



## The FTX Collapse

- The recent drop in VDAs is due to **panic selloff** in the native token of the VDA exchange FTX. FTX is a Bahamas-based VDA exchange founded in 2019 by **Sam Bankman-Fried** having its own VDA token called FTT. The problem started on 2nd November 2022, when a report by CoinDesk, a platform covering developments in the VDA space, published an analysis on FTX's balance sheet throwing light on malpractices in FTX where its founder had been channeling FTX's customers' funds to Alameda Research to take on more debt and raise more funds. It was also found that the exchange's **assets under management (AUM) were largely held in the form of FTX's own VDA token called FTT**.
- The revelations sparked by CoinDesk's report raised alarming concerns for FTX's financial position and its sister company Alameda Research. These concerns were about their foundation being primarily made up of coins that its sister company FTX invented, raising questions of solvency in Alameda not having an independent asset like a fiat currency or another VDA. **Alameda's assets** are worth around **\$14.6 billion**, of which, \$3.66 billion are locked in FTT, while its third largest assets were worth around \$2.16 billion in FTT collateral, indicating more than **\$5 billion** of Alameda's **assets are FTT**.
- After the CoinDesk's report, Binance, another VDA exchange and an early investor in FTX, holding large number of FTT tokens announced to liquidate its holdings of FTT tokens as it wanted to be cautious of the crashing FTX. This move made other investors react as well by offloading their FTT holdings heavily. Many reports claimed that Binance was looking to acquire the already struggling FTX, which was thought to be working for Bankman-Fried, however that hope was shattered as the deal didn't work out. These developments further created a contagion effect with other VDAs crashing and leading to massive crash of VDA prices worldwide.

## Our Take

- The Virtual Digital Assets space has been abuzz with activity and has seen several significant developments over the past few months, from the launch of the Digital rupee by the RBI to the recent FTX collapse. These recent developments in the space provide several learnings for the sector and are likely to bring in some much-needed transparency within it. Several Indian VDA companies have already implemented systems to avoid an FTX-like situation to build confidence among investors.

There is no doubt that VDA assets and Web 3.0 is revolutionizing how business is conducted throughout the value chain, significantly impacting India's growing digital economy. The government has shown a willingness to integrate the latest technologies with existing schemes to build robust systems and should take a similar approach with VDAs. With the government amending its income tax laws to enable the taxation of VDAs and introducing a digital rupee, it may also take steps to enact legislation to regulate VDAs in the country soon.



## Industry Speak



**Mr. Nischal Shetty**  
*Founder & CEO WazirX*

"We have witnessed a considerable shift in attitude of global leaders and regulators towards Crypto over the years. With rapid adoption of blockchain, the potential of virtual digital assets has gained recognition. Countries across the world have stepped forward to regulate Crypto, with India expected to develop its own framework in its capacity as G20 president.

In the coming years we will witness several decentralized projects emerge based on the foundations of Crypto. India has 11% of the global Web3 talent and with that, the opportunity to set a new course in the Web3 entrepreneurship narrative. The country has a steady adoption rate in Crypto, and the appetite for new technological innovation in consumer facing services is high. The RBI's CBDC pilot is an encouraging sign for Indians to look forward to mainstream implementation of blockchain in public and private sectors.

At this point, we need to focus on a conducive environment for users where they can start exploring the Web3 ecosystem. Some measures like lowering taxes on Crypto gains - removal of 1% TDS, legally safeguarding user funds should be considered. There should also be a better infrastructure with adequate support from the government for entrepreneurs starting projects in Crypto. VDAs as utility tokens should be popularized with use cases. Additionally, consistent efforts towards raising awareness and educating citizens about Crypto are needed on a large scale."





# Expert Speak



**Mr. Ghanshyam Das**

Senior Advisor,  
Primus Partners

Mr. Das has had an outstanding career in domestic, international banking and Capital Markets for over 45 years, during which he developed a firm understanding of the complexities of global markets. He is thoroughly familiar with the regulatory and business environment in USA, European Union, Southeast Asia, Middle East, India and other major financial hubs of the world. He has been able to establish close and mutually cooperative relationships with most Banking and non-Banking Financial Institutions, Stock Exchanges, Corporates, Regulators and Government Departments

**With the upgrade and recent launch of a high-speed 5G network, Web 3.0 now appears to take shape in most sectors, most prominent being the banking and technology sectors. What are your views on the fast-paced implementation of its offerings in these sectors in the Indian context?**

The launch of 5G services, which enables 100x faster speeds than 4G, is much more than just the next generation of technology. Most likely, it will expedite the global-scale adoption of blockchain technology in several industries in India, such as trade financing, logistics, healthcare, education, etc. It would also propel the economy with greater productivity, opening newer sectors and job growth, and alter the face of service-based industries. This fast-paced implementation is essential, and any delay will be detrimental to our goal of being a leading country. On the other hand, the global economies are taking advantage of this crucial infrastructure catalyst, enabling Blockchain as a Service (BaaS).

**With the emergence of newer trends in the technology sector, do you see Government suitably prepared to embrace these trends with the right policies and statutes in place? What are your views on Government formulating an appropriate policy and regulatory framework, and how the common man will benefit?**

The telecom industry expects 5G to penetrate India by 2023. However, the adoption and integration of 5G technology in India will also

have to overcome many challenges, including the right mix of regulatory policies. The pace of change industries witness will be phenomenal, and the policy paradigm must be synchronized. Government has been apt in devising an accommodative policy and regulatory framework and will continue to evolve to accommodate the changing trend that might emerge in the future, as has happened over the decades for the high-tech sector.

Additionally, the earlier adoption of 5G will help India encash on current programs like Digital India, Startup India, etc. It would enable us to be at par with global peers of developed nations in the 4th Industrial Revolution driven by enhanced digital connectivity.

**With regards to the impending Web 3.0 and Blockchain use cases looming large due to the 5G launch in India, which sector, in your view, will benefit the most and what would be the game-changing scenarios that will radically improve how we interact on the web?**

We know Web 3.0 has a higher capacity in terms of computation and control of data. At the same time, Blockchain ensures data purity, precision, perfection, and security. While 5G will add speed to it, innovative Indian minds will alter the industries' faces at a never-before pace.

While it is too early to envisage which industry will be benefitted most; one thing is sure - India will be the most beneficial marketplace

from the wave of fast-paced implementation of 5G going forward!

The machine network of Web 3.0 and extended reality (XR), which is the combination of Virtual reality (VR), Augmented Reality (AR) and Mixed Reality (MR), will deliver a virtual world experience for consumers. XR will bring a world where humans can seamlessly switch from the virtual to the real world and vice-versa.

It's a game changer in all aspects, i.e., from Financial Services to Retail to Manufacturing to Healthcare to Media & Entertainment to Edu-tech; we will soon see 5G making an impact that has never been witnessed before. 5G will fast-track the benefits of the IoT (Internet of Things), with use cases in real time monitoring of disaster management, precision agriculture, medicines, dispute redressal, education, etc. It will also enhance decision-making abilities and reduce information asymmetry.

**Will we see more of Decentralized Currency Systems playing a major role in the digital economy and what are your thoughts on safeguarding this ecosystem for the public at large?**

The long debate over decentralized and centralized monetary systems is seemingly finding a consensus emerging about the co-existence of both currency systems. If we go back in the timeline, history has also witnessed the benefits of private and public money. However, the current decentralized system of money has evolved or overcome previous perils and is much more mature than any of its previous versions.

More than 105 countries are exploring, and 17 countries are at the pilot stage of the launch of Blockchain based digital versions of centralized currencies. Countries like Singapore and a few in Europe are also testing cross-border payments using CBDC (Central Bank Digital Currency). In India, innovation and development of cross-border payments via UPI are now available in European countries

enabling people to move funds instantly without friction. The digital Rupee will bring further efficiency to such payments and reduce settlement risks, thereby aiding businesses involved in B2B trade. The Indian Government is taking calibrated steps on innovation, implementation, and regulation for the larger significant economic benefit without jeopardizing the nascent blockchain industry.

**You have had a long and illustrious career in finance, over the span of which technology has continued to upgrade. With the advent of Central Bank Digital Currency and VDA Currency now bagging attention - what are some lessons that can be learnt from the implementation of the then emerging technology in the past?**

The technology of the 80s and 90s eased the working inconvenience while the past decade enhanced the efficiency multi-fold. The current wave of technology is unfolding an abundance of opportunities that we didn't even envisage earlier.

Most people in Government departments (Except for the Dept. of Telecommunications), the banking sector and generally in the industry (except for a few new economy companies, who were struggling to survive) were reluctant even to acknowledge the benefits; leave about making efforts to learn and adapt to it. Repenting retrospectively is redundant.

The focus should be on a well-regulated market structure and not repeating blunders of 1968 by the introduction of then most ineffective Gold Control Act which helped Dubai/UAE emerge as an important trading powerhouse. However, by pursuing regressive policies, we will gain nothing, but only drive away the future potential of the Indian Economy. RBI having taken a proactive stance to formalize & introduce virtual INR could provide a wonderful lead and strength India as a global economic power!



## Contributors



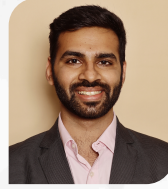
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## About Primus Partners

Primus Partners has been set up to partner with clients in 'navigating' India, by experts with decades of experience in doing so for large global firms. Set up on the principle of 'Idea Realization', it brings to bear 'experience in action'. 'Idea Realization'— a unique approach to examine futuristic ideas required for the growth of an organization or a sector or geography, from the perspective of assured on ground implementability.

Our core strength comes from our founding partners, who are goal-oriented, with extensive hands-on experience and subject-matter expertise, which is well recognized in the industry. Our core founders form a diverse cohort of leaders from both genders with experience across industries (Public Sector, Healthcare, Transport, Education, etc), and with varied specialization (engineers, lawyers, tax professionals, management, etc).



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for providing solutions to help clients achieve their goals

### RESPECT

For all and alternate viewpoints

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of thoughts and actions

### MASTERY

of our chosen subject to drive innovative and insightful solutions

### US

Representing the Primus collective, where each individual matters

### STEWARDSHIP

for building a better tomorrow

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