

# HETEROTOPIA

AN ISOC INDIA MUMBAI PUBLICATION

FINTECH | JANUARY 2022



 Internet Society  
India Mumbai

AN ICANN AT-LARGE STRUCTURE

# EDITOR'S NOTE

**NANDITA KOSHAL**

2022 has brought an end to another challenging year and ushered in hope for a better and opportune year. The last two years have affirmed that covid and change are the only constants in our lives. Both highlight the need to evolve, adapt and re-invent. At Internet Society India Mumbai Chapter, we recognize the need and ability to re-invent and evolve as an integral part of growth and progression.

As our next step in the growth process, we are excited to introduce our new initiative to you: Heterotopia. Heterotopia is our attempt to create a shared space that celebrates intellectual differences. We take some inspiration from 20th-century philosopher Michel Foucault and uniquely envision Heterotopia to be a space that invites "other or different perspectives" to contribute constructively to the growth of a certain idea, thought and innovation.

At ISOC India Mumbai, we have always endeavoured to encourage and promote the "other or different" through our activities and philosophy. As the only women-led ISOC Chapter globally, we pride ourselves in fostering diversity in thought, perspective, leadership, thematic focus and action through our mission and initiatives. Keeping in line with this vision, every thematic cycle of Heterotopia will comprise different activities such as moderated discussions, expert talks or novel ideas by young polymaths, culminating with a publication that envelops different thematic perspectives by experts and enthusiasts.

It is, therefore, our great pleasure to launch the special publication under Heterotopia on the theme of 'Financial Technology', more popularly known as 'Fintech'. In this edition, we have attempted to cover broader, emerging themes in fintech and tried to capture Indian and global perspectives by inviting contributors from diverse professional, ideological, educational, regional, cultural and demographic backgrounds.

The second decade of the 21st century witnessed major changes in the way financial institutions and consumers interact with each other. The underlying force driving this behavioural change is technology, riding on information and communication tech, and computational tech. Technology has revolutionized how economic agents interact with money and finance in an evolving ecosystem. Technology has become their friend, guide, philosopher, and mentor for the majority of the monetary decision that they make. The reliance on technology to "think for you", "motivate you", "guide you", and manage money for you through gamification and behavioural inducements has moved the dependence from financial advisors to finance algorithms and apps. The relationship is further expected to be altered in the world of Metaverse and Web3, which will have a more decentralized finance infrastructure built on blockchain. The ever-evolving technology is thus constantly shaping the way humans store and spend their money.

This compels one to explore the different dimensions of these financial technologies; how financial products will evolve in future? What kind of skill set will be required to manage new financial products? How will financial technologies interact with other cutting-edge technologies like Augmented and Virtual Reality? What will be the impact of fintech on the future of banking, regulation, economy, and most importantly, consumers? Can the non-traditional way of banking pose competition to traditional methods? Can digital or cryptocurrencies replace national currencies as legal tender? Will generations before Millennials and Gen Z be comfortable adopting these evolving technologies? This edition of Heterotopia explores some of these thought-provoking aspects of fintech through essays and opinions by fintech enthusiasts and practitioners.

As part of its mission to promote discussions on governance of new and emerging technologies, the chapter organized a moderated deliberation on the topic, "Governance of Financial Technologies- Global Perspectives" on 4th December 2021, where it invited fintech and banking experts from financial institutions in the US and Canada to discuss the opportunities and challenges in the governance of financial technologies, products and services. The key discussion points and insights of the deliberation are included in this edition in the form of a report.

We acknowledge that fintech is a vast ocean, and we may have only been able to cover a few drops of the ocean. As the fintech sector and products are continuously evolving, we hope to cover more topics on this theme in our future publications.

Lastly, this initiative could not have been possible without the contributions of some key individuals. I would like to thank Mr Prateek Pathak for conceptualizing this publication and providing crucial design and editorial insights, Ms Feroza Mody for her design support, and Chapter President Ms Shveta Kokash for her encouragement and support to this initiative. I sincerely hope you enjoy this edition and the insights shared by the writers. As always, we would love to hear your thoughts and feedback and are happy to connect with you.

Thanks & Regards  
Nandita Koshal  
Editor & Vice- President  
Internet Society (ISOC) India Mumbai Chapter



How will the product management function continue to evolve and adapt in fintech in future?



# PRODUCT MANAGEMENT LESSONS FROM FINTECH SECTOR

PRATEEK PATHAK & ISHAN MALHOTRA

What is common between Uber, Amazon, PayPal, Bitcoin, Canva, Robinhood, TransferWise, Netflix, Walmart, and Google?

They all use fintech.

If fintech is defined simply as digital or electronic means of dealing with money, then fintech has its roots over 100 years ago. In 1918, the US Federal Bank built Morse Code-driven Fedwire Funds Service to facilitate interbank transfers without time-consuming and risky transfers of cash or gold.

Today, there are as many categories of fintech. Each of these categories has many companies. Broadly, we observe that fintech has transitioned from a specialized vertical, like lenders and challenger banks, to a more generalized horizontal. Indeed, *every company is a fintech company now*.

With the rise of digital as a primary medium for financial transactions, product leaders across many business sectors—from Uber to Google—are looking to adopt banking, lending, payments, financial education, insurance, and more in their ecosystem. As consumer companies look to develop new financial products and financial companies look to support or build innovative consumer products, the visionary notion that 'every company is a fintech company' will gain further currency in the future. This acceleration will require the proliferation of fintech-specific product management skills in every company.

The typical job description of a product manager at any organization covers envisaging a product roadmap to meet customer needs, collaborating with technology teams for timely implementation, and driving strategic business goals. It goes hand in hand with assessing strategic alliance opportunities in collaboration with on-field business development representatives to foster the sustained adoption of co-created products.



What are the specific dimensions of product management in fintech product management that can be applied to other fields of product management? While answering this question, we need to consider that majority of fintech products still fail or undergo a long business gestation period from their conceptualization stage to the next version of product launch. However, those fintechs that have been successful have revolutionized how we live our lives.

A LinkedIn analysis of current 500+ fintech product managers in India indicates that a significant proportion of product managers come from an engineering, computer applications or a management degree background with limited inter-disciplinary skills. Most of their LinkedIn profiles are packed with technology and operations jargon that cannot be easily understood by every Human Resource or General Management professional. The jargonistic barriers create an imminent recruitment challenge for employers that may lead them to acquire the talent not fitting their requirements for the job. The recruitment challenge, in turn, poses an astronomical strategic cost to a fintech company, and by extension, undesirable product outcomes for end-users. There is, therefore, an underlying need for clear articulation of transferable skills of a fintech based product manager that can add value to other business categories and empower them to realize the visionary notion that every company is a fintech company.

Considering the plausible variation in the hiring and product management process of one fintech company from the other, we strongly propose that a fintech based product manager must have these five essential transferable skills:

### **Skill 1: Generating stakeholder insights based on a nuanced understanding of individual financial behaviour and evolving financial regulatory environment**

Fintech contains more stakeholders than traditional product management, such as legal, compliance, data privacy, and accounting. A single mistake can have undesirable fiduciary implications. Every product manager knows that having an innate understanding of stakeholders is central to any software product's success. Product managers in fintech are expected to generate more pertinent stakeholder insights due to a deeper understanding of a stricter regulatory environment and a more behavioural understanding of end-user segmentation due to special emphasis on a person's financial literacy and credit scores. The process of generating these insights can be customized and transferred to product management in other sectors such as the luxury beauty tech industry.

### **Skill 2: A deeper understanding of brand positioning and stretch to enhance brand trust**

Unlike other industries, most fintech customers are literate, digitally savvy and ahead of the curve with respect to general market trends. As product evangelists, fintech product managers must have a clear idea of brand positioning and brand stretch permitted for their product. Otherwise, the trust may be compromised and may affect product adoption. Therefore, successful fintech marketing will involve strategically deploying well-researched content that proves that your fintech solution is trustworthy. The process can be customized and transferred to product management in other sectors like higher education and the medical tourism industry.

### **Skill 3: Operational knowledge of law and compliance**

In contrast to a traditional product manager, fintech product managers interact with legal and compliance teams daily. These daily interactions expose them to deeper insights and enable them to develop highly valuable skills in the legal space like a better understanding of user contracts, direct exposure to the evolution of customer grievance redressal mechanisms etc. These transferable skills can become an enormous asset for product management teams in the logistics and law-tech sectors.

### **Skill 4: Emphasis on data-driven decision making over mere intuition**

Fintech product managers work with critical user data and must rely on data-driven decisions due to the underlying numeracy-driven nature of the financial industry. Such a data-driven decision-making process will make organizations more cognizant of the execution risks. It will further ensure that transformative business decisions are based less on the impulses of senior management and more on a numeracy driven culture of decision-making.

### **Skill 5: Charting user journey and envisaging a seamless transaction experience in a Metaverse**

The advent of metaverse has allowed Internet-enabled financial transactions to transition from a two-dimension entity to a three dimensional one. The transition has led to new forms of financial transactions. For example, Ariana Grande's Fortnite skin cost 1500 V Bucks during Epic Games Rift Tour Environment. Not only could Fortnite gaming users attend a virtual concert, but they could also buy virtual memorabilia via a smooth payment experience. Interestingly, Fortnite was 2018's most important social network as it developed specially branded worlds for Disney, Verizon and John Wick, leading to the advent of innovative forms of social commerce. Indeed, fintech product managers in these games have designed virtual, three-dimensional customer journeys and envisaged a seamless financial transaction experience for e-commerce and social commerce. These skills can have revolutionary implications for virtual adaptations of different businesses in the three-dimensional Internet of the future.

Cross-functional skillset and cross-functional coordination are critical for every product manager to drive any business decision. Hence, knowledge and skill set beyond the traditional roles are required. Indeed, the afore-mentioned five skills of a fintech product manager can benefit product managers and decision-makers in other business categories. Hiring product managers with these skills can enable organizations to adopt more thoughtful fintech solutions in their offerings and reduce recruitment misfires. Only then the visionary notion that every company is a fintech company will be fully realized.

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# AUGMENTED/VIRTUAL REALITY: INROADS IN BANKING AND FINANCIAL SERVICES

ASTHA JAIN

With rapid technology advancements, the line between the virtual and the real world is getting blurred. Technologies such as Augmented Reality (AR) and Virtual Reality (VR) are providing breathtaking experiences that could only be imagined previously. AR and VR fall under the Top 17 Technology buzzwords that will shape the technology landscape in the future.

## What is Virtual and Augmented Reality?

Virtual Reality is an artificially simulated environment that makes objects and surroundings appear real, enabling a digital recreation of a real-life setting. It is a technology of the present that provides immersive experiences and allows for emotional and sensory engagements.

To indulge in a VR expedition, one needs VR equipment like a VR headset or helmet curated by companies like Google and Samsung. Sometimes the words VR and AR are used interchangeably. But are they the same technologies? Let's find out.

Augmented Reality builds and displays an enhanced version of the real world by analyzing data of different objects, sounds and visuals in our surroundings and overlaying that on the real world.



The difference between AR and VR is that AR does not block the view of the real world. It includes digitally simulated characters in the real world. VR experiences, on the other hand, are entirely artificial. One of the most relatable examples of an AR experience is the online game Pokemon Go.

AR experiences can be gained through mobile phones, laptops, digital devices and some applications such as Snapchat and Instagram.

## **Breaking some myths associated with these technologies**

### **Myth 1: VR and AR are only for gaming and entertainment**

Breaking the myth: It may have started with gaming, but the use of VR has spread over multiple industries such as healthcare, education, real estate and retail for both B2B (business-to-business) and B2C businesses (business-to-customers).

### **Myth 2: The scope of AR and VR is limited to marketing and cannot be applied further to businesses**

Breaking the myth: Although the current use is prominent in marketing and gaming, it has spread across multiple sectors to enhance customer experience and provide necessary services. One example could be the use of VR for therapy. As per a report by Deloitte, over 75% of the world's most valuable brands have built and implemented AR/VR experiences for their customers and employees.

### **Myth 3: VR and AR can be distracting tools for customers and will not gain popularity**

Breaking the myth: Many shopping experiences such as IKEA room tours, e-commerce retail trails are facilitated using AR and VR. These provide ease, comfort and elevate the customer journey by providing a sense of reality before the actual use. Over 66% like shopping experiences using VR, according to a report.

### **Myth 4: VR and AR will reduce human interaction**

Breaking the myth: It may seem that the continuous state of being behind the headset may reduce human interaction but AR and VR can potentially promote more social engagement than any other existing technology. The technology will shape the future across various industries by exploring the potential for synergies in creating new forms of human interaction.

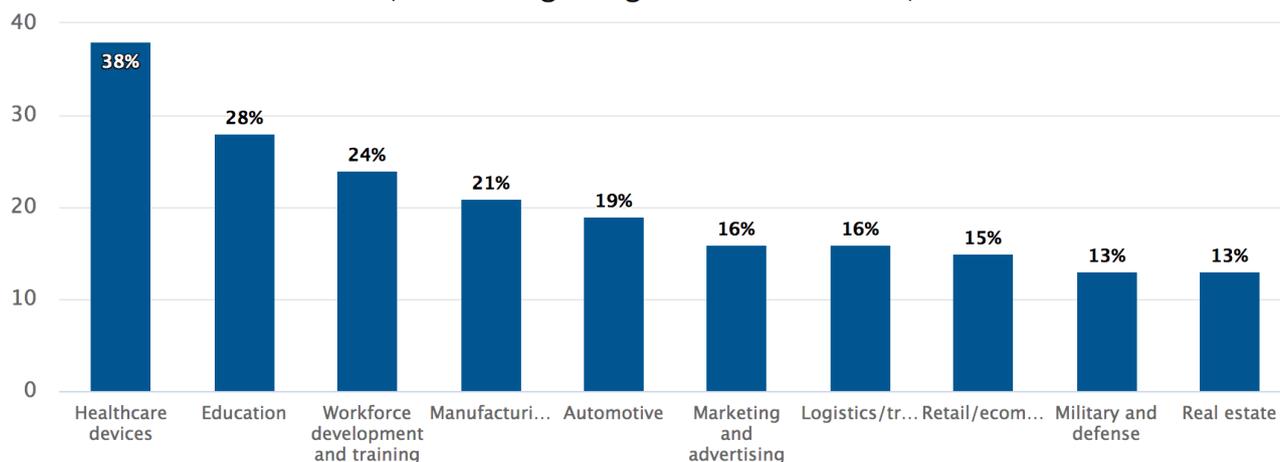
## **Applications of AR and VR**

These technologies are gaining popularity in a widely diverse range of industries. The combined market for AR and VR is worth \$12 billion in 2020, with an impressive growth rate of 54%. The combined market will be worth \$72.8 billion by 2024 (IDC, 2020). The growth is driven by increased customer adoption, especially during the pandemic.

Geographically, China led the AR/VR spending by region in 2020, with \$5.8 billion or 38.3% market share, followed by US (\$5.1 billion), Western Europe (\$3.3 billion), and Japan (\$1.8 billion) (IDC, 2019). China's market share is expected to increase to 56% in 2021 (China Internet Watch, 2021).

Some prominent industry usage statistics apart from gaming and entertainment are:

## Sectors That Have the Most Disruption by Immersive Technologies in 2021 ≡ (outside of gaming and entertainment)



Source: Perkins Coie 2020

Source:financesonline.com

Designed by  FinancesOnline

### Potential applications in Banking and Financial Services Sector

With the banking and financial services sector undergoing a massive digital transformation, technologies such as AR and VR offer a pool of benefits for financial institutions and their customers. It can help elevate the customer experience by providing seamless banking solutions. Though present-day adoption is not very significant, some of the beneficial areas of development could be:

#### 1. Virtual Retail Banking

Digital banks such as Tangerine in Canada have been an upcoming trend. Soon the technologies such as AR and VR would enable the concept of virtual banks. There would be no need to lease our retail spaces when customers can have the experiences and services in virtual bank branches. Face to face interactions can be mimicked that will help ensure that the trust and personalized experience of visiting a physical office is maintained. Customers can gain 360-degree insight into their current holdings and position

#### 2. Virtual Trading

Financial institutions and fintech start-ups are investing heavily in building virtual trading platforms powered by AR. These provide tools to enable 3D visualization of data that adds to banks processes, algorithms and trading tools. It also helps professionals gain a deeper insight into financial markets and trade trends. For example, Swiss online bank Swissquote developed a virtual reality (VR) application that uses a VR helmet to create a 360° trading wall for users to monitor markets and make trades with a glance.

#### 3. Learning & Development

Current applications of VR and AR in other industries can be replicated in the banking and financial sector. It can facilitate employee on-boarding, upskilling, cross-skilling, career pathing, transitioning and help update relevant skills and competencies according to finance industry trends. A one-time investment in innovative technology by banks can help eliminate significant redundant human resource costs. Furthermore, this can be extended to customers to provide learning guides in desktop and mobile banking.

#### 4. Enhanced Security

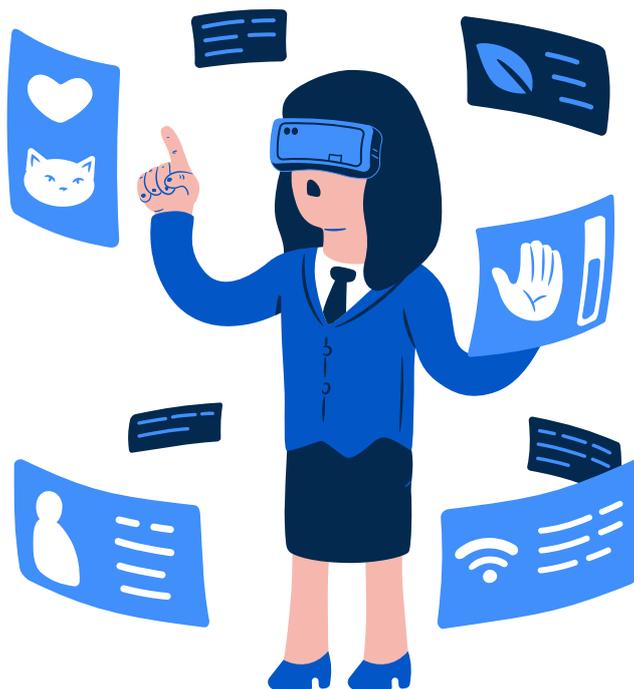
With the advent of techniques such as iris detection, face recognition, behavioural biometrics, voice recognition, facial gesture recognition as part of the augmented reality ecosystem, security management systems can be enhanced for all functional units such as personal banking and wealth management. This advancement can help in the reduction of fraud. The technology can be used in the built-in internal core systems to diagnose and defend against real attacks by preparing for real-time scenarios before occurrence.

#### 5. Data Visualization

Financial institutes generate heaps of data every day. This data could generate relevant insights for investors, traders, advisors and customers. The current systems are very slow in delivering results in the required format even though powered to process and analyze complex data. With the deployment of AR, it becomes easier and faster to visualize relevant results in a 3D environment. The insights could be in the form of intricate heatmaps, holographs or other 3D visuals, hence increasing accessibility. One such example can be Fidelity Labs, which created Oculus Rift to generate an immersive 3D environment data analysis and returns assessment on stock portfolios.

We believe that even though the current AR and VR experiences come with limitations, the future of immersive technologies seems bright. Organizations across various industries such as banking need to build on customer experiences delivered by such technologies to ensure higher innovation, engagement and retention. If they can tap on the potential of AR/VR, the possibilities for practical applications are infinite.

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"The banks of the future are looking to inject new life into their outlets – transforming formally dull environments into efficient, modern, tech-savvy destinations"- CNN Business

# BANKS OF THE FUTURE

NUPUR VIJH

Banks are financial institutions that help to regulate the level of credit and currency available in a country, and at the same time, promote a country's economic and financial welfare. Banks are for people to secure their hard-earned money and get money in case of need. Banks, over the years, have changed their shapes, structures, and style to better cater to the ever-changing world. They became more customer-friendly, provided options to customers to venture into the market of stocks, introduced credit and debit cards, invented the automated teller machines through which the customers can withdraw cash anytime and anywhere around the world, and provided various other facilities to serve customers. Then came the world of technological revolution. The banks tried to keep up and introduced phenomena like mobile banking to help customers bank from any part of the world. They could continue to carry out major operations through traditional brick banks where people visit and get help with their queries. The world in 2020 came to a halt due to the pandemic, and everybody started working from home. The halt changed how we shopped, exercised, banked, and lived.

2020 was a small window that helped us glance into the future. It brought to fore various fintech companies like Chime, Simple, Discover and others that have been silently serving a niche customer segment. These unorthodox banks started challenging the traditional banks by taking steps such as removing the monthly accounting fee, having no minimum balance requirement, providing the services of a traditional bank on a simple mobile app. In this context, if we were to imagine the future of the banks or the banking structures, there would be a declining trend towards the physical structures of the banks, giving way to the overwhelming use of digital services via mobile or computing devices.



Talking about technology, the usage of Artificial Intelligence (AI) will be prodigious in the future. AI will be able to remove the hurdles that consumers face while banking and simplify banking even to the most micro level possible. There will be the personalization of services to the customers, and the customers will be treated as the single priority. The AI technology will help institutionalize the next generation of fraud monitoring and deliver value through higher approval rates with fewer declined transactions and proactive credit limit management. The banking will align with the customers environmental and social values and take global responsibility. They will create ecosystems that free up innovative minds to share, grow, and make banking better, both internally and externally.

Banks will need to constantly innovate to compete with the evolving banking models as the tech giants such as Google, Apple, Facebook, and Amazon enter the payment ecosystem. They will have to become digital services businesses that can represent value potential through monetizing data and building products and services around predictive insights into their customers, such as how they earn money today versus how they will earn money tomorrow. In the future, the cards might also become obsolete as there will be greater use of digital wallets like Transferwise, Remitly, etc. or even digital currency. Alternate currency or digital currency might become more dominant in the future and open more avenues for investments.

The banks of the future will see cloud computing becoming central to the banks' operations. By leveraging the data leadership through advanced analytics to derive integrated insights, cloud computing will provide an impetus for revenue generation, cost reduction, market insights, product development and personalization of customer journey. Banks may have to collaborate with various fintech companies in areas where they lack the expertise and scale. They might also borrow fintech technology and change their services for clients' betterment. Banks might also get potentially replaced by platforms that run almost entirely by algorithms and robots. The bank account of the future might be an open ecosystem that could easily be transferred from one bank to another. Online platforms might also allow to remove the middleman and help access the sources of finance directly. Human staff will be replaced in high street branches by intelligent machines, robot-advisors, and cash machines with video chat capabilities.

These changes might happen sooner than expected. Technology is ever-changing and is capable of completely surprising us in the future. It will be interesting to see the robotization of things that we thought could not happen without the help of humans, but if that were to happen, would humans be able to trust these new banks? Will banks remain the most trusted place for humans to store their wealth?

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# FINTECH IN INDIA: ITS RISE AND FUTURE PROSPECTS

**FEROZA RASTOM MODY**

Financial technology, known as 'Fintech', refers to the technology used to transform financial processes for many reasons such as efficiency, ease of use, convenience, etcetera. Fintech serves not to replace traditional banking or financial services. In contrast, fintech enhances and diversifies such services using artificial intelligence, machine learning, big data and algorithms. Some examples of fintech would include applications to transition in-person procedures seamlessly to online transactions and processes, such as 'banking apps' that let individuals manage their banking needs from either an online portal or through their mobile phones. Other examples include the invention of credit cards, e-wallets and other digital payment methods that enable virtual transactions. The fintech industry has rapidly grown in India, and it continues to develop with the viable ecosystem that India provides for digital growth. To further encourage the growth of this industry, there need to be trust-building efforts with different stakeholders.

## **The Fintech Market in India**

India provides a lucrative and growing user base for the fintech industry, especially as seen over the last five years. Investors have already seen potential in this market, considering that fintech investments between 2014 to 2015 increased from \$247 million to \$1.5 billion and above. Technologically advanced cities like Mumbai, Gurugram, and Bangalore have been the primary recipient of these investments. By 2019, India soared far above the global average adoption rate of fintech (which was at 64%) at a high of 87%, tied with China's adoption rate of fintech. Further, the Boston Consulting Group argues that the Indian fintech market is estimated to be valued at over USD 150 billion by 2025.

India is amongst the fastest growing fintech markets in the world. Of the 2,100+ fintechs existing in India today, over 67% have been set up in the last five years. Indian fintech industry valued at \$ 50-60 billion in FY20 and is estimated at ~\$ 150 billion by 2025. The fintech transaction value size is set to grow at a CAGR of 20%. The Indian fintech industry ecosystem sees a wide range of subsegments, including Payments, Lending, Wealth Technology (WealthTech), Personal Finance Management, Insurance Technology (InsurTech), Regulation Technology (RegTech), etc. The Fintech sector in India has seen cumulative funding of ~\$27.6 billion. As of October 2021, India's Unified Payments Interface (UPI) has seen the participation of 261 banks and has recorded 4.21 billion monthly transactions worth over \$100 billion in October 2021.

India's fintech market is propelled by its relatively young population, technological advancement, increasing access to the Internet and regulatory practices that encourage innovation and growth in fintech. The low transaction and infrastructure costs incurred due to technology tools such as India Stack have enabled virtual monetary transactions. The supporting digital ecosystem and environment have facilitated the spread of financial services.

Between 2016 and 2020, there has been a 60% increase in access to smartphones indicating the growth of a digital India. Moreover, despite the lower accessibility to Internet services, the increased access to technology and the growing investments in fintech firms indicate a potential to improve digital access in rural India. The Indian market, therefore, serves as an ideal ecosystem for the adoption of fintech as several enabling factors provide opportunities for fintech companies.

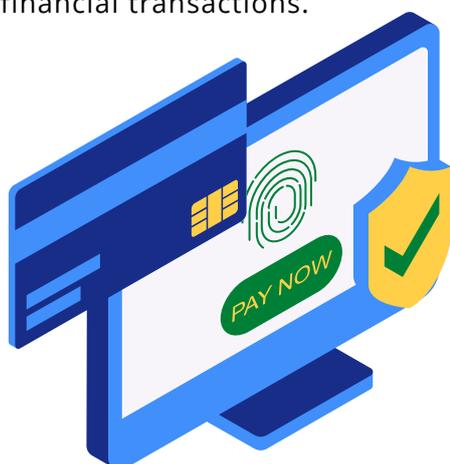
Despite the COVID-19 global pandemic, the year 2020-2021 proved to be an opportunity for the technological industry in India. In one of the reports by the National Association of Software and Service Companies (NASSCOM) and International Data Corporation (IDC), India, it was found that companies had invested in the technology sector to ensure that they would remain resilient and provide for digital workspace and delivery capabilities. Another significant factor was the robustness of the IT sector which was expected to grow by 10.2% by the end of 2021.

### **Fintech and Stakeholders- Improving Stakeholders' Trust**

The Reserve Bank of India (RBI) has highlighted several advantages to the adoption of fintech in India. From making the financial sector more efficient to improving financial inclusion to reducing credit risk to potentially reducing discrimination by using big data, fintech plays a significant role in every aspect.

But there are a plethora of risks associated with fintech-based transactions like money laundering, illegal data, privacy breaches, and other relevant concerns. A strong and cohesive regulatory network is required to build consumer trust and confidence in using fintech-enabled technology. India already has an extensive financial regulatory framework, including the Payments and Settlements legislation, Centralised KYC, the Startup India Action Plan and many other enabling policies and provisions brought by the government and statutory bodies such as the RBI.

Regulatory frameworks are significant in creating a conducive environment where instead of banking and non-traditional banking entities such as fintech firms competing against one another, there is potential to forge a collaborative model. Banks and fintech firms working together could mean greater regulation and improved risk-aversion. Traditional banks play a crucial role in providing financial stability and vetting investments and other financial transactions for depositors who may or may not be aware of the risk factors involved in their financial transactions.



The cooperation between the central bank and other banks like regional rural banks would garner more consumer trust in the system and encourage the adoption of fintech technology outside the major Indian cities and financial hubs. A sine qua non, digital and legal awareness on the existing regulatory frameworks would further help build consumer confidence in such technology. At the same time, regulatory authorities would refrain from viewing fintech as a disrupter but a transformative and rapidly growing technological tool to enhance the financial market. Potential investors would then be encouraged to support and help fintech firms grow, assuming such established regulatory authorities are willing to back these firms and the industry.

India, therefore, serves as a viable and actively growing arena for the fintech industry, with technological, legislative, and monetary factors in place that seek to promote this field. For example, the RBI's recent Regulatory Sandbox for fintech firms encourages growth and innovation of digital technology and processes, thus being a major promoter in the fintech industry. Additionally, upcoming private banks and fintech firms partnerships will strengthen the way these services are offered. Similarly, collaborations such as the one between Fiserv, Inc. and the National Payments Corporation of India that promotes RuPay cards, and offers financial services through the nFiNi platform, will encourage even first-time credit users to adopt digital financial technologies. Thus, a collaborative model with traditional and non-traditional banking firms would enhance regulation and reduce common financial risks involved, therefore building trust for consumers, investors, and regulatory authorities.

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Mt Gox, one of the biggest Bitcoin exchange in the world lost 850,000 Bitcoin or \$7.2 billion USD in today's value in a hacking attack in 2014

# CAN CRYPTO BE LEGAL TENDER IN INDIA?

PRIYAMVADA GUPTA

Tesla Inc. Chief Executive Elon Musk recently said that he and his company, SpaceX, hold Bitcoin, despite his concerns about its environmental impacts. Tesla disclosed a \$1.5 billion investment in Bitcoin in February 2021. Soon after, it began accepting cryptocurrency as payment for its vehicles. The company, however, reversed course. It suspended the initiative in May 2021, as Musk expressed concern about the source of the electricity being used to power Bitcoin mining. Recently Musk said "I might pump, but I don't dump...I would like to see Bitcoin succeed", leading to an increase in the prices. Similarly, one of the world's most renowned investors, Warren Buffet has called Bitcoin "probably rat poison squared". He has on several occasions shown an aversion to investment in cryptocurrency. "Cryptocurrencies basically have no value and they don't produce anything...In terms of value: zero... I don't have any cryptocurrency and I never will," Buffett had said last year. However, recently Buffet's Berkshire Hathaway invested \$500 million in Nubank, which is a crypto-friendly digital bank that offers investments in a Bitcoin exchange-traded fund (ETF). Be it American billionaire Mark Cuban who initially likened Bitcoin to gambling and advised investing only as much money as you can afford to lose only to change his stance and warn that "Shutting off this (cryptocurrency) growth engine would be the equivalent of stopping e-commerce in 1995 because people were afraid of credit card fraud" or IMF Managing Director Kristalina Georgieva who regards digital currencies backed by central banks as the most reliable form of digital money but finds it difficult to think of Bitcoin and other cryptocurrencies as money.



## **What are the other countries doing?**

There has been a flurry of activity in the Crypto market making it difficult for governments and financial experts to ignore crypto's rising prominence in the financial space. While countries like the USA, Canada, Australia and the EU have taken a generally positive stance, countries like China, Russia and Vietnam do not acknowledge crypto transactions or provide services related to them. Recently, China banned all cryptocurrency transactions and vowed to root out the mining of digital assets.

## **Cryptocurrency and the Indian government**

The landscape of money and payments in India has gone a landmark shift globally over the past 10-20 years. With digital payments making a way into our lives, a decentralized network of payments allowing everyone to transfer money with ease is a welcome solution. We have indeed come a long way from being dependent on just cash. One can easily pay a fruit or a vegetable vendor on the roadside in India through digital payments options like Paytm or Gpay, and demonetization has ensured that shift in mindset. One of the reasons for this shift is that people understand that this is fiat money being transferred from one bank account to another. However, when it comes to crypto, a country like India is a long way from using it as a mode of payments in day-to-day life. Less than 1% population has invested in crypto, and even less than that probably understands it. People should be able to understand and trust a mode of payment for it to be adopted widely. Though the legality of cryptocurrency has been a matter of confusion in India, millions of Indians have already pumped in over \$1 billion into cryptos.

The government has a challenging task of allowing fintech space to flourish in India while ensuring that it is accomplished without safety concerns. In 2018, in a circular issued by RBI, all financial institutions were instructed to stop providing services to businesses dealing in cryptocurrencies. However, the Supreme Court in March 2020 overturned RBI's circular, as RBI has no power to prohibit the activity of trading in virtual currencies, permitting banks to handle cryptocurrency transactions from traders and exchanges. In early 2021, the ruling government came up with a bill that aimed towards regulating and banning cryptocurrencies, with the possibility of a Central Bank Digital Currency (CBDC) being issued by the RBI. However, there was minimal development in this regard – allowing the crypto market to grow even bigger over the course of the year. The various branches of the government have been confused regarding the nature of cryptocurrencies (is it an asset or a legal tender?), their regulation, and taxability.

Nonetheless, recently, the government has decided to table a new Cryptocurrency Bill in the Parliament's Winter Session (the bill provides for the banning of all private cryptocurrencies, alongside several criminal punishments on default) – this has caused a huge uproar of worry amongst crypto investors across the nation. It shall now be interesting to see what action the government takes over the next few months; they shall be monumental in determining the fate of cryptocurrencies in India.

## **Cryptocurrency: Yay or Nay?**

The financial experts believe that it is safe to invest in crypto and it is the future, but experts forget the most important point, a currency needs to be stable for people to believe in it. One of the major drawbacks of using crypto is price fluctuation and volatility. China's crackdown on crypto recently wiped off 8% value in Bitcoin in just one morning.

If we start using crypto as legal tender, one morning if the value of that cryptocurrency has fallen by 50%, people with limited resources may just have one meal a day instead of two. And all this is irrespective of the inflation in the economy! Moreover, there is no maintenance of any records of the parties involved in crypto transactions. The identity of buyers and sellers is completely unknown. This anonymity makes it a haven for terror organizations and money launderers to conduct their business on the dark web without worrying about being discovered, contributing to funding terrorism globally. Another concern is hacking and ransomware attacks. Crypto wallets are vulnerable to hacking. Hacking a few wallets itself can make hackers millionaires. Attacks on cryptocurrency per se are not possible (refer to the original paper on Bitcoin), but crypto exchanges remain vulnerable to hacks. One such example is an attack on the Mt.Gox exchange, which operated between 2010 and 2014, where Hackers made off 850,000 Bitcoins from this exchange. In today's value, that would be \$7.2 billion. Foxconn suffered a cyberattack for 1,804 Bitcoin ransom, worth over \$34 million as of the present time. Other large companies such as HBO and Binance have been attacked in the past as well.

While the usage of crypto is morally debatable, the origin is more baffling to any layman. There are many questions that one can raise like where is it sourced from to pay miners in the first place? Why would someone reward miners with money to solve complex math problems? These questions are still unanswered and not frequently asked.

To conclude, the freedom offered by crypto is what everyone around the globe has been wishing for in a fast-changing economy. However, cryptocurrency is too volatile and unpredictable to serve as legal tender yet. Though crypto is the antithesis of regulation, some oversight from the central authorities is needed to make sure that the hard-earned money of the masses is not looted by hackers and scammers. As regards crypto investment, one needs to do his/her own research before investing. Higher risk does offer a higher return, but caution needs to be exercised when one is investing in an unregulated market.

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# XENNIALS AND FINTECH

## MOHAMMAD PERVAIZ ANSARI

The term 'Xennials' refers to the micro population born between 1977 and 1983, a generation sandwiched between Generation X and Millennials. At the cusp of Gen X and Millennials, Xennials can be described as a generation that had an analog childhood, without the conundrum of technology but digital young adulthood. Xennials were the first generation to experience growing up with computers and the Internet at home. Unlike Gen X, Technology did not come as a "Magic" to them.

### **So how do Indian Xennials fare with fintech?**

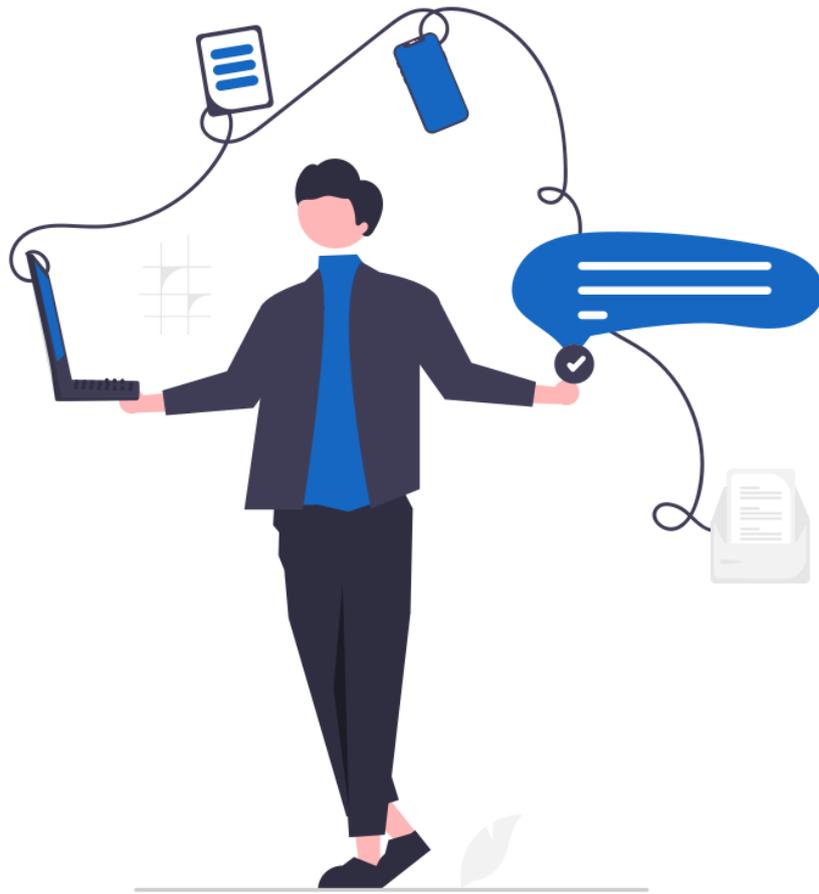
As the generation that has seen the rise of the Internet and technology, Xennials can quickly adapt to technological changes. However, as the generation that has also seen the analogous life, Xennials appreciate a break from technology to perform simple tasks of life. Therefore, they are on equal parts tech enthusiasts and tech sceptics, classifying them further as the 'orthodox' and the 'versatile' based on their timely technology adoption. But ease of adoption does not necessarily translate into actual adoption. The adoption of fintech has a lot to do with digital literacy. According to a survey, only 38% of households in India are digitally literate. In urban areas, digital literacy is relatively higher at 61% relative to just 25% in rural areas.

Additionally, the adoption of technology by Xennials for financial management is governed by their perception of safety and trust of online Vs in-person transactions. Cybercrimes such as cyber frauds are a strong deterrent for Indian Xennials in fintech adoption. They are not comfortable risking their money due to online frauds and the post online frauds procedures. The misconception about financial technology, its usage and security along with lack of awareness among Xennials compared to Millennials are other factors that hinder the growth of technology-based services.

According to a research study on the usage of fintech services among Millennials, Gen X, baby boomers and Xennials, the majority of the population belonging to the age category 40–50 years and above 50 years perceives the technology-based financial services and apps to be unsecure (Das & Das, 2020). The same study also found that generation X, Xennials and baby boomers have low trust in fintech services and prefer to visit bank branches than use Internet-based applications compared to Millennials and Gen Z.

The government of India has taken some steps to promote digital literacy, awareness and adoption in this age group. One such initiative is educational courses and online training. The National Institute of Electronics and Information Technology (NIELIT), under the National Digital Literacy Mission (NDLM), has conducted programmes to promote the adoption of technology for financial management in the target age group of 14-60 years.

Proper knowledge, security features, government support and grievance redressal mechanism can create a positive attitude towards the adoption of technology-based financial services amongst this category of users.



### **Inclusive fintech needs adoption by Xennials**

Versatile Xennials are more responsive and adaptive when it comes to technology but their scepticism and desire to maintain that old world charm makes them vary in integrating technology fully in their lives, especially for financial management. A more directed effort by the government, fintech companies, and marketers is required to bring a pivotal demographic of Xennials within the ambit of technology-based financial services and help bridge the crucial link between Gen X and Millennials.

Xennials have characteristics that make them valuable in any workplace. They are adaptable, inclusive, familiar with technology and ethically responsible. Adoption of technology in their financial management will not only make a difference in their lives but also be beneficial for society at large.

Like it's said, 'It's never too late to start.'

- *Mohammad Pervaiz Ansari is an entrepreneur and an academic at a leading technical college in Mumbai. He is an inSIG (India School on Internet Governance) 2019-20 fellow and a volunteer at ISOC India Mumbai Chapter*

# GOVERNANCE OF FINANCIAL TECHNOLOGIES: A GLOBAL PERSPECTIVE

## AN ISOC INDIA MUMBAI CHAPTER WEBINAR REPORT

4th December 2021

### Speakers



**Sohrab Kalra:** Sohrab is Senior Manager, Innovation and Emerging solutions at Interac, Canada. He has over 12 years of experience spread across strategy consulting, entrepreneurship, and product management. He plays a prime role in progressing Interac's innovation agenda focused on developing foresight & enterprise strategy and helping drive key initiatives such as Open Banking. Before working with Interac, he was a Senior Strategy Consultant focusing on the commercialization and growth of emerging technology and trends. He also co-founded a SaaS venture that was acquired. He previously held product/strategy roles with Microsoft and Amdocs. Sohrab holds an MBA (Batten Scholar) from Darden School of Business, the United States and a bachelor's degree in computer engineering from India.



**Sofia Gomez de Silva:** Sofia is a senior consultant at the Canadian Imperial Bank of Commerce (CIBC) Toronto, Canada. She started her career as a government regulator for pension funds in Mexico, where she led the modernization of the industry with digitization. Sofia pursued her MBA at Rotman School of the Management, the University of Toronto, where she won a scholarship from CIBC. To experience working in a start-up firm, she became the CFO of a quantum computing fintech before returning to CIBC to attend its prestigious rotational technology program. Sofia currently works in internal audit as a senior consultant in data analytics strategy and governance at CIBC.



**Karan Gupta:** Karan is a Manager of Pricing and consumer profitability at Capital One, USA. With over 7plus years of professional experience, Karan has previously worked in the Product Management space with organizations such as Veritas and CISCO. At Capital One, he currently works on setting interest rates on back-book bank products, Growing deposits and driving profitability of existing customers. Karan has completed his MBA from Tepper School of Business, Carnegie Mellon University, USA, and his bachelors in engineering from VESIT, Mumbai. Karan has been travelling for the past year and a half and every month lives in a different state of the US.

Emerging technologies are changing the way people interact with financial systems. To deliberate on how the integration of technology with finance has posed different governance challenges and presented new opportunities to traditional and upcoming financial institutions, ISOC India Mumbai Chapter organised a panel discussion on the theme- Governance of Financial technologies: Global Perspectives. The session was moderated by Nandita Koshal, ISOC India Mumbai Vice-President and Co-President, Business Technology Management Association(BTMA), a graduate business club at Schulich School of Business, York University, Canada. The discussion began with a journey of all three speakers in the world of banking and finance. While for Sohrab, it was a serendipitous foray into the world of financial technology that allowed him to work in the area of complexity and innovation, for Sofia, it was her curiosity that led her to move away from government regulator in Mexico to explore the space of Regulatory tech (Regtech) in banking in Canada, and for Karan, it was a mix of interest, affinity, and exploration that led him to the world of banking after his engineering and MBA. The discussion then moved deeper into the topic where the moderator asked the panellists to share their thoughts on the existing or emerging technologies that can change the face of fintech and banking in coming times.

Sohrab opined that the three significant computational and informational systems and technologies that would redefine how finance is perceived in the next decade are; quantum computing, blockchain and decentralized infrastructure and data, and AI. The last three decades have seen finance transforming from physical to digital banking to crypto and digital currencies. As finance becomes more digital, it evolves into a unit of information. As this unit of information flows through different organizations, companies utilize it and build services over it. Every company gradually starts imbibing attributes of a fintech, and in this context, one may say that every company could be a fintech. In future, more open data sharing, combined with layers in the new Internet, such as new capabilities in computing, engineering information structures, Blockchain, AI, will allow companies to create new financial products, services and give way to a whole new way to how the lifecycle of money moves.

Karan, based on his experience in the pricing department in Capital One, emphasized three critical technology and data aspects. The first aspect was automation, specifically robotic process automation (RPA). RPA has the potential to change banking for the good in the long term. RPA will reduce the cost and provide much richer insights, thus, making the banks nimbler. Cost-effectiveness gives an edge to banks over fintechs in a highly competitive environment as national banks have to spend a lot of money on regulations and compliance than fintechs that are not regulated. The second aspect was forecasting. The more accurately banks can forecast the trends better will be the utilization of resources, thereby providing banks with another edge over fintechs.



The third aspect was microtargeting and customer segmentation. Big banks traditionally would have a block marketing process, but with micro-targeting, they can more accurately define customer behaviours, help target customers at different levels, address their specific needs, and become an experience for customers rather than an exercise.

Sofia aligned with what Karan had discussed and shared that recent times have seen a substantial increase in robotic process automation, with RPA emerging as an integral way to operate in the future. In her opinion, the pace of innovation in banks would be slow. For example, while cloud computing has been present for a long, it is now that banks have finally committed to utilizing them. She acknowledged that a significant advantage that Canadian banks have is that their risk appetite, and the Canadian regulatory environment, are very conservative. Therefore, even if technologies open up new opportunities, the pace of innovation would stay safe and steady. She also said that it is an opportune time for fintechs to work in partnership with banks when it comes to innovations as banks can provide an understanding of the regulatory landscape to fintechs while fintechs can offer testing opportunities for banks. According to her, there are subtle but perceptible changes in the way banks are now operating in client data and assets protection using technology.

The discussion moved to the pertinent question on regulation. Nandita asked the panellists what considerable challenges and potential threats in the governance of these technologies could they foresee? What step prominent global banks or fintechs have taken to mitigate these challenges and risks?

In response, Sofia considered the external threats of cybercrime, robbery, fraud, impersonation as prime challenges to banking. Banks try to mitigate these threats by figuring out models that can identify typical transactions for clients and work out high fraud risk scenarios. This kind of financial governance structure helps build a protection mechanism for the entire banking system in Canada. To deal with internal threats such as misuse of client data by employees, banks heavily regulate their processes. They have policies, internal controls, chains and chains of identifications around responsibility, supervisory, and operational controls in place. In the same vein, Sofia felt that the biggest concern for fintech companies would be to achieve a high level of maturity in their internal governance and internal controls in an unregulated setup.

Sohrab spoke from Interac's perspective and shared that the pressing issues in the governance of new technologies are making these technologies more equitable, accessible, and accountable. An equitable and inclusive technology entailed ensuring different segments of the population could keep pace with the evolution of technology and adapt it. He talked about securing access to technology for ecosystem participants by right-sizing the entry requirements. He also mentioned that with the movement of transactions online, there is a power imbalance that favours service providers over consumers. To restore the power balance, it is essential to put trust mechanisms in place for consumers. Lastly, consumers freely shared their data online, which led to the unintended consequences of fraud and cybercrimes. Therefore, new technologies like automation or decentralization should have accountability as a central consideration.

Karan, in response, identified two challenges- inclusiveness and availability of resources. In inclusiveness, he talked about the disparate impact of policies. The uniform application of technology for all sets of the population leads to discrimination in indirect ways as the same policies have a dissimilar impact on different sects of the population. As for resources, Karan felt there was a lack of resources in terms of human and financial resources to implement these emerging technologies.

To further discuss the governance aspect of technology, the moderator asked how better governance of financial technologies can lead to a more safe and secure Internet?

Karan began by profoundly stating that banking is a business of trust. If there is no trust, banks cannot acquire customers. Instances of data breaches, cybercrimes can pose challenges to this trust. First, the way to create a safe Internet is by having governance in place to prevent data breaches. Second, building trust and conviction in customers' minds that the banks or the fintechs are doing things that favour consumers' interests and adopting technologies will help consumers. In addition to Karan's points, Sohrab added that diversity of workforce and talent pool improves the learning curve and reduces the chances of fraud and marginalization. Secondly, he remarked that access to recourse for customers creates implicit trust in any exchange of value that happens over the Internet. This gives customers the psychological safety to keep interacting with the product.

Agreeing with both Karan and Sohrab, Sofia added that the way to ensure a safe and secure Internet ecosystem is to connect the entire industry and allow the fintechs to sit at the table with the government and banks to discuss the implications of fintechs not being able to access the system.

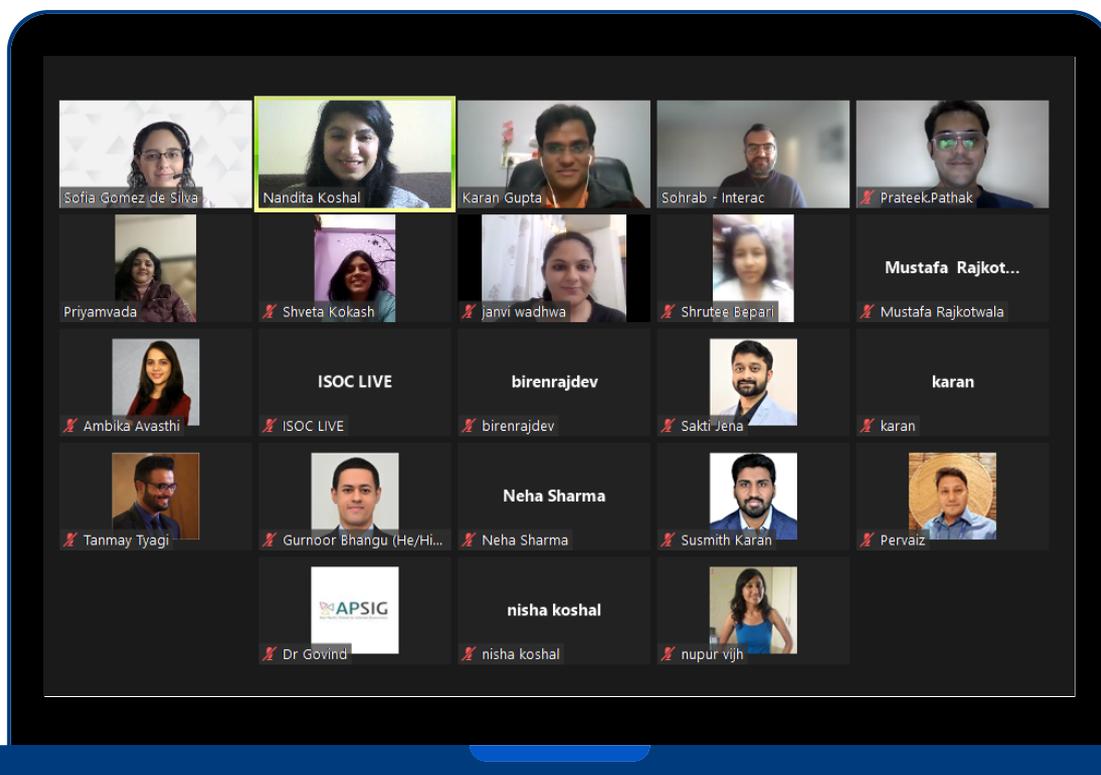
The session then moved to the audience Question & Answer round, moderated by ISOC India Mumbai founding President, Prateek Pathak. He began by asking how panellists visualized the evolution of financial agents in the era of the three-dimensional Internet or omniverse? Karan responded by opining that the fundamental mechanism of banking, or the unit of money, would not change. Sofia added that once technology transformed the banking industry, it would enhance trust and transparency that would benefit the industry. While refraining from predicting the future, Sohrab cautioned that it is essential to wait and see how different scenarios unfold and accordingly evolve the roles.

The next question was asked by former ISOC New York President, Joly Macfie, on how fintech is threatened by the government's move to weaken encryption? Sohrab emphasized on trust framework where users have the right to share data with whomever they wanted as is happening in countries like Australia. Sofia added that while the impact might be unfavourable for the fintechs in terms of consumer data, but the impact is positive on the agencies at the back end protecting the critical information.

On the question by Biren Rajdev, Senior Manager - Data Science at UnitedHealth Group, on open banking and what type of companies would benefit or lose from it, Sohrab responded that open banking is not a zero-sum game. It is a win-win situation where fintechs would gain as they provide services and get access to customer data. The incumbents can benefit by exposing their products to a broader audience. Karan added that open banking allows new players to come in and create trustworthy services that create an environment for more inclusive banking. However, it also increases competition and compels banks to constantly deliberate on keeping the engagement high, loyalty up and maintaining the existing relationships.

The audience Q&A round ended with a question by Kapil Goyal on how national currencies would stack up against global currencies such as Bitcoin and others. According to Sohrab, it would not be a zero-sum game and would be more like a space where ecosystem and closed-loop economies interact. The discussion ended with a profound proclamation by Sofia that such currencies may not have to compete with each other and can coexist depending on the particular need of the hour.

The session concluded with the vote of thanks by ISOC India Mumbai Additional treasurer, Priyamvada Gupta. Priyamvada thanked the Business Technology Management Association, Schulich School of Business for their support of the event; Joly Macfie for live-streaming the event to 110 chapters across six continents; Nandita and Prateek for moderating the session, the audience for their participation, and chapter leaders Shveta Kokash and Feroza Mody for their support in ensuring successful conduct of the event.



A glimpse from the event

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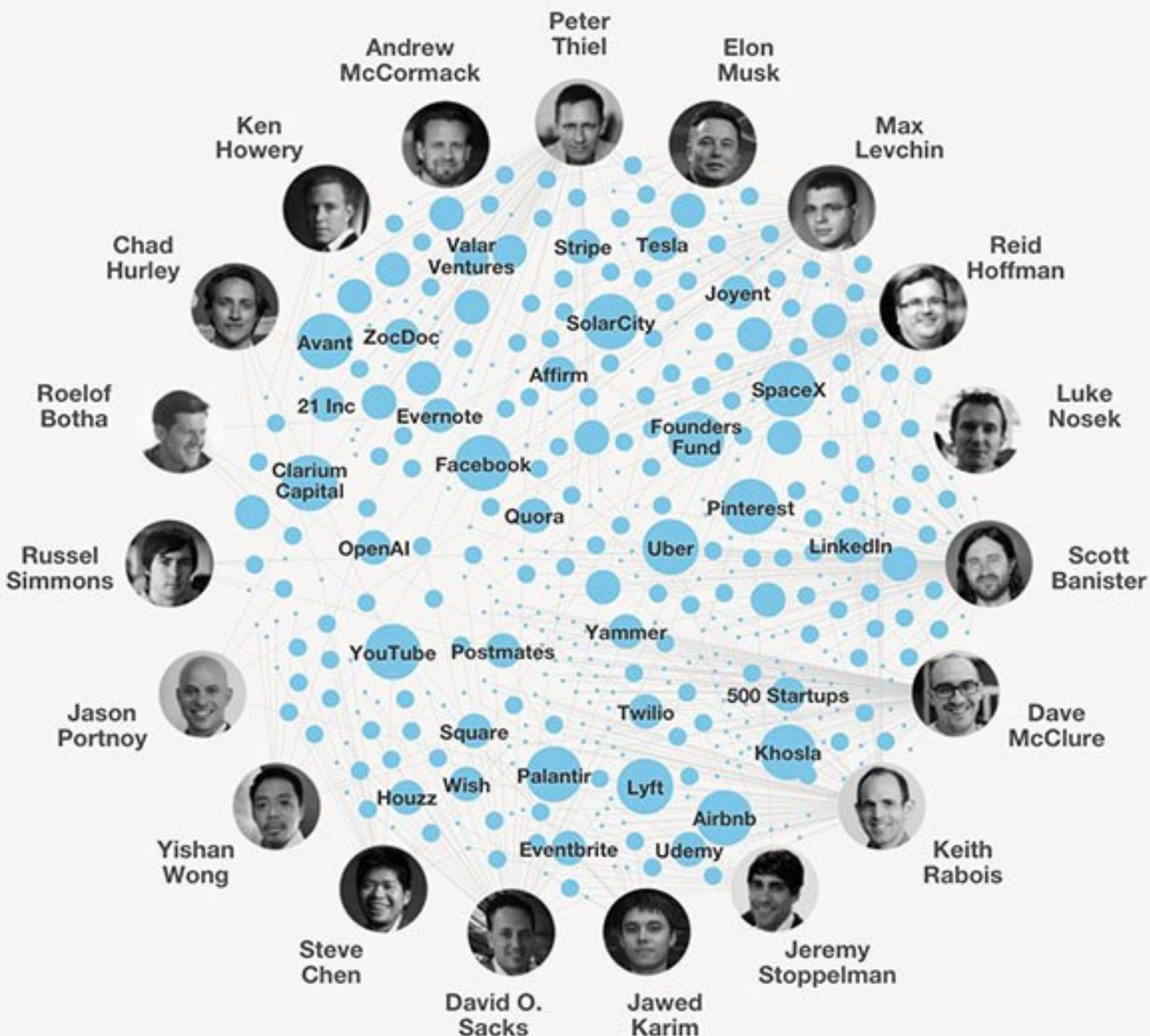


**SHVETA KOKASH**

Coordination

# PayPal Mafia

PAYPAL MAFIA REFERS TO A SECTION OF FORMER FOUNDERS AND EMPLOYEES OF PAYPAL, A PIONEER FIRM IN FINANCIAL TECHNOLOGY. THE MAFIA OR TECH DONS HAVE SINCE THEN FOUNDED OR INVESTED IN ADDITIONAL TECHNOLOGY COMPANIES INCLUDING TESLA, LINKEDIN, SPACEX, AFFIRM, SLIDE, KIVA, YOUTUBE, YELP



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