FICCI

#PICUP

Fintech 2017

March 1, 2017
Mumbai

A Platform for Innovation and Collaboration
with Upcoming and Promising Fintechs

Organised by FICCI in collaboration with IBA and NASSCOM

CONFERENCE PROCEEDINGS

PICUP Fintech 2017

Trident, Nariman Point, Mumbai, March 01, 2017

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PICUP FINTECH
CONFERENCE

A Platform for Innovation and Collaboration with Upcoming and Promising Fintechs

1st March, 2017
Mumbai

CONTENT

PICUP FINTECH CONFERENCE

A **P**latform for **I**nnovation and **C**ollaboration with **U**pcoming and **P**romising Fintechs

1st March, 2017 | Mumbai

PROGRAM	
9.30 a.m. – 10.45 a.m.	**Inaugural Session** **Welcome Remarks by: Mr. Rashesh Shah**, Sr. Vice President, FICCI and Chairman and CEO, Edelweiss Group **Brief Remarks by: Mr. Arun Tiwari**, Dy. Chairman, IBA and CMD, Union Bank of India ***Release of Fintech Mobile App*** **Presentation on the theme of the conference by: Mr. Nicolas Harle**, Senior Partner and Managing Director, BCG **Inaugural Address by: Mr. R Gandhi**, Deputy Governor, Reserve Bank of India **Vote of Thanks by: Mr. Arvind Thakur,** Chair, NASSCOM Domestic Council and CEO & Joint Managing Director, NIIT Technologies Ltd. **Session to be moderated by: Ms Jyoti Vij**, Deputy Secretary General, FICCI
10.45 a.m. – 11 a.m.	**Tea/ Coffee Break**
11 a.m. – 12 noon	**Session on 'FinTechs and Banks: Possibilities and Potential'** **Session moderated by: Mr. Saurabh Tripathi,** Senior Partner and Director, BCG **Panel of Speakers:** ❖ **Mr. Arun Tiwari**, Dy. Chairman, IBA and CMD, Union Bank of India ❖ **Dr. Ajit Ranade**, Senior President and Chief Economist, Aditya Birla Group ❖ **Ms Zarin Daruwala**, CEO - India, Standard Chartered Bank ❖ **Mr. Sopnendu Mohanty**, Chief Fintech Officer, Monetary Authority of Singapore ❖ **Mr. Sashank Rishyasringa**, Co-Founder and MD, Capital Float ❖ **Mr. Ranu Vohra**, Co-Founder, MD and CEO, Avendus Capital Pvt. Ltd. Q&A

12 noon – 1 p.m.	**Session on 'Working in the 2 Speed World'** **Session moderated by: Mr. Amit Kumar**, Partner and Director, BCG **Panel of Speakers:** ❖ **Mr. Rajnish Kumar**, MD (NBG), State Bank of India ❖ **Mr. Rajiv Anand**, Executive Director and Head, Retail Banking, Axis Bank ❖ **Mr. Taranjit Jaswal**, Head – Global Corporates, Corporate Banking, India, Barclays ❖ **Mr. Kiran Shetty**, CEO, SWIFT India ❖ **Mr. Murali Mahalingam**, Industry Director, Banking & FS, SAP Indian Subcontinent Q&A
1 p.m. – 1.45 p.m.	Lunch
1.45 p.m. – 5.15 p.m.	❖ **Parallel Sessions (1.45 – 3.30 p.m. and 3.30 – 5.15 p.m.)** ❖ **Market Place: Open Session for attendees to visit stalls**
1.45 p.m. – 3.30 p.m.	**Parallel Sessions**

Fireside Chat 1: 'Promise of Program Lending'

Panel Discussion: 1.45 p.m. – 2.45 p.m.

Session moderated by: **Mr. Ashish Garg**, Partner and Director, BCG

Panel of Speakers:

- **Mr. Karnam Sekar**, DMD and Chief Credit Officer, State Bank of India
- **Mr. Harjeet Toor**, Head – Micro Banking, Cards, Retail and MSME Loans and Financial Inclusion, RBL Bank
- **Mr. Amit Sachdev**, Co-Founder and CEO, CoinTribe
- **Mr. Ramit Arora**, President and Co-Founder, Biz2Credit
- **Ms Kalpana Pandey**, CEO, CRIF High Mark
- **Mr. Alok Mittal**, CEO & Co-founder, Indifi Technologies Pvt. Ltd.

Q&A

Product Demonstrations by Fintech Companies: 2.45 p.m. – 3.30 p.m.

- **Mr. Krishna Kumar**, Founder and CEO, Cropin SmartRisk
- **Mr. Vinay Mathews**, Founder and COO, Fairassets Technologies India Pvt. Ltd.
- **Mr. Abhishek Kothari** and **Mr. Manish Lunia**, Co-Founders, FlexiLoans
- **Mr. Vipul Rawal,** Co-Founder**, FinTech Labs**
- **Mr. Abhijit Onkar,** CEO, **GraduFund**
- **Mr. Kunal Verma,** Co-Founder, **MoneyTap**

Fireside Chat II: 'On Tap, Cashless, and Contactless — The Path to Ubiquitous E-Payments'

Panel Discussion: 1.45 p.m. – 2.45 p.m.

Session moderated by: Mr. Prateek Roongta, Partner and Director, BCG

Panel of Speakers:

- **Mr. Sudhakar Ramasubramanian**, Managing Director & CEO Aditya Birla Idea Payments Bank Ltd.
- **Mr. Sameer Nigam**, CEO, Phone Pe
- **Mr. Naveen Surya**, MD, Itz Cash Card Ltd.
- **Mr. Asit Oberoi**, Group President and Global Head, Transaction Banking Group, Yes Bank
- **Ms Sujatha Mohan**, Head, Digital Initiatives, RBL Bank

Q&A

Product Demonstrations by Fintech Companies: 2.45 p.m. – 3.30 p.m.

- **Mr. Ritesh Agarwal**, Founder and CEO, FonePaisa Payment Solutions Pvt. Ltd.
- **Mr. Sanjeev Chandak**, CEO, Ftcash
- **Mr. Arijit Roy**, Head – Sales, Happay
- **Ms Priti Shah**, CEO, Paynear Solutions Pvt. Ltd.
- **Mr. Kumar Abhishek**, Founder, Tonetag

Fireside Chat III: 'Artificial Intelligence – Real Solution'

Panel Discussion: 1.45 p.m. – 2.45 p.m.

Session moderated by: Mr. Shantanu Upadhyay, Principal, BCG

Panel of Speakers:

- **Mr. Shantanu Sengupta**, MD and Head, Consumer Banking, DBS Bank India
- **Mr. Deepak Sharma**, Chief Digital Officer, Kotak Mahindra Bank
- **Mr. Naveen Asrani**, Director – Startups, Microsoft Corporation India
- **Dr. Kailash Nadh**, Chief of Technology, Zerodha/Co-Founder, Rainmatter
- **Mr. Anuraag Saboo**, Director and Head of Research, Gumption Labs

Q&A

Product Demonstrations by Fintech Companies: 2.45 p.m. – 3.30 p.m.

- **Mr. Shankar Narayanan**, Co-founder and COO, Active Intelligence Pte. Ltd.
- **Ms Meghna Suryakumar**, CEO, Crediwatch Information Analytics Pvt. Ltd.
- **Mr. Shridhar Marri**, CEO and Co-Founder, Senseforth Technologies Pvt. Ltd.
- **Mr. Arpit Ratan**, Co-Founder, Signzy Technologies Pvt. Ltd.
- **Mr. Pratik Karmakar**, Head – Cleints and Co-Founder, Singulariti.ai

3.30 p.m. – 5.15 p.m.	**Parallel Sessions**

Fireside Chat IV: 'WealthTech and Robo Advisory'

Session moderated by: Mr. Ruchin Goyal, Partner and Director, BCG

Product Demonstrations by Fintech Companies: 3.30 p.m. – 4.15 p.m.

- **Mr. Varun Agarwal**, Co-Founder and COO, altflo
- **Mr. Nitin Vyakaranam**, CEO, ArthaYantra
- **Mr. Anuraag Saboo**, Co-Founder, Gumption Labs
- **Mr. Sharad Singh**, Founder, Invezta
- **Ms Shruti Royyuru**, Head Marketing, WealthObjects

Panel Discussion: 4.15 p.m. – 5.15 p.m.

Panel of Speakers:

- **Ms Janet Young Yoke Mun**, MD, Group Channels and Digitalisation, United Overseas Bank
- **Mr. Srinivas Jain**, ED, Strategy and International Business, SBI Mutual Fund
- **Mr. Nitin Vyakaranam**, Founder and CEO, ArthaYantra
- **Mr. V.R. Govindarajan**, CEO, Perfios Software Solutions Pvt. Ltd.

Q&A

Fireside Chat V: 'Robotics – Next Generation Operations Productivity'

Session moderated by: Ms Neetu Chitkara, Principal, BCG

Product Demonstrations by Fintech Companies: 3.30 p.m. – 4.15 p.m.

- **Mr. Shashank Bharthuar**, Director, Confirmfast Communications Pvt. Ltd.
- **Mr. Abhinav Parashar** and **Mr. Sanket Nayak**, Co-Founders, Digio
- **Mr. Abhinav Kumar** and **Mr. Himanshu Kumar**, Co-Founders, Hello Tax
- **Mr. Rahul Pagare**, CEO and Founder, TRUSTID

Panel Discussion: 4.15 p.m. – 5.15 p.m.

Panel of Speakers:

- **Mr. Amit Goel**, Co-Founder and MD, Let's Talk Payments (LTP)
- **Mr. Sandeep Sharma**, MD, South Asia and Middle East, NICE
- **Ms Anita Pai**, Senior General Manager, ICICI Bank
- **Mr. Pankaj Sharma**, EVP and Head, Retail Operations, Axis Bank

Q&A

5.20 p.m. – 5.30 p.m.	**Product Demonstrations by:** ❖ Capital Float ❖ Phone Pe
5.30 p.m. – 6.00 p.m.	**Closing Session** *Recognition of leading FinTech Companies*
6.00 p.m. onwards	**Networking Reception**

INAUGURAL SESSION

From L-R: Ms Jyoti Vij, Deputy Secretary General, FICCI; Mr. Arvind Thakur, Chair, NASSCOM Domestic Council and CEO and Joint Managing Director, NIIT Technologies Ltd; Mr. Arun Tiwari, Deputy Chairman, IBA and CMD, Union Bank of India; Mr. R Gandhi, Deputy Governor, Reserve Bank of India, Mr. Rashesh Shah, Sr. Vice President, FICCI and Chairman and CEO, Edelweiss Group; Mr. Nicholas Harlé, Senior Partner and Managing Director, BCG.

Welcome Remarks
Mr Rashesh Shah, Sr Vice President, FICCI and Chairman and CEO, Edelweiss Group.

Brief Remarks
Mr Arun Tiwari, Deputy Chairman, IBA and CMD, Union Bank of India.

Theme Presentation
Mr Nicolas Harle, Senior Partner and Managing Director, The Boston Consulting Group.

Inaugural Address
Mr R Gandhi, Deputy Governor, Reserve Bank of India

Vote of Thanks
Mr Arvind Thakur, Chair, NASSCOM Domestic Council and CEO & Joint Managing Director, NIIT Technologies Ltd.

Welcome Remarks
Mr Rashesh Shah, Sr Vice President, FICCI and Chairman and CEO, Edelweiss Group:

Mr Shah began by observing that PICUP FINTECH 2017 is "an idea whose time has come". He appreciated the time earmarked by Mr Gandhi out of his busy schedule, and pointed out that his presence at this event itself underscores its importance. Quoting Bill Gates, he observed, "banking is necessary but banks are not." The presence of companies that are not banks but are providing banking services underscore that reality. "Technology," he said, "is changing at a rapid pace. No area in financial services is untouched and will remain untouched by technology."

About 25 years ago, the two key resources in financial services were capital and people. The way these two resources were harnessed was important. But in the last five years, it is not only capital and people, but also technology. All these three resources need to be harnessed. The recent demonetisation programme served as a huge catalyst. There is now a spurt in both the supply and demand side of digital transactions.

The Government has put in place several innovations such as UID, BHIM, UPI and Bharat QR, facilitated by the RBI.

These developments will have huge long term implications. The key catalyst has been UID. It provides an instant answer to the question 'who am I?' simply through biometrics, without a card or any other physical entity. That takes care of the KYC. Mr Shah pointed out that the financial services industry has been grappling with KYC issues; UID resolves that in large measure.

Another area where fintech is making a huge impact is credit. Financial inclusion in India is not only about savings. "It's also about credit because credit in India has been one market where a large part of the population has been underserved." Even now, Mr Shah regretted, after 45 years of changes in the banking industry, wholesale credit still goes to corporate borrowers; retail borrowers and SME customers are still underserved. This gap can be bridged through technology. Technology increases the ability to understand those smaller customers.

But fintech is not only about digitising money, it is also about information. It assists in monetising the data that is available. It can reduce the information asymmetry by simple, cost-effective matching of buyers and sellers; and users and providers of capital. "Fintech is going to create a very vibrant and cost-effective marketplace for all of us," Mr Shah predicted. He firmly believed that India is poised to be one of the fintech capitals of the world. He informed the house that there is excitement around the world about the fintech opportunities in India; the idea of "1.3 billion people suddenly getting digitised in the financial services space" is overwhelming. The reduction in the cost of servicing, in understanding customers, in risk management and in providing a great customer experience, all brought about by technology, will be very exciting.

But there are also challenges. "We need to work on data protection, data security, and cyber threats which are going up by leaps and bounds all over the world." While the opportunities created by fintech are harnessed, the risks must also be mitigated. "It is going to be a constant challenge between optimising the opportunity, but also making sure that we minimise the risks." The Government and the RBI are working on these issues. The Payments Regulatory Board is a recent initiative by the RBI.

Finally, said Mr Shah, "PICUP FINTECH is our effort to act as a catalyst to give some momentum to this whole space and create a forum where we can understand and appreciate the opportunities." The conference would highlight case studies from all over the world. He thanked the participants for their presence and for already making the conference a grand success.

Brief Remarks by **Mr Arun Tiwari**, Deputy Chairman, IBA and CMD, Union Bank of India:

Mr Tiwari began by complimenting FICCI, NASSCOM and IBA for very appropriately naming the conference PICUP FINTECH: 'A Platform for Innovation and Collaboration with Upcoming and Promising Fintechs'. He reassured the gathering that banks will continue to exist despite several questions being asked. Even with the arrival of fintechs, "banks in brick and mortar format will continue to remain and they have remained globally so."

The founding principle of Indian Banks' Association, said Mr Tiwari, has been "To work proactively for the growth of a healthy, professional and forward-looking banking and financial services industry in a manner consistent with the public good." He asked, "Are the fintechs a threat to us or are we complimentary to each other?" In his opinion, banks and fintechs will

coexist in times to come. The loser will be the redundant processes; and the winner will be the customer. That, he said, is the combined goal of both parties.

In the last few years, start-ups like Uber, Airbnb, Alipay etc. made their dreams come true with funding from venture capital. Innovations by fintech companies brought cheer to the customers. Customers now expect 'uberisation' of the banking and financial industry. Rather than see innovation as 'disruptive', Mr Tiwari felt that it should be seen as 'constructive destruction'. "Disruption," he said, "is a process where a small company with fewer resources but with innovative ideas and strategies is able to successfully challenge the established players in the business." Incumbent banks usually focus on the most profitable customers; the needs of the others are ignored. That is where fintechs or innovative companies pitch in. Slowly and gradually, they up their game and capture the respective market. "Slowly, the innovation starts moving up-market, which we are feeling in our industry also." He foresaw that the time is not too far when many of these innovative start-ups displace businesses not only in the banking sector, but in other sectors too.

But the banking industry is highly regulated globally. Fintechs within the ambit of banking, like any young entrepreneur, are not tuned to be regulated; and they will be dealing with somebody else's money. Mr Tiwari suggested that globally, regulators should be cautious about the growth of fintechs and bring them within the ambit of desirable regulations. "Ultimately," he said, "when you are dealing with somebody else's money, it is a matter of trust. And trust is just 100 per cent." He called upon the fintechs to take this point seriously. He thanked FICCI and NASSCOM for joining with IBA, and expected such seminars to fuel the willingness of banks to move forward and retain their market share, while at the same time improving their efficiency.

Launch of Fintech App:

Mr R Gandhi launched the Fintech App which was specifically designed for this occasion. It is a mobile app and is the first endeavour to bring everybody on a common platform where they can access a readymade database of over 800 fintechs in India.

Theme Presentation by **Mr Nicolas Harle**, Senior Partner and Managing Director, The Boston Consulting Group:

Mr Harle considered three points in his presentation:

- The global landscape:

In 2005 there were about 2000 fintechs globally. Today, there are over 14000 of them globally. "Three fintechs are created every day." They initially started out in the payments space. They progressively moved to lending, to wealth management, and the present hype is on blockchain, which is growing very fast together with enabling tools such as data analytics and security. "More than $ 100 billion have been raised by fintechs. This means that every second, $ 600 are spent by VCs on fintechs. This means that every day, more than $ 50 million are raised by fintechs." The main drivers of these amounts are payment and lending; lending in turn, serves both retail customers and the SME market.

- How countries compare in terms of fintech disruption:

India is capturing a growing share of fintech. In 2012, India represented a mere one per cent of VC funding. That figure is accelerating significantly and currently stands at five per cent. Most of the Indian fintech industry caters to payments. The majority of them are backed by VC. This has a huge consequence: they are all going to be up for sale or cooperation. "Is it a threat? Maybe, in some instances," he averred.

- How to drive cooperation between fintechs and banks:

Fintechs are here to play a role in a broader ecosystem. Only a few of them are 'IPOed'. "The space they cover is broad." A vast majority of the fintechs that were funded comprise retails and SMEs. The Indian fintech scenario is similar to that of the rest of the world with the exception of blockchain.

Mr Harle highlighted four aspects to explore the level of disruption. The first is customer perception. Points to consider include whether customers are fully equipped; whether there is an unbanked market; and whether the SME market is ready to leverage digital opportunities. The second lever is the role of the regulators. Are they progressing towards fintechs and offering digital licenses? The third are the banks, whether or not they are market concentrated, and whether they are able to leverage the challenge of fintech. Finally, the traditional ecosystem such as telecom players or retailers will be affected by the new players coming in. Airtel and Vodafone have been granted payment licenses.

Fintechs are customer-centric. "They create personas to understand what the customers are expecting and they are trying to solve pain points." They have a mindset that is different from some banks that are, in contrast, product-oriented.

In the US, regulation is "a bit shaky", and banks are not that concentrated. They have lagged in embracing the fintech challenge, with a very strong ecosystem. India has a lot of digital awareness in the cities; but on the other hand, there is a large unbanked and under-banked population that needs to be served. The regulator has progressed significantly and made multiple moves.

He pointed out that in the Indian banking market, 60% of the lending and 70% of the deposits are shared by the top 10 players. It is fairly concentrated. But fintechs are good at embracing data. They leverage significant data in order to personalise the offer along with making profit. Therefore, although banks in India "have embraced the fintech challenge quite well," Mr Harle concluded that they can learn about creation of personas and data leveraging from the fintechs. This will allow further innovation. "Banks need to equip themselves and look and study the fintech space to see what the best fit for cooperation is." He suggested that they look at other parts of the world to bring in ideas that were developed outside.

The broader context is about strategy, Mr Harle felt. There will be a trade-off between customer-centricity and efficiency; or between the decision to serve wealthy clients, SMEs or tap the unbanked and under-banked population. Can fintechs invent a new journey? "Do you want to look proactively at the ecosystem and fund part of it?" he asked the bankers present. "Do you want to use fintech to enhance your IT architecture to do big data and analytics, or to support the huge challenge which is the cultural change of the employees?" These points, he said, will need to be encompassed in the digital transformation agenda.

Inaugural Address by **Mr R Gandhi**, Deputy Governor, Reserve Bank of India:

Mr Gandhi began by expressing his gladness that IBA, FICCI and NASSCOM were organising this conference as a 'Platform for Innovation and Collaboration with Upcoming and Promising (PICUP) Fintech Companies', bringing together banks and fintech companies. He felt this was an important conference because there is euphoria around the success of the fintech companies around the world, leading to some unrealistic prophecies. He sought to address these prophecies.

Technology and banking, he said, have a long and close association. “Both have benefitted immensely by this association.” Technology has changed the way banks and financial institutions interact with their customers. These developments have created opportunities for new entrants, who may not necessarily be bankers, to disrupt traditional business models and penetrate new markets. Fintech companies provide traditional services in different, more efficient ways.

Lending and borrowing came into existence from the time the concept of money was understood. They became organised when the prototypes of modern banks were established some 700 years ago. Banks also undertook the payments service. Trends in the fields of information and communication technology then redefined banking. “Actually, it is not redefinition, but de-definition. Banks are no longer those entities which do banking exclusively; now others, the non-banks also do banking.”

‘Chunking’ of banking is the norm. There are specialist entities that perform only certain specific chunks. These entities include payment service providers; P2P and P2B services; SME financing; consumer retail financing; disintermediation; crowd funding; open-ended mutual funds; money market mutual funds; deposit alternatives; trade financing; invoice financing; bill discounters; bill collectors; credit referrals; account aggregators; interest-free products; syndicators; investment bankers; MFIs; cooperatives; HFCs; and credit rating agencies. They have chipped away chunk after chunk of banking. “Is there an element of banking that remains the exclusive privilege of banks?” he asked. “No longer,” he declared.

This ‘chunking away’ of banking from the banks has given enormous opportunities to non-banks, who can offer a chosen service with very high efficiency, speed and affordable cost. When they make innovative use of ICT as their business model, they are called ‘fintech companies’. Another type of fintech companies are those who develop innovative systems, products and services for the financial sector, but do not offer the services themselves. They are primarily the R&D structure of fintechs. “I would think these are the real fintech entities,” Mr Gandhi felt. The term ‘fintech’ is usually applied to the segment of the technology start-up scene that is disrupting traditional sectors. It has become a buzzword in the last three years. It is changing the way funds are raised, used, lent, borrowed and remitted. It is impacting not just entrepreneurs and businesses, but also ordinary banks and financial customers. Regulators across the world are closely monitoring these developments. Standard-setting bodies like the Financial Stability Board, the Basel Committee on Banking Supervision and others have formed special teams to examine these developments. “We have also formed a special team,” he disclosed.

Mr Gandhi then discussed two key fintech innovations: market place lending and blockchain technology.

Market place financing, also known as ‘crowdfunding’, refers to a method of funding a project or venture through small amounts of money raised from a large number of people, typically through a portal acting as an intermediary. Crowdfunding can take the form of charitable donations that provide no financial returns; or as equity crowdfunding that falls within the domain of financial markets. Person-to-person (P2P) lending is a form of crowdfunding that is used to raise loans that are paid back with interest. Such innovative market place financing is prompting people all over the world to contemplate the end of banking and financial intermediation.

Blockchain technology is another disruptive innovation. A blockchain is an incorruptible, open, distributed digital ledger of economic transactions that can be programmed to record virtually anything of value. It can record transactions between two parties efficiently in a verifiable and permanent way. "Certain innovative products which have come on the scene have excited a large section of people around the world," said Mr Gandhi, referring to the Bitcoin phenomenon. Bitcoins have caught the imagination, generated interest and gained value. This has led some quarters to predict the end of currency itself. These predictions have raised concerns among regulators and central bankers around the world.

Innovations bring in positive change in efficiency, productivity, quality, competitiveness and market share. They are typically disruptive and usually result in paradigm shifts. It takes time and effort to understand them. Associated dangers include untested effects and lack of clarity about long term effects, leading to misunderstanding and misuse. Some innovations may be bad per se; but sometimes even good innovations can be misused.

As innovations leverage technology in unusual ways, they can disturb the standard ways in which systems are operated. "While we do gain, it is not uncommon that these innovations do inflict pain on the society." Hence it is necessary to carefully analyse the pros and cons, ring-fence the risks, conduct pilot studies and fine-tune the product before scaling up and adopting the innovation.

Mr Gandhi then discussed the downside risks of market place financing and blockchain technologies. Market place financing links the fund raisers and fund providers, eliminating the need for a financial intermediary and the associated costs. "However, who guarantees the good performance of the fund raisers and fund providers? Who will enforce the contractual obligations?" he asked. The parties are faceless to one another and at a great distance, even beyond borders. Hence market place financing may not be sustainable for a large number of people or amounts. "You need an organised and regulated entity to ensure that the innocent and weak parties are protected," he pointed out.

As regards blockchain or distributed ledger technology and its professed capabilities to usher in virtual currency (VC), Mr Gandhi observed that the 'death of currency' idea has been predicted right from the early 1950s. In the late 1990s and early 2000s, people believed that by 2020 most people will have embraced and fully adopted the use of smart device swiping for purchases, nearly eliminating the need for currency or credit cards. "Has currency died, is it dying, or at least will it die?" he asked. And he answered the question by saying, "In all these years, you will find that currency has actually increased in absolute terms." With the exception of the Nordic states, countries are printing more and more currency.

But with the advent of cryptocurrency, it is felt that this time currency will die or at least be replaced by virtual currency. The quest for anonymous and independent digital currency has been gaining traction for some time. 'Cypherpunks' tried to develop privacy through crypto-logic. "They endorsed mistrust on the prevalent system of currency and boasted of an anarchist philosophy to find the anonymous and independent digital currency." Nick Szabo attempted to create 'bit gold', and this was further refined by Satoshi Nakamoto in Bitcoins. This was the creation of digital currency, not created by an authority. More and more people have started accepting it. Bitcoins have acquired value and are being used for various economic transactions. They are being used as investments. Currency is being eliminated. Blockchain, which is the foundation of Bitcoin-like innovations, is touted as the death knell of currency.

But Mr Gandhi was of the view that its potential is being overstated. There is no central bank or monitoring authority for virtual currency solutions. They pose potential financial, operational, legal, customer protection and security related risks. VCs are stored in the digital or electronic media. They are prone to losses arising out of hacking, loss of password, compromise of access credentials, malware attacks, etc. Payments by VCs are on a peer-to-peer basis. There is no established framework for recourse to disputes or grievances and charge-backs, nor is such a framework feasible. There is no backing of any asset for VCs and their value seems to be a matter of speculation. They have no legal status. This places a natural limit on their progression. It has also been reported that VCs are being used for illicit and illegal activities.

Mr Gandhi's arguments against the virtual currency system stemmed from the absence of confidence and/or anonymity. "A currency should be able to sustain these two elements forever; once either of these elements gets affected, it will impair its exalted status." He observed that confidence in any virtual currency based on blockchain is limited to its initial rounds, patronised by adventurists and risk-seekers. The masses will need greater confidence for acceptance and continuance. That can come only if an authority endorses it. As far as anonymity is concerned, blockchain apologists say that it can be made 'difficult to track'. But 'difficult to track' is not the same as 'anonymous'. "Therefore, it may remain a pipe dream that blockchain will eliminate currency by ushering in virtual currency," he declared.

The proponents of fintech innovations realise that exaggeration of their capabilities can be bad for further developments in the area. Banks and financial institutions have realised that there is value in adopting fintech innovations for their own benefit and that of their customers. There is a movement to make use of blockchain technology for virtual currency by the central banks themselves, but this calls for a lot of research. IDRBT recently brought out a White Paper on the applications of blockchain technology for the banking and financial sectors in India. There are several such endeavours all over the world; hopefully, they will lead to usable solutions. So while fintechs are accelerating the pace of change and are reshaping the financial services industry, banks are recognising their potential. But it is clear that the disruptive innovations of fintechs cannot wholly eliminate traditional banking or finance. There are several ways in which fintechs and banks and financial entities can collaborate with one another to usher in the best value for customers.

Mr Gandhi ended by expressing confidence that the conference would provide all stakeholders with a unique platform to create opportunities for building mutually beneficial partnerships.

Vote of Thanks by **Mr Arvind Thakur**, Chair, NASSCOM Domestic Council and CEO & Joint Managing Director, NIIT Technologies Ltd:

Mr Thakur pointed out that the country is going through a digital revolution. The recent demonetisation has added fuel to this movement. "The Government is actually stipulating digital targets for various financial institutions," he reported. He went on to add that India has the third largest start-up ecosystem for technology companies, with 4800 start-ups growing at about 10–12%. The number of start-ups is expected to cross 10000 by 2020. The start-up ecosystem exists primarily in fintech, healthtech and edutech; of these, fintech is the largest component, comprising 480 start-ups. Globally, the financial services industry is being disrupted; it is looking at ways to transform itself to be able to deliver better services and compete more effectively.

Start-ups, on the other hand, are agile and very focussed on delivering customer experience. They understand their customers well but they lack the regulatory knowledge, and, most important, the customer confidence which larger banks enjoy. “I think there is a fundamental premise for collaboration in this context,” Mr Thakur said.

He continued, “NASSCOM is committed to building the start-up ecosystem in the country for the technology industry.” He felt it was appropriate that FICCI, IBA and NASSCOM had got together to create this platform. He thanked each association and its office-bearers for coming together to enable this transformation. He also thanked Mr Gandhi for accepting their invitation to deliver the Inaugural Address, where he actually highlighted that banking is no longer the exclusive preserve of bankers. While Mr Gandhi highlighted crowdsourcing and blockchain as fundamental technologies, the really important point that he flagged up was the need for caution against unrealistic expectations from technology. He also reassured the house that currency is not going to die. “He set the direction with respect to how we as industries should collaborate to be looking at this technology.”

Mr Thakur thanked Mr Shah and colleagues at FICCI for putting together this programme. He agreed with Mr Shah that the industry will be transformed when people, capital and technology come together. Thanks were also due to Mr Tiwari who highlighted that banks and fintechs will coexist and drive efficiency and also deliver a superior experience.

Knowledge Partners BCG were appreciated for their experience and understanding of the industry. They were instrumental in constructing this event.

Mr Thakur also thanked all the panellists who would be deliberating on various issues on this occasion. He expressed gratitude to the moderators and sponsors of the event. Last, but not least, he thanked all the start-ups present. “India has all the ingredients of a fintech revolution.” He observed that the country has the third largest number of Internet users; it has a large and growing digital population; and there is a thriving start-up community, with a financial services segment that is underpenetrated and underserved. Government support and the desire for inclusive growth have created a very unique infrastructure with Aadhar, UPI, and programmes such as the Jan Dhan Yojana. All this has resulted in the proliferation of many new innovative applications. BHIM is a great example of one such application. The people’s IT skills and entrepreneurial capability, together with this unique infrastructure, create the opportunity to generate unique solutions for the industry. Mr Thakur acknowledged the efforts of Mr Kannan who chaired the Steering Committee of this conference and guided the efforts to put it together, along with the NASSCOM team. He also had a word of appreciation for the judges who would evaluate the best start-ups.

He wished the conference all success.

Session on 'Fintechs and Banks: Possibilities and Potential'

From L-R: Mr. Saurabh Tripathi, Senior Partner and Director, BCG; Dr. Ajit Ranade, Senior President and Chief Economist, Aditya Birla Group; Mr. Arun Tiwari, Dy. Chairman, IBA and CMD, Union Bank of India; Ms. Zarin Daruwala, CEO-India, Standard Chartered Bank; Mr. Sopnendu Mohanty, Chief Fintech Officer, Monetary Authority, Singapore; Mr. Sashank Rishyasringa, Co-Founder and MD, Capital Float and Mr. Ranu Vohra, Co-Founder and CEO, Avendus Capital Pvt. Ltd.

Session moderated by
Mr Saurabh Tripathi, Senior Partner and Director, The Boston Consulting Group.

Panellists:

- **Mr Arun Tiwari**, Dy. Chairman, IBA and CMD, Union Bank of India.
- **Dr Ajit Ranade**, Senior President and Chief Economist, Aditya Birla Group .
- **Ms Zarin Daruwala**, CEO - India, Standard Chartered Bank .
- **Mr Sopnendu Mohanty**, Chief Fintech Officer, Monetary Authority of Singapore .
- **Mr Sashank Rishyasringa**, Co-Founder and MD, Capital Float .
- **Mr Ranu Vohra**, Co-Founder, MD and CEO, Avendus Capital Pvt. Ltd.

Overview by **Mr Saurabh Tripathi**:

Mr Tripathi kicked off the discussion by presenting a few data facts. India has about 900 fintechs, across almost all areas. The largest number of them are in payments, and about 15 of them are in blockchain. The total funding that went into fintechs peaked in 2015 and dipped in 2016. Mr Tripathi's view was that there is enormous potential with huge possibilities for banks to benefit from a vibrant fintech community. "There are a number of challenges, obviously, whenever you are trying to do new things." He explained that sometimes, the regulations come in the way, although he did not feel that this is the most primary challenge in India. Sustaining growth and profitability, funding and access to capital, competitive intensity, building customer trust are some of the things that come in the way. "How we unlock that path is important," he said.

He discussed a survey launched by IBA as a precursor to the present conference. They asked all banks about their perspective on fintechs. The banks unanimously responded that they saw fintech as a great opportunity. Majority of them felt that payments, retail lending, wealth management and SME banking were areas where fintechs could bring new technology and ideas. Banks appreciate collaboration with fintechs as channel partners to provide new innovative products and services. Most banks think of fintechs as channel partners; they do not see them as equity investors, incubators or accelerators. They would like to partner with fintechs in order to get help in innovating products and services. Forty per cent of the banks are already in some kind of partnership with fintechs. Five per cent of them have a separate innovation centre to identify the fintech partnerships. Twenty per cent have set aside money for the purpose of establishing partnerships and collaborations. "Clearly there is room for improvement here," Mr Tripathi averred.

"There is a huge opportunity here for banks and fintechs to work together," he continued. "BCG's view is that that is where the real value is." The idea that fintechs will diminish the banks' business takes the discussion in the wrong direction and creates unnecessary doubts. "There is no doubt that banks are here to stay and fintechs can add a lot of value to them. The real question is how it can be unlocked and how we can work together." He pointed out that a lot of partnerships have been established globally and some of them have done very well. This is being seen in India too. "We need to find how banks and fintechs work better together — who has to change how much, and where?" He observed that the change could be in mindset; management commitment; talent management; or IT architecture to make banks more suitable for partnerships. Fintechs would also need to become more amenable to working together with banks to make it a win-win possibility.

Mr Tripathi expressed happiness that the panel comprised experts with very diverse viewpoints. He had a set of questions for each member, and hoped that they would be candid and bold in their assertions, because the purpose of these discussions was to shed light on what can be useful to the industry. "And there is no light unless there is some heat. So it's okay to have some heat," he remarked, in lighter vein.

He began with Ms Zarin Daruwala, who has tried to bring about a lot of change in Standard Chartered Bank. He asked her how she found partnerships with technology companies during this journey. He also wanted to know how their accelerator model with an innovation centre in India was working, and whether that is the right model for banks to look at.

Dr Ajit Ranade represented the Aditya Birla Group that has large and successful insurance companies and NBFCs who would be seeking partnerships. They also have a payment bank. Hence Dr Ranade would have a view of both sides, and Mr Tripathi wanted to learn what it takes to make the partnership successful. If banks were to invest in accelerators, their need to work with fintechs would actually go down because then they can develop a lot of things on their own. Yet, they can also benefit by partnering. "If we were to assume that this narrative that fintechs are going to destroy the banks is not right, then the revenues of the fintechs will come from the banks, only through partnerships." Hence a viable model must be found wherein fintech companies add enough value to the banks so that the latter are willing to compensate them enough.

Mr Arun Tiwari represented the public sector banking industry, where trust is very high. "This whole talk about trust in the banking industry in India is very heavily driven by the fact that we have got a public sector banking industry which has Government backing," declared Mr Tripathi. He substantiated his claim: "When demonetization

happened, a lot of deposits went to the public sector banking industry because that is where a lot of trust lies. Clearly, the public sector banking industry is here to stay." But it also faces a lot of challenges. The fintech community offers a special opportunity because it goes beyond mere partnerships; it provides access to innovation and talent. Hence Mr Tripathi felt it would be good to know how Mr Tiwari looked at it and what fintechs meant to him. "Who is an ideal fintech for you?" he asked Mr Tiwari. Some people want access to customers; others are willing to be a part of the bank and work behind, while the bank faces the customer. "How should the fintech company position itself so that they are most attractive to you, to work with them?" Fintechs can be a part of the value chain. But then, banks are not able to compensate them properly. So the value does not flow, and the fintechs lose out. Fintechs, according to Mr Tripathi, are start-ups and need to have a revenue stream, which can only come from the banks. A lot of time, there is a tussle about how much banks should compensate them for the service that they provide in the value chain.

"What model, ultimately, you feel is a sustainable model?" Mr Tripathi asked Mr Sashank Rishyasringa, founder of a fintech. He had seen his fintech evolving, and how the business model had to change in order to work better with banks. Hence Mr Tripathi wanted to know about his experience in working with banks, and what could change to make that better. "Fintechs," he pointed out, "need to understand, banks are very much concerned about compliance. You should be as concerned about compliance as the banks are to get any great partnership." He had a word of advice for fintechs: "Align your interests with the banks 100% so that there is no conflict of interest or any doubt about it." He conceded that operationalising a partnership is not easy. He suggested that banks need to think about dedicated responsibility within the organisation to just facilitate partnerships. "Across the world, banks who are very good at it will have some dedicated responsibility in their organisational structure whose job just is to scout for partnerships and make the partnership successful."

Mr. Ranu Vohra came from the investment community. His firm, Mr Tripathi informed, has its origin in an institute called Coolstartups, and start-ups are at the heart of her company. He wanted to understand the thinking of VCs, who have put in a lot of money, how they felt this could be sustainable, and how thinks look for the Indian start-up community, particularly fintechs. He recalled his personal experience when trying to set up a partnership between a bank and the fintech world. It was difficult to have an equal dialogue with the fintech community, because the latter was backed up with a lot of private equity and venture capital money. Profit was not the question; the approach was that the future belonged to them. "I could not manage to set up even a single partnership. It is good to know that things have changed and the investor community, which is backing the fintech world, is asking tough questions." To make a partnership work, the questions that really matter are whether it can substantially reduce the cost of acquisition and risk.

The third stakeholder, i.e. the regulator, was represented by Mr Sopnendu Mohanty. "It has been widely discussed that the Singapore Government has decided to be the most attractive place for fintechs," Mr Tripathi stated. He asked Mr Mohanty what they were trying to do and how he would compare what is happening in India with the same in Singapore. In particular, he wanted to know more about the sandbox approach that they came up with to promote innovation in a contained environment. He then remarked that the important takeaway for Indian banks is that there has been over-emphasis on

payments. “We all know that there is no money in payments. Especially in our country, nobody pays for paying.” Lot of innovations happen on payment. “Unless we can convince somebody to pay for it, even the remaining amount of money will go away,” he cautioned. There are a lot of other areas where fintechs can add a lot of value to the banks. Mr Tripathi felt that this was also a good message to the fintech community. Banks sit on the maximum amount of data in the world. “They sit on technology, they sit on data and I don’t think they even scratch the surface in terms of getting full use of the data.”

Mr Tripathi further remarked that the fintech community comprises young people who do not understand the world of bankers. As long as they live in their separate world, they can never work together and collaborate. There has to be a way for them to be educated about the real pressures that bankers live with. Regulation and compliance must not be taken lightly. For partnerships to work, both partners need to appreciate each other. “And I think that fintechs don’t always appreciate the life of a banker.” Finally, he reiterated that fintech is not just about payments; that concept is a mistake being made in India. There is a lot of opportunity in the entire value chain.

Panellists’ Views

Ms Zarin Daruwala:

Standard Chartered is a global bank with a global technology platform; but there are a lot of things which are unique to India, which they need to do with local fintech companies. Some examples are having accounts Aadhar-linked or KYC-linked; others include Bharat Bill payments or UPI. “We have worked with a lot of local fintech companies and it has helped us because the cost is lower compared to if you were to look at global solutions,” Ms Daruwala informed the house. She added that fintech companies have a lot of agility in delivering solutions. “We worked with the local fintech company on UPI and we managed to do it in 89 days which is a fairly good time-frame,” she explained. The partnership with fintechs has been useful and they are working on other initiatives with fintech companies as they go ahead.

Standard Chartered Bank has something called an ‘accelerator lab’. It is a human-centric design model where people work on a concept called LUMA — looking, understanding and making. The team looks at the problem and designs a solution. It need not be only a financial or a technology solution; it must result in process improvement ultimately. It involves lot of human element. Ms Daruwala disclosed that they are working with a few industries using the accelerator lab. “We find a huge advantage.” She clarified further: “If you are working with a fintech, there is a solution, and then you sort of fit the problem. Here, you start with the problem, think of what you want, and you customise it along with the accelerator lab.” They work with the industry on industry-specific and client-specific solutions. They have selected a few large clients, and give them unique, tailor-made solutions.

Standard Chartered Bank also uses the accelerator lab to work with initiatives like the IoT, to improve the end-to-end TAT for some of their retail products. They re-imagine how a customer would manage his own wallet and arrive at unique, out-of-the-box solutions; then they do a prototype, scale up, and invest in the technology. “This has proved to be quite useful for us,” Ms Daruwala said.

Another concept that they are working on is ‘Agile Technology Development’, which started in India. In this initiative, all persons who are involved in a particular job sit in a room and work on end-to-end solutions, and then disband. “It is a much faster way of doing technology solutions,” she observed.

Dr Ajit Ranade:

Aditya Birla Group, as an umbrella, has a range of financial services companies, and everything except a bank. Dr Ranade reserved his comments about whether the new company which will be launched soon is a fintech, a bank, or something that will evolve. "It will start off something. It is not a static label," he said. He pointed out that competition is a very big reality. "For almost 20 years, we had barely about half a dozen or 10 banks which came on the scene. Suddenly, in the last two to three years, you are going to have 21 new banks." He was certain that fintech would be crucial to all of them. In his view, the competition would try to establish its presence in the large, unfinished agenda of financial inclusion. That is where the action is.

How banks make money will also be important. Ninety five per cent of the funding comes from venture capital. Dr Ranade wondered how many of them actually make money. "That would be an important data point." He observed that the low hanging fruit is payments; but India is probably the only country in the world which offers digital infrastructure at no cost. "That itself takes away a big part of where you would have made money." He added, "I am not saying that is a bad thing; it is a good thing."

The conventional banking model is to build large balance sheets and make money on the margins. Larger the balance sheet, greater the profitability. But that is not going to be the model of the fintechs. The business model may contain sale of products and services including payments and remittances, and then make money out of that. "That is going to be a big challenge in the presence of very stiff competition." He cautioned the new banks not to overlook the fact that the existing banks "are already on their toes; they have accelerators and innovations going on." He admitted that his group has an advantage because they have other companies which are in the financial products and services space. "All this is giving us confidence because we have a proven success story." Referring to the telecom story, he pointed out that India has shown that it is possible to have one of the lowest cost telephone services covering one billion subscribers in the remotest corners of the country. Ninety two per cent of prepaid customers make micro payments regularly, which flow from all corners of the country to the head offices. They remain reasonably profitable and make continuous reinvestment in spectrum and technology. "That gives us confidence that perhaps this will work," he declared.

Dr Ranade explained that India was able to establish a one billion market among the lowest cost because it started off with very low tele-density. The same is true of banks. Despite 26 crore Jan Dhan accounts and a huge push towards digital, the fact is that on average, the savings bank penetration in India is just 46%. The opportunity is there, but not in the metro cities. He asserted that "the opportunity is in the huge unbanked space in India. This will require lot of ingenuity, but thanks to telecom, we know it can be done." There can be some learning from there. He conceded that the banking relationship is not a one-off association like buying an FMCG product. Yet, he felt that there is a possibility of leveraging low cost channels like ATMs, business correspondents and kiosks with trust relationship.

Mr Arun Tiwari:

"Banking is a deep-rooted relationship over a period of time," began Mr Tiwari. It is all the more so because it is a matter of hard-earned money. Speaking about Union Bank, he said, "From a public sector point of view, as a bank we have spent a little ahead of the curve much earlier on. We were the first bank to become CBS compliant way back in 2007-08. Thereafter,

we added couple of innovative products and services in the market." He informed the house that they are using technological tools in HR, risk management, products and predictive analytics. "It is not that we have stopped at payments only, or certain typical services being offered by the bank."

Mr Tiwari observed that all the banks are not at the same level of technological evolution. When there is competition and products are being offered by other banks, it is advisable to partner with fintechs in order to remain competitive and retain market share. "Why invest time and money in something that may become redundant after a year and a half?" But he had a word of caution for fintechs. "You are just growing up. As of today, you are growing up on VC funding. That VC funding is not going to remain forever." He suggested that fintechs must have a long term sustainable business model. He pointed out that even in the public sector space, banks have been funding academic institutions and incubators; they have been partnering with fintechs to provide digital talent. At present, wallets and selfie accounts are running on the back of fintechs. Ultimately the customer will be the winner, and will remain with the bank; redundant process will be eliminated and a part of that bandwidth will be served by fintechs. What is important is who serves the customer in the best possible manner.

Mr Tiwari responded to Mr Tripathi's point that fintechs do not get properly compensated through the value chain. In his opinion, if a fintech is able to create a value added product that banks cannot do without, they will pay for it. "Believe in yourself and deliver to that extent that it becomes impossible for the banking fraternity to get away from you. You will be paid much better than what you expect."

Mr Sashank Rishyasringa:

When Capital Float was started, its founders were clear that the long term paradigm for fintechs is through collaboration between banks and new age digital finance companies. The reason for that is complimentarity. "What we do at Capital Float is innovate at the frontier of the credit economy in India. We find niches that are not served or underserved by the banking system," said Mr Rishyasringa. He went on to explain that they develop custom credit products for kirana stores, taxi drivers, small merchants, small manufacturers and online sellers. They develop differentiated underwriting and deliver loans to these entities in a digitised manner that is low on operational expenditure.

He described Capital Float as a product factory to serve new segments that have not been touched by the traditional sector. As a fintech, they are early adopters of technology. "Anything new that comes out that could reduce operational cost or cost of delivery, we are there," he declared. He gave an example. When the India Stack was established, they pioneered the practice of giving a kirana store a loan on a mobile phone in 90 seconds. But he was careful to point out a few things that Capital Float is not. "We are not the largest balance sheet in the country and probably never will be. We don't control the core financial infrastructure of the economy. We don't control the ability to build a current account from scratch, build transaction infrastructure from scratch." Mr Rishyasringa pointed out that banks are excellent in both of these. They have the largest balance sheets in the country and they control the financial plumbing and infrastructure of the economy. The Capital Float portfolio comprises 100% retail assets that include nano and micro loans, 80% priority sector lending and completely new segments where credit is the entry point for a bouquet of financial, non-fund and liability side products that can be sold. "That

is the genesis of any conversation we have with a bank,", he said, adding, "the complementarity is pretty obvious."

Their experience with banks has been very good. They are partnering with several banks. Two things have worked very well for them:

- Alignment and risk and compliance: "We are an NBFC and we started our life as a book building business," said Mr Rishyasringa. For the first two years, they lent money entirely from their balance sheet. Today, when working with banks, they co-lend a portion of every loan. This gives the banks enormous comfort about regulatory compliance, and sharing of risks.
- A full stack approach: Mr Rishyasringa pointed out that a lot of present day partnerships between banks and fintechs are quite superficial; a lead gets generated online and is handed off to a bank. In his experience, that has not worked very well. What has actually worked is the deep level of integration between themselves and their banking partners. "One of our banking partners, IDFC, actually uses our technology as part of their backend when lending on our platform." They are completely integrated as far as risk, compliance, loan management, booking, accounting, etc. are concerned. "We are quite selective and we partner with a few players at a time, but we try and go as deep as possible."

He was also quite candid about what hasn't worked. In many conversations, there is huge excitement at the CEO or MD level to create a partnership; but that energy dissipates exponentially down the hierarchy. That is a challenge. Secondly, large banks have a fundamental aversion to experimentation that prevents the partnership from scaling. When a partner bank agrees to carve out a sandbox and create an experimental culture within the bank to work with the fintech, things move quite quickly.

He responded to Mr Tripathi's comment that the fintech people do not understand the world of bankers. The distinction, he felt, is because banks have a certain amount of regulatory arbitrage. But the customer does not care about that. "As an industry, we need to shift to thinking of players as financial institutions competing in an open market to give the best possible service to a customer." He was of the opinion that the regulator understands the need for more banks to be set up in the country. "I don't think India by any means is fully penetrated when it comes to scheduled commercial banks, and even when it comes to financial institutions. At the end of the day, we are all institutions trying to serve the customer."

Mr Ranu Vohra:

Mr Vohra represented the investment community. He described his perspective on the Indian start-up community, and fintech in particular from three vantage points: (i) as an advisor to some of the transactions that have happened in fintech; (ii) as an investor, through their private equity fund; and (iii) as a financial services company.

2015 was a great year for the banking industry. There were lots of investors, and a flurry of deals. 2016 was a sobering year. That trend seems to have continued. A lot of financing goes to early stage transactions. He considered robo-advisory services in wealth management. Thirty start-ups have received series A funding. "So you can imagine the pyramid which is building up; there is a selection ratio and hopefully out of those thirty companies, there will be two or three which will emerge as the real differentiated companies." The opportunity set is very large, and favourable for investors. Mr Vohra informed the house that

India's digital banking penetration is 15% against China's 67% and US and Japan's 75–85%. Out of the total amount of alternative lending, the share of the US is about 9.7%, that of China 0.21% and that of India 0.002%. "So the sheer size of the opportunity is large," he inferred. He described the lens through which venture capitalists would look at this opportunity. Venture capitalists would feel that if e-commerce, where there were not too many listed billion dollar companies, could create multibillion dollars of value, an area like fintech where traditional financial services companies have enormous market cap and there is a huge opportunity. "I think we're sitting on something which could effectively be a gold mine for the industry. In fact, at Avendus, we feel it is the next very big opportunity after e-commerce."

Venture capitalists, particularly those who are investing in Series B and C businesses, are looking for differentiation. "They are worried about a few things. The cost of capital of these companies is not small. So how well do they survive as they scale up on their high cost of capital?" He added that as per their analyses, the cost of acquisition of customers is still not showing any significant signs of coming down. So while the opportunity is large, there are issues. In the payments business, the regulatory possibilities create an issue because of the uncertainty about what the Government and the private operators will do. "If you are going to stick a couple of hundred million dollars into a sector without having clarity on that, it will be a huge challenge in terms of the sheer larger investments coming in. I am talking of the larger investments that have to happen if this industry has to see the light of day."

The playing field, Mr Vohra pointed out, comprises either local players who will emerge, or global players "who could come in and take everyone's lunch or dinner." He cited the example of Über. It was thought of as a regional model until it started doing very well even in developing markets. "I personally think that in fintech, there is an opportunity for local players to be large and meaningful as opposed to a big global player coming in with its technology and saying that they would control everything here. That could be the interesting angle which could lead to a lot of value creation among the local players here."

But fintechs and entrepreneurs have to accept that there will be challenges. Mr Vohra's advice to them was to identify the right opportunities based on a certain set of conditions. If the conditions change, they have to adapt their model. "That is what life for entrepreneurs is, which will actually determine who of the hundreds of companies in fintech will succeed or not succeed." There may be several reasons for success; one of them will be how adaptable and amenable to evolution a company is, based on the Government's guidelines and the way banks work.

Mr Sopnendu Mohanty:

"As a regulator, we have taken a completely different view from most of the regulators," began Mr Mohanty. "We see fintech as an opportunity," he said, adding, "Being the third largest financial centre in the world, we cannot take fintech lightly." He shared the thinking of the Singaporean authorities. They are looking to see if they can take fintech beyond payments. Only 10% of their portfolio comprises payments; the remaining 90% focuses on B2B, and is trying to bring about a major infrastructure shift. He was of the view that banks are terrible when it comes to infrastructure systems. They spend more and get the worst technology. "So that's where we start looking. Can we make space for fintech to play a more meaningful role in this space?"

In order to do this, they have broadened the scope of fintech. They have put fintech behind all asset classes, be they retail, trade finance, capital markets or insurance. Today, globally,

80% of fintechs are in payments; a big part of the VC drop is because there is no way to go forward with payments. “There is a shift in the VCs’ money to infrastructure, B2B fintech.”

He described the problems that they are trying to solve. One use of fintech is to solve regulatory reporting problems. Regulatory reporting becomes a nightmare because of data. If the back, middle and front-ends of the banks can be digitised, regulatory reporting can get streamlined. He highlighted further possibilities. “Can I take fintech and make bond pricing more transparent? Can I take fintech and make trade finance simpler?” The technology is very deep, and the apps are not superficial. “They are not B2B; they are serious B2C,” he said. Both talent and scale are required. And fintechs by design don’t have scale. “How do you, as a government, provide the scale for them?” he asked. These are the things that Singaporean Government is thinking about. They are working with their ASEAN counterparts to build infrastructure to create a marketplace that can connect tier-III and tier-IV banks. Fintechs will be able to scale up by riding on this infrastructure.

Mr Mohanty also talked about the sandbox initiative that they have set up. “We don’t write a white paper without the experiment being done. Our approach to writing a white paper is to do an experiment.” He cited the example of digital currency. “We are the first central bank to engage local and global banks to do wholesale payment using blockchain.” He believed that policy making should be through experiments and not through white papers, because it may take three years to create a policy, but at the speed with which the technology is changing, it would have moved on by that time. He conceded that there is fear of the unknown. Hence as part of their sandbox initiative, they have invited fintechs and banks to come together, sit with the regulators and define the parameters under which they will operate. They are then given six to nine months to run the product; if there is no systemic risk, it is allowed to go live. “I think that process is far more safe than saying ‘no’ and not doing anything about it, and going for a policy change. I don’t see any other way for any regulator than through the process of experimentation.”

An audience member made an observation that fintechs have a ‘use and throw’ attitude. But they deserve more empathy. The fintech generation has not seen ‘Licence Raj’, and they live in a different world; the generation dealing with them does not understand them. Mr Mohanty’s view was that fintechs also think about the customer, because their own pain points reflect in their solutions. “Do they need to know compliance and regulation?” he asked. He felt that the system should be designed such that it reduces the compliance burden. “I think that is what the Holy Grail will be. Can we build infrastructure where the compliance is inbuilt in the design of the system? That is where we should focus,” he advised.

Session on
'Working in the 2 Speed World'

From L-R: Mr. Amit Kumar, Partner and Director, The Boston Consulting Group; Mr. Rajiv Anand, Executive Director and Head, Retail Banking, Axis Bank ;Mr. Rajnish Kumar, MD (NBG), State Bank of India; Mr. Kiran Shetty, CEO, Swift India; Mr. Taranjit Jaswal, Head – Global Corporates, Corporate Banking, Barclays India and Mr. Murali Mahalingam, Industry Director, Banking and FS, SAP India Subcontinent.

Session moderated by
Mr Amit Kumar, Partner and Director, The Boston Consulting Group.

Panellists:

- **Mr Rajnish Kumar**, MD (NBG), State Bank of India.
- **Mr Rajiv Anand**, Executive Director and Head, Retail Banking, Axis Bank.
- **Mr Taranjit Jaswal**, Head – Global Corporates, Corporate Banking, India, Barclays.
- **Mr Kiran Shetty**, CEO, SWIFT India.
- **Mr Murali Mahalingam**, Industry Director, Banking & FS, SAP Indian Subcontinent.

Overview by **Mr Amit Kumar**:

There is common consensus that speed matters today. The discussion in many boardrooms of banks is how the bank can accelerate whatever it does. "Why does speed matter and why does it matter more?" asked Mr Amit Kumar. He considered what had happened over a 20-year period, and contrasted that with what had happened just over the last two years. "The pace of change has been phenomenal," he observed.

Only a few bank licenses got issued over a 20-year period. In the last two years alone, over 20 licenses got issued. This was unprecedented. As a country, it took us a long time to get to about 150 million smart phones and a certain level of Internet adoption. That number has more than doubled in the last two years alone. "We're here because there is a lot of action in the fintech space," said Mr Amit Kumar, pointing out that 10

years ago it would be unimaginable that there would be a conference to talk about fintechs. India has leapfrogged from being largely a paper-based model to a digital model where more than one billion people have digital identities. UPI and GST have profound implications on how banks operate.

"Let us look at a typical conversation in a bank," he suggested. CEOs pay a lot of attention to financial numbers and market shares. They make demands on BU heads. The BU heads in turn track what is happening in the industry and what the fintechs are doing. They make demands on the IT team. The typical demand is to launch a particular feature in a very short time. The typical response from IT is that it will take much longer. And before the CEO and the BU heads brace themselves for a long waiting period, someone from Compliance informs them that 20 signatures are needed before any release can be authorised. "That is the big issue that the banks have to deal with." They would like to respond to market realities and do things much faster; but things take a long time and often what gets delivered is not of the desired quality.

What is the solution? Mr Amit Kumar suggested three things that need to be in place: Firstly, banks have to change their way of working. "We have to think about working in an agile way." Banks must think differently from the traditional manner in recruiting talent. The traditional model has to change. Last but not the least, the IT architecture needs a rethink.

There is a whole science established around agility. At its most fundamental level, an agile way of working can be described by three or four aspects. Firstly, there is recognition that things have to be done in an iterative manner. There has to be a continuous cycle of planning, testing and integration. These must be broken down into smaller cycles which are iterative. This allows the bank to have an adaptive approach. Finally, there must be an empowered team that is authorised to take decisions. And when this is done right, it improves business outcomes and reduces risks.

In the 'old world', there would be a number of departments working in a very siloed way. Once or twice a month they would come together and form some steering committee to discuss what has not worked. The new model comprises a team which is cross-functional with people from all specialisations. They are empowered to take decisions and resolve problems as they arise. This model is likely to fetch much better outcomes than those delivered by a siloed approach.

"Talent is a very, very important building block," declared Mr Amit Kumar. It needs a lot of attention compared to what it received in the past. "It's not easy. There are a lot of challenges that banks face." Mr Amit Kumar explained that private sector banks face the challenge of tough competition for the talent. Young, enterprising individuals fresh out of business school are more likely to be attracted to a fintech or a tech company rather than a bank. "Banks have not necessarily done a good job of building a brand," he rued. Public sector banks face unique challenges such as inflexibility and compensation. There is a perception that the linkage between performance and promotions is poor. Public sector banks have tried to overcome these challenges by creating two tracks. People continue to join as POs; but then there is a specialists' track that has been created. This often leads to cultural clashes and needs to be managed very carefully.

"The way banks operate has changed in a very fundamental way," observed Mr Amit Kumar. They now have to deal with more channels, partners and ecosystems. Fintechs are providing interesting opportunities. This means that the IT architecture has to be created in a way that is seamless and does not require much effort. The

core system of the IT architecture will have to accommodate two layers. One is the industrial layer where things are done in a slow and gradual manner, ensuring high quality data and working with large vendors. This industrial layer has to co-exist with a layer which allows different partners through the use of APIs and micro-services; allows innovation on an ongoing basis; requires work to be done in an agile way; and deals with unstructured data and small vendors.

In summary, the three important building blocks are figuring out how to work in an agile way, paying attention to the talent block and adapting the IT architecture to the changing world.

Panellists' Views

Mr Rajnish Kumar:

State Bank of India is undergoing a digital transformation. This transformation has two objectives: (i) enhanced customer experience across multiple channels — identical experience at the branch, or in mobile, tablet or Internet banking — and (ii) cost efficiency. Mr Rajnish Kumar disclosed that they spent almost a year only on planning and discussion. It is a two-year project with three key elements:

- End-to-end customer journey.
- Super-prudent financial management.
- Online marketing.

"Our consultants and partners tell us that nothing has been tried at this scale elsewhere," he said, adding that the exercise is complex and requires a lot of commitment, but they have taken up the challenge. He described the project structure: They have the business vertical with its advisors; then they have the technology partner and their own in-house technology team. At least four different sets of people work on the project. "Aligning the thinking of all the four is in itself a challenge." Mr Rajnish Kumar revealed the way they have tried to overcome this challenge. They have used the 'garage' concept: around 10-12 people from different fields sit together, start with the problem statement and then work out the solution. "This is a very new way of working which we have adopted. We never thought that we will be working out of garages." They have set up 12 garages, and each garage has responsibility for planning.

The first challenge is to bring about a change in mindset. Compliance and regulatory issues have to be resolved. For the team to be agile, there is no other way to do it. And they are not touching the core system. "A bank like State Bank of India cannot think of doing anything with our core banking system," asserted Mr Rajnish Kumar. There is a separate layer which will handle all the data and analytics. The right technology has to be used to integrate the two systems. "Scale is another issue. We are creating capacity for at least 200 million accounts," he disclosed, since they handle large volumes and cannot be constrained by capacity.

"Initially, the results are very encouraging and we are very excited about this project," said Mr Rajnish Kumar. "Technology is there; what is ultimately needed is the articulation of the vision and what we want from the business." He observed that the usual complaint of IT is that the business teams do not articulate what they want. Hence they decided that no requirement would be given to IT unless all ends are tied up and the concept is thought through very thoroughly. Technical feasibility, compliance issues, regulation and risk have to be well thought out in the first phase. That is where the garage concept helps, because the inputs from IT are already available when planning and designing. "It is better to spend more time in doing these things before, rather than attempting a piecemeal approach."

He shared his bank's experience on working with partners. "It has been a very good experience," he said. The first thing was to have a board-approved policy. "A policy environment has to be created, and that can be approved only at the highest level." After that it is not so difficult, because there is clarity in the policy and process. They have set up a fund to support the fintechs, and that has also been approved by the board. "We have taken the best-in-class." They are capable of delivering a project of this size, scale and scope. They have set up a programme for collaboration with fintechs and a senior official from their global IT centre has been assigned this responsibility. A lot of companies come with a lot of ideas; but they need to be able to scale and innovate. But Mr Rajnish Kumar felt that although the earlier results have been encouraging, ultimately only time will tell. They have certain key deliverables and measurement criteria which will determine the success of the project when it is complete.

Even today, despite all the archaic laws, State Bank is considered to be well ahead in its digital transformation and adoption of technology. Mr Rajnish Kumar explained that the process is different when building a mainframe system. The challenge in selecting a fintech partner is in ensuring that they are able to scale up in two or three years. But since the bank is owned by the Government, there is no way to get out of the guidelines that apply to banks. "Despite that, you can do things, and we are doing it." State Bank's digital transformation journey is of very large scale and scope; and they are following the process despite all the CVC guidelines. Perhaps, he felt, if they were not a public sector bank, they could have executed the project a little faster. But he was quite sure that for a project of this size, even a private sector bank would take almost the same time.

Mr Rajiv Anand:

Digital is about customer experience and cost. Technology helps in getting the balance between operational risk and customer experience. It enables banks to do things that they were not able to do in a paper world. "That, to me, is in a sense core or key when you think about digital; but unless you digitise the back-end, it is equivalent to lipstick on a pig," declared Mr Anand. Axis Bank embarked on a fairly large project of digitisation of the back-end in consultation with BCG. They broke down the processes into hundreds of customer journeys to see how they could be digitised. He gave an example. Two years ago it would take anything between 7-10 days by the time the customer filled up a big form, the bank processed it and the customer received his cheque book. Through digitisation, they were able to bring down the time initially to one or two days, and now it is almost instantaneous. That is the kind of transformation that has improved the customer experience. He gave another example. Two and a half years ago it took seven days to open an account. Now it takes eight hours and that is considered too long. "Customer expectations are constantly changing," observed Mr Anand.

Axis Bank is embarking on the use of artificial intelligence, robotics and machine learning at the back-end to be able to get greater efficiency. "Phase I was going through this whole process of digitisation. Phase II is to be able to use machine learning etc. to ensure that error rates are reduced dramatically. Hopefully over a period of time, we are able to eliminate the cost at the back-end as well." Many banks, Mr Anand commented, tend to believe that having an app at the front-end makes the bank digital. "I don't think it works like that. You have got to think of the entire customer journey from the app right to the back-end, including risk and compliance."

He shed more light on customer experience. “Customer experience is no longer about what State Bank is doing or what Axis Bank is doing. It is what Über or Amazon or Flipkart are doing that is driving customer experience.” Therefore it becomes critical for banks to understand how some of these experiences are being delivered. It also becomes imperative for banks, if they want to be relevant as far as technology and customer experience are concerned, to be able to engage with the start-up community. Mr Anand explained that this is the primary reason why Axis Bank set up its innovation lab called Thought Factory in Bengaluru. “We literally see hundreds of start-ups on a monthly basis and work with a handful of them in the space of artificial intelligence, payments and other technology. The experience is very enriching.” Although there is a high level of understanding of both technology and customers’ problems, it is challenging for a large organisation to combine both components when working with start-ups. “We are struggling through that. We find that scalability becomes an issue. There is very high quality talent but delivering in terms of timelines etc. certainly becomes an issue.” There is a formal structure for start-ups to be able to engage with the bank through Thought Factory.

He also highlighted that as a bank, they are working in a highly regulated environment. Ultimately, they are in the business of trust; data security is an imperative. Hence they are still grappling with the question of how much data they can expose and how to deal with issues around data security. So while he agreed that open APIs will unlock a whole new world to them and their customers, they have some reservations about them, particularly with regard to cyber security. “How we get that pipe from the unregulated space to the regulated space such that there is no operational or reputational risk is a key challenge that we are working through.”

There are two types of projects. For large, multi-crore projects banks have to go with the requisite process. But there is also a process of experimentation. Thought Factory enables Axis Bank to experiment in small bits. Their mandate is to be able to experiment with many start-ups at any point in time. “But we also want to fail fast,” revealed Mr Anand. “If that does not work out as anticipated, we kill the project.” Hence instead of spending crores of rupees on a project, they spend a few lakhs. If at the end of three months they think it is worth taking it to the next level, they go ahead and do that. But if they feel it is not working, they kill it and move on to the next experiment. Mr Anand was of the view that nobody in the fintech space knows what the world will look like 18-24 months from now. Therefore he advocated little bits of experimentation in a controlled environment, where banks can control the cost, and, most important, have the courage to kill the project if it is not working.

Mr Murali Mahalingam:

“The business problem is there is fragmented IT architecture. Eighty to ninety per cent of the cost is spent on keeping the lights on,” declared Mr Mahalingam. He felt that very little money is available for innovation and there is a need for agility. “Where we come in is with an agile platform. We call it a smart platform.” He went on to explain the meaning of ‘smart’ in this context. The first aspect of a ‘smart’ platform is scalability and security. He gave the example of PayPal. They are growing at 30%, with 400 million customers in 190 countries. They were looking for scalable architecture and they chose SAP. Scalability is important; and security is the most important thing when considering a platform. A platform needs to be scalable, and highly secure. The SAP platform has also been selected by Reliance Payments Bank for its scalability.

The second important aspect of a 'smart' platform is modern architecture, including API-based banking and micro services with in-memory computing. All this gets enabled when the platform is offered as a service. Mr Mahalingam explained this with the example of Emirates Bank in the Middle East. Today, a person desirous of a home loan has to go through four or five properties before choosing a home. Emirates Bank used the SAP platform and came up with something called 'Augmented Reality'. Through this, they were able to simulate the entire experience of buying a home while sitting in the branch. The customer can choose whichever property he likes. He already has an account in the bank; the e-KYC gets done, and his credit score is made available. He is then able to finalise the property on the spot. This provides him with a very seamless experience of banking. "This is where the power of technology comes in to provide augmented reality connecting IoT and mobility to the customer."

Next, he gave the example of a smart kitchen. This is more relevant to the urban population where there is very little time to make purchases. "You have some need in the kitchen. Using sensors and IoT, you can actually look at the availability of the grocery. It sends out a request to Big Basket and then the payment gets debited from the bank." Mr Mahalingam emphasised that the important aspect is agility. SBI Buddy chose them because they wanted to reach out to the customer in a very agile manner. The app was launched in 13 languages and is being used by about a million customers today. This is a clear example of scalability.

He disclosed that while creating a platform, it is very important to reimagine the process. Blockchain becomes very important. "We did a POC which is the first of its kind in the world, where we have been able to reduce the payments from three days to six seconds by doing a payment from ATB Canada to Reisebank in Germany." It is one of the use cases where the entire blockchain has been used.

The Commonwealth Bank of Australia is the largest bank in Australia. They leveraged the SAP platform and have been able to grow their business. At the end of the day, it is all about cost. The technology must result in a TCO reduction to the bank. If that does not happen, nobody will invest in the technology.

In summary, the need of the hour is a smart platform which is scalable, modern, agile, which helps the customer reimagine the process and reduces the TCO. Mr Mahalingam informed the house that SAP has a co-innovation lab at Bengaluru which runs as a start-up. The fintechs come with ideas, and then follow a very structured programme. The first thing is to get the idea right. Next, and more important, is to see that a minimum viable product can be created. Finally, they have to see whether the idea can be monetised and whether the bank or fintech can take it forward. The SAP model is one of collaboration with banks and fintechs. From a platform perspective, they work with larger banks to get an FSI community that they have created for APIs. They get insights from senior bankers about what services can be created from a banking platform standpoint, and consumed as APIs. The business has to dictate what needs to be done. "We are the platform of choice for growth and for innovation. It is a complete win-win," said Mr Mahalingam as he concluded his presentation.

Mr Kiran Shetty:

Mr Shetty began by talking about the 2-speed world. "I strongly believe that India is going to lead the digitisation theme across the globe and that journey has already started," he said. "But," he cautioned, "as we move into those journeys, I think it's very important for the industry to

come together and look at some of the common platforms and develop standardisation." He cited an example from Europe. In Europe, the securities market wanted to get to real time settlement; they were talking individually to different constituents within the ecosystem. It would take their projects three to five years to get digitised. On the other hand, SWIFT started to hear perspectives from different people, got them together and created a standard forum. A standard protocol was created for the industry, and they went from scratch to real time settlement within a window of 12 months. "In our country, we need to move in that direction."

Mr Shetty observed that there are many common themes emerging, such as the wallet ecosystem as well as other digital platforms that connect with the banking world. Wherever there are common themes, he advocated that the industry comes together and creates those forums. He further suggested that there are companies like SAP that can help; that will save time and cost and accelerate the digital agenda. "I definitely believe that that's one area that probably requires a bit more attention than what is paid today," he asserted. "There is a mad rush and there are different things that are happening at different levels, which should be eliminated."

Cyber security is a very important topic. "The cyber threat is real and it is going to increase," prophesised Mr Shetty. He disclosed that they have exposure to over 220 countries, and can see what is happening in that environment. In his opinion, 90% of the cyber compromises across the globe have happened due to the absence of a few basic things. One reason is password hygiene. Another is creation of firewalls around the production environment. It is dangerous for people to be able to access the production environment from outside. Yet another reason is giving access to put a USP into the port and dropping malware. "If basic stuff and hygiene were maintained, 90% of those issues would not have happened." But he also cautioned that once those challenges are arrested, the cyber threat will graduate further and manifest itself in a different way. Cyber security is the cost of doing business going forward; it should be projected as a business expense. Just as companies do business analytics, they should start focussing on cyber threat analysis to determine who is accessing their website, how they are accessing it, and what is happening there. There are companies that are able to do that now. He ended on a sombre note. "I think the time has come where more attention needs to be provided to that issue. It has to become a business issue and I think the threat is only going to magnify and increase from here on."

Mr Taranjit Jaswal:

One of the key things that has happened globally with banks in the western world after the financial crisis is a dip in their discretionary spend. Barclays being largely a technology company with a banking balance sheet, has experienced a crunch in the amount that it can spend just to maintain its existing set up. That is the reason, Mr Jaswal explained, that a lot of banks are trying to patch up, maintain and run their legacy systems. At the same time, there has been a lot of innovation over the past few years, especially around digitisation. "How do banks really compete with that?" he asked, and then answered, "That has been an unbundling of banks. The only way banks are really surviving is by trying to get deeper into their customers' wallets and cross-sell across products. That's how they are sustaining their own client model."

Every bank has core architecture on top of which open API systems are built. Mr Jaswal disclosed that Barclays has pretty much the same model. They have a legacy system wherein large IT vendors work with them in the bank itself. In

India, they employ close to 28,000 people; a large number of them work on technology which is used globally across their corporate investment as well as retail banks. “What we are trying to do is just work with a lot of partners globally and collaborate rather than just try to innovate everything on our own,” he said.

Barclays has a well-established fintech innovation lab called Rise. It was established a few years ago in London. Currently the bank has seven Rise centres globally. The most recent was a centre that was opened in Lower Parel, Mumbai. Describing it as a co-working space for lot of fintech companies, Mr Jaswal suggested, “I am sure there will be quite a few fintech companies here which would have heard about Rise.” He revealed that the centre got over 6000 visitors in less than a year. “We have got 140 seats for co-working space out of which 90% are filled up by 40 fintech start-ups.” The company gave them real life problems that its corporate bank and wealth management departments have been facing. A few weeks ago they had the first demo wherein all those start-ups came out with their solutions for those specific issues. “The whole idea about Rise is that we use it as an open innovation platform since we cannot do everything on our own.” So, explained Mr Jaswal, they try to partner with some of the start-ups and give them a use case for which the start-ups can work with the bank. If they feel that the idea is globally scalable, they give them a contract and see how much it can be scaled.

A short time back, Barclays hosted one of the largest hackathons in Mumbai. It was a two day event with 700 participants, held simultaneously in Mumbai and Manchester. The idea was to open up the APIs for their UK payment service directive and see how start-ups could help them work on those APIs. “As we go forward I think we will see a large number of banks doing the same,” Mr Jaswal prophesised.

Fireside Chat I:
Promise of Program Lending

From L-R: Mr. Ashish Garg, Partner and Director, The Boston Consulting Group; Mr. Ramit Arora, President and Co-Founder, Biz2Credit; Mr. Harjeet Toor – Micro Banking, Cards, Retail and MSME, Loans and Financial Inclusion, RBL Bank; Mr. Karnam Sekar, DMD and Chief Credit Officer, State Bank of India; Ms. Kalpana Pandey, CEO CRIF High Mark; Mr. Amit Sachdev, Co-Founder and CEO, CoinTribe and Mr. Alok Mittal, CEO & Co-Founder, Indifi Technologies Pvt. Ltd.

Session moderated by
Mr Ashish Garg, Partner and Director, The Boston Consulting Group.

Panellists:

- **Mr Karnam Sekar**, DMD and Chief Credit Officer, State Bank of India.
- **Mr Harjeet Toor**, Head – Micro Banking, Cards, Retail and MSME Loans and Financial Inclusion, RBL Bank.
- **Mr Amit Sachdev**, Co-Founder and CEO, CoinTribe.
- **Mr Ramit Arora**, President and Co-Founder, Biz2Credit.
- **Ms Kalpana Pandey**, CEO, CRIF High Mark.
- **Mr Alok Mittal**, CEO & Co-founder, Indifi Technologies Pvt. Ltd.

Overview by **Mr Ashish Garg**:

Mr Garg began by laying some context to the discussion. “There are many issues in classical lending,” he said. “Banks and NBFCs have been serving a large part of the Indian population and the growth has been spectacular.” But, he pointed out, the existing service providers face challenges in rural lending. For one, the product is not customised to farming income, which is seasonal; it is not suited for regular EMIs. Secondly, there is very high reliance on documents. A lot of documentation has to be put in place before a loan is approved, despite many attempts being made by the Government. “It is a very high cost to serve model. If you have a ticket size of less than rupees five lakhs, the operating cost to acquire and serve a customer becomes very high.” The recovery process is very manual and cash-intensive, which again leads to a lot of resources getting deployed. How banks

read the credit and work with the client could result in high NPAs. Banks then naturally have a low inclination to lend. It is a vicious cycle. While banks and NBFCs have done a great job in serving many segments of the market, there are segments which they do not serve well and many of those customers have either to rely on the informal sector, or be denied of access to credit.

For the SME sector, a typical TAT for giving a loan would be 60–90 days. It will be 30–45 days for the micro and JLG sectors, and 15–30 days for a personal loan. The cost to serve the SME sector goes up as the ticket size goes down and the clients get more dispersed. "There are lot of inefficiencies both from the lenders' side and also from the customers' side," Mr Garg rued. This is where the fintechs come in and complement the system. "Fintechs can reduce TATs to days, hours, minutes. They can operate at one tenth the cost using the entire India Stack," he remarked. This is beneficial for the whole system.

Mr Garg identified five themes for the day's discussion:

- Fintech models — who will prosper, and what will be the size.
- Risk management.
- Market expansion.
- Partnerships — do banks and fintechs see each other as predators, prey or alliances.
- Regulatory and policy support, and how to mainstream this evolving ecosystem.

China took a lead over every other nation in 2015 itself, and growth is expected in the range of 40–45% year-on-year. By 2020, they are expected to be USD one trillion of origination, involving fintechs in some way. There are many kinds of fintechs, working on different niche platforms. Some of the big ones work with small business loans; others work around merchant cash advances; there are factoring, and P2P lending specialists; tech companies like Amazon are entering the lending business. India too has seen varieties of models emerge, such as market places; aggregators; and those who do a combination of different things, across the entire value chain.

Some work needs to be done to convince the banks that fintechs as an industry can bring in more value in a low touch model. "Everyone agrees that in high touch, there are some complementary elements, but how can you bring that up in a low touch model where there is still some walking on the bridge to be done?" asked Mr Garg. Banks have their own set ways of looking at things. They don't have fine segmentation and they can't look at very small niches in the market. He felt that every fintech will take into account the way they think about data when considering risk management. "To some extent they are absolutely right." He gave the example of OnDeck, a large US fintech. They serve three different customer segments: restaurants, landscaping companies and plumbing companies. The cash flows for each of these segments are very different. Therefore, their ability to pinpoint what matters, and look for signals in the data has to be very unique. They have developed their proprietary scoring models using about 2000 data points per application and over 100 external data sources. They claim to have 10 million small businesses in these databases.

In India too, as the infrastructure is laid out, the Government is building a lot of platforms. Information is available and is starting to be used. But the models have not seen a full cycle. Fintechs are still a new entrant into our financial world; and the volumes are low. Mr Garg sought to know how these models could mature, and

what fintechs need to do to create confidence in their business models. What kind of margin would they be able to charge over a bank's lending rate? "Asia seems to be one of the more competitive markets," he observed. Fintechs seem to be able to mark up prices well beyond bank rates. It could be that they are serving customers who are otherwise very under-served. But then, "this is killing the golden goose, because if you create such margins, either the banks will take over the market, or there will be other efficiencies that will draw in the market." He also wondered whether fintechs face the problem of disproportionate allocation of money towards marketing and customer acquisition. The customers come from the banks. The latter have the competitive advantage around data, channel access, multiproduct solutions, and low cost of funding. Many banks are becoming part fintechs. Access to the infrastructure is allowing banks to do a lot of things. So he conjectured about how banks and fintechs will see this partnership — whether they will talk to each other and understand how one can be useful to the other.

With these words, Mr Garg commenced the discussion and gave the floor to the panellists.

Panellists' Views

Mr Amit Sachdev:

Mr Sachdev was asked how large the origination by fintechs in India would be by 2020. His view was that there is a huge latent need which is not being met today because of a lack of products or processes. He put that figure to about 500–600 billion dollars. "My sense is that the fintechs will have a huge role to play in creating that market, and a large part of it should ideally be created in partnership with banks," he said, since "banks are the institutions with the lowest cost of capital." They are the institutions that can reduce the cost of lending in that segment. Mr Sachdev felt that the white space penetrated by fintechs would be anywhere between 25–50 billion dollars. "The white space that exists in China is very similar to India," he informed. "I would guess that India would pretty much follow China and I think 25 to 40–50 billion dollars is where India should be in about five years' time."

He also felt that "there is a lot of romance around the number of variables that my model uses." The US, which is a lot more evolved, understands how many data points are really useful. But he conceded that it could be anybody's guess at this stage. People should be very careful about what insights they are looking for and use the available data. That is the best way to address the problem.

Most of the new models that came up in consumer markets earlier were trying to create a new market and new behaviour. They recognised that a latent need existed and were trying to latch on to that need. On the lending side at least, a huge informal market already exists. A large number of moneylenders are already doing that work, but inefficiently. A lot of the lending start-ups, including CoinTribe, are trying to bring that informal market into the formal arena and make it more efficient both in terms of time and cost. "As of now, I believe that most of them have been profitable on the gross margin basis," he disclosed. "I would guess that the amount of burn required in these models will be much less than what we have seen."

A lot has changed over the last two years, Mr Sachdev observed. He revealed that the first time his team went to a bank to discuss partnership, they were not received well. Today, there is a lot of excitement among banks about partnering with them and thinking about new models and new products. Fintechs bring a lot of nimbleness to the technology platforms, and hence the ideas that banks already have can be taken to the market much faster. There is more focus on the complete granular retail and granular SMEs, given

the pain points that the banks have suffered with the large corporates. But they have got to be very careful about who to partner with, he cautioned. A partnership between a bank and a fintech is like a marriage. With the amount of technology integration that it requires, there needs to be openness about how credit models work. "We would like to be very careful about doing the right due diligence on who to work with and who not to work with," he stated. He revealed that it took them almost seven months of efforts to establish their first partnership with a bank. "But now that cycle is cut down a lot," he said.

All fintechs have tried to focus on two or three segments. Some start-ups in the P2P space have taken a call to bring efficiency into the JLG segment through individual rather than group lending. He felt that while that is an interesting model, one has to be able to assess the risk well. His company has taken a call not to go after that segment right now, since those capabilities are not easy to build. In addition, the banks that they partner with have also to be comfortable in taking on the risk. He also felt that a great degree of inefficiency that exists in the small business segment needs to be addressed. A lot of start-ups are focussing on small businesses; they are the natural, low-hanging fruit. He predicted that it is just a matter of time before the fruit is eaten, and then the start-ups will look at the micro businesses.

Mr Harjeet Toor:

Mr Toor felt that there would be major expansion of the market, and fintechs will play a significant role. Today, the penetration of banks into rural areas is abysmal; fintechs will capture that space. "If I have to put a number, in the personal lending space, in about three to five years we should start looking at about 30%–40% of the total business in terms of customers." That number may be slightly lower, say about 20%, for the MSME sector. But the biggest challenge, in his opinion, comes from the rural sector. "That is where we will have to see how we develop the model because it still will remain high touch whether we like it or not." Fintechs must complement banks in that space. While pure origination may be challenging, they can certainly work on improving the profitability. Fintechs can look at alternative data, create algorithms and build models. But it requires patience. "It takes a good two to three years and various cycles of the model for it to have a certain amount of predictability," he averred. Merely testing it on 200 or 300 customers is not enough. The only way is to run various pilots for a couple of years before they can confidently claim to have a model for this segment.

He addressed the question of how much a customer would be willing to pay for convenience and ease of access. When it comes to small ticket loans, they may be willing to pay a good amount if they can get the money quickly. Compared to the interest they would pay, the amount appears to be astronomical. "But it is economical and if it does not pinch, then the customer is able to use that money for more productive use." It is different when it comes to standard loans where the convenience premium is low and risk premium is high. In that space, if the market can be expanded and a customer going to a moneylender can be convinced to go to a bank, the fintechs can charge more from the banks. For smaller loan amounts, the issue of convenience creeps in. He gave a quantitative illustration: for an unsecured MSME loan of Rs 30–40 lakh being routed through a fintech for a bank customer, a mark-up of 1%–1.5% should be sustainable.

With respect to the bank lending rate against the expectation, Mr Toor felt that it is something that we need to think about as a country. He cited the example of Kabbage. "Kabbage operates at

70%–80% or even 120% interest rates and they write off 30%–35%; but what they are able to do is get a segment into the market which would otherwise have found it very difficult to come."

He revealed that RBL believes that partnership is the only way to go forward. "We don't see fintechs as either adversaries or as somebody who is going to grab away our share." The need is mutual, possibly because of RBL's stage of development as a bank. They are excited about the niche use cases that the fintechs have. "The technology, and speed at which they are able to implement and change technology, is something which is admirable," he said. But he highlighted some gaps in the way the fintechs work when compared to the banks. Their regulatory understanding, especially in the field of lending, is weak. "There is a boundary which you draw when it comes to regulation," he declared. Sometimes, funding pressure for the company keeps the promoter busy and that tends to derail things. Finally, scalability is an issue. "We have not yet come across any one of our partners who has been able to break through that scalability barrier," he observed, while acknowledging that one or two of them are close to meeting that goal.

On the individual side, there is enormous potential and lots of work happening. Credit bureau customers are easy to tackle because they have a credit history, and therefore financial institutions can take a spot decision. But they will either need to get the customer's consent to get the data off the phone, or tie up with a telecom or e-commerce partner and build up a score on that basis.

Mr Alok Mittal:

"I agree with Harjeet that fintech will go into areas which are currently not being served," pronounced Mr Mittal. "The point where I disagree is that about high touch." He justified his view with the observation that the whole promise of fintechs and programme lending is to be able to serve customers in a low touch manner. In particular, they can go after pockets that don't have very high revenue per loan. A loan may be indexed by the size of the borrower, or the duration of the loan. In the current banking system, a three year loan is a short-term loan. "What about the six month or twelve month loan or a revolving working capital requirement?" he asked. The revenue yield on such loans could be fairly low; it is technology that will bring in the required operating efficiency. Hence, Mr Mittal noted that some of the fintechs that he is familiar with do not harbour a desire to become high touch models, but to use technology effectively in order to drive low revenue yield and tap underserved opportunities.

The conversation about alternative data often swings between two extremes. On the one hand are the bank statements and tax returns of the customer. "If I have that, then the fintech does not need to exist. State Bank of India is doing a great job of serving those customers and will continue to do so." At the other extreme is data that shows the number of Facebook friends a customer has, and uses that to predict repayment probability. "I think there is so much low-hanging fruit in the middle which we need to utilise," said Mr Mittal. Some of the fintech companies use data that is present on mobile phones and other streams of data. There is a fair bit of emphasis on check out loans. However, even banking turnover or income tax returns pose an income estimation problem. Bureaus have their own income estimation tools. But Mr Mittal felt that those are at best growth estimates based on what EMI has been paid. He felt that bureaus need to do credit scoring. He revealed what his company does. They extract data from the supply chains of specific industries and figure out the transaction throughput; and then, given the marginal structure of the business, they estimate the income. "We are saying, 'can I

solve this problem of income estimation better?' Once you start to do that, you have bounded the downside risk of the model significantly."

Mr Mittal disclosed that his experience with the venture industry is that "there is always a land grab mindset that ails that industry." He hoped that it would be less pronounced in the financial services industry domain, because, unlike the e-commerce space, most investors believe that this is not a 'winners take all' business. Hence there is no merit in awarding money on digital transactions. "We are seeing some of those signs where the money is being spent in a disproportionate manner," he informed. He felt that some of those players will win because they have created a brand and a place for customers to walk in. Correspondingly, the market will see product innovation that will exploit the niches that exist. "The market here is so large that at some level, the notion of competitive behaviour is a moot point," he said. The question is how the industry can collectively address the 500 billion dollar gap. As soon as they start seeing that as the goal, all financial institutions will align with each other and try to tap that opportunity.

Banks in India move much faster than those in the US. According to Mr Mittal, the chief barrier in partnering with fintechs is around the process. "Business heads have told us that they can manage credit but they cannot manage compliance." Mr Mittal felt that different banks are at different stages of evolution in the partnership mindset. Citing his own experience, he said, "We were asked for a full life cycle solution, monitoring, early warning signals, all of them, and we present all that; what gets through at the back end is the ESA agreement. Banks have to realise that those two can't go together." Hence, in his opinion, the co-creation mindset is important. That also helps address some of the scale issues, because the investment is in a longer term milestone.

Mr Karnam Sekar:

There is a huge market, especially when the informal sector is included. But then, collecting information about the informal sector is a great challenge. Mr Sekar revealed that it is the main problem that traditional banks face, and wondered how the fintechs handle it. "We have established ways to collect information in the organised sector," he said, adding that a customer's credit-worthiness and requirements can be ascertained. But that is a huge challenge in the informal sector, and State Bank handles it in its own way. Mr Sekar felt that if fintechs can come up with a good model to address that challenge, which would be good help to the industry and aid in funding the unfunded sector of society. "But are we equipped?" he asked.

He also pointed out that almost all fintechs are only trying to gain some share of the existing pie. "All of them are struggling in the organised sector. They are not trying to expand the pie." According to him, the real challenge lies in going out and collecting the information where it is not available, and then establishing credit-worthiness. "That is the challenge, and that would be where the real market lies," he declared.

There is no readymade model that suits a particular market. It is an evolving process and will take time to stabilise. "You can't have a 100% perfect readymade model from day one." Mr Sekar felt that fintechs may not be able to fund the models in a large way. They will have to offer their services to other funding agencies through technology. "You need to partner with major lenders, maybe NBFCs, MFIs, maybe banks," he advised. The fintechs would be able to help such institutions in sourcing the applications and improving the TAT. Post-sanction is another critical area where fintechs have good scope.

Speaking about alternative data, he disclosed that State Bank has some practical experience.

"Our experience shows that really useful information is not coming out, especially where we need it the most." He explained that what they need is information from smaller areas situated in tier-2 and tier-3 cities. "I don't know whether the companies are really equipped to give that alternative, useful data and whether we will be able to harness that. No new information is coming. Actually, we want that." In listed companies, the knowledge is shared by everybody, and alternative data is not needed. It is needed when it comes to smaller cities, lesser known companies, and especially on the smaller segments. This is one area in alternative data provides very useful information in post-sanction and even pre-selection. "As a lender, I value that information very much, but that data has to come in a useful form," said Mr Sekar.

He believed that fintechs charge a 20%–25% mark-up over the bank rate. It also depends on the customer segment that is unfunded and wants to enter the formal sector. He gave the example of a vegetable vendor who goes to the market in the morning. By the end of the day, he does not mind paying possibly 1000% compounded value, because he wants the money at that point in time; he makes money and gives it back. Mr Sekar claimed that he personally knew many such cases; but he wondered whether that portfolio could be scaled up to avail of the 25%–30% rate of interest. Risk would be another factor. "Therefore, both things put together, I think interest rate-wise you should have proper systems and always look up at a portfolio of higher size to see whether it is sustainable," he suggested. If the business model is sustainable, the spreads will need to be scaled down. "You can't be expecting 20%–25% on the entire portfolio for a longer period of time. That is not a reasonable expectation."

What is exciting about fintechs is that they bring in a lot of energy with new ideas, new concepts and new models. But it is difficult to scale up. "Whatever you do, you do it at a very small level, 30–40 crores portfolio which will operate and work well; but we are talking about 14–15 lakh crores. How do we scale it up?" That is where many of them fall behind. And there will always be a mismatch in the speed. Going forward, can fintechs do a transaction analysis and help bankers to identify the stress that may come six months to a year ahead? "That is our expectation, where so far I have not seen any fintech company coming up."

Mr Ramit Arora:

"We are the third largest player in SME lending in the US behind OnDeck and Kabbage," Mr Arora stated in his opening remarks. In his opinion, the models developed by OnDeck and Kabbage have still not matured. He advised Indian fintechs not to be in a rush; they must take their time, because it is a very difficult market especially when it comes to small business lending. "You have to test out your models, you have to see how they are working out," he advocated. He inferred that companies like OnDeck are struggling because they tried to expand too quickly, and their models never matured. CAN Capital and The Receivables Exchange tried to grow very fast and had to shut down their lending operations. "So scale is one thing, but I think testing models is the most important thing," he declared. Once that is done, scaling becomes easier; and if the fintech survives long enough in the market, it will be able to reduce its cost of acquisition, build a stronger operation, and succeed in the model. "That's what we have to learn from the banks," he suggested. "If the banks have a credit model, they are not going to take unnecessary risks just to increase their lending book."

He was asked to share his thoughts on what fintechs in the US charge as a mark-up. "In the US, especially in SME lending, the margin is

much higher because lot of banks withdrew from lending after the financial crisis in 2008."After that the mark-up has been between 15% and 20% of what the bank would charge. They count the convenience, access and better customer experience, although Mr Arora conceded that they also account for a higher default rate. That is why a company like OnDeck can still sustain itself despite a 14% charge for NPA rating. The rates are 35% to 40% in terms of the API and business lending is not a regulated market there. The business owners are opportunity cost-driven. If they see an opportunity, they don't care about the cost. "I think that is the difference in the mindsets," he said.

Globally, banks are sceptical about how technology will be integrated; they are gradually changing their point of view. "In the US we partnered with Citibank. We started with the front-end, providing a good customer experience on mobile as well as web-based platforms," Mr Arora revealed. Now they are graduating to integrating with their underwriting engines and legacy systems to provide faster decision-making. "It's a step-by-step approach; you have to be patient. Once you reach a certain scale, the bank respects you," he advised, adding that when the model has been tested enough times, the banks will be eager to even buy loans or use the technology of the fintech. He believed that fintechs have better technology and are able to consolidate data sources. This helps banks in making better decisions.

Kalpana Pandey:

CRIF High Mark works with millions of data elements like a bureau. "There is a lot of expertise that we have globally. Even in India, our credit bureau system today has more than 900 million known records," declared Ms Pandey. Based on that data, they are able to generate predictive power and create score cards for institutions. "We are working with some of the fintechs so that they can actually improve the entire end-to-end process." She felt that the improvement in technology as the models mature will increase the confidence levels. The CRIF India team can work with banks and fintechs for their entire credit lifecycle on the data front, the analytics front or the solutions front.

In India, as a credit bureau, they are governed by the Credit Information Companies Regulation Act (CICRA). As per the Act, they get base data from credit institutions. "Based on that, we create scores using multiple platforms." Ms Pandey observed that internationally, credit bureaus get a lot of alternative data. This includes utilities data, telecom data, rental payment data, tax data and even legal cases data. Such data elements help to improve the power of prediction when there is too little data, or when the customer is new-to-credit, which is a large segment in India and one which fintechs are focusing on. This alternative data can give a lot of insight about the customer's behaviour. And the information can be used by any scoring model to arrive at a decision. "Based on that, you can actually have some kind of automation in your entire credit underwriting process," she said.

She also informed that there are ongoing discussions with the RBI and the World Bank on the legality of the approach and how other countries have evolved. "If this data starts coming through authorised channels like the RBI or regulatory bodies, it would be more reliable and more complete." RBI has set up a committee with stakeholders from telecom and utilities companies. Ms Pandey disclosed that she is a part of this committee. "We deliberated on various things like data privacy and regulations which today apply to the telecom operators." They also discussed practical aspects such as electricity bill payments. Many times people rent out their apartments; the electricity bill payment

data should not impact the credit history of the owner in whose name the bill appears. The committee is working on the regulatory changes that need to be done at TRAI or DOT, and the data will come to the bureau once that is done.

There is another full set of data on the social platform. “There, we believe that that data should be based on customer consent,” said Ms Pandey. The social data issue will involve data privacy, confidentiality, and reliability. Accordingly, it should be treated as different from alternative data.

Fireside Chat II: 'On Tap, Cashless, and Contactless — The Path to Ubiquitous E-Payments'

From L-R: Mr. Prateek Roongta, Partner and Director, BCG, Mr. Sudhakar Ramasubramanian, Managing Director & CEO, Aditya Birla Idea Payments Bank Ltd., Mr. Sameer Nigam, CEO, Phone Pe, Mr. Naveen Surya, Founder and Managing Director of ITZ Cash Card Limited, Mr. Asit Oberoi, President and Global Head, Transaction Banking Group, Yes Bank and Ms. Sujatha Mohan, Head, Digital and New Initiatives at RBL Bank.

Session moderated by
Mr Prateek Roongta, Partner and Director, The Boston Consulting Group.

Panellists:

- **Mr Sudhakar Ramasubramanian**, Managing Director & CEO, Aditya Birla Idea Payments Bank Ltd.
- **Mr Sameer Nigam**, CEO, Phone Pe.
- **Mr Naveen Surya**, MD, Itz Cash Card Ltd.
- **Mr Asit Oberoi**, Group President and Global Head, Transaction Banking Group, Yes Bank.
- **Ms Sujatha Mohan**, Head, Digital Initiatives, RBL Bank.

Overview by **Mr Prateek Roongta:**

"The payments space in India has seen humungous disruption over the last two or three years. A lot of this disruption has been caused by the entry of several new players in this space, most of whom have been non-banks." With these opening words, Mr Roongta went on to explain that this phenomenon has caused a huge shift in the value-capture; the value from payment transactions is now captured at multiple spaces by multiple parties involved. The entire ecosystem and economic environment of payments is shifting. Consumer behaviour too is changing; consumers are now getting used to a very different world, they are ordering groceries and taxis on their mobiles. "So why not payments on mobile?" More and more people are becoming comfortable with mobile or Internet payments. Through all of these changes, banks have been forced to think differently. They have

been forced to offer new products, solutions and services to the consumers and do things digitally and electronically.

He described the non-banking players as telecom companies who have got into the payments business through wallets; wallet providers under the PPI Instruments circular of RBI; e-commerce companies which have launched their own captive wallets; and most recently, payment banks which have been licensed by RBI to set up businesses. All of them focus primarily on digital and electronic payments. While digital payments are still a small proportion of the total payment transactions in the country, they are growing rapidly. Wallets have become really popular. "The number of transactions happening on mobile wallets today is greater than the number of transactions happening on the mobile banking apps of all banks in the country put together," Mr Roongta informed. And Indian consumers are very comfortable transacting on these new-age platforms.

Mr Roongta informed the house that BCG did a survey some months back to understand what consumers use these payment instruments for. The general belief is that a lot of these mobile wallets were started by either telecom companies or value-added service companies; hence the focus was only on mobile top-up. But consumers are using wallets for things like utility bill payments, e-commerce, travel booking and to some extent for in-store payments as well. The other common belief is that the usage of these instruments is driven by discounts and offers. Offers are still important; but convenience is now beginning to outscore offers. Offers are important to on-board customers, but customer retention and continuity are driven by the convenience of these payment instruments. "That is going to be a critical theme as we think about how we drive more and more adoption of digital payment instruments." They have to be convenient, intuitive and user-friendly to retain people on their platforms.

One of the game changers for the movement of the payment economy from cash to non-cash will come when point of sale transactions move to a non-cash medium. The main categories in which consumers are comfortable using non-cash instruments are food, entertainment and organised retail. Consumers are comfortable using digital instruments at points of sale if the payment transaction is as convenient as cash. Hence, Mr Roongta pointed out that it is imperative for the service providers to come up with solutions which offer that convenience. But for that to happen, it is important for the acceptance infrastructure to grow and become ubiquitous. In the BCG survey, 75% of the merchants interviewed said they were comfortable using digital or plastic payments because of its convenience. They would be able to avoid the hassle of dealing with small cash, running to a bank every two hours to deposit that cash, and reconciling their cash flows at the end of the day. "If a convenient solution is offered, merchants are also more than willing to migrate to non-cash instruments."

Mr Roongta also pointed out that the number of merchant outlets in the country which have accepted card payments has been stagnant over the last ten years. He believed that the advent of low cost accepting solutions can increase this number by 10–15 times over the next five years. And this will drive the acceptance of digital payment instruments at physical points of sale. This migration will also be aided by the significant build-up of the payments infrastructure in the country. The India Stack involves a presenceless, paperless and cashless layer. The cashless components such as the Aadhar payments bridge, AEPS, IMPS and UPI are path-breaking. "All these systems put together can

make the use of mobile or digital for payments very, very simple and intuitive," he said. "UPI can be a potential game changer. You will no longer need bank account number, branch name, IFSC code etc. to make payment transfers. You just need the virtual payment address which you can create on your own."

In 2015, 78% of all the consumption expenditure in the country was done in cash. This was pre-demonetisation. Post demonetisation, if this trend of people using mobile- or digital-based instruments for cash transactions continues, in the next five years the proportion of cash transactions can come down to 50% or less. "We will largely have a non-cash economy in the next few years," Mr Roongta predicted. He highlighted some points that could be debated in the panel discussion:

- What would drive large scale adoption of digital payment instruments?
- What could be the potential barriers for adoption which the service providers must focus on?
- What role can banks play in driving adoption of digital payments?
- Can UPI really be a game changer, and how to make it happen?
- How can fintechs collaborate with banks and other financial institutions to proliferate this adoption?
- How would digital payments providers build a sustainable business model?
- What do we expect from regulators and the Government for this migration to happen?

He then introduced each of the panel members and commenced the discussion.

Panellists' Views

Mr Sameer Nigam:

Phone Pe has been one of the prominent players in driving the migration of payments from physical to non-cash. Mr Roongta asked Mr Nigam, "What is the real incentive for consumers to move away from such a convenient mode called cash to something which requires lots of clicks on a handset?"

"The answer lies in what you are saying," replied Mr Nigam. Payment companies today, he observed, are striving to make solutions as easy as cash. "I think that bar is too low," he said. In all three use cases where historically people have moved to digital transactions — remittance, accepting payrolls and online transactions — the ticket size is large. Employees don't want to receive their salary in cash every day and migrant workers cannot send cash to their families every day. Most business transactions where non-cash is more convenient than cash are of a nature where neither distance nor amount is an inhibitor. "For digital to actually take off, usability is going to be a very high bar. Otherwise it is not even on parity with cash."

"There is a reason why cash-back is the only thing that is working," he continued. "It is working because when you have to recharge your phone for Rs 50 four times a month and somebody is giving you Rs 50 back just because you are recharging it, it seems convenient. It is not convenient, it is a pain." Simply put, consumers want good experience and good reliability. "This is a problem for everyone we service, merchants and consumers," he disclosed. Service providers need to give very high reliability on the transactions, which, Mr Nigam felt, is not the case with most networks today. And then comes incentive. Consumers or merchants do things because they are either convenient or they are giving them some reward or benefit.

While the Government is doing a lot, Mr Nigam had a few suggestions: The Government is sitting on some of the largest core assets in terms of railways, and a very large captive consumer base in the defence forces. "If they are serious about acceptance, then they have to actually lead." If the Government wants to increase the acceptance on POS tenfold, they need to enable market forces instead of trying to kill the MDR. "A socialist statement does not create market forces," he said. Visa and MasterCard were able to create a digital ecosystem of acceptance across merchants and countries because they were 'for profit' entities. "In India, we don't have a network today that can stand on its own and determine rules that make sense for the consumer alone because of vested interests. How many banks here have actually opened up RTGS APIs?" he asked, pointing out that a customer cannot walk into a bank and ask to build a payment solution for a B2B supply chain. There is too much distance between those defining the policy and the ground. People know what they want to do in their daily lives with cash. The solutions need to reach them, so they don't need to carry cash.

UPI has a consumer limit of Rs one lakh per day and per transaction. But Mr Nigam felt that it is one of the best-designed and most progressive infrastructural rails for payments. "We should all be very proud that it has come from India." Scalability is the joint responsibility of consumers and merchants; together they should try and take it to a point where it cannot scale. "Let us move forward, otherwise all we will keep doing is giving ourselves reasons not to try," he advocated. "We have to change gear. We have to get out there and say that this has to happen, and now let us figure out how."

Speaking about risk, Mr Nigam felt that people sometimes confuse fraud risk with systemic risk. Banks talk about fraud risk for good reasons. But the biggest risk in the system is that it does not have auto-reversal of debit built into it. Technology players bring better, more scalable solutions to the table. This is where partnership comes in. "This is what we are doing with Yes Bank, and all the banks are trying to do with NPCI to shore up the quality of solutions." It is a big problem for a consumer if a transaction that he has authenticated does not go through in critical times. The settlement window to resolve an issue is 45 days. "That is the acceptable SLA in the banking system. As a consumer, that is not acceptable." That never happens with cash, and is a major barrier to adoption. "We need to seriously start discriminating between types of risk. Money does not get choked when you are dealing with cash. We need to beat that."

In Mr Nigam's opinion, BHIM is a great starting point because the Government, unlike anybody else, can go out and mass promote a product. It got front page headlines for almost two months in a row. They are able to introduce things like Digi Dhan with taxpayers' money. "To me, the best investor that you could have is the Government of India, and they are doing everything they can and I think it is welcome." They are recognising that if they want mass penetration of these products, they have to do whatever it takes to introduce systemic improvements. He felt that inherently a wallet cannot make money. It is a virtual layer on top of money. That money is basically in the bank account, either as cash or as a credit line which is going to get paid out for with cash. Wallets need a lot of innovation to retain consumers once the cash-back goes away.

Different entities have a different view of profitability. Banks have traditionally seen payments solutions as a revenue stream, because banks were the only ones that could provide these solutions. Technology companies look at payments as the starting point in their journey. They can gather an incredible amount of data; and consumers, merchants,

and even unknown third parties are willing to pay in order to provide primary, secondary and tertiary services to consumers and merchants, all anchored on payment data. "India has one of the weakest credit bureau databases and systems in the world," he rued. "For a reasonably mature economy, we have very, very limited data about each of our consumers." A lot of payment companies may come into the market if they can start getting consumers to spend for various payment transfers. Mr Nigam called for a longer term view on this issue.

Mr Asit Oberoi:

People have to get used to digital transactions. "Once they get used to it, they will never ever go back to physical," stated Mr Oberoi. He gave the example of a customer booking an FD through a branch; when they have to deal with a person, the slightest discrepancy in the document "just goes on forever." But there are challenges.

There are two types of barriers to the adoption of digital. "One is behavioural and the other is infrastructure-related." People are used to dealing with cash. "That habit in many ways needs to be broken," Mr Oberoi felt. There is also hesitation to use digital for the first time, especially with the older population. "Most of India is young," he observed. "So you need to educate people at an early stage, bring it into the school education. Those are digital natives and those are great opportunities for us."

There is also the risk of cyber security. People, especially those who have not used digital tools, are worried about security. Some of that can get covered by education. "On traditional net banking we give people two or three options on security, like biometric access, two factor authentication, etc." Education plays a great role; but there are also many incremental controls based on Aadhar and biometrics. "They are very good tools and biometric is really good."

Then there is the infrastructure-related challenge of Internet connectivity, smart phones versus feature phones, etc. "At Yes Bank, we launched Yes Sim-sleeve which is using feature phones to actually make payments, but I am really looking forward to UPI on a feature phone as well," Mr Oberoi disclosed. Another issue is the restricted availability of POS terminals, with two terminals per thousand cards, as against more than ten in other countries. In his opinion, "the whole move to digital has to be run like a project." The Government is trying hard to get there, but it must enlist the support of the other players. A large corporate will have a large payment ecosystem going from the customer to the retailer to the distributor to the corporate. There are multiple payments to vendors and employees within that ecosystem. "I think some of the corporates and the banks and fintech players need to partner to help digitise that whole ecosystem," he suggested. Merely digitising one part of it will not be sufficient. "You have to digitise all and it has to work like a project, because it is a mother of all projects," he declared. Otherwise, it is hard to change old habits, and already people are starting to go back to cash despite digitisation.

But everyone is gradually moving towards electronic payments. "It may take some degree of time, but even drivers and vegetable vendors are getting paid electronically. Autorickshawallas have QR codes, etc." India is a vast country and hence programme management and some ways of working together are imperative. Risk management needs to be different in digital services; and regulation has to make sense. Everybody must partner together to do this in a more efficient manner, because it is a whole ecosystem change in a vast country like India.

He referred to the Rs one lakh per day per transaction limit on UPI transactions. He felt that it should be left to individual clients to choose their limit, possibly with a cap of Rs 10 lakhs.

"People should have some degree of choice," he felt. But he conceded that the Government is taking some really good measures as can be witnessed in transaction banking, food and beverage, Jan Dhan, Aadhar, etc. These measures should be prioritised and brought into the programme management fold, followed by a greater level of participation between different entities. "The most important thing is to give the client a strong experience. And digital is business transformation because it helps give the client a better experience." Moreover, it is very important that the experience be consistent. Similarly, a system that leads to a reliable experience is the most important thing in service.

Mr Naveen Surya:

Every year, two trillion dollars are spent in our country. Out of this, only 10% is digitised, and 90% is still cash. Of that 90%, 70% spends 70% of the cash. For them, it is an issue of access before convenience and incentive. "Access to what?" asked Mr Surya. "Access to buying train tickets in two minutes." The problem is that policymakers believe that our country and consumers are homogenous, and seek out solutions that work best for them. "That has been failing and we have reached this 90% issue for so many years. Unfortunately, we are still not seeing what the real solution is," he lamented.

What needs to be done to drive digitisation? "You are no longer talking to a 10% set who is banked, who is digitised, who is smart phone-enabled, who is fully educated," Mr Surya pointed out. The people who are to be converted are a very different set of a fragmented audience. The 'one solution approach' never works in such cases. "Even in our 10% we use different cards, different tools, different wallets for our different needs." What is needed is a different kind of solution, which is agnostic to form. That is the philosophy of Itz Cash Card Ltd. "When you deal with multi form factor of products, you need to have an approach as to how do you reach out to consumers which is both physical and digital," he explained. Hence they are 'phygital'. "We are the Über of payments because Über is actually more physical than digital." Post demonetisation, cash is back in full swing. It needs to be digitised somewhere for digital transactions to happen. Once this is understood, then the approach towards addressing this market becomes very different, and a solution can be found.

There are only two or three fundamental payment products starting with cash, credit cards and a bank account. Everything else is nothing but debit from a bank account, either through a debit card, IMPS, net banking, UPI, BHIM or anything else. The problem is that the security and the processes needed to manage a bank account are very different than for these payments. "You need to unbundle the payments within banking and across the industry and across the policies," said Mr Surya. There has to be proportionality in the measures of authentication used. For the majority of the 90%, the bank account is for saving money. It is an emergency saving tool, not to be used for payments. "The moment we get this mixed, all these complications come."

Fundamentally, the digital space is competing with physical cash. There is a policy issue of cash limits versus digital limits. The current Government pegs this at Rs two lakh. Anything over this will be banned in cash. But Rs two lakh is allowed in a single transaction, no questions asked; whereas with a debit or credit card, mobile phone or at any other outlet, a customer has to provide an ID. With wallets, KYC is required for transactions beyond Rs 20,000. "There are complications. I think we all have to understand that the system that we are trying to bandage every time is not going to work," Mr Surya felt. That is why the country is stuck at only 10% digitisation, he felt.

"Somewhere, we need to have a radical approach," he declared. He recalled the telecom reforms that happened a decade ago. A supplier could issue a mobile phone, but the subscription could be issued only after connection through landline technology. "That is the situation of payments. All of us need to think through it including banks." Different regulations are needed for payments. Instead, everything is getting regulated and that is where the confusion has happened. Mr Surya also observed that the common perception is that all money in a bank account is white and all cash is black. Although merchants talk about MDR when it comes to merchant payments, the real reason for preference of cash is only to save that 35% of tax. Unless tax reforms are brought in to support those merchants, they will keep going back to cash whenever they see an opportunity.

The Government's communication is positive. "The so-called disease of using cash in our country is to be systematically eradicated the way we eradicated polio," Mr Surya asserted. It happened through a continuous communication drive. "We see it as a psychological shift and the communication has started to drive it." Fundamentally it will help everybody in the ecosystem if they move their physical cash into digital. Things which are completely driven by cash-back will also be successful until they get funded. "As a player, one has to decide whether you want to earn valuation alone, whether you want to have attention alone or whether you want to have a balance of earning." If an institution has a genuine value proposition for its customers and someone pays them for that, it automatically answers whether or not they will survive.

Payments are at the bottom rung of the profitability ladder. It is the largest funnel of customers because everyone consumes payment. "We are the company who have already proven that you can make money and be profitable doing payments, depending on how you are selecting your customers and what you are doing," he said, adding, "Some companies choose to create a funnel and then create a customer, and then find revenue somewhere else. Some do this plus finding ways to also make money in payments. That is why you see maximum companies in fintechs, and payments will eventually be a core of it."

Mr Sudhakar Ramasubramanian:

"We all associate digital using a mobile, using a web, using whatever to make payments," began Mr Ramasubramanian. But he pointed out that this set of users is a small percentage of the Indian population. There are a whole lot of others who constitute a much greater number than those who have a data connection, across the country. They visit their nearest retailer and do their transactions primarily in cash. "So there is an opportunity for us to convert all of those money conversations into a non-cash format."

Further, Mr Ramasubramanian stated, "I think the world is getting device-agnostic. There is no need for a device." He felt that UPI is very important in this context. "We are waiting for UPI. We want to see a non-smart phone-based UPI coming up." That, in his view, will give a fillip to a lot of merchants who can then start receiving payments without having access to a smart phone or a smart device.

India is a country of contrasts. Indian banks have a hundred lakh crore rupees in their coffers. Almost 70%–80% of India's GDP is lying in bank accounts. Yet, 90% of our transactions are in cash. "There is an opportunity for several of us to play. It is a big white space," said Mr Ramasubramanian. But bankers need to think about providing last mile convenience to the customer. "It is far easier for a person to pick up his purse, take some money and give," he said, and enumerated the several steps involved in using a phone or an app to make a payment.

There is a lot of friction in the current payment process. There is an opportunity to reduce that friction. Last mile connectivity is very critical. "Currently the number of bank branches that exist in India are far lower than what we should have for the kind of spread of country that we have. How do we bring the banking points closer to the consumers and then make the last mile work for them?" Only then will they bring money into the bank rather than go everywhere carrying cash.

Everybody wants to know whether a payments bank can make money. Mr Ramasubramanian's view was that "there are many ways to look at the payments space." The most used term is a 'restricted banking licence', where a bank can't lend and can accept limited deposits. He offered a different perspective on how they view the payments space. Fintechs operate in different areas of the financial ecosystem. They could be in payments, or in other areas; they could operate in the physical space, or in the digital space. "If an option is given to them to accept deposits and pay interest on those deposits, it is a big positive for them." It brings in a new point of view, and creates opportunities that go much beyond what one can think with a restricted licence.

Along with the opportunity, there are regulations that need to change. "Yes," conceded Mr Ramasubramanian, "there are some customers who will take some time to adapt to new means of payments." But there will be many others who will adapt readily. "It is our opportunity to be able to provide a mechanism for them to be able to do those payments and use the bank in a manner that makes their life more meaningful," he suggested. His response to a question about whether the communications network can handle higher migration was that communication technologies have moved. The communication layer is not unique just to the payments infrastructure. It is common across all data transmission and is scaling up. "And there is enough and more capability and space available for that to take care of the minor payment stuff that we are doing."

Ms Sujatha Mohan:

Ms Mohan was asked by Mr Roongta about whether the issue around the transparency of income reporting acts as a barrier for people wanting to move from a cash to a non-cash economy. "The simple answer is, yes," she replied. But the problem has two or three dimensions and needs to be broken into. There is a reasonably large amount of money lying in banks, and a lot of transactions happen in cash; this is due to the intermediation between the start and end of a transaction, especially in the supply value chain. She felt that if the entire population is divided into income value chains, there is no resistance to digitising. The conversation at that point is about getting them access and making it simple; it is about POS terminals and getting people to obtain their money in a digital format.

"I think a very large portion of our population actually gets cash-based salary first of all," she observed. "That needs to be eliminated." This is the lowermost segment and is the focus of the endeavour both from the Government and from others. The top-end segment is agnostic. "They know they are going to get into a tax net if they are not careful; they are anyway digitised and there this conversation on convenience is the user experience." The mid-segment comprises loaders, truckers, commission agents, and people in the industry who are making trade happen. Cash is rampant in this segment. There is an element of worry about digitisation among this segment. This is a reasonably important issue for them, because many of them operate on the fringe of being profitable. They don't seem to understand the concept of cost of cash handling. "They won't even realise that it is a

cost they carry," said Ms Mohan. This segment can be incentivised only when the taxation method is simplified and the tax regime made very rigorous. I don't think anybody particularly likes carrying a crore worth of cash on a bike from one corner of the city to another. They do that. The threat is real and that is an area of focus because that is a reasonably large chunk of the population." But she had no sympathy for those who do cash transactions because they cannot cover for their expenses. "In India, we are very price-sensitive. Instead of pricing for the goods, you cut the tax payment and price your transactions. That is something that can be done only through a very rigorous tax regime."

The flow of cash currently is that it is withdrawn from a bank account, the cash is taken, it changes hands and at the end, it is taken and remitted into a bank account. Ms Mohan called for this process to be disincentivised through stricter norms. Almost every type of identity for payments has been launched, such as Aadhar, mobile payments, etc. "But one of the other things that nobody takes care of is the service angle," she pointed out. She called attention to the fact that in digital, one of the things that scares most people is where to go if a transaction fails. "That is never prominently called out and it is not even planned for." UPI and IMPS have very long settlement windows, they are not technologically handled, and the service is not managed well. The service issue is bilateral, and that is what magnifies the problem. "The reason why NEFT, RTGS is still a very stable system is there is a central point of closure because RBI takes that responsibility. As an ecosystem, we have to start putting together the service angle when we are introducing products of this kind." But she felt that most systems get corrected over a period of time. UPI is a very positive move, and brings in interoperability. Banks are in conversation with NPCI to correct the process and iron out the lacunae. "This is a constant dialogue that happens, and over a period of time, processes mature," she informed. She also disclosed that many bankers go out of their way to make sure that the service angle is taken care of.

Fireside Chat III: 'Artificial Intelligence – Real Solution'

From L-R: Mr. Shantanu Upadhyay, Principal, BCG, Mr. Shantanu Sengupta, MD and Head, Consumer Banking, DBS Bank India, Mr. Deepak Sharma, Chief Digital Officer, Kotak Mahindra Bank; Mr. Naveen Asrani, Director, Startups, Microsoft Corporation India; Mr. Anuraag Saboo, Director and Head of Research, Gumption Labs.

Session moderated by
Mr Shantanu Upadhyay, Principal, The Boston Consulting Group.

Panellists:

- **Mr Shantanu Sengupta**, MD and Head, Consumer Banking, DBS Bank India.
- **Mr Deepak Sharma**, Chief Digital Officer, Kotak Mahindra Bank.
- **Mr Naveen Asrani**, Director – Startups, Microsoft Corporation India.
- **Mr Anuraag Saboo**, Director and Head of Research, Gumption Labs.

Overview by **Mr Shantanu Upadhyay:**

Mr Upadhyay began by getting to the heart of what AI is. "It is easy to get mixed up with AI and plain vanilla automation," he said. He explained that it is important to get to the right level of understanding of AI for two reasons. On the one hand, if it is defined too broadly, any kind of automation can be bundled into AI. This is what happened with digital. 'Digital' became such a buzz word that people stopped taking it seriously because anything related to technology or IT got bundled into digital. Hence it is important to define AI very narrowly, so that its exact potential can be harnessed. On the other hand, if it is defined too narrowly, such as targeting to create human level of intelligence, there is the risk of failure. That is what happened with AI for a long time.

Folklore and sci-fi talk about AI as machines that can think and act independently and eventually become a threat, such as HAL in Arthur C Clarke's

‘2001: A Space Odyssey’. John McCarthy, a Professor at Stanford University, coined the term ‘artificial intelligence’ in 1956. He defined AI as the science of making machines intelligent. A few years earlier, in 1950, Allen Turing said that if a machine can fool a human into believing that it is interacting with a human, then that machine is too intelligent.

Mr Upadhyay informed that Boston Consulting Group and NASSCOM brought out a joint report on ‘AI, Beyond the Myth and the Hype’. According to them, any system can be called artificial intelligence if it can either think and/or interact as humans do. “If you look at a machine becoming like a human, there are two aspects to it,” he explained. One is whether the machines can think as humans do, with the brain power of humans. The other is whether the machines can interact in a natural and context-aware manner, as humans do. We humans are very good in parallel processing; it is our strength. “In one go, we can understand what is there in this environment.” But we have been weak in sequential processing. Machines, on the other hand, have been very good in logical reasoning or in sequential processing. “If we have to multiply 45367 by 74531, a human brain would not be able to do it but a machine can do it in a second.” He added that machines are now also getting better at parallel processing in narrow areas. The thinking aspect of it could be pre-defined as in robotic process automation or in plain vanilla automation, if the rules are defined; the machines will do exactly what they are supposed to do. But when it comes to AI, we are getting into the realm of how they can get into a learning system which can adapt itself on its thinking. “What it means is that the machine is able to synthesise knowledge, not just data, and reason on top of it. This is what a human brain is capable of doing.” We may take it lightly, he remarked, but that is the extreme level of what the computing power of a brain can do.

The second aspect is interaction. It could be transactional, like an ATM, or we could get into an interaction level which is context-aware to an extent, but very natural, like Apple’s Siri. “AI is all about taking computation to a different level and our ability to be context-aware and interact more naturally.” Mr Upadhyay cited more examples. IBM has committed billions of dollars to its Watson which is like a cognitive platform. Google is moving from ‘mobile first’ to ‘AI first’. A lot of start-up activities have been happening in the machine learning space. “But we are still just scratching the surface. It is not even the tip of the iceberg as far as what AI can eventually do.” According to him, it will take at least 25–30 years to get closer to the level called general purpose AI, which gets very close to a human brain. “But in narrow areas, AI is all over the place.” It is being used by Google Maps, the way a journey is looked at and the time taken to reach there assessed; it uses a lot of machine learning algorithm. Even a lot of the material in newspapers, especially the sports clippings from Associated Press or even Fox, are being written by machines.

AI is a field; it is not one technology. Machine learning, deep learning, neural networks, advanced versions of working with ontology, computer vision and virtual reality are the technologies that are taking the field of AI to a different level. Its cognition capabilities can re-engineer the value chain at a much broader scale across sectors and re-ignite customer engagement. “If you are going to have a machine talk to you, you could take customer experience to a different level because the machine would know everything that it could do.” Certain sectors like autonomous cars and healthcare are getting re-imagined because of AI. Mr Upadhyay predicted that the way diseases will be diagnosed and the treatment provided could get completely transformed in the next three to four years. In financial services, AI is already being applied to

route enquiries in a customer care centre or to allow customers to access their bank accounts by leveraging voice and image recognition. There are use cases around detecting illegal trading or frauds. Palantir have been using machine-run algorithms to work with banks to find out if frauds have been happening. AI is also being applied in developing market strategies, investment strategies, and in loan processing.

The core of AI is not just about doing statistics. "AI can help you de-average at an astounding level because AI can get to the weak signals," explained Mr Upadhyay. He elucidated further: "You can still do the segmentation and look at the averages; AI would eventually disaggregate these averages and look at some sort of mass customisation." The machines collate the data and are able to learn, and the output gets better and better. The statistical equations become better as the machines get more data. "All this happens passively. That is the potentiality of AI."

Mr Upadhyay asked whether AI is a game changer, or it is more a journey of incremental steps. How will the collaboration between man and machine play out — will it be only machine in the future? "Most of us are scared about it," he confessed. And while people are accepting what AI can deliver, he wondered whether the black box can be trusted. A human brain, he pointed out, is also a black box. When an organisation hires someone, they depend on the resume and the interview. But eventually what the employee brings to the table is also a black box. He noted that people are working with these technologies, and the level of trust comes in when they are able to see them generating the right level of results. He also sought to know whether the two speed world is going to stay, or we will see the end of it in the next few years. From a fintech perspective, he considered whether the winner takes it all — whether two or three players will become dominant, or there will be a "thriving long tail picking up aspects of different processes." He asked further, "Would there ever be an AI platform? Do you see the big guys taking over the platform side of it?" Finally, he sought to examine whether the regulators are up to speed with AI, and raised the issue about the social regulatory concerns. If Fitbit is capturing personal data, the question arises about who owns that data. In his words, "I would not like if I am taking a sharp curve or fender-bender with my car, immediately that data gets passed on to the authorities or to the insurer."

These were some of the issues that Mr Upadhyay raised as the discussion went underway.

Panellists' Views

Mr Anuraag Saboo:

AI goes beyond statistical modelling. Statistical modelling is about data processing and is used in AI as a process. AI is about interpretation and then taking action on that. It has lots of context-sensitive information. "AI is much more than just processing which comes from the statistical models in this data process. You need much more to make it intelligent to act on it," Mr Saboo observed.

"Basically AI is a leapfrog and any kind of leapfrog will have its disruptions." He pointed out that the electric lamp did not come out of the continuous improvement of candles. When it came in, a lot of candle makers went out of business. "We are trying to see the same thing here." But when it is applied, it will have its inclusion; since it has a lot of contexts, it will have a lot of modelling. It is a lot of black box. "Your entire neural network engine basically creates a black box." Its outputs are not directly explainable, but they are part of a development of a process.

AI will require a much higher level of intelligent human width to work with, which Mr Saboo calls 'augmented decision-making'. At some level,

this intelligence will reach a point where it can run on its own. Augmented decision-making will happen at those critical levels. “At some point of time, AI will definitely cross the human barrier of intelligence,” he predicted. He pointed out that it is already above humans in a lot of areas such as in playing some games. “If it becomes superhuman, it becomes the instructor. Today, chess players learn from those computers, it is not the other way round.” Scientists have applied Moore’s law and have predicted that by 2030, a black box sitting across a desk can be expected to speak as intelligently as a human. By 2050, we will get singularity where the general evolution of artificial intelligence will exceed human intelligence in all areas. According to Mr Saboo, that is the reason we are seeing a lot of investment by Elon Musk, Gary Marcus and Bill Gates.

When AI is deployed in financial institutions, it adds on to their decision-making process and makes it easier for them. But for the masses, the black box becomes a direct-to-use solution. That is how it evolves. It is doing a lot of things inside fintech, not just outside fintech. “I don’t think it is more about creating solutions which are not imaginable at some point of time,” said Mr Saboo. In fact at this point in time there are solutions which may be imagined later. To him, AI is a long innovation cycle of learning, fuelled by the start-up revolution. The technology, theme, evolution and ecosystem are all coming together to fuel it.

In his view, the data belongs to the person who generated it and if it has to be shared, it should be done with consent. Regulations will define the boundaries about how much data can be used. AI decision-making is machine decision-making. Hence the regulator will pinpoint the compliance on the persons who programme the intelligence. “Most of the regulators do not understand the impact of AI as on date,” he observed. “Right now, for them, it is like a piece of software; those who design the software are responsible for the outcome of the action. Obviously, this will get stretched over a period of time.”

He addressed a question about how AI can be applied to improve process efficiencies, such as processing of loans. He replied that there are start-ups who are working on that. There is a credit score that gets generated from the transactional data. This becomes the input. They take a decision based on the input in an augmented way. Later on, they will start documenting the output of the decisions. Once they understand that, the process can be automated. At that point of time, a limit below the customer’s threshold will automatically get sanctioned. Today, there are lots of banks who work with these start-ups, Mr Saboo informed.

Mr Naveen Asrani:

If AI is broken down into its components, the predominant elements will be automation, digitisation and computing. But the larger play in leisure and some of the cloud platforms being built is mainly in natural, contextual understanding, and ‘connecting the dots’, which responds quickly to who the customer is. The insights tend to be unintrusive. What AI brings centrestage is not just churning of numbers; it is contextual experience. “The way AI is evolving, you will have intelligent agents being the new platform, and you will have natural experience whether it is bots, chats and radio coming centrestage,” Mr Asrani predicted. That will redefine the way technology will be experienced, and more importantly, how the services of tomorrow will be experienced.

Mr Asrani further stated, “Artificial intelligence is not built for BFSI. We are seeing the use cases happen across the industry.” There is a natural progression of how we engage with it. Correlations happen across sectors. Today, a lot of data is released seamlessly without the user

being aware of it. A lot of that data is contextual; it can reveal a lot about the user, even when he does not reveal anything about himself: the way he behaves, where he was, what he bought, and where he transacted. Further, he explained that there is a threshold in the ability of the human mind to understand through continuous learning; it gets fatigued at some point. That is where AI becomes important. "You respect where you can actually have an ancillary in the journey, which is where the infrastructure or the intelligence comes in." It may help in enhancing customer experience or in robo-advisory services.

''How many of you tell what exactly your net worth is to your best friend? How many of you tell that to yourself actually?" Mr Asrani asked the house. He visualised saying this to a machine which does not do anything except tell the user exactly where he stands. "There is no emotion about it and it will not go and tell anyone about it." While his organisation understands compliance critically, they see value addition in the ability to blend the worlds together from a financial services and credit rating point of view. A person who can create a LinkedIn account in under a minute would have the same expectation when opening a bank account. "Why shouldn't a bank or an insurance provider or a mutual fund on-boarding experience be equally seamless?" he questioned.

Artificial intelligence can recognise a trend and identify where there is opportunity, or where there are likely problems, especially in the BFSI space where compliance is very critical. "We are seeing this cross pollination of learning which is where AI takes centrestage and is a complementary platform in the journey." Right now, it is at the initial stages of working towards a platform. The good part is that that it is a very inclusive phenomenon on platforms. "What we have seen is the ability for the platform to co-create." Mr Asrani informed that Microsoft works with partners who are very clear about the areas they want to work in. "You don't want innovation to just come in every week, unplanned, without even a goal of where you want to take the organisation." Their conversations are about helping their partners prepare for the future. The latter are looking not just at technology, but beyond, at agility thinking and new business models. Start-ups are creating new opportunities and products. They are addressing new use cases which would not have been imagined as an opportunity. "These are new areas and we should not just be looking at the start-ups for the tech."

Microsoft runs on trust and believes that data should reside low-key. Mr Asrani felt that all users of technology will in some way, consent to data being leveraged at different forms and at different places. That is integral to any infrastructure provider. "We value that completely because while we are looking at amazing 'vow' experiences which are intuitive, you also want to make sure that sandbox is private and secure." He added that they value the digital world we live in, which may seamlessly blur at times; and they want to work harder to help their customers have better experiences. They see security and privacy taking centrestage; they have a command centre on cyber security in Delhi. "That is paramount in the way we work with our customers and even their customers."

Mr Shantanu Sengupta:

"From a banking perspective, artificial intelligence provides a huge opportunity," began Mr Sengupta. He explained that it is a 24 X 7 platform which helps banks understand their customers by storing real-time information about their preferences. The real benefit is to understand what the customer really wants and then go forward with contextual offers. "To my mind, I think artificial intelligence will play a very,

very important role as we move ahead." It offers banks a huge opportunity, especially in cross-selling.

He acknowledged that there are partners who have developed expertise in core capabilities. "We are seeing what Siri has done with Apple. It is completely a game changer." He informed the house that DBS Bank has launched a virtual assistant for their digital banking, and it is working very well. The virtual assistant handles the bulk of customer transactions and queries. He advocated collaboration. "We should look at the ecosystem and see who are the partners who have competencies in certain areas and then try and integrate the two to make a very compelling platform for our customers."

But Mr Sengupta conceded that there are challenges going forward. "It takes time for adoption," he said. One of the success factors for AI to leapfrog in the future is the confidence level of the people. Data security and the ability to generate the right algorithm are continuously being challenged. Yet, every bank and regulator across the world is realising that there is a huge opportunity. Customers are interacting differently with banks, with BFSI organisations or with any other manufacturer. The challenge for banks is to simplify the process so that value is created for the customers, while at the same time a reliable and secure ecosystem is created.

Mr Deepak Sharma:

"Artificial intelligence is here and it is for real," declared Mr Sharma. But he said that it will be a long time before Indian banks can realise the full benefits of AI. They are still at the first stage, where automation itself is a big thing for them. Many Indian banks have embarked on automation because of the benefits it brings.

The important thing is to demystify the jargon about AI because different people will have different perspectives on it. "For us, it was important to see what AI does and how it fits into our strategy, rather than just embarking on things that we keep hearing every day." Mr Sharma informed that his bank picked up four or five areas to see what AI can do; they wanted to quantify those benefits before investing further.

Kotak Mahindra Bank has 45,000 employees; their HR department has a team of 30–40 people who handle a lot of queries on phone or email and support the entire staff contingent. A lot of the queries are repetitive and the responses are very standard. "We said that before we do it for customers, let us first solve this problem for ourselves. We realised that we could replace almost 80% of the staff that was required to do these mundane processing of queries."

As they started embedding analytics, they got to understand what their customers need, whether they click or do not click. How much time do they spend? Which are the sections they go to? "A lot of this data was available, but we could not convert it into actionable analytics over a period of time," Mr Sharma disclosed. Now they are able to drill down to much smaller clusters and make targeted offers, even if they are not able to reach an N+1 model.

They have started seeing a big shift in the way customers interact. Their objective is to make human interaction more intelligent and sharp. He illustrated his point: when a relationship manager talks to a customer, he is able to identify the propensity of the customer towards a particular product. "We are able to make our relationship managers more intelligent than just a salesman." They have an asset management company, and they are trying to sharpen the algorithm to identify what funds should be recommended to customers. They also started

a robo-advisory service, where once again they focussed on employees before customers. They wanted to know whether a person would use the service if offered a direct digital platform where the fund selection is automated, the portfolio gets rebalanced on its own and the risk profile is created. "These are learning steps. We are still in a journey where we have taken the first few steps. There is a lot more to learn and a lot more value to get out of this," Mr Sharma stated.

He felt that the two speed world will remain through the process of transition. "While you are trying to build new, you still have to suck enough efficiency off what you already have built." Those who are starting afresh need not worry about the two speed world because they are born digital. The challenge is for organisations that are making the transition. In Mr Sharma's opinion, 'two speed' is not just about IT, but also about the mindset and culture. "We have put our bets on both sides to make this efficient," he said, explaining that eventually the existing business and efficiency will fund and create opportunities for them to invest in the next big bet. Hence both sides need to co-exist till one of them becomes redundant. "We call it 'run the bank and change the bank'. That is what two speed is."

The Kotak Mahindra Bank credit team used to look at almost 500 different parameters. The bank started putting those parameters through the AI programme and ran the machine process parallelly with the standard process for six months. As exceptions started getting identified, the system started getting trained. After about six months, they found that 30%–40% of unsecured loans could go straight through and be underwritten in less than 48 hours instead of the usual 7–8 days. About 60% of the applications still get referred to a credit officer, but Mr Sharma was confident that the system will get better with time as more learning keeps coming in. "A 40% straight-through may go to 50%–60% as we start training it. The more data points, the more intelligent this entire system will be."

He informed the house that they have started to work with over 30 start-ups. Start-ups bring in a lot of value in terms of business models; linear thinking; segmented focus strategy; and most important, they are able to test and validate the ideas quite early on, before the bank invests time and money. "That is what creates a lot of value even in the space of AI." Mr Sharma believed that the core platform and cognition engine must be with the bank; but they test a lot of use cases and have identified 10–12 good uses cases, all coming from fintech partners. He gave an example of a use case: when a customer logs in to his account on a mobile phone or a computer, almost 40 different parameters are considered. A lot of this data can be encrypted and stored as an encrypted code. Every time the person logs in, the machine can detect if there is a change. Is it a different device or a different location? Has the customer changed the font or the browser? The bank can choose the level of the accuracy match for its different responses. "These are not the kind of cyber security and fraud where you act after something has happened. You want to take a real-time decision here," he explained. At the same time, banks do not want to inconvenience their customers with processes that are not robust enough. It has to happen in a fraction of a second. Banks with a few million customers see millions of online transactions go through every day, and will find it useful to use AI in their cyber security framework, so that they can carry out surveillance without compromising on convenience.

Data and privacy pose a greater challenge. AI is all about what is done with data. Today, there is a lot of data outside of banks and insights are also available through other players in the ecosystem. Mr Sharma was confident that regulators will

take a view about the entire data sharing guidelines, if not now, then in some time. “A lot of information is publicly available about each one of us.” Google knows all about its users, but, Mr Sharma pointed out, the users don’t mind that because Google uses that information to present them with something that is convenient and useful. Similarly, he felt that customers will be delighted if banks can use the information they have about them to offer them something meaningful. They are starting to use AI to have more intelligent conversations and identify the important moments in a customer’s life, where they can interject and offer a solution. In such instances, convenience becomes a much larger benefit than what is compromised in terms of data. “I think there is going to be a fine balance between what you do with data and how much data availability and data privacy should be taken care of,” observed Mr Sharma.

Fireside Chat IV: 'WealthTech and Robo Advisory'

From L-R: Mr. Ruchin Goyal, Partner and Director, BCG, Ms Janet Young Yoke Mun, MD, Group Channels and Digitalisation, United Overseas Bank, Mr. R. S. Srinivas Jain, ED & CMO, SBI Mutual Fund, Mr. V.R. Govindarajan, Co-founder, Perfios and Mr. Nitin Vyakaranam, CEO and Founder, ArthaYantra.

Session moderated by
Mr Ruchin Goyal, Partner and Director, The Boston Consulting Group.

Panellists:

- **Ms Janet Young Yoke Mun**, MD, Group Channels and Digitalisation, United Overseas Bank.
- **Mr Srinivas Jain**, ED, Strategy and International Business, SBI Mutual Fund.
- **Mr Nitin Vyakaranam**, Founder and CEO, ArthaYantra.
- **Mr V R Govindarajan**, CEO, Perfios Software Solutions Pvt. Ltd.

Overview by **Mr Ruchin Goyal:**

"The impact digital is having on our lives is quite profound," began Mr Goyal. There is one space that is considered to be truly human-centric, where trust and face-to-face interaction are very important. That is the area of investments, personal finance and wealth management. "But today, even this space is being disrupted quite rapidly by the advent of digital," he pointed out. He shared some facts and figures about the state of asset management companies. "We're really under-penetrated as far as asset management is concerned in India." India's AUM to GDP ratio is only 8% as against 80%–90% in Europe and the US. He further observed that it is not as though Indians do not have the money or do not put money in the organised financial sector. They just don't put money in investments, preferring to put it in bank deposits. "Bank deposits are a very large segment in India," Mr Goyal said. The AUM to bank deposits ratio is 15% in India.

In the US, people keep more money in asset management companies than in bank deposits; this is the trend now in India and this is how the industry will grow. The Indian asset management industry has seen three phases since early 2000. In March 2003, the entire industry was worth only Rs 80,000 crore. Between 2003 and 2008, the industry grew at 45%, but the base was small. These were the early formative years; stock markets were doing well, and a lot of people began investing in mutual funds. The period between 2008 and 2012 was the phase of consolidation. The global financial crisis took place; and regulations were changing in the entire industry. Since March 2012, the industry has again come back to very rapid growth, growing at 25% in a large base. The assets under management have already crossed Rs 70 lakh crore. "The Indian asset management industry in the next five years could grow to Rs 4550 lakh crore," Mr Goyal predicted.

This growth is being driven by retail participation. A lot of small investors from smaller towns are putting money into equity and debt funds. There is a very large inflow into SIPs. HNIs are coming into the industry in a large way. "It is a well-rounded industry; there is participation from all kinds of segments," Mr Goyal observed, adding, "This growth should continue."

He considered the portion of money coming in through all kinds of digital channels. While the AUM is growing at 25% within the industry, the digital AUM is growing at 85%. "This is truly the tipping point, where digital can become really large, going forward." Digital can play a huge role in every leg of the value chain of investments, right from sourcing to on-boarding, advisory, transaction, processing and servicing. The innovation can be in any one part of the value chain; it does not have to be end-to-end.

He gave examples of innovative digital marketing. IDFC launched 'Dil Ke Ameer', where a person narrates his dream. A customised video of that dream is then made, with a message showing how nice it would be if that dream were to become true, with a link where the person can click to begin saving for the fulfilment of that dream. This is very different from traditional marketing. It is an innovative way to on-board customers digitally. e-KYC has now become the norm for on-boarding customers. But there are other wealthy companies who are trying to do a full KYC without the need for a physical visit. "This is still an evolving regulation; people are still experimenting with doing away with the need for paper, a manual signature, or a physical visit."

There is a whole range of completely automated advisory services, with many players trying it out. Transaction processing and customer servicing are now happening online. Birla Sun Life Mutual Fund launched an app whose function is to link the customer's bank account with his Money Market account. "Money can be moved from the bank account to the Money Market account with just a swipe of one's fingers." The user experience has been very good. The app has received three lakh downloads with highly positive customer responses. "That is the power of digital," asserted Mr Goyal.

Traditional companies like ICICI Direct assist customers to transact online. There are others who invest in end-to-end financial and investor advisory services online. "The question is, which customer segments will really benefit from digital? Vice versa, what can digital offer to different customer segments?" he asked. He observed that the mass market customer is completely and traditionally left out in the realm of wealth management, because the cost of service is very high. It is to be seen whether digital can offer a compelling, low cost wealth solution to the mass market. Will it be viable to serve the

mass market through a true wealth solution, not just a transaction, he wondered. Can the system give holistic advice to active traders, HNIs and the affluent? "Different segments have different needs and pain points. What can digital do for them?"

Globally, within the fintech space, robo-advisory and artificial intelligence are getting a huge amount of funding. It is projected that about $ 2 trillion should be together worth of assets will move in the realm of advisory services. "Are we ready for this major disruption in India?" asked Mr Goyal. He also wondered which model will work in India — whether it will be the Western model of passive investments and ETFs, or whether there will be a different model in India that will be unique to the needs of Indian customers. And he noted that across different segments, the digital proposition for mass marketing will be very different than that for an HNI. He sought to know what will work for the different customer models, with what implications, and how different players should adapt in order to ensure that they are all a part of this journey.

Panellists' Views

Mr Nitin Vyakaranam:

Market sentiment is very important for the growth of any innovation. There has been steady growth post 2013. Speaking about his company, Mr Vyakaranam said, "We have been able to break this whole shackle of large city — tier I and tier II — and reach people who are looking at financial life and saying that they need help. We have been able to reach places where normally a bank or a wealth manager could not go." He identified three reasons for this: The first is the geography. The second is the wealth of the individuals. Most banks and wealth managements run on ratios. A wealth manager is assigned based on the money that a person has. And the third is the language. The jargon used in the wealth management world is finance-centric. Ninety seven per cent of Indians don't relate to that jargon. "We have been able to break those shackles. The need is very clearly there."

He cited the example of a 19 year-old engineering student from rural India. His financial goal was to buy a hard disk. "He was getting Rs 300–400 from his parents, and he wanted to save to buy a hard disk." Mr Vyakaranam felt that instead of bankers asking themselves 'are we ready?' the question should be framed as 'can we reach there?' "Everyone has aspirations," he observed. "The question is, do they have the tools to be able to plan for that?" According to him, when people say they are ready, it means that they are willing to go far to meet their aspirations. "Are we ready as an industry to go out and meet those challenges and help them reach their goals?"

The last 10–15 years have seen a dramatic shift in people's ability to believe in themselves and do better as individuals and as a society. "History does not creep. You feel that it will take a long time to do it, but it just gets on to you." The expectations of HNI customers are different. "As an advisor, I am going to give you good advice." But an HNI expects to be treated in a different way. In Mr Vyakaranam's opinion, the entire product-centric approach that the industry takes will have to change. In 2007 or 2008, if someone sold a bad product to a customer, the latter would quietly blame it on fate. Today they go to the bank and fight. Why is this? "Because other industries like healthcare, retail, have made that jump, have been democratised where the customer is king, while the financial services industry is still about 20 years behind."

Although financiers are doing a good job, they fall short when it comes to personal finance, Mr Vyakaranam felt. The cost of personal finance is increasing every day. He suggested that they build products and solutions which will fundamentally shift and redefine how wealth

management is done. “We have about 115 million families in India. The number of qualified wealth managers is 10,000. Is there a way that any brick and mortar company can reach the 115 million people?” He asked. He rued that the entire thought process around wealth management is centred on investment because the managers involved have to meet their KPAs. He was emphatic that needs to change, although he conceded that moving away from product-centricity to customer-centricity is not easy. “It is not going to happen in small baby steps where I say I will take this offline process and make it an online process. What you need is a fundamental shift, looking at things holistically; when a tectonic shift happens, that is when you achieve that.” Further, he felt that people invest mostly to save tax, which is a very short term, narrow view of finance. Investment managers need to address the customer’s need, not the seller’s need. Trust is not just about shaking hands and selling a wrong product. The investment manager must help customers identify their needs and aspirations. People are waiting for someone to ask those questions. Investment managers need to look at investments, risk management and preparation for emergencies. “Ninety seven per cent of Indians will go bankrupt if there is a financial emergency. How do we handle it?” he questioned. His view was that it cannot be handled physically. “Technology is the only way. I think we will see those tectonic shifts happening in three to five years and we will be surprised.”

The western world is today not searching for alpha, they are searching for beta. The maturity of their indices is far superior. “In fact, you will struggle to find a good index beyond the one that is in India,” Mr Vyakaranam said. From a technical perspective, he felt that there is no benchmark. A lot of people feel that India is a cost market, but according to him, it is not. “People are not worried about costs. What they are worried about is returns.” And ETFs have another problem that robo-advisors are facing now. They can be built by anyone. “If your value-prop is just cost, it is never going to work. What you need is to put in really sophisticated stuff.” A lot of research has been done in finance; that science resides in libraries around the world and is used by very few people. “That needs to come out into the real world. Real people should use it and that is where you will start seeing the difference.”

Mr V R Govindarajan:

Perfios is a data aggregation service provider and interacts with a large number of wealth managers, independent financial advisors, banks and NBFCs. Mr Govindarajan felt that today’s robo-advisors just mimic what an independent financial advisor does in his office. A lot of people in India work with multiple advisors. What he pointed out was that “When you talk to an advisor and he suggests that this is your risk profile and this is the kind of investment you need to make, he is doing that without really knowing what your full portfolio is. This is completely shooting in the dark.” That is what happens with most face-to-face interactions. And most robo-advisory models also work in that model. The customer goes through a risk profile, the advisor constructs a model portfolio, a research arm feeds into the model portfolio and suggests suitable investments. “Obviously, that does not make sense unless I know what your total portfolio is.” But people are not comfortable sharing all their information with the advisor, although they may share it with their accountant for various reasons. What prevents the end-user from sharing that information with an advisor? Mr Govindarajan provided the answer: “Today, if you have to share all the details, you have to give all pass books, CAMS or whatever other statements, everything that you have, and then leave it at the mercy of the advisor.” He felt that technology can help in sharing the information on a ‘need to know’ basis, without providing everything.

UPI is a good example, where just by creating a virtual address, a user can transfer money. "If there is a way technology can help in sharing that information with an advisor, the same thing can be built in with a robo-advisory; what will happen is that you have a model portfolio." The current portfolio can be tracked on an ongoing basis, and suggestions can be made to fill in the gap.

The maximum impact of this will be felt by what Mr Govindarajan called the 'mass aspiration class'. In the Indian context, all the HNIs can afford to have an RM-based relationship; most of them would prefer a face-to-face interaction. But there is a huge middle class population that has come into being in the last decade or more. "These are mass aspirational people who don't have the help," he said, adding that they can definitely benefit from a robo-advisory platform. He regretted that advisors tend to push the product where they will get maximum benefit. This is causing a trust deficit and having a negative impact.

Ms Janet Young Yoke Mun:

Why is wealth so important? There is huge growth of mass-affluence across the whole of the Asia-Pacific region. Ms Mun sees this as an opportunity for growth. "There is a huge influx of interest of robo-advisors from the West, US and Europe, all coming into Asia because of the word 'wealth'." While there are lots of millionaires in India, she considered how many wealthy people would be willing to use robo-advisory services. Capgemini had done a survey to identify the change in this number between 2015 and 2016. Their findings were as follows:

- Asia excluding Japan: The number rose from 70% to 76%.
- Rest of the world including rest of Asia, Japan, US and Europe: The number rose from 40% to 65%.
- Japan: The number rose from 50% to 65%.

The positive response towards robo-advisory services in Asia, she said, is because of China. "China is a country where there are a lot of wealthy people willing to go on online platforms because of all the internet financiers going digital. Wealth and robo-advisory come as part of the behaviour of the change." She added, "Seventy per cent of the wealthy Chinese below 35 years old are willing to go on robo-advisory. Will that happen to India?" She revealed that based on the statistics, that number is very low. This is a huge opportunity. Wealth managers, when surveyed, feel that only 20% of the people will use robo-advisors. But when wealthy individuals are surveyed, that number is actually closer to 80%. "There is a big dichotomy and therein lies the opportunity."

The experience of UOB is that many large online wealth platforms have come up over the last 12 months. "They have all come to Singapore because it is a good place to lend in Asia before you go to the different parts of the world." She observed that a lot of the existing platforms in the west are ETF-based. But ETFs are not the most common instruments across Asia-Pacific. The region does not have a huge, very well developed ETF market. Hence they have to be configured exhaustively to fit into the market. In order to help people manage their wealth, investment managers need to understand what the wealthy want to invest in, how they behave and how they can be helped. She gave instances of what people in different countries like to invest in. In Vietnam it is money; in India it is gold, jewellery or real estate. "At UOB we always put the customer's needs and objectives in the centre of everything we do. If our customers are successful, then we will be successful. That is the secret sauce to the success of everything in terms of the platforms we have," she revealed.

Her observation was that in India the key priority of most people is to keep their money safe. They would also like to invest towards a goal. At UOB, they help their customers reach their goal, although they started off cautiously because once trust is broken, it is very difficult to be rebuilt. They spent a lot of time building a personal financial management tool that helps customers in goal-based planning. They have concentrated on education and financial literacy. Currently they are in the process of incorporating a robo-advisor. "No point in trying to build one ourselves; there are so many intelligent, good fintech solutions out there that we can partner." But as of now, they are still in the process of evaluation and have not zeroed in on anyone. She felt that this is an opportunity for robo-advisory services in Asia to make a difference in the wealth management landscape.

The advantage of a robo-advisor is that it is available 24 X 7; it is objective and uses algorithms that are based on a lot of data and analytics. It has a relatively low cost. These benefits can be passed on to the customers in a manner that meets their needs. "However, in UOB, we believe that we have to go beyond banking, because everyone else will do what we do. How can we be different?" Ms Mun asked. She informed that UOB provides its customers with solutions in banking, lifestyle, travel, dining, and has rewards and payments schemes. "Why do we put dining into our app which is a banking app?" She explained that UOB is the largest credit card issuer in Singapore; on a single day, over 25,000 people use their credit cards to eat or drink something. Since the frequency of use of the card is so high, if dining is included with banking, the use of the banking app will increase significantly. Bankers must know the habits and preferences of their customers both inside and outside the bank, and use that knowledge to build the customer journey. She had a word of advice for the robo-advisors present: "Marry your customers' goals and financial well being with their real life goals. I think then you will enrich the huge population in India and make them not only financially literate but also happy and much more financially successful."

She talked about India and China, two large economies with large populations, both successful in their own way. "Why did China, in the space of the last five years, become what they are?" She informed that about five or six years ago, the Chinese regulators were worried that if they did not manage their institutions well after the global financial crisis, they could face an economic downturn. Yet they wanted financial inclusion because they have a large underserved population. They needed to manage the emerging wealth in china, where everybody was investing in property or in the stock market. Hence they decided not to impose too many regulations, but instead to allow the Internet finance companies to grow. "If you go towards what the customers need, you can then build everything around the customers' ecosystem." Ms Mun remarked that today a visitor going to China does not need to carry a single currency note. Everything is done on mobile and through QR code. And everyone can buy wealth products online. They can buy small ticket products. Hence most people are willing to invest. That is how the wealth starts to build and scales up. Why did e-commerce become so big in China? Because going physically to buy things is tough. Hence with the advent of e-commerce, consumers changed their behaviour and that impacted every part of their life. "In India, you have huge opportunity, and that is why I am here," she informed the house.

Mr Srinivas Jain:

Banks have seen a major change in regulation from an asset management perspective. The introduction of the direct share class created an issue about what self-directed investors must do. On the distribution side, margin compression

created an issue about what happens to customers who are not being serviced by IFAs. That gave an opportunity for fintech robo-advisory companies to set up online advisory platforms that could service these clients at affordable cost. "It is not an offline versus an online debate yet in India," Mr Jain felt. "It is about the underpenetrated, underserved market versus the served market." A significant proportion of the population remains unserved today either because of the economics or the size of distribution. "We have got to get that right and digital is one way which will make that happen." He predicted that eventually even offline partners will move towards online, or some kind of hybrid model. "That is the first challenge from an Indian point of view."

The advent of low cost asset management products that are available directly to an investor created a different model which is unique in the world. India is one of the largest markets where a customer can be self-directed to buy a product because it is cheaper than buying it through a distributor. In the current environment of aggregations, data and information, followed by advice, can be given to clients for a fee. This generates a hybrid model which is completely digital, but has a call centre that takes care of offline servicing. Mr Jain informed that currently, there is a hybrid model evolving which offline service providers see as an opportunity to make a differentiated offering. Some banks will offer a digital-only, self-service solution for small ticket wealth management of around Rs five lakh. These experiments will go on for some time before a unique model gets evolved.

"It is a long way to go in terms of what is going to happen. It is going to happen faster than we think simply because of this whole environment which is also unique to India," he averred. He observed that digital currency has become a reality after demonetisation; this will enhance digital penetration. Even advisory models usually push the product, instead of adopting a solution-oriented approach. Mr Jain felt that eventually, with smarter robo-players being created, we will move towards such an approach. "This is where the whole tipping point will happen from the digital, and more so, from an asset management point of view."

In his view, asset management companies will get disrupted if they do not remain relevant. "Can asset managers like us lead the whole initiative of making it easy for last mile digital advisors?" he asked. State Bank of India has a product called SBI Savings Fund, which is to initiate uninitiated investors. A small sum of money earns better than expected, and the money can be put back in the customer's account in less than a minute. "The experience actually makes them adopt digital. That is when you see that tipping point," he pointed out. The first step is to get the investor to start experiencing investment products through the digital route. The bank is now taking the concept to robo-advisors and integrating it with their platforms to make it much easier.

But there is no single advisory model that is absolutely right. It is an evolutionary process. Mr Jain suggested that asset managers, who have a wealth of knowledge and data, can sit with fintech companies and build an extra layer which is a self-correcting model. "Today, SBI Mutual Fund has over five million customers who invest with us. What if I open up that information data and make your decision-making much smarter?" he posed. A small fintech company will not be able to do asset allocation based on macroeconomic data. It needs a large asset management company to get those inputs. "Big asset management companies like us are able to build and give you modelling scenarios which then can be integrated in your solution plans and then the offering becomes much richer," he offered.

State Bank of India is the largest ETF provider in India. “All our actively managed funds have handsomely beaten the markets,” stated Mr Jain. But while they run a very large passive market, they also have a very attractive pool of active managers. He felt that in a market like this, it becomes difficult to suggest ETF under an asset allocation pool; that will happen when the alpha managers cease to perform. There is also the issue of embedded cost. “Today the compensation of embedded cost comes in a robo-advisory through the products that you sell and not from the services that you offer.” Until some of these issues get resolved, ETF will be some time away.

Fireside Chat V: 'Robotics – Next Generation Operations Productivity'

Session moderated by
Ms Neetu Chitkara, Principal, The Boston Consulting Group.

Panellists:

- **Mr Amit Goel**, Co-Founder and MD, Let's Talk Payments (LTP).
- **Mr Sandeep Sharma**, MD, South Asia and Middle East, NICE.
- **Ms Anita Pai**, Senior General Manager, ICICI Bank.
- **Mr Pankaj Sharma**, EVP and Head, Retail Operations, Axis Bank.

Ms Neetu Chitkara:

Ms Chitkara began with a quote from Daniel Wilson of the NY Times: "There are an endless number of things to discover about robotics. A lot of it is just too fantastic for people to believe." She wished to use the panel discussion to uncover the different elements in robotics.

To begin with, she considered what robotics process automation (RPA) really means, and the difference between RPA and AI. She requested panel members who have implemented RPA to share their experience. As the discussion got underway, she highlighted other relevant issues.

One function that is repetitive, manual and tedious is ATM reconciliation. This is a classic case where RPA can be applied. Ms Chitkara wanted the panellists to elucidate how this job can be given to a robot. She also wished to learn about some of the use cases where robotics is applied globally in banking, and whether there is more potential for Indian banks to explore some of these use cases.

Cost reduction is cited as one of the important benefits of RPA. "It may not be the only one," according to Ms Chitkara. A very important benefit is that it can quickly resolve customer issues. She then asked a provocative question. "We have seen some of the private sector banks take a lead in implementing RPA but I don't see as much talk of RPA if I go to some public sector bank or some of the smaller banks. Why is that?" She wished to know more about the challenges in accelerating the deployment of RPA in these banks. One challenge that comes up is the cost differential. But she felt that over a period of time, that differential may anyway go up as in the developed countries, and make the case for RPA even stronger. "Is there a minimum scale which would be required or critical mass to deploy RPA in a process?" she wondered.

Ms Chitkara wanted to know what percentage of the back office could be moved to robotics in the next five years. She sought the audience's view on this. Most of them felt that it would be in the range of 50%–70%. She inferred that "there is an understanding that this is not something which can be avoided or which we can shy away from." It is something that is inevitable. As regards job losses, even though many tasks can be moved to RPA, it does not mean that it will lead to joblessness. "People are moving to more value-added work," she observed.

Panellists' Views

Mr Amit Goel:

Mr Goel's focus was on the processes in the banks, and what kinds of RPA solutions can be applied. Basically, any process is subject to errors. If there are more than two errors for hundred tasks, that creates a lot of problems

of delay, money and compliance. In the last 20 years, banks brought in a lot of ERP software, CRM systems, claim processing systems and healthcare systems that were ably being used by humans in the banks. “We were very happy with the automation that happened by humans interacting with the systems.” Now, software is being built to use these systems instead of humans. “Think about RPA software interacting with your CRM systems, CRP systems, claim processing systems, help desk and so on. They do much better, because they don’t make errors and they do it faster. That’s what RPA is all about,” he explained.

India launched financial services much ahead of anywhere else in the world. Some of the foreign banks are very good at reporting the results of their RPA exercises, Mr Goel pointed out. For example, Barclays reported that they were able to reduce about 120 employees and save about 175 million pounds in just one RPA exercise. But he added, “In India, the cost of labour is not that high, just as a data point.” From the data points perspective, even the most matured customers in foreign markets have reached 40%–50%; that might go higher. Most of them fare around 20–30%. “The more important thing is that not all processes can be automated, especially those which are exceptions, like there is a decision which has to be taken by a human being,” he said. Further, he disclosed, “I have always been fascinated by this data point that in the US, as ATMs came in many decades ago, people thought that the clerks or the tellers will actually lose jobs. But over a 25–30 year period, nobody lost a job. That is fascinating.” In his view, the effort and money required will shift to creating an integrated workforce. If 50%–70% of the tasks are automated, that still leaves 30%–50%; so a lot of effort will have to go into making the RPA and the human being work together. He saw no difficulty in skilling employees to accept RPA. “This is a India advantage. We are a young country.” The situation here, where the average employee age is 27 years, is very different from that in European, Japanese and American banks.

Mr Sandeep Sharma:

In laypersons’ terms, robotic process automation can be explained as follows: if there are 10 people in a team today, in the future that team may comprise 3 people and 7 robots. Robots don’t take a chair, but they have names because the team leaders want to think that they are still running a team of 10 people. “Team sizes are measured not just in terms of humans, but also in terms of the number of bots that they have.” A recent World Bank report mentioned that RPA may replace 70% of the workforce. In other words, 70% of the work is not going to be done as it is done today. It is going to be automated, and people will move up the value chain.

“At least in this area, India is quite advanced,” Mr Sharma felt. He conceded that globally, the adoption of technology is much faster. But that is because the cost of arbitrage and labour are higher. India is a little slow in adopting technology because of the costs involved in creating and maintaining the platform. He had a word of advice for those who want to deploy RPA beyond the illustrative use cases: they must see whether they can deploy it quickly despite not having any impact with the backend system. “You are not updating a core banking system. Often, what we find is implementations get bogged down in trying to do everything with the robots.” Sixty to seventy per cent of the work can be automated right away, and the exceptions can be tackled manually. Once a process is identified for the exceptions, they can be moved to the robots as well. “It is important to note that robotic process automation is also being looked at as an alternative to outsourcing,” he said.

He dwelt on the benefits that RPA can bring to a bank. Before taking a decision, a bank will examine the business case which factors in the benefits of costs, wages etc. But Mr Sharma felt that there are a couple of softer measures which generally don't make their way into a business case. "They are equally, if not more important than the hard measures." The first one is customer experience. Any process simplification, operational efficiency and accuracy all reflect in how the customer experiences the brand. There is actually an impact on the bank's NPA score based on what it does with RPA. The second is employee engagement. Banks hire staff from the millennial generation which is just coming out of college; they are made to sit behind a computer and do mundane 'copy- paste' jobs. "Think about what you are doing to the employees' life on a day-to-day basis," he cautioned. "If you want your employees to be engaged, if you want them to grow, you want them to be working on something really exciting and innovative."

He considered the challenge faced by public sector banks in accelerating the deployment of RPA. "I hate to admit it but there is a sense of entitlement to a job for life." Employees are averse to anything that challenges that premise and improves productivity. "But at the end of the day, it will catch up. It is slow," was his view. He explained that this is an area where the rest of the world is leading India. There are a lot of public sector banks overseas that are mostly privatised; but even in the government sector, they are thinking ahead. He gave the example of a government agency in the UK which has five lakh employees. They are in a financial crunch and need to become lean and mean, and are examining how they can remove one lakh people. "I don't think that as a nation we are ready to have that sort of conversation. You have vote banks and a variety of other things that are still important in the public sector compared to operational efficiencies," he rued. But the storyline is not really around job losses in public sector banks. It is about moving employees to more productive use of their time and enhancing employee engagement. This change has to be top-down.

Mr Sharma agreed that there has to be a minimum scale of operations for RPA to be deployed, although he felt that the scale will come down in the future, as software robotics enters each household. Today, generally speaking, the scale of operation starts at a minimum of about 100. It has to take into account the cost of deployment, technology, and the operating platform. But in more advanced markets where the cost is very high, that number can come down to as low as 10. He explained the mathematics: if the cost of each person is about 1,00,000–1,50,000 dollars, and if just two people are eliminated, that is a saving of about 3,00,000 dollars a year; deploying a robot becomes a much cheaper option.

He agreed with the audience that the percentage of the back office that can be moved to robotics will be around 50%–70% over the next five years. "We are fairly nascent in this journey," he observed. People will move up towards high end work which is different from what they are doing today. But there will always be work, and employee engagement will increase as they do better jobs. "Over a period of time, this is an area that has to be relentlessly looked at. It is going to be defining survival for enterprises if they don't become more productive." And he suggested that RPA should not be looked at in isolation; it must be considered along with digitisation, process maps, and a number of other things that go along with it. RPA includes 'assisted' and 'unassisted automation'. A front office employee may be doing three things which require human intelligence; but there may be seven other mundane things that need to happen in the context of the flow that the human is doing. They happen in the background. This is referred to as 'assisted automation'.

Ms Anita Pai:

Processes which are voluminous with a huge number of transactions, where humans do not add value are the ones that lend themselves to robotic process automation. Ms Pai informed the house that ICICI Bank have been early adopters of RPA, starting the journey almost two years back. They have seen huge implications in terms of turnaround times and accuracy. "It was, I thought, a fantastic thing that we had stumbled upon and I was very surprised that none of the consulting firms had actually come in and given us briefs on it." Today they have over 500 processes and sub-processes under RPA. "We have moved the bar quite high," she stated. About 20% of their back office processes are automated. "It has given us a huge fillip." They have been growing very rapidly on the retail side, without adding anybody in the back office. They use a linear calculation: for a 20% growth in business, the number of staff in the back office has to be increased by at least 7%–8%. "I say with pride that over the last three to four years, we have not added a single person." In fact, they have been able to move non-value adding work into RPA and free up people to do work that helps the bank bring out new products and processes.

To illustrate, she considered an ATM dispute and gave an idea of the steps involved. A small set of customers may phone the call centre saying that their accounts got debited but they did not get cash out of the ATM. In a manual handling process, the person first checks the core banking. If it is an error during the process, the core banking reverses the debit and credits back the money. It may get done in two or three minutes, by which time the customer has already put in a query. If the debit is not reversed, they go to the next level which is the switch level. They check to see if there was any transaction. If there is no transaction, they go to the third level which is the electronic journal from the ATM. So the employee has to pull out three levels of data. Ms Pai pointed out that there are people who try and fool the bank regularly hoping to get compensation. "So you also want to run it against that list and make sure that somebody is not taking you for a ride. That data is not in any system. It is probably kept outside on a spreadsheet." Each of these four levels has a 'yes' or 'no' answer. The final decision is communicated to the customer via an email or an SMS. She informed the house that they have been able to use software robotics for this entire process. "Where we used to take about four hours to revert back to the customer, now we take one hour." She noted that these are high anxiety processes for the customer and can lead to trust issues. So the faster they are resolved, the better. "Those are the types of exponential changes that we can see."

She did not feel that cost is a big driver in the Indian context. Her bank hires 1000 more people every year. But they are aligned into areas which are customer-facing, more towards business acquisition rather than in the back office. "I don't think really employee substitution or cost was the main driver. The bigger driver was, can you do things more real-time." She explained that when there is a person involved, the processes will always be sequential; the person will pull out one piece of data at a time. Whereas a robot can pull out all the data at a single point. "That is the big advantage that the customers will get, business teams will get." Simplification of processes is another big benefit. "When you automate a process, everyone knows there are very clear specifications; you have to be able to draw out your flow charts very clearly and therefore the process gets very simplified. You realise you were doing many things which were probably unnecessary," said Ms Pai. In her opinion, that is one of the bigger benefits of RPA. The ICICI bank employees are young, and excited to do new things. She commented that it is actually

tough to work with the new millennial employees because they are always ahead of many others. “We have not felt any issue in the interaction between employees and software robotics. In fact, it has become a huge motivation tool.”

But along with the benefits, she identified a few challenges. Changes in a regular transaction system are part of a very well designed governance process. The business teams write out the specifications, and the technology team ensures that it is feasible. “This is a very good, well-documented process. If something was to go wrong, the technology team will pull out the relevant pieces of code and ensure that they get the whole thing back up again.” Ms Pai expressed concern that the governance processes for an RPA job may get compromised; it was not clear how they could tackle such issues. So far, she explained, they have been able to mitigate it by keeping their governance requirements as strong as for regular automation. “But I think that is something that one needs to always keep an eye on,” she cautioned.

Core applications keep changing. As they bring in more functionalities and better capabilities to integrate with other applications within or outside the bank, the need for a present-day type of tool will reduce. The business landscape is changing too. Ms Pai pointed out that in the last few years, before demonetisation, the number of cheque transactions in the country was either stagnant or dropping by a couple of per cent every year. The payments landscape was growing at 20%, and most of it was electronic. Things are different now. “Banking is going through a huge amount of change. A lot of disintermediation is coming through a lot of fintechs etc. which is changing the way we do banking.” The back office typically uses software robots, while chatbots or actual robots are used in the front office. She felt that about 50% of the back office jobs could be moved to robotics in the next five years.

Mr Pankaj Sharma:

Mr Sharma explained the approach that should be taken when robotics is being deployed in a bank. The bank should first identify their overall roadmap: what things they want to keep in-house, and what they want to outsource. They should then re-engineer their processes; the latter must be optimised through deployment of lean six sigma and other processes and tools. Axis Bank has concentrated on eliminating or improving some processes over the last two years. The remaining processes were combined with robotics and other elements. They have been working on STP, on their core systems and using artificial intelligence and machine learning. “We are proud to share that in the last three years, we have not added a single person on the back office side, even though on the retail bank side we have grown on an average between 20% and 25%,” he announced.

Mr Sharma cited Form 15 G/H as a use case where Axis Bank has deployed RPA. “That is something which you have to fill every year. Typically in April, May and June, we get lakhs and lakhs of requests from senior citizens and other customers who want tax exemption.” The bank put across an exact replica of what the income tax authorities want, both on their mobile app and their Internet banking app. With one click, the form can be submitted. “However,” he added, “because senior citizens are involved, they would be coming to the branches. We are working on simple robotics and seeing how we can take the data in a digitised format and submit it to the regulator in a direct manner.” He gave another example. “Currently we are using robotics on ATM reconciliation process.” He explained that they have a network of 14,000 ATMs and do millions of transactions every month with very strict guidelines on handling disputes. They are able to complete the reconciliation in a very short time. “In the last couple of years, Axis Bank,

with one of the largest volumes, has emerged as the number one player with the lowest level of disputes reported across." One of the key aspects that is helping them is work on their core systems, which are difficult to change very fast. The new technologies help them in bridging the gap between the core system and the newer and faster changes which are happening. "To change a core system, it might take 12–15 months, but through this we are able to implement this in 30–45 days' time and use it much more comprehensively," he informed.

RPA brings other benefits besides process simplification. It keeps the focus on customer service, and enables the bank to function with longer service hours. "When you deploy these tools, you are actually able to work 24 X 7 X 365 days. That is a big paradigm shift and this actually is a game changer." Longer service hours and impact on customer service has been a big benefit for them. Another important benefit for them is accuracy and compliance. "We want to make sure that all our processes are working with zero per cent error. With robotics, we have been able to reduce that set of errors," he conveyed.

One of the key challenges with robotics is human process knowledge. Every process is accompanied by process knowledge. When robotic software is being deployed, the users need to understand that there are processes going on in the background. How that is documented when the BRD part of the software robotics is being done is important. The quality of that knowledge cannot be overstated; if its essence is not captured well, the implementation will not be successful. Another challenge is that the bank still does not have all its processes in one core system. Whenever there is more than one core system, silos get created, and integration becomes difficult. So bankers must first see how they can get the processes on one core system and then deploy robotics. Equally important is the tool or the platform which a bank wants to take. Various partners will have different solutions. The organisation must consider its own requirements, and then take a call when going on this journey.

He did not foresee a reduction in team strength or elimination of processes. The point to be considered is on what percentage of processes the bank wants to deploy robotics. In his opinion, about 70% of processes will get revamped in the next few years. "If you are not doing that, that means you are not evolving and you are not changing," he declared. "You have to keep on evolving and making sure that your processes are up to date and making an impact on efficiency and accuracy parameters."

Customer experience, accuracy, compliance and the impact on costs are what define success. Robotics can also be used in the front-end. Axis Bank does a lot of sourcing through their sales people who input the data into tablets. If there is a mistake in the input, the wrong input goes through the complete chain. "We have done a lot of error-proofing," Mr Sharma disclosed. "That is the use of assisted robotics in a front-end tool and it is helping us in improving the accuracy levels and input parameters."

CONTACT

Jyoti Vij
E: jyoti.vij@ficci.com

Anshuman Khanna
E : anshuman.khanna@ficci.com

Supriya Bagrawat
E : supriya.bagrawat@ficci.com

Amit Kumar Tripathi
E : amit.tripathi@ficci.com

Federation of Indian Chambers of Commerce and Industry

Federation House, Tansen Marg,
New Delhi - 110 001
T : +91-11-23738760-70
W: www.ficci.com