

## The 7<sup>th</sup> DII Seminar

### FinTech Innovation from Emerging Markets

#### The Case of bKash from Bangladesh, Tunaiku in Indonesia, and NPCI in India]

##### •Discussion Points

•Today, Dr. Mahmood is presenting three cases of companies that continue to open these opportunities for their users

##### bKash

- A fintech unicorn poised to cross the two-billion US dollar valuation
- Just recently, the Softbank group injected 350-million US dollars
- In 2018, they also received a couple of hundred million US dollars from ANT Capital

##### Tunaiku

- The largest fintech lending product in Indonesia
- They provide online lending

##### NPCI

- To some people, it is the gold standard for facilitating payments within and across countries

2. Revolutionary in how payments are made in India

- In discussing these three companies, we hope to answer three questions:
- What types of entities tend to do better?
- What strategies tend to be more effective?
- What role should the regulator play?

##### 1 .bKash

- Bangladesh is a key emerging market in Asia, from 2018 to 2020, the country has grown by an average of eight percent annually, and it is forecasted to grow even faster after pandemic
- One reason for the rapid growth is because Bangladesh was a poor country. Growth is easier to achieve the poorer a country is, while richer countries have difficulty in growing as fast as they did previously
- Background
  - Bangladesh had reduced absolute poverty over the years with the

active NGO, BRAC

- Growth also fueled rapid urbanization, higher population density, lack of social services.
- Urbanization generated opportunities.
- Urban concentration allowed 86% of the population had no bank account in 2012 but 100-million people had mobile phones

### **Presence of leader in public sector**

**In 2009, Dr. Atiur Rahman, the 10th governor of the country's central bank, claimed himself to be a developmental central banker**

- "Bangladesh Bank realized that countries cannot prosper unless poor people can access financial services. Payments are at the center of financial inclusion. In Bangladesh, Grameen Bank innovated [...] credit. However, the 'payments' piece was missing."
- Compared to developed countries, the role of the central bank in developing countries is to focus on development and not just monetary policy. Have development be the core or the forefront of the central bank
- Dr. Ahman: "Telcos came to me, but I told them 'You can build the road but don't run the bus. I won't give you the bus service.'"

Telco were interested in the unbanked but not the banks

But telcos do not have to report to the monetary authorities, Traceability and compliance are much lower but the financial services are critical for people to move up the social ladder, in particular to the emerging lower middle class.

Presence of entrepreneur

- Kamal Qadir: an unusual kind of entrepreneur, founder of bKash

Started bKash in 2011

Unique characteristics of bKash

- BRAC Bank holds a 51% in bKash
- Gates Foundation and the International Finance Corporation are equity investors
- None of the board members were from banks

Unique portfolio of benefits for the unbanked: easy, secure, cheap, and convenient

- How do we convince people who would not believe that money could be transferred through the air?
- How do you convince people who have lived all their life knowing physical money? Who should they trust with the change?
- How do we offer a platform that is versatile and secure?

They used a USSD system as it was cheaper and worked irrespective of the mobile handset or operator. It was also more secure because of two-factor authentication

- How do we bring it to the people?
- Thought of mobile money as a consumer good that needs to be distributed
- They targeted people who sell prepaid sim cards as their agents. By 2016, bKash's agent network grew to nearly 160,000, and now their numbers have reached about 200,000
- These agents are now a common sight across the country
- A video of bKash was shown on Bill Gates remarking on bKash (2016). <https://www.youtube.com/watch?v=UOWFzyyBNJs>

### Success of bKash

In 2021, bKash has over 50 million subscribers

- In 2017, Fortune released a list of companies that changed the world, bKash was ranked 23rd in the world
- The bKash experience shows us how the banked and unbanked can work together
- Kamal Qadir said: "Banks are designed for big fish. We are designed for anchovies. Our job is to design a new kind of net, collect all the anchovies and give that money to a bank as a capital resource. A bank is very good at picking that big pot of money [...]. They can finance a hospital, a factory, universities. There is no conflict between us and the bank. We are taking idle money from people's pocket and putting it in the bank. In a very fundamental way, we are actually complementing the banking service."

### 2. Tunaiku

- Payments are vital for financial inclusion, but access to credit is another important aspect
- Tunaiku targets young, digital savvy, unbanked, and underbanked Indonesians whose lives could be derailed by small financial setbacks
- In the last couple of years, many individuals in Indonesia have moved from just below the poverty line to just above it. Targeting unbanked those who are at lower middle class, above the poverty line.
- Online lending portal providing unsecured loans through a mobile phone application
- Faster and more convenient than traditional banks. No need to fill out long

and complex forms

3. Longer installments and lower interest rates than those offered by loan sharks

- How would we know who give the loans to, especially since these people do not have collateral and the default rate is unknown? How do we deliver this value?
  - Applied its own customer database and credit scoring algorithm
  - Gave out blind loans to get the data to feed into the algorithm

Vishal Tulsian, CEO of Tunaiku: “We gave out the blind loans, then we could get the data. In a manufacturing business, the capital cost is put in the machines. In this knowledge economy, the capital cost will be the need to collect data and burn some money.”

- By repeating this process several times and updating the algorithm, Tunaiku has been able to bring down its credit rate of default to 1% of the actual rate of default
- Their experience is an example of another way of capital investment. By considering cost of acquiring or building the data as the initial infrastructure cost a company would incur, Tunaiku invested in establishing its database, thereby building their startup
- Another interesting experience Tunaiku had was that the company needed to deal with a regulator from the beginning. They could have just gone and acquired a license to operate. However, for them to operate, they needed to become a bank. As a startup that would be difficult. As part of a family that had a small stake in a small rural bank, the family bought a majority of it. From there, the license was shared and given to Tunaiku. Through this experience, they were able to get through the regulations

Linking with the NPCI

Tunaiku’s case was part of a family that had the resources to acquire a bank and receive access to the over complied. In bKash’s case, they were part of the largest NGO in the world, BRAC.

We need to change the large informal and small SME sector in low-income countries to much larger SME and much smaller informal sectors

The heroes that can make this kind of development are small entities in villages but to do that we need a solid financial infrastructure

From interoperability among banks to financial inclusion to democratization of the payments infrastructure

## NPCI

Initiated by the central bank of India but owned by multiple banks

India needed a homegrown platform that could be scaled up to create a flexible ecosystem for interoperability

- i. A large unbanked population could benefit from a payment revolution. The linguistic, geographic, and economic diversity posed a significant challenge to come up with economically viable solutions that could be universally accepted in India
- ii. The financial market infrastructure is weak and lacked interoperability and efficiency. The banking sector was dominated by large state-owned banks who were laggards in technology adoption
- The supply side question: who will develop the infrastructure?
- Solution was to create a non-profit, co-opetitive infrastructure
- If a private entity would have developed the infrastructure, it could have generated free rider problems for the bank taking the lead, or the first mover bank could have potentially taken laggards hostage ownership is by multiple banks

## NPCI

While NPCI's independence provided it with enough space to innovate, a non-profit structure made it possible for NPCI to focus on long-term collective benefits without having to worry about short run market pressures independent from the central bank

From the beginning, NPCI, deliberately put together a group of people who were not from the Royal Bank of India or the banking system, but primarily from the technology sector • like the experiences of bKash and Tunaiku

- The demand side question: if we build it, will they come?
  - JAM Trinity
  - Jan Dhan or J: direct payment of government subsidies ignited the demand for banking among unbanked
  - Aadhaar cards (National IDs) or A using biometric identifiers to resolve onerous know-your-customer requirements needed by banks
- 3. Mobile phones or M's high penetration among the unbanked meant banking was accessible

- ii. Democratization of payments through the Unified Payments Interface (UPI)
  - o Essentially a payment highway where any payment platform could connect and seamlessly execute inter- and intra-platform transactions
  - o Useable by traditional banks, credit card solutions, and newer payment platforms
  - o More democratized system by reducing the cost of innovation for small fintech players
  - o Allows individual user to pick and choose their payment service providers, making it possible to keep their funds in one bank, while using specialized fintech service from others for greater convenience

iii. With its success, other countries have become interested in adopting the NPCI model

1. Dilip Asbe, CEO: "We are working with Bank for International Settlements, the World Bank, and we are reaching to as many as 50 to 60 countries, their governments and regulators because we want to leverage the [NPCI] stack that we have built by India so that it can become a public good of the world. We don't want to monetize this but support the world and improve the livelihoods of people around the world and this would be the contribution of India."

Conclusion and implications

### **Who?**

- 1. Incumbents vs. startups? All three are startups
  - a. We need people who are tech-savvy, young talents who are not attracted to the typical culture of a bank or a central bank
  - b. Being customer-driven rather than compliance-driven; the process of information flows matters when creating new processes through technology
  - c. Small and agile teams with a large degree of independence, while remaining directly operating under the board
  - d. Open and innovative culture that appeal tech-savvy talents who avoid old-fashioned job descriptions and career paths
  - e. We need to change our strategic, people, process, structure, and incentive mindset to foster innovations for fintech

NPO vs. Family vs. Government

### **How?**

- 1. How to win over the customer?
  - a. We need to think about value innovation: security, convenience, ease of use
- 2. How to solve institutional voids?

- a. We need delivery system innovation
- 3. How to address regulatory ambiguity?
  - a. We need to be innovation in dealing with the ecosystem, the regulators too
  - b. For example, bKash is working with garment firm owners to use their platform for their payroll system
  - c. Work and create dependencies and people who can benefit from the platform, thereby making your company more indispensable
  - d. Making your fintech solution a part of the ecosystem

### **Regulator's role?**

- 1. Low touch vs. heavy handed?
  - a. In the case of Bangladesh and Indonesia, they were low touch
  - b. Quote from a senior adviser of a Bangladesh bank: "We felt that our task is to provide an enabling environment where ideas can be experimented. Where successful ideas can flourish, and others will not do as well. We wanted to ensure that we do not overregulate anything. We did not provide anything overly structured. That's because we didn't know what to regulate, they hadn't taken off yet. So, why should I make a 50-page manual laying out dos and don'ts. That would be self-defeating. So, we provided them loose enabling guidelines."
- 2. Co-creation vs. invisible hand?
  - a. The competitiveness of an ecosystem depends on:
    - i. Factor (input) conditions
    - ii. Context for firm strategy and rivalry
    - iii. Demand conditions
    - iv. Related and supporting industries
  - b. India had the demand conditions, but it was latent. Thus, the government created NPCI, the infrastructure, as part of the related and supporting industries
  - c. NPCI then created the fintech highly through interoperability among banks to connecting with credit card solutions to democratizing payments with UPI, as part of factor (input) conditions
  - d. The government also prompted the demand conditions through the JAM Trinity model
  - e. NPCI, through UPI, ignited the context for firm strategy and rivalry
- 3. Once the process is kickstarted, the pieces fall into place, and the ecosystem is generated
- 4. The interesting point about bKash and NPCI is the governments were low

touch but also cooperative. They worked with a variety of actors. There was a co-evolution of people working together

b. Prof. Mahmood ends his presentation with a quote from Mr. Rahman, the 10th Governor of Bangladesh Bank: “The market may have an invisible hand, but the market may not have soul all the time. We have put a soul into the market by giving to the poor people who never have thought about it.”

### **Interventions by Dr. Gerald Hane**

a. With a lot of the audience coming from the public sector, may we ask you to elaborate more on the policy lessons learned from the three cases? Are there common approaches, or, in retrospect, could there have been any policy measures that could have accelerated these startups?

i. First, we cannot come up immediately with a full-fledged policy or regulation. For example, cryptocurrency, nobody knows the full extent of this phenomenon exactly. But this doesn't mean we shouldn't do anything. Doing nothing will only create negative spillover effects. In the three cases, all want financial inclusion, but all do not want someone to who might take all these peoples' money and leave suddenly. There must be a balance. The approach that may work best is allowing a private sector entity to operate the system but still work together with the government.

ii. One approach that will likely not work is allowing the private sector to come in and do what they without regulations. Government steps in the private sector makes a mistake with the possibility of shutting them down. This may not be the approach that works best. An example of a lightly regulated experience is ANT Capital in China. After a while, regulations came in but the market has already grown to a point where having regulations became necessary. If the regulator came in at the beginning, it could have killed the potential market.

iii. The balance is important, and the factors may vary between country to country and the partner – in the case of bKash, their partner is the largest NGO in the world, BRAC. Legitimacy of the firm also matters. In the case of bKash, having investors like Bill Gates and Jack Ma spells volumes and creates a solid foundation for legitimacy.

b. We understand that each ecosystem is different, where some think that startups have more difficulty in developing an ecosystem, while established large firms may develop and implement theirs faster. Thinking about the ecosystem, what do you think are some of the key factors for success?

- i. It is interesting to think that large players already possess the ecosystem. Looking at big business groups, one may argue that they exist because of the lack of institutions. They are not interested in the development of these institutions because it will disrupt their established operations.
- ii. The ecosystem we are talking about will not be built if the weakness of the ecosystem is the reason that these big businesses exist
- c. The cases provided are three very powerful examples. Does one have an advantage over another for certain circumstances?
  - i. The weakness of the bKash model is that everything is regulated, but the strength of it too is that everything is regulated. No one can say that they are pulling a fast and easy scheme. On the other hand, it does take time and effort. For fintech, the best way is to go with regulation because it is quite different from other innovations where the knock-on effect is not as high. It may be best to over comply or ensure that we are in a compliance space. Other cases not in this presentation have shown governments shutting them down. The best course of action is still to work together with the regulators, i.e., the government, when it comes to fintech.
  - ii. Regulators can come in to help shape the rules as opposed to simply ignoring them. This is especially true for countries that have fewer alternatives to bank their money, like Indonesia or Bangladesh.

### **Question and answer session**

- a. Dr. Iizuka: The point made on the differences between fintech and other technology-related businesses is an interesting point. Does that have something to do with financial services being public goods compared to other services? Does the role of government change, given the myriad of digital technologies and are there any sectoral differences?
  - i. Dr. Mahmood completely agrees as the potential bad in financial services is very high.
  - b. Ms. Kitahara: It is interesting that non-financial experts are in Bkash's governance system. Was there a contribution that they could only make as non-financial experts? If so, what kind of contribution was it?
    - i. It may have never been possible if bankers did it because bankers would only like to do it the banking way. In these cases, the non-financial experts involved are customer-driven, and this is a significant difference. These people saw it as selling a commodity, they saw a need to look for distributors too.
    - ii. Dr. Iizuka's comment: Customer-driven is an interesting keyword, as the

public sector may also be missing this. There really needs to be a good balance and complementarity.

c. Mr. Shimizu: Is it possible to create innovations like these cases if we (entrepreneurs and government) carefully design them? Or are innovations like these undesignable a priori and only recognizable when they survive?

i. The government should be low touch but also turbo charge the ecosystem, like in the semiconductor, electric vehicle, and HDTV industries of several countries, as opposed to being a direct player in the ecosystem.

ii. Going back to the figure that shows the four variables for competitiveness, the government is not part of the ecosystem. However, it supports the ecosystem by creating the related and supporting industries. The government also stimulates latent demands, as in the JAM Trinity in the NPCI case. The government must take the role of a catalyst.

iii. It may be difficult to design specific innovations but it is more possible to create the ecosystem that makes it possible for companies to create these technologies and innovations

iv. Dr. Iizuka's comment: it seems like the government now must be agile in deciding on when, what, who to intervene. Thinking about developing countries, how do you think they can foster the capability of the government under these circumstances?

v. They may need to get the best people. In the case of Singapore, they can attract all best people into government. But this may mean removing resources from the private sector. In other countries, it is the other way around where the government is lacking in better human resources. Again, there must be a balance.

d. Ms. Yamashita: A question about future strategies for leapfrogging financial platforms. Are those entrepreneurs ambitious to leapfrog the financial services within the reach of the central banks-like in terms of the introduction of digital currency?

i. The central bank may create sandboxes where they can work together, perhaps. People understand so little about cryptocurrency or digital currency yet. There is fear in this sphere. There may be danger in implementing these in countries like Bangladesh where investments and resources may syphon towards this technology rather than other development needs.

ii. Dr. Hane: larger entities often are slower moving compared to smaller venture entrepreneurs – like those in the cases presented – because larger entities often need to set the ground rules and risk management.

iii. Dr. Mahmood: thinking about the Meiji Era when Japan started building its war ships. The creation and profit were all private, but the risk was shouldered by the public through the government. If somebody thinks that the future of the world is digital currency, perhaps the central bank can work with a group of people that the central bank thinks are trustworthy. Nonetheless, a conversation with the banking sector is necessary. Otherwise, these ventures may be shut down, and the restructuring costs will be very high.

**Several comments during the Q&A session were raised but there was not enough time to address them. These are from:**

o Mr. Ayana: Can you tell us more about the usage of machine algorithm to identify the right borrowers for bKash or any other financial agents to easily lend money? How successful is bKash or other cases in minimizing the borrowing constraints?

o Mr. Saito: We fully agree with the point that the public sector is no longer attracting talented people as it used to, and that the government should be a “catalyst”. Even in Japan, central ministries are now regarded as a typical “black workplace” for 3K and tend to be shunned by talented young people. Under these circumstances, the revolving door flow of human resources between the public and private sectors in Japan is hampered as well. I think that we should seriously consider the conversion, or the double track that allows side jobs.