The FinTech Revolution

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This is an introductory article on the FinTech phenomenon that has exploded on the Banking & Financial services industry at a global level over the recent few years. While it is still early days of the FinTech revolution, some people are of the view that the traditional and established players in the Financial Services industry are likely to be swept away. The author is of the view that the most likely outcome, once the dust settles down, will be of one of active collaboration and partnerships between the established financial services players and the start-ups.

What is meant by FinTech?

FinTech is a buzz word that has been largely used to connote the application of Digital Technology in creating and delivering Financial Services in the era of the Internet, mobile telephony and Big Data. Many established players in the BFSI[1] Industry and hundreds of start-ups already use digital technologies to offer financial services to consumers in innovative ways. Most of the discourse on FinTech has been how the emerging wave of start-ups will overrun the more established players in the industry, but this article builds the case for a more likely evolutionary path of FinTech to be one of mutual dependence and partnership between the established incumbents and the start-ups. On the lines we have seen in the growth pattern of new technology industries, even the FinTech revolution will bring forth its set of unicorns, a few spectacular failures, some smart moves from established banks/ financial institutions to learn the new tricks of the trade, and emergence of regulatory technology to manage the risks and compliance requirements of this sector.

Use of information technology (IT) in the BFSI industry is not a new phenomenon. For the past four decades or so, IT has been extensively used in delivering banking and financial services, and the positive benefits that IT has brought to consumers have been well studied and documented. The 1970s witnessed the issuance of credit cards in a big way in developed countries resulting in a retailing revolution and consumer boom; in the 1980s, global funds transfer services and exchanges started to become electronic, giving rise to a spurt in foreign currency trading, bond markets, global remittances, and derivatives. Retail consumers also benefited from the proliferation of ATMs. From 1990 onwards, global financial markets have become more inclusive with several developing countries getting coupled with global financial flows. The Internet was an invention of the 1990s decade, but for the first few years its use was largely as an innovative communication tool. The initial euphoria grew into a technological bubble within a few years that burst in early 2000s. In the first decade of the new millennium, we saw the maturing of the Internet and emergence of more sustainable e-commerce models. More and more people started to benefit by the advent of the Internet and in the manner that BFSI industry adapted to the Internet. Many services were introduced or were transformed, such as, online banking, online equity trading, and online payments. Even processes for mundane activities like opening and redemption of fixed deposits in banks were transformed.

What has triggered the FinTech revolution?

Investments in FinTech have grown exponentially over the past 5 years. For example, in 2010 the investments in this sector globally were estimated at $1.8 billion, but they had grown tenfold to $19 billion in 2015[2]. More than two-thirds of the investments in FinTech were in the so-called last mile consumer-leg of the financial services value chain, primarily in the payment transactions. The CEO of JP Morgan Chase famously said in a wake-up call to Wall Street, “Silicon Valley is coming. There are hundreds of start-ups with a lot of brains and money working on alternatives to traditional banking”[3].

Despite such feverish growth rates, it is interesting to note that only a small fraction of consumers of financial services in US and UK (where penetration has been the highest in the developed world) has migrated to using FinTech services. In China, where FinTech has had the highest rate of growth anywhere in the world, about one sixth of the consumers of financial services actively use FinTech. Interestingly, some FinTech companies in China have more clients than large banks do. This phenomenon is caused by a combination of factors unique to China, such as, the high penetration and usage of mobile phones, the largest set of active users of e-commerce based services anywhere in the world, and a bunch of successful FinTech companies who have influential shareholders who have also succeeded big in e-commerce and conventional financial services. This model of partnership between the conventional banking and financial services firms and start-up FinTech is likely to proliferate in most countries, as the former have a lot of clients while the latter have the innovative zeal and technological know-how.

The major factors that have given a fillip to FinTech are:

1. The rise and spread of mobile telephony, in particular, the widespread use of broadband data services and smart phone
2. The millennium generation that is more comfortable with using the Internet, Apps, Smartphones and e-commerce and is willing to embrace new methods of consuming financial transactions
3. Rapid advances in computer technology (both hardware and software) that has given rise to the advent of Big Data, advances in machine language that is spawning the era of Internet of Things, technologies such as cloud computing, greater security in networks, and cheaper costs of access.

Some people also believe that while the above are the active drivers of the FinTech revolution, its seeds were sown in the aftermath of the global financial crisis of 2008 when many consumers started to lose their faith and trust in the large financial players. Start-ups took advantage of this and the also of the enabling technological developments to offer services and/or information to consumers over the Internet. Whatever be the reasons for the rise of the FinTech story, its impact is real and is likely to stay the course.

What all activities are impacted by FinTech?

FinTech players have started to touch many aspects of consumers' lives, but they are most active in five segments, namely, Payment services, retail banking, P2P lending, wealth management, and what is called Block-chain technology. In many of the above areas, the start-ups have targeted end consumers in a big way, giving rise to the impression that a tidal wave of FinTech is in the making which will disrupt the established players in the industry. This is greeted by scepticism amongst the incumbents as many feel that financial services, particularly those that are complex in structure, cannot be delivered by technologists (who dominate the start-ups) without adequate experience in the banking/financial services domain. The following is a brief description of the impact that FinTech has started to make on various slivers of the BFSI industry:

1) **Payment Services:** This is the segment where the most visible impact of FinTech has occurred so far. The global payments business is about $600 billion per annum, and has been a monopoly of banks and a handful of non-bank players specialising in money transfers. Payments amongst business entities, amongst individuals and with Government are the lifeblood of an economy and only rise with economic growth. With the advent of mobile technology, the number of mobile phone owners has outstripped the number of bank accounts, particularly in the developing world. In countries like Kenya and Bangladesh, the mobile payments systems have revolutionised their economies in terms of large number of hitherto financially excluded people getting to be beneficiaries.
2) **P2P Lending:** P2P lending platforms are involved in lending to both individuals as well as (small) business firms. The former segment (online consumer lending) has evolved a little more than the latter (online business lending) in most countries where P2P lending has taken off. The business of P2P lending came into vogue after the global financial crisis in 2008, when several established banks either faced a crisis of survival and/or a crisis of credibility. Several start up entities emerged that aimed to bridge the gap and lend to individual borrowers.

   The new generation FinTech firms compete on parameters such as simplified procedures (vis a vis established banks some of whom are seen as stodgy with complex processes), the convenience that being 100% online brings, better returns (for lenders to the P2P platforms) or simply the fact that they entertained borrowers that conventional banks would not touch.
3) **Retail Banking:** The core services that retail banks offer are accepting deposits (which is backed by some kind of insurance protection) and providing clients a safe place to keep their cash that earns interest; they facilitate payments that clients need to make to others through a variety of channels such as cheques, debit/credit cards, drafts, on-line transfers and so on; they provide credit. Some banks also vend financial products (essentially investment options) that are "manufactured" by other financial services providers. All of these services provided by retail banks are being eyed by technology-driven FinTech providers in some manner or the other.
4) **Investment banking:** FinTech has touched many parts of the Investment banking and funds management businesses. Crowd-funding is already a reasonably well-known concept and route of raising funds by ventures, especially in the technology world. Many regulators in several countries (including SEBI) have brought out regulations for crowd-funding. In Wealth management, robo-advisors have made their presence felt in many countries, and have started to push out human advisors from the simpler and straightforward investment advisory space. As algorithms get more sophisticated and databases improve, one can expect robo-advisors to become more ubiquitous on the Internet. In the world of wholesale trading of financial instruments, algorithmic trading has succeeded, wherever regulation has not curbed it too much. As technology improves, the costs of handling large tracts of data will plummet and areas like machine learning and artificial intelligence will start making a bigger impact on outcomes. While Big Data is useful in making predictions based on correlations, advances in computer technology such as distributed computing and advanced machine learning enable better predictive and prescriptive analytics, which will impact areas like high speed trading, asset allocation, market making, and finer price discovery.

5) **Insurance:** Many of the initiatives in the Insurance space can be classified as conventional play of Internet and e-commerce. For instance, there are ventures and apps that connect doctors to patients and other stakeholders such as diagnostic labs, medical storage databases, and insurers. There are others that connect insurance players to policy holders or service providers. The biggest impact that FinTech can potentially make in Insurance industry is not so obvious to most observers, as the big changes that are likely to occur are in risk assessment, pricing, and structuring products, are largely back-end processes. As FinTech applications impact the Insurance sector, one is likely to witness an expansion in the number and range of products that the sector can offer to different types of customers. In a country like India, where penetration of insurance is low, growth of FinTech in this sector would result in a surge in insurance adoption, especially at lower price points.
6) **Block-chain:** This is not a product or service per se but a digital technological innovation that has vast potential for disruption in multiple fields. In a seminal paper in 2008 titled "A peer to peer electronic cash system", Satoshi Nakamoto (an elusive person yet to be identified but widely regarded as the father of the Bitcoin), prophesied that a pure peer to peer version of electronic cash would enable online payments from one party to another without having the need to go through a bank. Over a few years, Bitcoin currency (and other crypto-currencies as they were called) gaining popularity amongst a set of investors and users, but they have yet to become mainstream. The crypto-currencies have evolved outside of regulators' domain for the most part and there have also been some spectacular crashes in their systems. All this has led to scepticism and a lack of trust in these crypto-currencies and a general perception that they denote illegal and nefarious activity. However, such a conclusion conflates business malpractice with the potential legitimate applications of a highly disruptive financial and digital innovation. In the future, we are likely to witness a convergence of block-chain technologies (the underlying technology of crypto-currencies)[4] and digital banking services.

Interaction between FinTech and BFSI industry

FinTech has been interacting with the BFSI industry in three broad ways as follows:

1. **Disruptive:** Here the FinTech start-up players have something revolutionary to offer (usually it is heavy on technology) that is catching conventional players off guard. Examples are crypto currencies (based on block-chain technology) that are finding applications in currency trading, e-commerce payments, distributed ledgers, etc. Another example is electronic wallets that are breaking into the float funds that banks have historically enjoyed and into the more profitable service offerings of banks and other large financial lenders.
2. **Disintermediation:** Here the FinTech start-ups are adopting more conventional warfare that the BFSI industry is familiar with by directly approaching the end-consumer with their offerings and in the process cutting off the middleman. Examples of this are crowdsourcing platforms (who are dis-intermediating investment banks) and P2P lending platforms (who are disintermediating banks and other lenders). While touting themselves primarily as lenders, the P2P players are also in effect impacting the savings habits of banks' clients. Many savers look for higher rates of interest than what fixed deposits (the staple savings products of most banks) yield. P2P platforms give these savers an avenue for higher returns, albeit at a higher and different kind of risk.
3. **Process improvements:** Several FinTech players are more focussed on specific slivers of the financial supply chain and aim to improve process efficiencies rather than dis-intermediate existing players or offer radically new products. The process efficiencies are in ways like providing more information or choices to the consumer to do a transaction (e.g. aggregating quotes for insurance policies and getting a wider choice to the consumer – in this case, the FinTech player could be an established broker also) or providing better network security to bank and consumer. Most of the process improvements are by way of offering the customer higher convenience, more choice, and more information in their consumption of financial services.

As can be seen, most of the services that incumbent financial services players offer to consumers (particularly retail consumers) can be offered by FinTech start-ups. In many instances, FinTech start-ups are more nimble, transparent and approachable to consumers than the established financial institutions, whose approaches are laced with their legacy processes and various regulatory stipulations. The major risk that incumbents face from the FinTech onslaught is that they might be relegated to the position of utilities that essentially supply the infrastructure and plumbing of the financial world, while the FinTech players position themselves as consumer-facing, innovative service providers owning the relationship.

How are regulators reacting to FinTech?

The Banking and Financial services industry is quite heavily regulated in most countries, more so after the global financial crisis of 2008. Regulators in most countries have been watching the phenomenon of FinTech closely, and have so far not put the spotlight directly on the FinTech players. Most FinTech operations touch a regulated entity in the financial services industry (e.g. a bank, an exchange, a broker, or a clearing house) and therefore, the regulators do get a good view of what is happening in the sector. When the mainstream financial players engage in their own FinTech, such activities are directly supervised. However, there are several areas of FinTech which are outside the ambit of the present regulation in many countries, especially, when the player is a non-regulated start-up and when the entity is directly providing a service to the end consumer. E.g. a P2P lender or a robo-advisor could fall in this bracket. In India, the regulators (both RBI and SEBI have been watchful) have started to bring out discussion papers and draft regulatory guidelines for FinTech entities / activities such as crowd-funding, P2P lending, mobile-banking, and payment vendors. In some cases such as mobile payment systems and payment banking, RBI has issued full-fledged regulations or licensing norms for entities.

The objectives of the regulators are fairly straightforward – to ensure that no activity creates a systemic collapse or crisis of any kind, and second, to prevent gullible or less savvy consumers be duped by service providers due to lack of regulation. There are other objectives as well that regulatory agencies have such as preventing anti-competitive behaviour by service providers; ensuring that financial markets are true to the purpose of supporting development goals of the government; that private details of consumers and businesses are not compromised due to breaches in technology security; and so on. Given the rapidly changing contours and boundary lines of technology, financial services, e-commerce and several sectors of the physical economy, one can expect the regulators of banking and financial services to become more aggressive in drawing a few red lines and requiring FinTech players to abide by new regulations. It is critical for regulators and the industry to have a mature dialogue on the risks and benefits to ensure that regulation does not unduly cramp innovation and prevent realisation of full potential of FinTech.

The FinTech industry, particularly the start-up entities that do not come from the financial services industry, would like to think that they should not be regulated by traditional regulators of banking or capital markets. However, the reality is likely to be different in most countries where the same regulation is likely to be applied on both FinTech players and conventional financial services players, but the difference will be more in the mode and nature of oversight that regulators apply.

How is the FinTech wave likely to pan out?

While a few start-up entities in the FinTech space, especially those with highly innovative approaches and deep-pocketed investors, will disrupt conventional Financial services industry, the most likely scenario going forward will be where the established Financial services players will also imbibe such new capabilities one way or another – through business partnerships, equity investment deals, or just adapting the methods of successful FinTech ventures. The phrase "People need banking, not banks" may sound catchy, but it is not entirely a practical proposition. Banking and financial services involve more than just consumer acquisition and servicing activities. There are several parts of the banking and financial services value chain that need strong domain understanding of risk management, capital management, behavioural analysis, long range planning, understanding of geo-political economy, a strong balance sheet, and so on, which most new FinTech players do not bring in adequate measure, but the incumbent financial players do. So, an eclectic combination of strengths is what the doctor would order for a healthy evolution of FinTech.

Therefore, we are likely to see a marriage of old-fashioned financial players with new FinTech entities – an example is the acquisition of FIDOR Bank (an online German Bank) by Group BPCE (a large mutually owned French lender) announced in July 2016. A second model will be where two players, one a financial services entity and another being a technology player or a FinTech, announce a sustainable partnership of some kind. E.g. In India, the licenses issued for setting up Payment banks saw State Bank of India and Reliance Jio partnering one another, and in another case, we had Airtel and Kotak Mahindra Bank collaborating. While none of the entities is a pure FinTech player in the true sense, the two partnerships reflect the intent to exploit FinTech by bringing their respective strengths in two different areas.

Will the FinTech bubble burst sometime in the future?

The FinTech wave has been growing at such an explosive pace over the past few years, that this question pops up every now and then. Clearly, the financial services industry globally is at an interesting intersection. A new story to creating value and delivering services has disruptively broken out in the face of the industry. The investment in FinTech around the world has exceeded \$20 billion, and shows no signs of abatement. At times, the FinTech space may appear to be the "Wild West" of the Banking & Financial services industry, with Venture capitalists, Private equity funds, E-commerce marketplaces, Telecom players, Social media and other giants of the Internet era, and even established financial institutions not wanting to lose sight of the fast moving targets, falling over each other to invest in FinTech ventures that evince half-promises of new vistas. Surely, there will be failures in such a mad investment scramble. When the bubble pops, we will be able to see, to quote a famous phrase, "who has been swimming naked", but more importantly, regulators should not pull in curtains and control rings around the innovative and entrepreneurial spirits that are working to bring more competition and better benefits to consumers.

Where does India stand in the FinTech revolution?

There are not as many (as yet successful) FinTech companies in the P2P lending space or in the investment banking/consumer banking space in India. However, India cannot be called as a laggard, and we have a surprising player who has taken tremendous strides in this space, namely, Government of India (GoI). It is remarkable that GoI has been very nimble in ushering in the technological backbone and even regulatory moves to kickstart the FinTech revolution in India. While GoI may not communicates its strategy or programmes in this fashion, what it (in conjunction with the RBI and SEBI in many cases) has done with the “Aadhaar” scheme, the “Jan Dhan” Programme, using the Direct Bank Transfers to target subsidies and other welfare payments, the recently introduced Unified Payment Interface effecting mobile to mobile payments (this is a first of its kind in the world), introducing a new cadre of (payment) banks in a novel manner, enabling online KYC through the use of multiple technologies, enabling e-signatures that allow online submission of documents, the use of digital lockers for safekeeping of documents, and so on, all indicate that GoI is keen to usher in the FinTech revolution to drive financial inclusion and development in the country. The move to becoming a cashless society in India, which not long ago would have been a laughable proposition, has become a reality now.

In 2016, India is considered to be one of the fastest growing markets in the world for Internet and mobile based businesses. In most of the developed and large economies of the world, both mobile telephony and internet growth has started to taper off, whilst in India the growth is high (upwards of 30%) and likely to continue for a few more years, as both broad-band services and smart phones have significantly more headroom for growth. Given the push that Government has been giving to start-ups and Digital India programme, and the vision of our regulators in the financial sector to make financial services more inclusive, it is a certainty that FinTech will grow by leaps and bounds in the coming years in India.

Views expressed in this article are the personal views of the author

[1] Banking, Financial Services & Insurance
[2] CitiGPS: Global Perspectives & Solutions 2016: How FinTech is forcing Banking to a tipping point
[3] Jamie Dimon, CEO of JP Morgan Chase, in his annual letter to shareholders in 2015
[4] A description of block-chain technology is not included in this article.