

Coping With The Challenges Posed By GAFA And Other Digital Disruptors: Can Advanced Technologies Help The Banking Sector?

Tripti Dhote, Pankaj Pathak, Prasanna Kulkarni

Abstract: Google, Apple, Facebook and Amazon (GAFA), global technology players, have transformed the banking business. As of now, GAFA's storming into financial services is incidental to and an extension of their normal business. With their ability to map, analyze and leverage big data across social media, smart phones, customer purchase information, and expectations of retail banking services, GAFA can provide a high quality personalized customer experience. To cope with these challenges, banks must transform themselves to offer a richer and satisfying customer experience. The digital as well as physical environments need to be integrated. Advanced information and communication technologies such as artificial intelligence can provide better insights into individual customer preferences. But there is a need for quick action. Amazon, Apple, Google, Intuit and PayPal have already joined hands in an association called 'Financial Innovation Now', to encourage innovation in financial services. Global encouragement to 'FinTech' has paved the way for other digital disruptors. Banks must face these challenges and be proactive. They need to review and revise their business models and develop new revenue streams. This is precisely where advanced technologies can help. This paper asserts that to face such intensely technological competition, the banking industry will have to develop the ability to systematically and strategically leverage customer insights, advanced analytics and digital technologies.

Index Terms: GAFA, Banking, Customer, Digital, Technology, CRM, PSD2

1. INTRODUCTION

THE banking industry is today undergoing major restructuring because of the continuously shifting competitive landscape and changing consumer behaviour. Due to digital and other advanced technologies, banking industry is transforming into a consumer-to-business (C2B) industry. Customer experience is fast becoming one of the most influential factors even in the banking business. A survey in 2017 revealed that 23% of customers would prefer digital wallets instead of mobile banking apps. [11] Non-banking players are also excited to grab the opportunity to use the digital wallet concept. The technology-driven customer experience enhancement has been driven by the four technology giants – GAFA (Google, Apple, Facebook and Amazon). The financial crises ca 2008 gave rise to multiple business transformations. In the last few years, many tech firms have shown interest in offering financial services. Collaboration between financial institutions and FinTech firms is increasing. The objective of the collaboration is generally to provide a FinTech solution, and to become stronger together, than as individual service providers. This looks like a serious threat to the traditional financial institutions. The earlier competition was only from FinTech startups, but now it is coming from monsters like Google, Amazon, Apple and Facebook (GAFA), who have jumped into the digital payment arena [1]. These companies have created a business ecosystem and have involved others in complementary activities. Many customers welcome FinTech due to different ways of working, their culture, problem solving ability and new innovative ideas [8].

Technological advancement has changed the consumer behavior relating to payments, which is a pointer to banks to change their operating model. [12] It requires reengineering of banks' legacy IT processes. Financial institutions, particularly banks, need to be self-disruptors looking for appropriate innovations and must empower their customers. They need to develop new processes and operations with the ease of use and 24/7 accessibility. The desired change can be brought in by adopting newer technologies such as cloud computing, artificial intelligence (AI), blockchain etc.

2 FUTURE BANKING SCENARIO AND GAFA

In future banks have to play a significant but different role in the new financial ecosystem. There may be several possible scenarios. The first scenario is one in which banks can merely provide the infrastructure; and other value added services would be left to the other players [2, 3].

Another scenario is quite tough, and needs substantial transformation by adopting proactive strategies just to survive the intense and growing competition. Here, the banks will exist in a highly competitive environment and will have to face direct competition with FinTech and other players like "GAFA". It is the second scenario which seems really imminent. To survive the unbridled competition from the new entrants, advanced technologies should be strategically adapted. Success of future banks will depend on taking care of their customer experience through automated processes which enable customers to save time and transaction costs. For surviving in an environment involving competition with FinTech, it is necessary for banks to change the organization to one with less hierarchical structures, encourage continuous innovation, learn from success, but quickly identify failures and take remedial action. Recruiting new talent and introduction of a culture of innovation will go a long way towards critically appraising the strategic vision of banks. The three key areas for transformation are: technological advancement, strategic innovation and talent and cultural update.

- *Tripti Dhote is currently working in Symbiosis Institute of Digital and Telecom Management, E-mail-tdhote@sidtm.edu.in*
- *Pankaj Pathak is currently working in Symbiosis Institute of Digital and Telecom Management, E-mail-pankajpathak@sidtm.edu.in*
- *Prasanna Kulkarni is currently working in Symbiosis Institute of Digital and Telecom Management, E-mail-pkulkarni@sidtm.edu.in*

2.1 GAFA's Move into the Financial World

There are four key drivers for GAFA's strategic move into the financial world. [13]

- Unparalleled success in the sub-markets they have pursued in the past. (Google's advertising services, Facebook's gaming platform, Amazon's brick and mortar digital-supermarkets and Apple's tech range)
- The large stockpiles of consumer data each company has on customers. Behavioral information helps the lender when making lending decisions, and to avoid loss on its portfolio.
- They already have a young consumer base who are becoming more and more receptive to non-traditional banks and digital methods of payment.
- The new Open Banking initiative: GAFA and smaller FinTech all look to gain new financial opportunities through the implementation of the revised Payment Services Directive (PSD2) and the 'Open Banking' announced earlier this year. As a result, GAFA could have a much larger impact on the global banking environment than many people initially thought.

2.2 Customer Centric Approach

Financial services industry needs to understand human behavior. GAFA quickly built their strategy to increase customer reach and popularity among banks with their quickly earned reputation. Banks need to develop and deploy digital enablers to compete with the growing popularity of GAFA. Traditional banks now need to decide if they want to adopt a new growth strategy to build new IT architecture or want to step back. Rising competition and customer experience is a spur for customer centric push. The underlying principles are: personalization, quick response (speed), relevance, and seamless delivery. Financial services industry is being reshaped into FinTech by redefining customer journey (Fig1) by giving them service according to their convenience, and with personalization. Traditional banks find it difficult to take advantage of mobility, artificial intelligence, big data, cloud and other technologies to redefine their services [7]. GAFA and other FinTech firms have bridged this gap to make significant impact on customer.



Figure 1: Journey to enhance customer experience

GAFA today have already marked their presence into financial sector by introducing Peer to peer (p2p) payments mode. They have realized that the key is to satisfy customers by giving them a personalized experience. While defining journey of a customer, bank's executives must put themselves in customer's shoes to understand their needs better. Journey to emphasize customer is shown below (Figure 2)

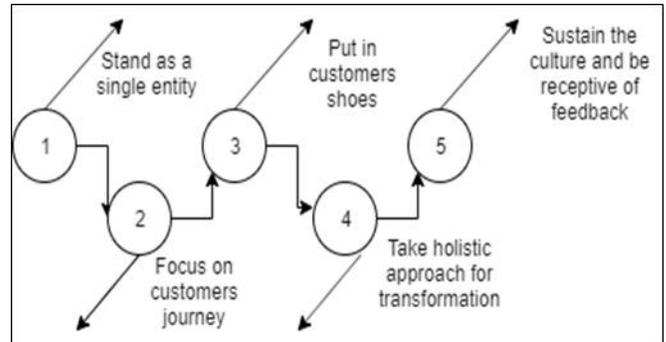


Fig2: Journey to emphasize customer

GAFA's approach and structure in Amazon's package delivery model is an indicator based model. This feature helps customer to track his amazon package - how many days it takes the package to get delivered to his location. This approach can be extended to banking systems as well, wherein customer at the time of opening bank account has to wait in a long queue. With advancements in technology these processes can be digitized. A person can upload his/her documents on banks internet portal. Customer can track his bank account opening activities on the portal-from submitting documents to scrutinizing - to getting the debit card, telephone banking, and net banking ID. Finally, the kit can be delivered to the house of the person. Google's pin verification model is the strongest security booth for online users. This can be extended to banking services. The customer should be given an option to login with One Time Password (OTP) as security key, when they want to access their account. This would minimize security breaches in customer account and would provide them high level security.

3 GROWTH OF FINTECH AND ITS INFLUENCE ON FINANCIAL SERVICES

Growth of FinTech has brought competition into banking and the financial system; but competition may also lead to efficiency. This competition has the potential for disruption of banking sector by introduction of digital technology. It also puts pressure on traditional banking sector for development and stability in the financial system. Digital innovations by Fintech [4] for financial services could initially affect the profit of traditional banks but this intra-industry conflict can be resolved by adopting innovative practices with better customer service terms. FinTech transformed banking through branches, to personalized and continuous customer service through digital technology, using several intermediary activities. Traditional banks which are not focusing on development of new services and digital disruption face increased competition. Liberalization and technological innovation brings new financial products and fosters economic growth for various segments of banking business. With digital disruption, tighter regulatory frameworks tend to reduce the risk and have stronger benefits [10]. Technology disruption in finance is not new but now it is

expected to utilize combination of technologies like blockchain, IOT and Artificial Intelligence. Some FinTech companies are also collaborating with traditional banks for providing holistic services to the customers. With technological development FinTech enhances the financial services and competes with traditional banks to create a market which attracts the unbanked as bankable customer. GAFA has exponentially grown while influencing the financial industry for promoting efficiency through digitalization of services, through flexible products, and offering bank-like services but not regulated as traditional banks. Digital disruption in financial services by FinTech and their increasing number of customers may seem to be a threat for traditional financial institutions. In response to this threat traditional financial institutes are increasing efforts to innovate themselves through collaborating and integrating with FinTech [9]. FinTech is transforming financial services through several notable technologies like AI and Big data for predictive analytics, distributed computing for handling day to day financial activities, and cryptography for security and identity protection. GAFA and other FinTech have millions of customers, and huge capital reserves to invest for technological advancement through above mentioned techniques.

3.1 Is GAFA a threat?

The initial reason for GAFA's potential dominance in the financial sector is their innovative techniques and preexistent positioning in their consumers' lives. Financial services from GAFA are exciting the millennials and traditional banks are losing their trust in millennials. With digital-driven millennials making up a large percentage of the global labour force, and most Generation X's conforming to a tech-centered lifestyle, GAFA has not only become a necessary part of the general consumer's everyday routine, but has also altered how the general consumer views their service providers. Having spent years perfecting their consumer engagement models, every company that makes up GAFA is fully prepared to analyze their consumer data in order to understand their wants and needs, and subsequently, provide the proper products and/or services that fulfil these needs. This integrated and innovative positioning that GAFA has in their consumer's lives, which comes from their effective and efficient engagement models and processes, poses a threat to the traditional banks. GAFA and other such BigTech have large customer base and name recognition with trust- a strong brand recall. They can use data about this customer base to tailor their offering of financial services. BigTech firms like GAFA can easily achieve scale in financial services due to their strong financial position and low capital investment. These companies can also operate with lower margin with a large market share. Consequently they can be a source of increased competition for traditional financial institutions.

3.2 PSD2 (Payments Service Directive 2) Problem

While GAFA's current positioning, analytical abilities, and engagement models make them a threat to banks and the financial services industry, it is important to recognize the huge impact PSD2 and the Open Banking Directive will have on the success of these ventures. While people initially thought that GAFA would apply for banking licenses, PSD2 and the Open Banking Directive have opened up the doors for these tech giants to disrupt the current financial services. In the past GAFA could only challenge the banks directly by becoming

'one amongst them' (for example, a partnership with a big bank or working as a subsidiary), now these technology behemoths can use their innovative ideas, teams and facilities to create new and improved financial services products for their established consumer base. Some examples of these products include Apple Pay, Facebook's P2P payment service in their messaging app, and Amazon's plan to create online checking accounts for their users. While these products and services are innovative, they only scratch the surface of what these four companies could offer. It does not even come close to showing how much GAFA could impact the financial industry we know today.

4 THE WAY FORWARD

4.1 How Can Banks Keep Up with Regulations?

Whether traditional or technology-enabled banking, financial firms are held to the same regulatory standards. Failing to comply with regulation puts banks at the risk of paying hefty penalties or legal fees. So, the question is, how can banks keep up with current FinTech regulations and prepare for the future as technology evolves. The first thing any bank can do to keep up with FinTech regulation is to foster a culture of compliance. Making sure chief compliance officers have sufficient oversight of operations, as well as the power to make decisions, can impact the import of their authority. It is up to the chief compliance officer to ensure employees feel safe reporting misconduct. Financial firms generally receive better audit reviews from regulators when there are well-defined compliance procedures. It shows regulators that firms are making honest efforts to operate with transparency and comply with regulations. Another thing banks can do is embrace regulatory technology, also referred to as RegTech. According to Tony Reid, CTO for financial services, EMEA at Hitachi Data Systems, "RegTech helps financial service institutions to enact compliance in a regular and accurate way while freeing up resources to focus on their core business and servicing customers". [5] Investing in RegTech can automate data analysis, optimize efficiencies, as well as accuracy, and help reduce operating costs.

4.2 Capitalizing on Unique Banking Assets and Data Analytics

Traditional banks own certain unique assets, such as:

- a) Huge storage of past customer data
- b) Existing physical customer interaction which can be easily combined with the digital experience
- c) A deep rooted trust among consumers relating to their personal data
- d) Access to a large pool of professionals with domain competency and cutting-edge quantitative skills

Companies like GAFA leverage data mining and predictive modelling very effectively. They use them for offer customization, risk mitigation, introduction of disruptive products, market expansion, operating cost reduction, automation of traditional processes, etc. Traditional banks can also adopt these business improvements. Banks can benefit from advanced analytics for monitoring consumer behaviour for fraudulent or illegal transactions. Analytics can provide detailed customer insights by profiling them, and understanding their requirements of banking products and services. This will enable banks to customize their products

and to offer better service, optimize customer lifetime value and prevent churn.

4.3 Discovering New Customer Segments in Banking

Data mining of large archives of transactional data with traditional banks should be used to develop new consumer behaviour models. Transaction and CRM data can be combined to discover new correlations between customer profiles and behaviour. They can be used by marketing staff to develop offers and promotions, which can lead to increased conversion rates. Similarly, Banks can get data scientists to analyse weblogs and similar pointers of online behaviour to enhance the digital and multi-channel customer experience.

5 CONCLUSION

GAFAs and similar players are bringing new and innovative products into financial services [6]. With support from PSD2 and open banking, proper positioning, customer engagement, and analytics, they are becoming a major threat in the financial services industry. GAFAs have the ability to take over the consumer base and overall market share of the traditional banks. Banks are now faced with a monumental choice: take the threat GAFAs pose seriously and begin to innovate their product and service offerings to compete or ignore the blatant threats GAFAs pose. However, all is not lost for traditional banks; except that they cannot continue to be 'traditional' for long. They have to capitalize on their unique banking assets, make proper use of data mining, digital technologies, and advanced analytics, to withstand the competition from not only GAFAs but from other FinTech players.

REFERENCES

- [1] Yu, H., Xie, W., Yang, L., Du, A., Almeida, C. M., & Wang, Y. (2019). From payments for ecosystem services to eco-compensation: conceptual change or paradigm shift? *Science of the Total Environment*, 134627.
- [2] Vives, X. (2019). Competition and stability in modern banking: A post-crisis perspective. *International Journal of Industrial Organization*, 64, 55-69.
- [3] Makina, D. (2019). THE POTENTIAL OF FINTECH IN ENABLING FINANCIAL INCLUSION. *Extending Financial Inclusion in Africa*, 299.
- [4] Salampasis, D., & Mention, A. L. (2018). FinTech: Harnessing Innovation for Financial Inclusion. In *Handbook of Blockchain, Digital Finance, and Inclusion*, Volume 2 (pp. 451-461). Academic Press.
- [5] Tanda, A., & Schena, C. M. (2019). FinTech Activities and Business Models: Analogies and Differences with the Traditional Financial Channels. In *FinTech, BigTech and Banks* (pp. 7-36). Palgrave Pivot, Cham.
- [6] PWC, P. (2017). *Redrawing the Lines: FinTech's Growing Influence on Financial Services*.
- [7] Kolesova, I. V., & Girzheva, Y. S. (2018). Impact of Financial Technologies on the Banking Sector. *KnE Social Sciences*, 215-220.
- [8] Makina, D. (2019). THE POTENTIAL OF FINTECH IN ENABLING FINANCIAL INCLUSION. *Extending Financial Inclusion in Africa*, 299.
- [9] Gomber, P., Kauffman, R. J., Parker, C., & Weber, B. W. (2018). On the fintech revolution: interpreting the forces of innovation, disruption, and transformation in financial services. *Journal of Management Information Systems*, 35(1), 220-265.
- [10] Walker, A. (2014). Banking without banks: Exploring the disruptive effects of converging technologies that will shape the future of banking. *Journal of Securities Operations & Custody*, 7(1), 69-80.
- [11] Choudhury A. How Can Banks Survive the Digital Wallet War Against GAFAs? [Internet]. |MEDICI. 2018 [cited 2019 Nov 23]. Available from: <https://gomedici.com/how-can-banks-survive-digital-wallet-war-against-gafa/>
- [12] T. Olsen, M. Judah, J. Fielding, N. P. Nielsen SP. New Bank Strategies Require New Operating Models - Bain & Company [Internet]. [cited 2019 Nov 23]. Available from: <https://www.bain.com/insights/new-bank-strategies-require-new-operating-models/>
- [13] Sonn H. Is GAFAs the Future of Finance? [Internet]. Fractal Labs. 2018 [cited 2019 Nov 23]. Available from: <https://blog.askfractal.com/growing-as-financial-assistants-how-gafa-google-amazon-facebook-apple-could-shake-up-the-financial-industry-as-we-know-it>