

YANGON UNIVERSITY OF ECONOMICS
DEPARTMENT OF COMMERCE
MASTER OF BANKING AND FINANCE PROGRAMME

**OPPORTUNITIES AND CHALLENGES OF FINANCIAL
TECHNOLOGY ON BANKING SECTOR IN MYANMAR**

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ABSTRACT

The purposes of the study are to identify the current financial technologies using in Myanmar and to analyze the opportunities and challenges of financial technology on banking sector. A descriptive research is used in this study in order to fulfil the purposes and the simple random sampling was employed in this thesis. The respondents are from selected local private banks (KBZ, AYA Bank, CB Bank, Yoma Bank, MAB Bank, UAB Bank, AGD Bank and Myawaddy Bank) that are almost completed digitalization process among Myanmar Banks. The primary data are used for this thesis and source for this study involves structured questionnaires also included Likert five-point scales. In all 200 questionnaires were administered to all respondents' email. This study examines the opportunities and challenges of financial technology on banking sector in Myanmar such as the significant benefits from the financial technology, the efficient and effectiveness of digitalization in Myanmar Banks. This study included the current financial technologies use in banking sector of Myanmar and analyzed the opportunities and challenges of financial technology on banking sector. Digital transformation is far beyond just moving from traditional banking to a digital era. It is a vital change in how banks learn, interact and provide service for the satisfaction of customers. Therefore, all local banks in Myanmar, which at present performing the traditional banking system, will need to carry out transformative changes. In this study, the actual market conditions in Myanmar's banking sector, the pros and cons of technology, and analyze the opportunities and challenges of financial technology on banking sector.

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LIST OF ABBREVIATIONS

FinTech	Financial Technology
CRO	Chief Risk Officer
CBM	Central Bank of Myanmar
MFIR	Myanmar Financial Inclusion Roadmap
FRD	Financial Regulatory Department
MFIs	Microfinance Institutions
CBS	Core Banking System
ATM	Automatic Teller Machine
POS	Point of Sale
MBD	Mobile Banking Directive
MMK	Myanmar Kyat
KBZ	Kanbawza Bank
AYA Bank	Ayeyarwaddy Bank
CB Bank	Co-operative Bank
MAB Bank	Myanma Apex Bank
UAB Bank	United Amara Bank
AGD Bank	Asia Green Development Bank

CHAPTER I

INTRODUCTION

Technology has revolutionized the world and daily life. In recent years, Kodak, record stores, blockbusters, and local travel agencies have given way to Instagram, Spotify, Netflix, and TripAdvisor. With fintech startups entering the banking market, the financial sector is now receiving a lot of attention.

"Financial technology" or "FinTech" refers to the use of technology to provide financial solutions. The origin of the word goes back to the early 1990s and refers to the Financial Services Technology Alliance, which was initiated by Citigroup to promote technical cooperation efforts Project. However, the industry has attracted the attention of regulators, industry participants and consumers since 2014. This rapid growth has attracted more regulatory reviews, considering the role of fintech in finance and its infrastructure This is undoubtedly necessary.

Technology is rapidly entering traditional banking. A recent survey of bank managers revealed that 47% of them discussed technical issues at each board meeting. One-third of banks are worrying about competition from unregulated non-bank companies. They believe that Apple Pay, Ali Pay, Google and PayPal pose a powerful threat to non-bank competitors. For technical reasons, the future of banks is largely unknown. (Bank Director - Growth Strategy Survey, 2015 August)

IT development will revolutionize the way banks operate. Banks may be tempted to invest in IT technology to increase cost efficiency. One view is that relationship banks will keep the right path in the future. In an uncertain environment where information problems are weakened, human decisions are still better than computers. There, bankers may still have the upper hand in the battle against artificial intelligence systems. In this sight, IT should be used to improve relationship banking. New technologies can be used to obtain additional information for and support their customers.

1.1 Rationale of the Study

Banks act as information agents, whose main purpose is to alleviate information problems among bank customers. Due to the special importance of banks to the real economy, banking supervision followed. What changed, however, was bank customers. Intergenerational transfers are happening. Bank customers are increasingly looking to get authorization, continuous contact and entertainment.

In Myanmar, most people are thought to be standing on the traditional banking system, relying on branches and employees to reach customers and the public. When customers need to use certain banking services (such as money transfers, savings and withdrawals from branches), this is time consuming and they must go to a nearby branch. The costs incurred by traditional banks include many operating and fixed costs. But in other ASEAN countries, such as Thailand and Singapore, they have transformed into a new banking system called e-Banking. As a result, banks have no physical presence, eliminating operating and fixed costs. Another benefit is that e-Banking does not waste time because customers do not have to go to the bank to check their bank balance or transfer funds from one account to another. Customers can access their accounts anytime, anywhere, via computers and the Internet. But nowadays, most large banks in Myanmar are rolling out their mobile banking and online banking systems to the public, but we need to know that now is the right time to transform traditional banking methods into branchless electronic banking systems. Some fintech startups such as OK Dollar and Wave Money are competing with banks.

Some local banks are digitized based on Brett King's Bank 2.0, which maps the technological innovations being used by banks and financial institutions to make better use of features such as social media, mobile devices, and business intelligence, while pointing out that banks and Compared with the development of related technologies, the adaptation speed of financial institutions is relatively slow. He identified ways to deal with these technological changes and changes that have not impacted the business for the next ten years by figuring out how to adapt to these challenges and try to benefit from them. In this study, the actual market conditions in Myanmar's banking sector, the pros and cons of technology, and analyze the opportunities and challenges of financial technology on banking sector.

1.2 Objectives of the Study

The aim of this study is to analyze about the impact and potential of FinTech on the banking sector in Myanmar. The specific objectives are;

- (1) To identify the current financial technologies use in banking sector of Myanmar.
- (2) To analyze the opportunities and challenges of financial technology on banking sector.

1.3 Scope and Method of the Study

The method used in this study is descriptive method. The primary data source for this study involves structured questionnaires also included Likert five-point scales and data are collected from 200 Respondents with the simple random sampling method from the (8) Private banks regarding the challenging and their opinion about the sustainability of the FinTech era in Myanmar to gather statistical data about responses. Other secondary data are referenced from Thomson Reuters Eikon Information and Research Terminal and relevant books and articles from the websites and newspapers.

1.4 Organization of the Study

This study is composed of five chapters, Chapter one starts with the introduction about the financial technology along with the rationale of the study, the objectives of the study, the scope and method of the study and organization of the study. Chapter two will include literature review about the background for financial technology reform, process and success stories of global technology reform processes. Chapter three studies overview of current financial technology in Myanmar. Chapter four is dedicated to the data, analysis and discussion of findings from the selected local banks and Chapter five concludes the study with findings and recommendations.

CHAPTER II

THEORETICAL BACKGROUND OF THE STUDY

In this chapter, represents the literature about digitalization of financial technologies relevant to this research. To present this, it includes studying on concept of Bank 2.0, digital transformation in banking sector, principles of digitalization in banking sector, digital transformation for specific banking sectors, risk of digital transformation in banking and advantages and disadvantages of digitalization in banking.

2.1 Concept of Bank 2.0

Due to the strong demand for high-speed trading systems and massive amounts of data, banks and financial services are often regarded as technology pioneers. According to Brett King, a strategic financial services consultant and author of Bank 2.0, the industry is stuck in a technological past. In the decades to come, banks will have to abandon traditional means of interacting with customers and can only provide solutions that meet the growing expectations of the public and use them wherever and whenever people need them. The financial services industry is undergoing digital transformation, and many non-bank innovators provide customers with customer-facing and back-end financial technology products and services. This shift includes emerging market economies and has provided traditional banks with viable digital alternatives in many places, which have left large populations without funding.

Traditionally, banking is a physical business. Branches have always been a place to get cash, apply for a home loan or open a new account or deposit checks. Bankers tell us that trust in banks is wrapped up in the realities of branches. However, in 2010, branch usage in Europe declined rapidly, so much so that their physical branches decreased by 24%. In 2010, 88% of the world's population did not even visit branches at all. Globally, there are fewer customers for cash transactions. Brett King also believes that although 95% of global banking transactions are conducted electronically, banks have not adapted to their organizational structure to accommodate the rise of electronic and Internet banking.

With the development of mobile payment technology, the number of physical cards will decline rapidly and will not weaken. So at the beginning of the next decade,

most of the physical elements of everyday banking will be completely replaced by digital interactions. Considering the development of mobile banking, the possible impact of integrating near-field (contactless) communication into the device, and the role of person-to-person payments in the mix over the next five years, the rapid changes in daily interactions with banks. If Internet banking is the most commonly used channel today, followed by ATMs, branches, and call centers, then this model will change significantly in the next five years. By 2015, the most “interactive” channels for banks every day will be ranked as follows: 1. Mobile; 2. Internet (desktop, TV, etc.); 3. ATM; 4. Branches.

As patterns-based customer behavior changes, the portfolio of services provided becomes critical. In theory, this should be a very different set of priorities to consider when investing in different banking channels. At present, organizational structures, metrics and budgets are lagging significantly behind customer behavior. As banks grow, especially in the retail industry, banks will reposition themselves over the next two decades, which will change rapidly. Fintech will replace the traditional banking system and all businesses will be digital in the future.

2.2 Digital Transformation in Banking Sector

Today, most customers are using multiple channels to exploration products, open, use, and manage their accounts, resolve issues, and receive notifications. Bank customers can interact with their financial institutions through more channels than ever before, and the channels selected will have a significant impact on bank revenue and customer satisfaction. The key for the bank is to determine the best channel mix for each customer to maximize revenue without significantly reducing customer satisfaction or engagement (Jim Marous, 2013).

While financial services have been computerized for eras, and products such as retail brokers using digital channels have been in use for about 20 years, the industry's complete transformation has been behind due to the market advantages of traditional financial service providers. These include established customer trust, regulatory barriers to entry into the banking and insurance industry, and regulatory approaches that lead to internalization of all or most value chain deviations (QYResearch, 2019).

The financial crisis of 2008 reduced trust in financial institutions, and regulators' response to the crisis, including increased capital requirements and compliance costs, made bank lending more difficult and expensive. Paradoxically, this creates

opportunities for unregulated, technology-enabled nonbanks to thrive. They can provide financial services cheaper and more efficiently than existing companies that afford traditional infrastructure and regulations.

In addition, digital transformation in other industries has also increased customer trust and satisfaction with technology-based financial solutions. This has also increased their demand for instant and customized products and services. Some of the most protuberant fintech companies are transferring funds, borrowing and investing in a cost-effective and convenient way to meet the needs of these consumers.

However, the impact of fintech on financial services is not limited to retail and customer-facing applications and services, but includes all elements of the financial services production process. Transformations in other industries have shown how increasing the availability of data and the speed of information transfer can address key issues in contracts and monitoring, which have determined the degree of internalization of corporate structures and activities.

2.3 Principles of Digitalization in Banking Sector

There are principles why digital banking becomes increasingly important in the banking industry (Jim Marous, 2018):

- Reduce costs: Banks are under pressure to reduce costs to stay competitive. If banks do not move to digital banking, they must continue to invest in expensive old hardware and software to keep these systems up to date.
- Increase revenue: Existing banks are unable to gain a 360-degree view of their customers. They lack intelligent systems that collect customer intelligence and help them become customer-centric. Poor customer experience results in lower market share.
- Attract and retain customers and maintain a competitive advantage: Fintechs and other new start-ups have shaken the banking scenery. As a effect, the demand for improved customer experience and personalized services is growing, and products and services from established banks are becoming more exclusive. Digital banking enables us to improve the customer experience and reduce costs, which is necessary to stay ahead.
- Maintain compliance with new regulations: Developed banks need to work harder to maintain compliance. Traditional banking systems make it difficult to

enforce the law, which reduces the return on expenditure. This has led banks to look at legislation in terms of compliance only and miss the opportunity it brings.

- Exploring the benefits of new technologies: New fintechs such as data analysis, open APIs, blockchain and cognitive banking are expected to impact banking business models. However, legacy systems have limited banks' ability to respond quickly to these developments. Full digitalization requires exploring the advantages of these technologies and future-oriented banks.

2.4 Transformation from Traditional Banking to Core Banking System

Advanced technology, growing customer demand, and many unexpected competitors are disrupting traditional financial services and forcing existing banks to face the grim reality of core infrastructure. As consumers everywhere adopt digital technology, bank customers also want to provide seamless services across multiple channels and all lifecycle stages. As a result, future-oriented bank executives are eager to develop novel business models that can generate a pleasing customer experience and generate new revenue streams, while striving to maintain long-term customer relationships (Brett King, 2010).

Bespoke core infrastructure has long specified security, safety and strength for banks to build their reputation. However, considering the high demand for system scalability and flexibility in the open banking ecosystem, banks are accepting the predictable need to develop next-generation agile architectures that can be integrated with other systems. Driven by the call for industry digital gatherings, the Core Bank Transformation (CBT) quickly gained momentum and encouraged the replacement of the outdated architecture with the new Core Bank Platform (CBP).

Traditional branch and online banking arrangements have been abandoned to establish an ecosystem partnership, in which banks become coordinators and customer relationship managers, regardless of their source, to access the most innovative and useful services. Therefore, a dedicated on-premises infrastructure is needed to seamlessly integrate with public and private cloud systems to support core banking functions while supporting the new banking business model.

Many current core systems are designed, operated and maintained as a system platform for evolving and delivering product services. However, as banks try to add

new era products and services, customer channels (telephone, internet, and mobile phones) and external connections, they are plagued by the following issues: aging structures, rigid data models, lack of application flexibility, IT Redundancy and duplication of labor.

CBT includes replacing, upgrading or outsourcing core banking systems from legacy platforms to more digital-based platforms. In the past ten years, the transformation of the banking platform has made great progress. In fact, it has become an enterprise-wide activity that covers the upgrade or replacement of many product and function operations. Nonetheless, the traditional core system that connects the institution's network is tightly structured and cannot be flexibly decoupled, retired, and upgraded. As a result, financial institutions can conduct mutual settlements and credit transfers, and regulatory reporting.

The replacement of the core architecture is not a flip. The new platform must be accompanied by innovative business processes to achieve significant efficiency gains. Prior to implementation, it is best to combine best practices with closely matched staffing models to ensure the best return on investment.

When banks decide to change their core systems, the right partners and strategic guidance can have a significant impact. The CBT team must not be afraid to seek the advice of experts who will bring the skills, experience and brand-new perspectives needed to solve the operations objectively and effectively. Given the internal and external pressures involved, CBT requires support from partners who should have outstanding strategic excellence and an impeccable track record of execution. Successful implementation of CBT requires all participants, especially the bank's leadership team, to remain focused, adaptable, and committed.

2.5 Digital Transformation for Specific Banking Sectors

2.5.1 Digital Transformation in Retail Banking

If retail banks do not adopt digital transformation, they will miss market share, customers and profits. Customers want a finer banking experience, while retail banks need to be more agile and create faster processes to enable that experience. Risk management, regulatory requirements, higher profit margins, new customer needs and improvements to the customer experience all mean that retail banks must innovate to develop. To increase customer intimacy, manage strict regulations and cybersecurity restrictions and avoid contaminated data, retail banks need to digitize.

2.5.2 Digital Transformation in Private Wealth Management

The trademark of private wealth management is the personal approach: participants in the field know their customers. The key experiment is to bring this experience to the new digital environment. Customers are accepting online communications and are moving away from the relationship-driven model. By digitizing legacy systems and automating processes, private wealth management banks can give customers access to available data and provide them with more insight and control. This enhances unique claims, attracts customers, drives sales and reduces costs.

2.5.3 Digital Transformation in Corporate banking

The corporate banking industry is working hard to serve digital-savvy customers. The industry's biggest challenge is meeting customer needs, as corporate customers want the same experience as the consumer banking industry. When converted to a digital environment, corporate banks can launch products and services faster and easier, create 360-degree customer views, and personalize the customer experience.

2.5.4 E-Banking

E-banking is a product designed for online banking that enables customers to easily and securely access their bank accounts. E-banking is a secure, fast, convenient and competent electronic facility that allows customers to access bank accounts and conduct online banking services 24 hours and 7 days a week.

With these services, customers can save time by conducting bank transactions from anywhere in the home or office, all you need is Internet access. Electronic banking can achieve the following functions:

- Accurate description of all methods available in their bank account
- Current accounts, lenders, overdrafts and their deposit statements
- Perform national and international transfers of various currencies
- Perform all types of utility bill payments (electricity bills, water bills, phone bills, etc.)
- Make customs payments
- Electronic confirmation of all transactions performed through electronic banking
- Credit card managements

2.5.5 Mobile Wallets

A mobile wallet is a virtual wallet that stores payment card data on a mobile device. Mobile wallets are a convenient technique for customers to make in-store payments and can be used at merchants listed with mobile wallet service providers.

The relationship between banks and consumers is rapidly digitizing. From e-commerce platforms to robot consultants, banks are transforming the way they operate to meet the changing needs of customers and the increasing use of mobile phones and devices. Companies in the financial sector are constantly emerging, they provide digital platforms and solutions, and are recognized as members of the fintech space. These start-ups have created disruptive tools and services that can easily be obtained at low cost. The payment industry is one of the innovative financial industries. By using mobile technologies such as smartphones, tablets or smart watches, companies and users are adapting to online and offline transactions using devices such as mobile wallets.

2.6 Risk of Digital Transformation in Banking

While the industry's digital transformation accelerates, banks will transition from exploring in mid- and back-end offices to using new technologies company-wide. This will challenge risk departments to change the way they monitor the bank's risk profile and enable innovation, and how they can use new technologies to become smarter, faster and more cost-effective (Paritosh Kumar, 2018).

From streamlining operations to technology-driven transformation, banks are taking action to cut costs. In the next three years, 83% of banks will focus on data analysis. Plans to use new technologies to manage costs are in various states of progress. Digital and mobile infrastructure programs are state-of-the-art, and banks are taking the first steps towards automation and machine learning. As banks transition from the middle to the third phase of the transformation process, they must address five main challenges.

- **Manage emerging risks and intensify competition:** As regulatory decentralization and competition intensify, broader geopolitical, social and environmental concerns become increasingly prominent. Fintech companies and large tech companies seek to attract in the profitable part of financial services, and banks' strategic choice is to reduce the return on net assets. Cybersecurity is now clearly the biggest risk for boards and CROs.

- **Leading the digital transformation of risk management:** Technology has reformed the customer interface, but banks must still implement new technologies in the midrange and back office to drive fundamental change. The risk function must change the way it monitors risk situations and innovates, and become smarter, faster, and more cost-effective. New technology and venture talent needed, but difficult to attract.
- **Run the three-line model:** The operation of the three-line model is necessary to improve the effectiveness and cost efficiency of risk management. Talent lacks are expected in advanced analytics, model risk and other key areas. Standardization and automation are accelerating even with wider delays in technology deployment.
- **Managing nonfinancial risks cost-effectively:** Despite the existence of a behavioral risk framework, there is still a long way to go to prove effectiveness and improve cost-effectiveness. As risk appetite frameworks evolve, common challenges remain (for example, expressing preferences for all risk types, cascading preferences for business units). Quantifying non-financial risks (such as reputation, strategy, and cyber risk) remains difficult.
- **Staying resilient and protecting against cyber risks:** Banks are rethinking what it means to be operationally resilient. In addition to core competencies (business continuity and disaster recovery), data quality and process mapping need to be improved. Quantifying and reporting is a challenge when managing cyber risk across three lines of defense, even as the board strengthens oversight. Manage key suppliers more effectively to support operational and cyber resilience.

2.7 Advantages and Disadvantages of Digitalization in Banking

2.7.1 Advantages of Digitalization in Banking

Digitization refers to the use of technology to convert data into a digital format. Adopting digitization is very important for the banking industry. By embracing digitalization, banks can provide enhanced customer service. This provides customers with convenience and helps save time. Digitalization decreases human error and therefore builds customer loyalty. People now have access to banks 24/7 due to online banking. It's also easier to manage large amounts of cash. Digitization also benefits

customers by facilitating cashless transactions. Customers no longer need to store cash, they can trade anytime and anywhere (Brian Beers, 2019). The main advantages of bank digitization are

- Improved customer experience.
- Reduce costs for banks and customers by using ATMs, mobile payments and online banking.
- Banks can provide more digital data, and they can use digital analytics to make data-driven, dynamic decisions. This benefit both customers and banks.
- Technology is non-discriminatory. Everyone is treated equally at the bank.
- As the convenience of banks improves, the number of banks' customers will increase.
- Productivity will increase.
- Automation will eliminate duplicate tasks.

2.7.2 Disadvantages of Digitalization in Banking

The digitization of the banking industry also has its disadvantages and inconveniences. Traditional banks provide an opportunity to meet customers' local branch employees. This may be an advantage if the customer needs additional financial services (such as loans) or if they need to change the customer's banking arrangements. Bank managers usually have some discretion, and if their personal circumstances change, they can change the terms of the customer's account, or they can reverse mandatory or service fees. And there are other disadvantages in bank digitization (Dennis Gada, 2018).

- Digitization reduces the workload of employees and therefore results in lost work.
- With the increasing use of online banking, some bank branches may no longer exist.
- Banks will be more vulnerable to cyber-attacks.
- Privacy may have to be compromised. No one can hide millions of dollars in a bank, but just play the middle class.
- Banks face threats from large tech companies, such as Apple Credit Card or Facebook cryptocurrency Libra.
- Most banks are struggling to keep up with technology developments.

CHAPTER III

OVERVIEW OF CURRENT FINANCIAL TECHNOLOGY OF MYANMAR BANKS

This chapter presents the financial technology reform of Myanmar banks, which includes History of Technology in Myanmar Banking Industry, Raising Up of Digital Payments and Current Overview of Financial Technology in Myanmar.

3.1 History of Myanmar Banking Sector

Although Myanmar's banking system was developed through investment and foreign participation in the decades before 1962, the beginning of socialist military rule that year nationalized the sector and restricted barriers to foreign and private sector participation.

It was not until 1990 that liberalization efforts resumed with the enactment of the Financial Institutions Law (FIL), which allowed commercial, investment and development banks, as well as financial companies and credit unions to re-enter. Two years later, private banks could re-enter the market. However, the sector experienced a series of major setbacks in the 2000s, beginning in 2003 when some informal lenders and financial institutions closed. This impact spread to the formal sector and led to a severe liquidity crisis. The three banks have been closed, other institutions have been revoked licenses, and CBM has imposed strict mortgage requirements and strict regulations on this. Over the years, this has seriously affected the bank's ability to lend. The 2008 global financial crisis has also delayed plans to open the sector and accelerate its development.

Liberalization and reform began in 2011, when the government allowed foreign banks to conduct foreign exchange transactions and operate ATMs under the Foreign Exchange Management Law promulgated in 2012, which abolished the 1947 legislation and removed restrictions on foreign exchange transactions. Political changes in 2015 were accompanied by signals that the country would be more open to the world, although some remain critical of the pace of progress in this direction.

The rapid growth of smartphone penetration in the country has prompted people to shift their focus to mobile financial services products. The new Myanmar Financial Inclusion Roadmap (MFIR) emphasizes digitally driven financial inclusion, targeting

low-income farmers and individuals, women, self-employed people, and small and medium-sized enterprises. It also seeks to expand financial knowledge and customer protection. As part of this plan, CBM created the digital services working group of Financial Regulatory Department (FRD).

FRD Director General U Zaw Naing told local media in a speech in August 2018 that members of the working group will come from the private sector, including private insurance companies, banks and microfinance institutions (MFI). Their intention is to develop new digital financial products and cashless financial markets. U Zaw Naing pointed out that although 74% of the country's working population uses mobile phones, only 8% have access to digital financial services via mobile devices, which creates huge growth opportunities for products such as mobile money transfers and microinsurance. "Technology will play an important role in the future of Myanmar's banking industry," U Maung Maung Nyunt, senior executive at Global Treasure Bank, told OBG. "CBM encourages banks to adopt technology."

3.2 Current Financial Technologies Using in Myanmar

Globally, fintech is changing the way people access and use their funds. Fintech is creating a world that can include the poorest people. In Myanmar, fintech could really change the rules of the game and help the country become more financially inclusive.

Mobile devices make payments easy to use and transaction efficient. It provides the ideal platform for most people without a bank account. According to World Bank estimates, only 26% of adults in Myanmar have a bank account and have access to financial services. According to the Myanmar Economic Report, the mobile phone penetration rate reached 12% in Myanmar around 2013, but the industry experienced exponential growth. By 2018, the mobile phone penetration rate reached a staggering 105%. Mobile devices have become an integral part of the communication methods of most rural and urban populations, so mobile wallets or digital payment processing methods can fill the void of most unbanked.

Digital transformation is much more than just moving from traditional banking to the digital world. How banks and other financial institutions learn, interact, and provide services to satisfy customers is a crucial change. As a result, all local banks in Myanmar that currently use the traditional banking system will need to change. In the process, Daw Yin Min Aye, general manager of local software company ACE Data Systems Co., Ltd. said that in the process, they will need internationally recognized

service providers with operational and financial capabilities that can transform Myanmar's banking system.

As many countries around the world are rapidly using digital payment methods, such as intermediaries such as PayPal and digital wallet systems, Myanmar has now begun to transform into a cashless society. The introduction of electronic card and mobile wallet payment methods is a way to carry credit or debit card information on mobile devices in digital form and is looking for better ways to improve these systems.

In the past, the country's citizens were burdened by outdated accounting practices and lack of clarity in the banking system due to poor information technology infrastructure. However, due to the rapid reforms and rapid development of the banking industry, as the situation changes, anyone can conduct online banking through mobile phones or the Internet, whether at home or anyplace there is an Internet connection.

Today, most banks in Myanmar are adopting a core banking system to provide better services to compete in the domestic market and new fintech companies. Table (3.1) presented the major core-banking systems in Myanmar and list of bank which are using the cutting edge core-banking systems. According to the table (3.1), 18 local banks are using 4 core banking systems but not all the local banks are using yet. Some small banks are still facing to deploy core-banking system due to lack of fund and infrastructure.

Table (3.1) Major Core Banking Systems in Myanmar and List of User Banks

Core Banking System	Oracle Flexcube	Temenos	InfoSys	MiSys
User Banks	1. Kanbawza Bank 2. Myanmar Apex Bank 3. Tun Commercial Bank 4. Shwe (Rural & Urban) Development Bank 5. Myanmar Tourism Bank 6. Small and Medium Industrial Development Bank	1. Myanmar Oriental Bank 2. Co-operative Bank 3. Myanmar Microfinance Bank 4. CHID 5. Myanmar Citizens Bank	1. Asia Green Development Bank 2. Global Treasure Bank 3. Myawaddy Bank 4. A Bank	1. Yoma Bank 2. AYA Bank 3. First Private Bank

Source: Central Bank of Myanmar, 2019

But so far, there is no government banks and some small banks are not applying yet for the core banking system.

3.3 Online Banking and Mobile Banking Services

Online banking and mobile banking, the square footage allows bank users to manage their accounts on a computer, tablet or mobile phone via the Internet. Supported by today's IT technology, it offers users the option to bypass the long-term, paper-based aspects of the ancient banking industry. With online banking, users will perform basic banking functions such as balance inquiry, fund transfer, bill payment, etc. without having to go to the bank in person. By allowing customers to quickly and efficiently

perform additional management of their funds anytime, anywhere, it provides another easy way for buyers to compete with banks.

For banking purposes, online banking helps them reduce operating expenses by reducing the interaction of expensive bill handling sub-degree tellers in an increasingly competitive banking environment. By eliminating the need for customers to work at the bank, it also reduces the bank's situation and allows the bank to work with fewer employees. Currently, online banking is one of all the services that the Myanmar banking system strives to pursue. It is considered a powerful add-on service to attract and retain new and existing customers. Since 2012, most private banks on Myanmar Square have provided many online banking services such as ATMs, Sales Purposes (POS) and Debit Cards.

The 2013 Mobile Banking Directive (MBD) provides for a "bank-led" model, which means that, among other methods, the license may be issued only to banks licensed in Myanmar, and currently only local banks are licensed. Banks can cooperate with non-listed companies and can interact with the network of currency agents to meet the needs of the service, but banks still face the risk of customers (purchasers, shoppers} and effectively "own" the customer banks should A separate checking account is opened for each customer similar to their digital account.

Under this syndrome, the amount of payment between people is limited to (a) 500,000 MMK per transaction, (b) the majority of 3 transactions per day, and (c) a future period of 1 million indefinite Most combination number MMK. However, some trade consultants believe that this only applies to "I to I" payments and not "B to B" payments. The syndrome itself does not guide the issue, and CBM has not issued any written instructions to the public.

Following the announcement of the syndrome, some of Myanmar's large banks have begun to develop their online and mobile industries. KBZ Bank was the first bank to launch a new mobile banking application and online industry in Myanmar in September 2014. It hopes to create more accessible banking in remote rural areas such as cities. KBZ Online Banking gives you a great way to check your customer account balances and transactions, transfer cash, and pay your bills in the comfort of your home and workplace. Later, AYA Bank and CB Bank launched their online and mobile applications in 2015, and today there are a total of 8 banks (KBZ, AYA Bank, CB Bank, Yoma Bank, MAB Bank, UAB Bank, AGD Bank, and Myawaddy Bank) Provide its customers with online and mobile banking services.

3.4 Mobile Payment Services

Since then times have changed, and with it technology and payment methods used for the transfer of goods and services. Rapidly changing technology has changed the way people make daily financial transactions. Mobile devices enable payment are easy to use and efficient in making transactions. It provides an ideal platform for the vast majority of the unbanked population. According to a world bank estimation only 26% of adults have a bank account and access to financial services in Myanmar.

KBZ Bank, Myanmar's largest privately-owned bank launched very first mobile-payment system in Myanmar so called KBZ Pay in August 2018, which is facilitated one million transactions with its mobile wallet application KBZ Pay, signaling progress towards a mobile-first Myanmar, the bank said in a statement yesterday. From 28 to 31 March, guided by the 18,000-strong KBZ Bank team across the country, customers performed an extensive range of transactions with KBZ Pay. This included mobile top-up and data pack purchases, cash-in or money deposits, and cash-out or money withdrawals, QR-code payments at merchants, Quick Pay of bill payments and Over the Counter (OTC) remittances.

The milestone comes just two months after KBZ Pay reached one million customers, all who were digitally verified with NRC and biometrics. With KBZ Pay rapidly growing its network, customers can use the mobile wallet at any of the 65,000 merchants and agents onboard KBZ Pay. "As the domestic champion for 100pc financial inclusion in Myanmar, we will continue to pioneer a secure and convenient mobile payments platform and work to improve the quality of life for millions through banking," said Mike DeNoma, chief executive of KBZ Bank. As of now, CB Bank launched CB Pay and AGD Bank launched AGD Pay. Wave Money is a joint venture company with Yoma banks and Telenor mobile operator. It enables users to send and receive money from the nearest authorized Wave shop.

Not only the banks are launching mobile payment in Myanmar, but also other fintech companies launched their mobile payment application. OK\$ is part of FMCG company Consumer Good Myanmar (CGM). It enables users to make payments through an application as well as from authorized agents. Currently, OK\$ application's total installs have reached 500,000 based on Google Play store data. M-Pitesan is Ooredoo mobile money service partnering with CB banks. They offer users the ability to transfer and receive money using a mobile application as well as from authorized agents. M-Pitesan's user base has reached 400,000, with over 10,000 agents in 2019

across the country. In recently, MyTel mobile operator launched their first mobile payment application, is called My Money.

3.5 Digitalization in Interbank Market and Central Bank Auction System

Central bank of Myanmar established the Interbank FX market in August 2013. In March 2016 CBM have also switched to an electronic reporting system for bank customers concerning their transactions. In currently, Central Bank of Myanmar is using Thomson Reuters Auction system in for FX Auctions and Bloomberg Auction system for Fixed Income Auctions. All the banks in Myanmar can able to submit their bid via system and no need to do paper works as like before. And for the interbank FX and money market dealing, CBM permitted all banks to use Thomson Reuters FX Trading to make a dealing between each of the banks. It is reduced the risk of cyber-attack, a lot of human errors and no need middle office to do settlement and it can directly link to treasury system of the bank to see their updated portfolio in every single time. And nowadays, CBM is developing real-time monitoring solution with Refinitiv (former financial and risk of Thomson Reuters) to monitor FX transactions between interbank market and bank to customer market to get more accurate reference exchange rate and to intervene unethical transactions.

3.6 Priority Areas of Budget Allocation for Digitalization

Top spending initiatives of the banks are planned in the areas of core-banking, security, analytics and digital banking (online and mobile banking), according to research from VDB Loi in 2019. They found that banks' profitability is related only to specific areas of IT digitization. While correlation does not necessarily imply causation, more profitable banks have been investing in a few common areas. The areas with the highest correlation with profitability were product back-office automation, digitization of document management and automation of credit decisions, and big data analytics applied to sales campaigns. The profit margins of banks with high levels of digital enablement in these areas were, on average, twice as high as the profit margins of other local banks.

CHAPTER IV

ANALYSIS ON IMPACTS AND CHALLENGES OF FINANCIAL TECHNOLOGY ON BANKING SECTOR IN MYANMAR

In this section, it is an analysis on the impact and challenges of financial technology towards the Myanmar banking sector. It is started with the selected respondent banks and demographic factors of the respondents from selected local private banks (KBZ, AYA Bank, CB Bank, Yoma Bank, MAB Bank, UAB Bank, AGD Bank and Myawaddy Bank). The later sections are focused on the current situation of digitalization, effectiveness of the digitalization, issues faced in digitalization and impact of the financial technology in Myanmar. The data collection for this study was done basically through the usage of questionnaire by making a target population of 200.

4.1 Research Design

This research used Microsoft Excel to analyze the data by examining survey response. A structured questionnaire was used as a survey instrument. The questionnaire instrument included three sections. Section I is related with the questions on the respondent's demographic characteristics such as name of the bank, gender, age, frequencies of bank services use and knowledge on financial tools. In section II is about current practices of financial technology in banking sector in Myanmar, it is included selected local private banks current situation about financial technologies and issues of these technologies. The last section III is included analysis on impact and challenges of financial technology in banking sector and this section is made up with five-point Likert scale model from strongly disagree to strongly agree (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree).

As a sampling method, the simple random sampling was employed in this study. In this process of sampling, 25 questionnaires are distributed to each selected local private bank by hand and email and gave enough time to respondents to fill the questionnaire to reduce sampling error.

4.2 Demographic Profile of Respondents

Demographic factors are divided into categories such as gender, age, frequencies of bank services use and knowledge on financial tools. The demographic results are very important to analyse on impact and challenges of financial technology on banking

sector in Myanmar. There are total of 200 respondents from selected local private banks and all the data obtained from the questionnaires collected are interpreted and summarized in frequency distribution and percentage distribution in the following.

i. Gender of Respondents

Most respondents are 134 male respondents out of 200 and percentage as 67%, and rest 66 respondents are female, percentage as 33%.

ii. Age of Respondents

Age is divided into five groups and which are 18~25 years, 26~40 years, 41~50 years, 51~60 years and above 60 years old. According to result, the highest number of age group is 26~40 years old as 47% and the second highest group is 41~50 years old with 36.5%. The rest 18~25 years, 51~60 years and above 60 years old group are 1%, 13.5% and 2% respectively.

iii. Education

Education is divided into 5 levels and which are less than diploma, diploma, bachelor, master and doctorate levels. The results are showing in the following table (4.1).

Table (4.1): Education Level

Education Level	No of Respondents	Percentage (%)
Bachelor	86	43
Master	93	46.5
Doctorate	21	10.5
Total	200	100

Source: Surveyed data, August 2019

According to table (4.1), most of the respondents are master and bachelor degree level, 46.5% and 43% respectively. The rest 10.5% of the respondents are doctorate degree level and there is no less than diploma and diploma level in the respondents.

iv. Job Position

Job position is divided into 4 categories, which are CEO/CFO/COO, head of department, manager and assistant manager and result are as follow.

Table (4.2): Job Position

Job Position	No of Respondents	Percentage (%)
CEO/CFO/COO	6	3
Head of Department	37	18.5
Manager	72	36
Assistant Manager	85	42.5
Total	200	100

Sources: Surveyed data, August 2019

According to Table (4.2), 42.5% of the respondents are assistant manager and 36% of the respondents are managers. The rest 18.5% and 3% of the respondents are head of department and CEO/CFO/COO respectively.

v. Financial Technology Services Offered

For the kind of financial technology services that selected banks offer is divided into 8 categories, which are online banking, mobile banking, ATM, mobile payment, debit and credit cards, cash deposit and withdraw machine, self-service machine and other.

Table (4.3): Financial Technology Services Offered

Financial Technology Services Offered	No of Respondents	Percentage (%)
Online Banking	200	100
Mobile Banking	200	100
ATM	200	100
Mobile Payment	100	50
Debit and Credit Cards	200	100
CRM	75	37.5
Self-Service Machine	25	12.5
Other	25	12.5

Source: Surveyed data, August 2019

According to Table (4.3), all of the selected respondents offer online banking and mobile banking, ATM, debit and credit cards. The 50% of the selected banks offer mobile payment, 37.5% offer cash deposit and withdraw machine, and only 12.5% offering self-service machine and other service (electronic trading platform).

4.3 Analysis on Opportunities and Challenges of Financial Technology on Banking Sector in Myanmar

The respondents were asked to express their level of agreement with each question. In each questionnaire, a five-point Likert scale was used for each statement from (1-totally disagree) to (5-totally agree). The results are shown in the table below.

i. Factor Contribute to Services in Digitalization

In the factor contribute to services in digitalization, it is included 4 main factors which are higher return in deposits, overall efficiency increase, attract new customers and more profit due to digitalization. The result from the respondents are showing in the table (4.4).

Table (4.4) Factors Contribute to Services in Digitalization

Factors contribute to services in digitalization		
No	Factor	Mean
1	Higher return in deposits	2.88
2	Overall Efficiency increase	3.905
3	Attract New Customers	3.455
4	More Profit	3.15
Average		3.3475

Sources: Survey data, August 2019

Through the analysis of Table (4.4), it was found that the overall average obtained was 3.3475. In conclusion, respondents believe that what drives digital services is their benefit. One of the most effective benefits is that banks have improved their overall efficiency through digitization and can attract (3.905) and (3.455) new customers, respectively. Although depending on structural factors such as labor law, population density, and the level of social digitization, digitization can be an important and permanent cost-saving strategy for banks, especially in countries with dense branch offices. Efficient, modern IT infrastructure is one of the prerequisites for achieving this efficiency, and it must also be protected from the serious threat of cyber-attacks. At the same time, new technologies can also attract new customers, depending on the scope

of the bank's online and mobile services. Third, the biggest benefit of digitalization is that it gets more profits with a score of 3.15, and less is a higher return on deposits with a score of 2.88.

ii. Behavioral Factor in Digital Bank

In the behavior factor, it is focusing about employee behavioral on the digitalization on banking sector. It is included 6 behavior factor in digitalization and the result are showing in table (4.5).

Table (4.5) Behavioral Factor in Digital Bank

No	Factor	Mean
1	Helped in reducing work stress	3.415
2	Helped in reducing chaos and confusions	4.315
3	Helped to do routine work more efficiently	4.34
4	Increased interest in work	2.89
5	Increased level of motivation	3.73
6	Increased level of job satisfaction	3.51
Average		3.7

Source: Surveyed data, August 2019

As show in Table (4.5), the value of mean is provided for the behavioral factor in digital bank. The average result is 3.7 and it is meaning the level of agreement is so high. The mean of digitalization helped to do routine work more efficiently and reducing chaos and confusions are highest, scored 4.34 and 4.315 respectively. And the digitalization increased level of motivation and level of job satisfaction score 3.73 and 3.51 respectively. The less score is increased interest in work with 2.89. It is means the behavioral factor that refers to digitalization beliefs that digital bank will help to achieve desired goals for all employees and it will help to for efficient and effective in the workplace.

iii. Employee Benefits of Digitalization

Adopting and adapting to digitization is not just an afterthought for banks. To stay competitive and relevant, it is important for companies to begin and gradually transition to digital transformation. In the table (4.6) it is the result from the respondents about employee benefits due to digitalization.

Table (4.6) Employee Benefits of Digitalization

No	Factor	Mean
1	Minimizes the cost of transactions	4.495
2	Saves time	4.155
3	Minimize inconvenience	3.97
4	Provided up to date information	4.015
5	Facilitates quick responses	3.97
6	Improves service quality	4.045
7	Minimize the risk of carrying cash	3.235
Average		3.98

Source: Surveyed data, August 2019

Result obtained from the table (4.6) on the employee benefits of digitalization, maximum mean is 4.495 found in minimizes the cost of transactions. Digitalization caused the smooth flow of regular transactions and provide banks with higher profits with lower operational expenses and transaction costs. Channelize through channels is the new paradigm for banking today, which in earlier times relied solely on the branch network where expanding the business meant adding more branches at high establishment costs. The minimum mean score is 3.235 for digitalization minimize the risk of carrying cash. In Myanmar, all the banks are trying to reduce the usage of cash and promoting the digital way for all the payments and transactions but due to lack of infrastructure most of the people are still using cash instead of digital way. By embracing digitalization, banks can provide enhanced customer services. This provides convenience to customers and helps in saving time. Digitalization reduces human error and thus builds customer loyalty.

iv. Difficulties Faced by Employees to Work with Digital-Channels

Technology is a growing trend and one of the biggest drivers of transformation in the workplace in the financial industry. But most of the employees are more friendly with the legacy system of the banking services and due to digitalization, a lot of them are facing difficulties to work with digital-channels. In table (4.7) is the surveyed results about the difficulties faced by employees to work with digital banking.

Table (4.7) Difficulties Faced by Employees to Work with Digital-Channels

No	Factor	Mean
1	Lack of knowledge regarding how to use/operate	3.22
2	Lack of trust	2.1
3	Increasing expectations of customers	3.88
4	Lack of proper training	1.985
Average		2.796

Source: Surveyed data, August 2019

As show in table (4.7), the value of means is provided for difficulties faced by employees to work with digital-channels. The average of difficulties faced by employees to work with digital-channels is 2.796 which means respondents are neutral on difficulties on digital-channels. The highest mean is 3.88 for increasing expectations of customers, due to arisen of technology most of the customers want better services than before. And the mean of the lack of knowledge regarding how to use/operate is 3.22. The less means are lack of trust on digitalization and lack of proper training on digital-channels which are score 2.1 and 1.985 respectively. It can assume there is not too much difficulties are facing for digitalization except the most of the customers want better services because of technologies.

v. Customer Orientation of IT Facilities

The competition for customers' services is reflected in increased use of financial technology by banks to provide improved and faster banking services with greater emphasis on value added services. In the table (4.8) contained customer orientation of IT facilities on banking sector.

Table (4.8) Customer Orientation of IT Facilities

No	Factor	Mean
1	Your bank uses the web as a tool to improve customer relationship	3.625
2	Internet helps you to identify profitable customers	3.58
3	Internet/mobile banking customers carry out more transactions than traditional customers	3.995
4	Internet/mobile banking can help more complete products of an equivalent quality with lower costs to more potential customers	4.4
5	Internet/mobile banking is helpful in product offerings	4.65
Average		4.05

Source: Surveyed data, August 2019

Result obtained from the analysis on customer orientation of IT facilities, the maximum mean is 4.65 was found in the internet and mobile banking is helpful in product offering. It can be assumed that internet and mobile banking in the banking product, benefit is the highest effect in customer orientation. The mean 4.4 was found internet and mobile banking can help more complete products of an equivalent quality with lower costs to more potential customers. The average for the customer orientation is 4.05 and it means respondents are strongly agreed on digitalization is the opportunity for the customer retention and offer more bespoke products to customers.

vi. Internal and External Challenges of Financial Technology of Digitalization

The digital wave has swept across all areas of industry, and banking is no exception. Although adapting processes to the digital age may have been an option before, they have quickly evolved to become necessary when it comes to banking. In addition to the fact that the number of digitally savvy people is steadily increasing, fast-changing technological changes mean that in terms of digitalization, they have brought many opportunities and challenges to banking. As banking institutions face pressure to stay ahead of the innovation curve, they must also face significant internal and external

challenges when it comes to digitalization. In table (4.9) and (4.10) presented the result from internal and external challenges of financial technology of digitalization.

Table (4.9) Internal Challenges of Financial Technology of Digitalization

No	Factor	Mean
1	Complicated and long procurement process	4.07
2	Strict regulatory requirements and standards	4.685
3	Lack of technical skills within your organization to deploy new systems	4.09
4	Difficulty in integrating new technology with legacy infrastructure	4.2
5	Lack of financial resources	3.47
6	Clash of cultures between bank and vendor	2.22
Average		3.8

Source: Surveyed data, August 2019

As shown in Table (4.9), the value of means is provided for the internal challenges of financial technology of digitalization. The highest score among them is strict regulatory requirements and standards for financial technology in digitalization with 4.685, which means CBM must release the minimum criteria to get cutting edge technologies in local banking sector. The mean of difficulty in integrating new technology with legacy infrastructure is 4.2, most of the people are used to with legacy banking system for long time and there is a huge gap between manual works and automatic systems. The minimum score is 2.22 from the clash of cultures between bank and vendor. The average for this analysis is 3.8, which mean all the respondents are agreed that is they are still having internal challenges to deploy digitalization in their banks.

Table (4.10) External Challenges of Financial Technology on Digitalization

No	Factors	Mean
1	New fintech companies are making strengthen the competitiveness of existing banks	2.82
2	Banks face a long-term threat from new technology	3.47
3	Peer-to-peer lending from fintech company is a threat to banks	3.58
4	Bitcoin and other electronic currencies will be processed by banks as conventional currencies	2.59
5	Most banks are struggling to keep up with technology	4.27
6	Digitalization reduces the effort of employees and some of them are replaced by technology	4.02
7	Banks will be more vulnerable to cyber-attacks	3.96
8	Privacy may have to be compromised	3.8
9	The emerging fintech scene is turning into a bubble	2.43
Average		3.438

Source: Surveyed Data, August 2019

As show in Table (4.10), the value of mean is provided for the challenges of financial technology on banking sector. The average of the challenges of financial technology is 3.45, which means the level of agreement is high. The mean of most banks are struggling to keep up with the technology is 4.27, it is means technology is changing a lot in nowadays but all of the local banks are facing a lot of struggle to keep up with the technology due to lack of technological skills to handle modernize systems, complicated procurement process and legal restrictions. And digitalization reduces the effort of the employees and some of them are replaced by technology which is score 4.02. The improvement of technology and artificial intelligence are replacing branch banking in some places, ATMs and CRMs are performing cash withdraw and deposit transactions of customers instead of branches. And communication and workflow between front office, middle office and back office can be done automatically by CBS so it can lead to increase unemployment rate for the financial industry employees. Also, banks will be more vulnerable to cyber-attacks and due to this, concern of privacy may have to be compromised. Twenty-first century is all about information and all the

hackers and other businesses are always seeking to get valuable data of the customers and if the information of bank customers and bank data are leaked, it will be a huge damage to the bank reputation and can also lead to bankrupt to that bank. The less mean of the challenges of financial technology on banking sector is the emerging of fintech scene is turning into a bubble, is scored 2.43. For now, Myanmar banks are started to using fintech and fintech startup companies are still in beginning stage. So respondents are neutral in the fintech scene is turning into bubble.

All banks want the fastest and most advanced technology, but they also require IT teams to provide value-for-money services, especially in some cases, where technology is seen as an expense rather than an investment, and There are also some obstacles and challenges in using finance. By introducing third-party providers to the banking system, the risk of fraudsters obtaining customer information is greatly increased, and unless there is evidence of fraud or negligence, financial providers will bear responsibility. As banks and fintech companies face increasing security threats without proper legal instructions, financial service providers will inevitably do what is necessary to take responsibility to third parties.

CHAPTER V

CONCLUSION

In this chapter of research, findings are summarized and concluded to derive the answers. This chapter includes three main sections: finding, suggestions and need for further research. First part consists of the finding of the study and research analysis of the impact and challenges of the financial technology on banking sector in Myanmar. On the second part, it includes the recommendations that are based on finding and results of the survey research. In the last part, it presents the limitation and need for further research on financial technology in Myanmar.

5.1 Findings of the Study

This study analyses the opportunities and challenges of the financial technology on banking sector provided by local private banks in Myanmar. There are two main objectives in this study, to identify the current financial technologies using in Myanmar and to analyze the opportunities and challenges of financial technology on banking sector. The required data of the objective are collected through sample survey and Thomson Reuters Eikon research platform. The total 200 respondents who are from the banks using advanced financial technology to meet the standard of Bank 2.0, and these banks are KBZ, AYA Bank, CB Bank, Yoma Bank, MAB Bank, UAB Bank, AGD Bank and Myawaddy Bank.

In the section one, demographic factors include gender, age, frequencies of bank services use and knowledge on financial tools. The gender of the male is more than female in this research. The highest proportion of respondents' age group are 26 to 40 years old and 41~50 years old and most of the respondents are master and bachelor degree level. The job levels of respondents are CEO/CFO/COO, head of department, manager and assistant manager of the selected banks. All the selected banks offer online banking and mobile banking, ATM, debit and credit cards. The 3 of the selected banks offer mobile payment and cash deposit and withdraw machine (CRM) service and one bank offer self-service machine and other service (electronic trading platform).

In the second section of the survey question, the opportunities and challenges of financial technology on banking sector are analyzed by Five-Point Likert scale. the respondents believe factors contribute to services in digitalization are benefits for them. The most effective benefit among them are the bank's overall efficiency increase by digitalization and it can attract new customers. the value of mean is provided for the behavioral factor in digital bank. The result of behavioral factor in digital bank is 3.7

and it is meaning the level of agreement is so high. The mean of digitalization helped to do routine work more efficiently and reducing chaos and confusions are highest in the behavioral factor. The employee benefits of digitalization, the average score is 3.98 and maximum mean of the analysis is the minimizes the cost of transactions. Digitalization caused the smooth flow of regular transactions and provide banks with higher profits with lower operational expenses and transaction costs. The average of difficulties faced by employees to work with digital-channels is 2.796 which means respondents are neutral on difficulties on digital-channels. The average for the customer orientation is 4.05 and it is means respondents are strongly agreed on digitalization is the opportunity for the customer retention and offer more bespoke products to customers. The average for the internal challenges of financial technology on digitalization is 3.8 and which mean all the respondents are agreed that is they are still having internal challenges to deploy digitalization in their banks. For the challenges of financial technology on banking sector, the average means is shown high (3.45) due to struggling to keep up with the technology and banks are reducing their employees and replaced their jobs with technology.

5.2 Suggestions

With digital banking platforms in place for most banks in Myanmar, 2020 will be a year of enhanced key service delivery and improved cross-channel customer experience. In the coming year, the available digital banking options will expand significantly and the risk of not meeting consumer expectations will increase. As the masses move from physical to digital channels, so have many of the face-to-face sales opportunities that they have encountered on the console in the past. Banks in Myanmar have a hard time replicating this experience online and on mobile channels. They are used to selling on the spot rather than remotely. As a result, banks will need to provide training to their sales teams for more remote sales in the future.

To serve digital consumers, Myanmar banks will need to move beyond FAQs and move to chatbots and interactive content. Combining these two technologies with advanced intelligence (AI) and machine learning will improve service delivery while reducing costs. Currently, only eight banks in Myanmar have adopted digital technology, but the remaining banks are still trying to switch to digital channels, while some banks such as the government and small banks are still engaged in paperwork and traditional banking. All Myanmar banks should focus on providing the best experience for consumers and keeping up with technology trends. If done right, the result of

providing consumers with the best digital experience will be not only lower costs, but also higher revenues.

Another of the biggest negative effects of technology is unemployment, as automation has replaced banking jobs. Although the fintech explosion will certainly affect many jobs, it will also create new jobs. As alternative currencies and blockchain technology are increasingly integrated into the banking industry, roles will increasingly be needed in security fields such as encryption and identity protection. Security-related matters will develop a wider and more diverse profession and provide new opportunities for financial professionals. Bank staff should be prepared for rescheduling.

Although big local banks like KBZ, CB, YOMA and AGD already launched mobile-payment for multichannel integration of Bank 2.0, meanwhile other international banks would be fully applied the Bank 4.0 at the end of 2020. Thus, banks still need to focus more on technology and should invest in financial technology continuously in the future.

5.3 Need for Future Research

This thesis explored the impact and challenges of financial technology on banking sector in Myanmar by using Bank 2.0. In this study, it is selected only 8 private local banks (KBZ, AYA Bank, CB Bank, Yoma Bank, MAB Bank, UAB Bank, AGD Bank and Myawaddy Bank) because these banks are almost digitalized and leading commercial banks in Myanmar. Therefore, it is suggested the future studies should conduct any other banks in Myanmar for future. This study is only cover the Bank 2.0 and therefore in future study can be focus on Bank 3.0 and Bank 4.0 for opportunities and challenges of financial technology on banking sector.

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APPENDIX
QUESTIONNAIRE
YANGON UNIVERSITY OF ECONOMICS
DEPARTMENT OF COMMERCE
MASTER OF BANKING AND FINANCE (MBF) PROGRAMME
“THE IMPACT AND CHALLENGES OF FINANCIAL TECHNOLOGY ON
BANKING SECTOR IN MYANMAR”

The objective of the study is to identify and analyze the impact and challenges of technology in banking services in Myanmar. The impact of technology on banking operations, a comparative analysis between Public and Private sector banks survey is conducted by Aung Phyoe Kyaw @ Leo (Master of Banking and Finance, Yangon University of Economic) under the guidance of Prof. Daw Soe Thu (Program Director, Department of Commerce, Yangon University of Economic).

! Note: The information filled in are treated as strictly confidential and the respondents' information will not reveal. The information will be used for the academic purpose.

Section A : Demographic Characteristic

1. Name:
2. Name of the Bank & Branch:
3. Gender
 - a. Male b. Female
4. Age
 - a. 18 - 25 years b. 26 - 40 years c. 41 – 50 years d. 51 – 60 years
 - e. above 60 years
5. Education
 - a. Less than diploma b. Diploma c. Bachelor d. Master e. Doctorate
6. Job Position
 - a. CEO/CFO/COO b. Head of department c. Manager d. Supervisor
 - e. Associate
7. Which kind of financial technology services that your bank offer?
 - a. Online Banking
 - b. Mobile Banking
 - c. ATM
 - d. Mobile Payment

- e. Debit and Credit Cards
- f. CRM (Cash Deposit and Withdraw Machine)
- g. Self- Service Machine
- h. other (please specify)

Section II: Analysis on Opportunities and Challenges of Financial Technology on Banking Sector

Please indicate your agreement or disagreement with the statements reflecting your own perceptions about the impact of using financial technology on the following scale. (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)

8. Differentiating strategies of digitalization						
No	Factor	1	2	3	4	5
1	More information technology					
2	Providing better quality of service					
3	Innovative products and services					
4	More labor-intensive techniques					
5	Recruiting young employees					
6	Expanding branch network					
7	Pitching into mergers and acquisitions					

9. Factors contribute to services in digitalization						
No	Factor	1	2	3	4	5
1	Higher return in deposits					
2	Overall Efficiency increase					
3	Attract New Customers					
4	More Profit					

10. Behavioral factor in digital bank

No	Factor	1	2	3	4	5
1	Helped in reducing work stress					
2	Helped in reducing chaos and confusions					
3	Helped to do routine work more efficiently					
4	Increased interest in work					
5	Increased level of motivation					
6	Increased level of job satisfaction					

11. Employee benefits of digitalization						
No	Factor	1	2	3	4	5
1	Minimizes the cost of transactions					
2	Saves time					
3	Minimize inconvenience					
4	Provided up to date information					
5	Facilitates quick responses					
6	Improves service quality					
7	Minimize the risk of carrying cash					

12. Difficulties faced by employees to work with digital-channels						
No	Factor	1	2	3	4	5
1	Lack of knowledge regarding how to use/operate					

2	Lack of trust					
3	Increasing expectations of customers					
4	Lack of proper training					

13. Customer orientation of IT facilities						
No	Factor	1	2	3	4	5
1	Your bank uses the web as a tool to improve customer relationship					
2	Internet helps you to identify profitable customers					
3	Internet/mobile banking customers carry out more transactions than traditional customers					
4	Internet/mobile banking can help to offer more complete products of an equivalent quality with lower costs to more potential customers					
5	Internet/mobile banking is helpful in product offerings					

14. Internal Challenges of Financial Technology						
No	Factor	1	2	3	4	5
1	Complicated and long procurement process					
2	Strict regulatory requirements and standards					
3	Lack of technical skills within your organization to deploy new systems					

4	Difficulty in integrating new technology with legacy infrastructure					
5	Lack of financial resources					
6	Clash of cultures between bank and vendor					

15. External Challenges of Financial Technology						
No	Factors	1	2	3	4	5
1	New fintech companies are making strengthen the competitiveness of existing banks					
2	Banks face a long-term threat from new technology					
3	Peer-to-peer lending from fintech company is a threat to banks					
4	Bitcoin and other electronic currencies will be processed by banks as conventional currencies					
5	Most banks are struggling to keep up with technology					
6	Digitalization reduces the effort of employees and some of them are replaced by technology					
7	Banks are more vulnerable to cyber-attacks					
8	Privacy have to be compromised					
9	Emerging fintech scene is turning into a bubble					