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1. SEVERAL PHENOMENA OF CHINA'S FINTECH

A) Companies of The Online Peer To Peer (P2P) Lending Platform and their business development

- Typically, a online lending company initially established by using the internet technology to undertake the activities of fund raising and lending.
- These companies are using big data and cloud computing for risk identification and management, to provide services in the form of p2p to fulfill the financing needs of SMEs.
- P2P has been around since the year 2006. These companies began from 10 operators in year 2010 and reach the highest in 2015 with 3464 platforms.

1. SEVERAL FINANCIAL TECHNOLOGY PHENOMENA IN CHINA

A) Internet Lending Companies And Their Business Development

Changes in the number of normal operating companies for online loans (home)

2013	-	572
2014	-	2251
2015	-	3464
2016	-	2568
2017	-	2240
2018	-	1201

1. SEVERAL FINANCIAL TECHNOLOGY PHENOMENA IN CHINA

A) Internet Lending Companies And Their Business Development

- From 2010, the Chinese's RMB online lending was 60million and reached 400.5billion in 2015.
- In 2016, it reached 816bil with average return of 10.45% annually.
- In 2017, the outstanding loans reached the highest at 1.2 trillion and now China has become the largest online lending in the world.

1. SEVERAL FINANCIAL TECHNOLOGY PHENOMENA IN CHINA

B) Network Lending Company Business Rectification

- Due to lack of supervision of online lending, there were various frauds cases detected
- In Aug 2016, the Chinese authorities had imposed a new regulation to restrict the lending companies from directly engaging in lending business but to act as intermediaries.
- Funds received must be deposited into a custodian bank with a 12 months lock-in period.
- In October of the same year, the China Financial Internet Association made 96 specifications on the information disclosure requirements.

1. SEVERAL FINANCIAL TECHNOLOGY PHENOMENA IN CHINA

B) Network Lending Company Business Rectification

- In Feb 2017, the China Banking Regulatory Commission further defined the responsibilities, business governance and permissible business of online lending, comprising the depositor, custodian and platform providers. The custodian is further clarified must be a commercial bank.
- In Aug 2017, the disclosure requirements were further defined to specify the matters to be disclosed, time and frequency of disclosure etc.
- In April later year, China Banking Insurance Regulatory commission was established of which one of its functions is to oversee the business of online lending.
- A joint collaboration between the Internet Finance Association and 32 banks was initiated in September of the same year, and they have announced that there was a total of 649 online lending institutions.

1. SEVERAL FINANCIAL TECHNOLOGY PHENOMENA IN CHINA

B) Network Lending Company Business Rectification

- Since the introduction of the policy, there was a large number of attrition in the industry.
- At the end of 2016, a reduction of 985 online lending companies as compared to 2015 and the number continued to decrease year by year.
- As at 2018, the market left with 1021 active lending platforms with outstanding loan of 789 billion.

1. SEVERAL FINANCIAL TECHNOLOGY PHENOMENA IN CHINA

C) Understanding Of Online Lending

- The online lending has promoted the development of China's digital finance business especially its technical application in big data, cloud computing and risk identification and control.
- Risks arise due to those companies that merely provide online lending but not using big data or cloud technology and mere like doing "loan shark" business and even transferring private lending to the network.
- Regulation has strengthened the supervision of online lending activities, especially for the lending platform and information disclosure requirements.

1. SEVERAL FINANCIAL TECHNOLOGY PHENOMENA IN CHINA

B) Financial Intelligence, Unmanned Digitization

i) Financial institutions use technology themselves

- Today's technological modernization, linking existing financial infrastructure, machinery and technology with the Internet, cloud computing, big data, artificial intelligence etc.
- Going smart and unmanned for example, banking deposits will be automated without human intervention and transaction can be done through ARM machines.
- With adoption of technology in finance, ATM machines are no longer needed. With website and mobile phones, they replace thousands of banking employees. It is predicted that legacy banks will disappear in 20 years.

1. SEVERAL FINANCIAL TECHNOLOGY PHENOMENA IN CHINA

B) Financial Intelligence, Unmanned Digitization

i) Financial institutions use technology themselves

- Money is now digitalized and traditional occupations will gradually reduced.
- The China Construction Bank (CCB) has introduced its first unmanned bank in China in 2018.

No security guard! Instead, it is the face recognition gate and the sharp camera



This picture is taken at the CCB bank. The AI face recognition gate replaces the role of security guard.

You can't find a lobby manager. Instead, I will smile and talk to you.



There is no lobby manager, instead a AI robot will serve you.

Can not find a teller, replaced by a smart teller machine



Al smart teller machine replaces the traditional teller counters.

1. SEVERAL FINANCIAL TECHNOLOGY PHENOMENA IN CHINA

B) Financial Intelligence, Unmanned Digitization

i) Financial institutions use technology themselves

- A lot relate to payment are using AI, unmanned transactions now and the transactions can be done via face recognition and fingerprints.
- In the past, lots of face-to-face communications were needed. With tech, robotic and voice system, they replaced the functions and realized the man-machine communications. Even if there is no immediate response to the queiru/problem, the system will be auto KIV to follow up later.

1. SEVERAL FINANCIAL TECHNOLOGY PHENOMENA IN CHINA

B) Financial Intelligence, Unmanned Digitization

ii) Cooperation with technology and data companies

- There are more collaborations between banks and tech co focusing on payment, big data, cloud computing and etc.
- In March 2017, Alibaba Group, Ant Financial Group and CCB signed a tripartite strategic collaboration MOU to explore a new operating model between traditional bank and tech co on innovative financial services. Ant Financial and CCB initiated collaboration for online credit card application, e-payment and e-credit rating.

1. SEVERAL FINANCIAL TECHNOLOGY PHENOMENA IN CHINA

B) Financial Intelligence, Unmanned Digitization

ii) Cooperation with technology and data companies

- In 2017, Baidu announced its collaboration with China Agricultural Bank. They will leverage on technological advantages of big data, Al and cloud computing to build smart banking and promote financial inclusion.
- The advantages in big data analysis improvise better client experience.

1. SEVERAL FINANCIAL TECHNOLOGY PHENOMENA IN CHINA

B) Financial Intelligence, Unmanned Digitization

ii) Cooperation with technology and data companies

- The collaboration between ICBC and Tencent was initially started with payment and settlement.
- They are now cooperating in various other aspects which include cloud computing, big data, AI, digital banking etc.
- The collaboration between FI and tech co has becoming a trend.

1. SEVERAL FINANCIAL TECHNOLOGY PHENOMENA IN CHINA

B) Financial Intelligence, Unmanned Digitization

iii) Technology, data companies carry out their own financial business

- Wechatpay and QQ Wallet are the flagship e-Payment products of Tencent's finance business
- Tencent Licai, WeiLiDai and Tencent Credit are their core financial products which cover fund management, personal credit rating, online lending and securities business and etc.
- Meanwhile, for Alibaba, they not only having payment wallet but has its own microfinancing company

1. SEVERAL FINANCIAL TECHNOLOGY PHENOMENA IN CHINA

C) Third Party Payment In China

- i) The birth and development of third-party payment institutions
- 3rd party payment is one of the innovative digital finances due to the development of payment transaction.
- It originated from Ali Kai Taobao platform. Due to banks reluctant to facilitate small amount transaction for online shopping, Ali established a 3rd party payment agency named as Alipay. The buyer will need to first remit to Alipay, and the payment will then be released to seller after buyer received and satisfied with the good.

1. SEVERAL FINANCIAL TECHNOLOGY PHENOMENA IN CHINA

C) Third Party Payment In China

i) The birth and development of third-party payment institutions

- The existence of 3rd party payment has been provided the market a better online shopping experience and efficient delivery chain, especially for the young generations whom are moving away from shopping at physical stores.
- During May 2011 to March 2015, the Central Bank has issued a total of 270 3rd party payment licences by 8 batches.
- Currently, the market is left with 240 operators.

1. SEVERAL FINANCIAL TECHNOLOGY PHENOMENA IN CHINA

C) Third Party Payment In China

- i) The birth and development of third-party payment institutions
- In 2010, the Central Bank had issued a new guidelines on third-party payment services. Non-financial Institutions are allowed to act as an intermediaries to provide fund transfer related services, comprising epayment, prepaid card, bank card receipts, and etc. The permitted services were detailed to 406 types.
- All payment institutions must obtain Payment Business licences from Central Bank before providing the above services. However, there are some illegal operators in the market.

1. SEVERAL FINANCIAL TECHNOLOGY PHENOMENA IN CHINA

C) Third Party Payment In China

i) The birth and development of third-party payment institutions

- Under the regulation, the 3rd party payment required to open a dedicated deposit account with commercial bank to accept customer's payment, except for People's Bank of China, which specified in other provision.
- The 3rd party payment institution can only choose one commercial bank, and only allowed to open dedicated client's deposit account in each branch of the selected commercial bank.
- The payment institution shall sign an agreement with the bank to specify the rights, obligations and responsibilities of both parties.

1. SEVERAL FINANCIAL TECHNOLOGY PHENOMENA IN CHINA

C) Third Party Payment In China

i) The birth and development of third-party payment institutions

- The 3rd party payment institutions business growth rapidly with their strength in raising fund efficiency. However, this had caused a sharp decline of deposit demand in traditional banking system, which lead the commercial banks have lesser liquiduity.
- On the other hand, the lack of data and supervision also pose the financial market become vulnerable.

1. SEVERAL FINANCIAL TECHNOLOGY PHENOMENA IN CHINA

C) Third Party Payment In China

ii) Development of third-party payment services

- In 2010, 3rd party online payment has reached 1 trill with a total business of 5.3 trill.
- The upward trend continued until 2013 where the third-party payment recorded 17.2 trillion, an increase of 38.7%. Offline transactions were 59.9%, Internet transactions expanded to 31.2%, and mobile payments accounted for 7.1%.
- In 2018, the third-party mobile payment transactions in China reached 190.5 trillion yuan, with a year-on-year growth of 58.4%. While the Internet payment transactions recorded 29.1 trillion yuan, a year-on-year increase of 3.6%.

1. SEVERAL FINANCIAL TECHNOLOGY PHENOMENA IN CHINA

C) Third Party Payment In China

ii) Development of third-party payment services

- In 2010, online payment business was dominated by Alipay with 50.2% and Tenpay 20.3%.
- In 2018, Alipay and Tenpay's 3rd party payment continued to dominate 54.3% and 39.2% respectively.
- Alipay's users reached 1 bill in Jan 2019 while Tencent reached 1.1billion users in the first quarter of the year, with an average daily transaction of more than 1bill times.

1. SEVERAL FINANCIAL TECHNOLOGY PHENOMENA IN CHINA

D) China Central Bank Digital Currency

i) Basic assumptions of the central bank's digital currency

- The R&D of digital currency by People's Bank of China (PBOC) began in 2014, led by former governor. Both the PBOC and commercial banks will be able to issue the digital currency – a so-called "two-tier" System. The plan is for a mobile wallet that allows consumers and businesses to swap their yuan for the digital currency.
- The digital currency is to replace part of money in circulation (M0). The actual launch date is yet to be confirmed
- The digital currency still need to undergo a series of R&D, risk assessments and mitigation, especially for cross border transactions and AML.

1. SEVERAL FINANCIAL TECHNOLOGY PHENOMENA IN CHINA

D) China Central Bank Digital Currency

ii) Central bank digital currency operations

- The Central Bank digital currency is only exchangeable with selected designated institutions. Centralized management model is adopted to avoid excessive issuance of the digital currency.
- The 2nd tier of the tiering system is formed by different commercial banks. Any issuance of the central bank digital currency to public needs to be backed with similar figure as reserve to the central bank.

1. SEVERAL FINANCIAL TECHNOLOGY PHENOMENA IN CHINA

D) China Central Bank Digital Currency

ii) Central bank digital currency operations

- Central Bank digital currency does not impose interest payment. This will not trigger inflation issue.
- Under the 2 tier system, the upper level will be the Central Bank, which provides guarantee to the issued digital currency and hence it works no different with the current RMB.
- Initially, the research build on a prototype on blockchain and later encountered issue on scalability. Hence, the technical aspects will not rely entirely on DLT as it couldn't cater the demand of a country as big as China. Hence, the team decided to remain technological neutral and do not necessary rely on one fixed tech.

1. SEVERAL FINANCIAL TECHNOLOGY PHENOMENA IN CHINA

D) China Central Bank Digital Currency

iii) How the public gets the central bank digital currency

Typically, there are three methods for the public to get the Central Bank digital currency:

- 1. Opening of digital currency wallet and exchange with fiat currency.
- 2. Via fund transfer. Similar to transferring money from a banking account to Alipay or wechat pay.
- 3. Direct remittance, e.g via a trading payment transaction or fund transfer between each other.

1. SEVERAL FINANCIAL TECHNOLOGY PHENOMENA IN CHINA

D) China Central Bank Digital Currency

iv) How to know the central bank digital currency

How to identify a central bank digital currency.

- The Central Bank's digital currency is not a super-sovereign currency
- The Central Bank's digital currency is termed as currency as one of the payment method
- Central Bank M1-M4 is already a digital currency
- The Central Bank digital currency is equivalent to legal tender. Meaning that, the central bank digital currency is not a new currency but a substitute to fiat currency, to ease the payment method.

2. CHINA'S FINANCIAL TECHNOLOGY DEVELOPMENT TREND

A) The Future Of Financial Technology May Bring Many Innovations

- The key difference between digital finance and legacy finance are that the number of clients involved are huge, large number of payment transactions, not only based on data but also behavioral patterns.
- The technological innovation with the use of big data, cloud computing provide new developments and opportunities in the financial market.
- On the other hand, this also create a huge supervisory challenges in the industry.

2. CHINA'S FINANCIAL TECHNOLOGY DEVELOPMENT TREND

B) Bringing Traditional Financial Business Process Re-engineering

- The legacy financial services often require guarantees, collaterals. This creates a higher financing cost and basically only protecting the bank and not increasing in efficiency.
- Ali Microfinancing, using big data to build personal credit rating. The loan provided does not require any collateral and merely build on the credit rating. This is another innovative lending business model and possibly stimulate new economic activities, especially for legacy bank to adopt.

2. CHINA'S FINANCIAL TECHNOLOGY DEVELOPMENT TREND

B) Bringing Traditional Financial Business Process Re-engineering

- Additionally, Ali's lending ha simplified the traditional financing application processes and implemented the "310" rules, where it means 3 minutes for loan application, 1 minute for loan assessment and disbursement with "0" human intervention.
- Moving forward, FI will utilize technology and big data to improvise the lending processes, use data obtained to establish a new credit rating and evolution system.

2. CHINA'S FINANCIAL TECHNOLOGY DEVELOPMENT TREND

C) Bringing A Regulatory Approach And A Regulatory System Revolution

- With Big data, internet and cloud computing, regulatory reporting needs to be improved which is able to monitor the data in real time.
- Big data can identify risks timely. It is the matter where the monitoring approach needs to be integrated with the network system and create a seamless system.
- With network analytic and monitoring, the FI may start to identify those with good credit rating, for not requiring collaterals. Big data is also able to precisely identify the business performance.

2. CHINA'S FINANCIAL TECHNOLOGY DEVELOPMENT TREND

C) Bringing A Regulatory Approach And A Regulatory System Revolution

- For example, CCB approved SME's loans 2 years ago with outstanding balance of 20bill and non-performing is 7%. With AI, the loans increased to 700bill with non-performing drop to 2%.
- Ali's non performing is below 1%.
- No reporting required and all are done online.

2. CHINA'S FINANCIAL TECHNOLOGY DEVELOPMENT TREND

C) Bringing A Regulatory Approach And A Regulatory System Revolution

- Third is about the supervisory approach by Central Bank. In general, the supervision is risk-based approach but the risk assessment cannot be precise for each individual FI.
- With big data, the Central Bank supervision can be more precise. Eg, the requirements on reserve with Central Bank, capital adequacy requirement, bad debt provision can be based on the business operations of each entity rather than 1 size fits all.
2. CHINA'S FINANCIAL TECHNOLOGY DEVELOPMENT TREND

D) The Revolution In Payment Methods May Bring About A Huge Change In The Financial Landscape

- The evolution of payment method from the use of gold and silver, bank checks, and now e-payment have changed the financial systems.
- It is envisaged that anyone who priorities the use of tech will lead the way forward.
- Ma Yun's has said that if the bank is not changing, we will change the bank.
- The development of blockchain and cloud computing as well as big data reform the credit system globally.
- It is all about technology and this is something need to be done sooner or later.

2. CHINA'S FINANCIAL TECHNOLOGY DEVELOPMENT TREND

- Since the announcement of Facebook to create a cross border digital currency, called Libra, it has created great repercussion from the international community.
- A lot of data tech companies are also trying to invent their own digital currency, same goes to international monetary fund as well as the Central Banks.
- Everyone is trying to build a super-sovereign currency.

2. CHINA'S FINANCIAL TECHNOLOGY DEVELOPMENT TREND

- By look into evolution and development of money history, money is equivalent with credit, which can measure the value and price of goods.
- Money was evolved from commodities, and become into form of banknotes and securities. Generally will be in tangible.
- Unlike the securities, value of the currency itself will not fluctuate.
- Currency has expanded from MO to M1, M2, M3 and even M4 now. The cash currency has been symbolized and digitized, and can be considered as digital currency.
- E-payment, debit card, and even WeChat pay, 3rd party payment are actually mode of payment, instead of creation of money.

2. CHINA'S FINANCIAL TECHNOLOGY DEVELOPMENT TREND

- No matter how good LIBRA vision was designed, it will still cannot surpass the sovereign currency.
- The LIBRA was created between the institutions with a basis of legal tender, and it leads to boundaries between digital currencies. Cross border transactions are still need to be recognized and regulated by the authorities.
- Therefore, the digital currencies such as LIBRA shall only be considered as evolution of payment method instead of innovation of money.

2. CHINA'S FINANCIAL TECHNOLOGY DEVELOPMENT TREND

- LIBRA is created on the basis of sovereign currency, it is the credit of sovereign currency. Regardless LIBRA pledged with what kind of currency, it was still the credit creation from sovereign currency instead of money.
- It is at most a quasi-currency, secondary or derivative currency. To-date, most of the digital currencies are speculative currencies, similar to commodities and stocks.
- If LIBRA is a currency, then WeChat and Alipay can also be called as Tencent Currency and Ali currency. In this regard, the transcending of sovereign currency may just an empty talk.

2. CHINA'S FINANCIAL TECHNOLOGY DEVELOPMENT TREND

F) More Technical Talents Are Needed In The Financial Sector

- Traditional finance mainly relies on deposits, loans, and supervision.
- In future, it will be further evolved from existing system technology by emphasizing on big data, cloud computing, AI, virtual reality as well as voice technology.
- Therefore, the IT talents will be in demanding compared to finance talents.
 For instance, the employment of Bai Xin Bank in China has recruited about 63% of IT staff. Su Ning Bank even more of, 72%.

3. CHINA'S ECONOMIC OUTLOOK

A) Will Maintain The Great Flexibility Of Learning And Adapting

- China's domestic financial and technology enterprises are fast-adopting FinTech. Chinese enterprises are keen to learn the most advanced technology from all over the world and use extensively.
- Continued perfecting, improving, and even innovation is one of the key success factors of China in the past 40 years after economic reform and liberalisation.
- It is believed that Chinese economy will grow higher by maintaining its flexibility of learning and adapting.

3. CHINA'S ECONOMIC OUTLOOK

B) There Will Still Be Moderate Growth In The Future For A Long Period Of Time.

i) After the rapid growth, it will enter a stage with moderate growth

- From 1978 to 2000, China's economy grew at an average annual rate of 9.5-9.7%.
- Later year of 2002-2012, the average annual growth rate had reached 10.27%. This growth rate is far exceeds 4% compared to the developing economies that undertake industrialization process. The growth mainly attributed by it's population size and market size. The demographics and market advantages will continue to play an important role in future.
- During industrialisation process, the population of Britain, France and Germany is only 20-30 million. While United States with about 30-100million. China with 0.8-1.3billion population and its talent will be more prominent in the future.

3. CHINA'S ECONOMIC OUTLOOK

B) There Will Still Be Moderate Growth In The Future For A Long Period Of Time.

ii) The rate of economic growth is slowing down, but there will still be supporting factors for moderate growth.

• China's GDP is close to 6%, and it is expected to be lower in the future. Innovation research and development and investment, develop new industries, solve the ecological environment and technical quality brands, tap the service industry and the potential of medical medicine, education and old-age industries, transform traditional industries with modern technology, improve efficiency, and solve urban and rural areas.

• By resolving the economic imbalances within urban and rural areas, and further liberalize the market. At the final stage of industrialization and urbanization (generally until 2035), it can still maintain a speed of 3.5-4% or more, and can be turned over again in 18-20 years.

Fanduo, at least 27-30 trillion US dollars, if the exchange rate is 6:1, at least 30-33 trillion US dollars

	2010	2011	2012	2013	2014	2015	2016	2017	2018
GDP	10.6	9.5	7.9	7.8	7.3	6.9	6.7	6.9	6.5

3. CHINA'S ECONOMIC OUTLOOK

B) There Will Still Be Moderate Growth In The Future For A Long Period Of Time.

iii) China's economic spillover model will bring new growth to the world

- In the past 20 years, Chinese economy was competed globally with its technology, low prices, and medium-low quality.
- In future, China will partially convert traded goods into investment products and develop the economic of the host countries by expanding investment, increasing technology and capital to drive the global economic growth.
- In the next 30 years, it is expected that the population and market strength of the non-developed countries may benefited from the China's economic spillover.

3. CHINA'S ECONOMIC OUTLOOK

B) There Will Still Be Moderate Growth In The Future For A Long Period Of Time.

iv) China will push the global economy into a new division of labor growth model

- The high exchange rate, high value-added, expensive patent and intellectual property fee, development models of major developed countries are not applicable to most developing countries, their market mainly in China. When leaving China, its market and profits will be immediately shrunk.
- In the Belt and Road initiatives, China will export high-end technology and equipment with lower cost, and funds to drive the infrastructure and economic development for the participating countries. Thus, forming a new division of labor market globally.

3. CHINA'S ECONOMIC OUTLOOK

B) There Will Still Be Moderate Growth In The Future For A Long Period Of Time.

v) China's institutional and policy space for improvement still remain large

- Firstly, fiscal policy is wide and dynamic. Currently, the government expenditure is inefficient, and there are encounters of repeated research, subsidies and investment phenomena. If reforms are carried out, the resources allocation will be greatly improved.
- Secondly, room of improvement for monetary policy is even greater than developed countries and it can effectively support the development of real economy. China's virtual economy chain is short, and the impact of the crisis is small.
- Lastly, the technology gap and huge urban-rural income gap indicated the potential for development is enormous.

3. CHINA'S ECONOMIC OUTLOOK

C) China's Unique Mechanism Will Ensure International Competition

i) Effective governance of the party and the country will maintain lasting social stability

- China has accumulated relatively mature experience in governing the party and the country, to guarantee a long term stability of society.
- The stability of China's political and social will ensure the economy continue grow steadily.

3. CHINA'S ECONOMIC OUTLOOK

C) China's Unique Mechanism Will Ensure International Competition

ii) It is very difficult to succeed in dealing with the methods of the former Soviet Union and Japan.

- The former Soviet Union and Japan differ from today's China in terms of population, market size, culture, and way of thinking.
- The competitive advantage of China's globalization cannot be replaced and hit by the United States. Excessive use of technology and financial, for instance, sanctions and SWIFT system by United States will eventually hurt its economic.

3. CHINA'S ECONOMIC OUTLOOK

C) China's Unique Mechanism Will Ensure International Competition

iii) The characteristics of China's economic competition do not have developed countries

- China poses an absolute international competitiveness in term of manufacturing industries and infrastructure construction projects; the irresistible effective cost is the advantage that developed countries unable to compete.
- This is the unique advantage after globalization of China and successfully competed with developed countries to secure portion of the market share.

Thank You!