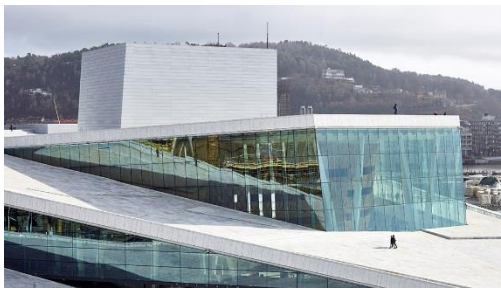
How Fintech is Shaping China's Financial Services?



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How Fintech is Shaping China's Financial Services

With the new round of technological and industrial revolutions progressing in the world, new information technologies such as cloud computing, data & analytics, artificial intelligence and blockchain have made great strides and set off a wave of financial technology (fintech) sweeping the globe. How is fintech shaping China's financial services sector?

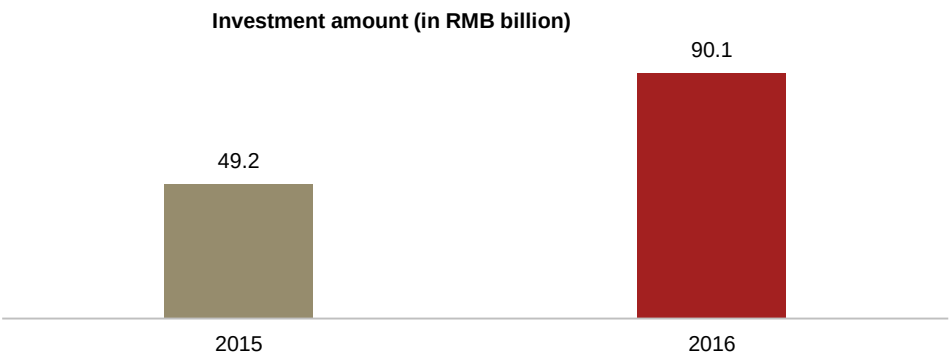
I. China's Fintech Market

We see three dimensions of fintech in China, which are services and sales via internet channels; business model and service innovations based on technologies; and most importantly, financial institutions' operational improvements using internet technologies. The proportion of fintech involvement will continue to increase throughout the entire transformation process of the financial services. Data and analytics is becoming the foundation of effective business decision making. More and more business model innovations are expected based on technology breakthroughs and new thinking.

The Fintech journey in China is expected to go through three stages, in our view: stage 1.0 was the scenario-based financial services revolution; the current stage 2.0 is the technology-driven revolution; and stage 3 is likely to be the business model revolution. At stage 1.0, financial products and services have been created from different scenarios, and the main driving forces are internet companies. At stage 2.0, emerging technologies are used to change channels, products and operations of financial institutions, strengthen the financial supplies and connect closely with demand. The main driving forces are traditional financial institutions and internet companies. At stage 3.0, the financial services business model will be rebuilt, where on-demand financial services will eventually take place (i.e. Inclusive Finance).

In 2016, fintech remained the focus of venture capitals and investment funds in China. The scale of investment and financing increased by 182% year-on-year as shown below [1].

FinTech investment momentum, 2015 vs 2016



1. Source: Institute of Internet Finance, Shanghai Jiao Tong University, Beijing Capital Investment Research Report on China's Internet Financial Investment and Financing in 2016

China is likely the largest Fintech market in the world in terms of volume and transactions, with online (mobile) payment, transaction volume reaching 100 trillion yuan in 2016. Online consumer financing and marketplace lending (P2P) business has grown significantly, although regulations will become more stringent. Many unique features such as the online payment system, mobile active level, urbanisation, education, etc. will help support China's Fintech business, and stimulate other Fintech related business models to boom in China. In terms of truly innovative and revolutionary technology, however, China is still behind the US.

In 2017, four Chinese Fintech companies (all in online lending business) got listed in NYSE and one listed in Nasdaq. In addition, an insurtech company and an online auto financing company got listed in HKSE in 2017. Global capital market understands China Fintech much better now than anytime in the past. PwC was involved in five of the seven recent IPOs.

For Chinese financial institutions, the focus of attention on fintech is mainly in the following areas, according to a PwC survey:

Strategies and mindset: Strengthen innovation through internal efforts and partnerships with fintech companies in the next three to five years;

Resource allocation: Commit to investing in emerging technologies and intend to allocate nearly a third of annual turnover to fintech investments.

Action plan: Plan to increase partnership with fintech companies, but concerns around IT security, regulatory uncertainty and IT compatibility need to be addressed.

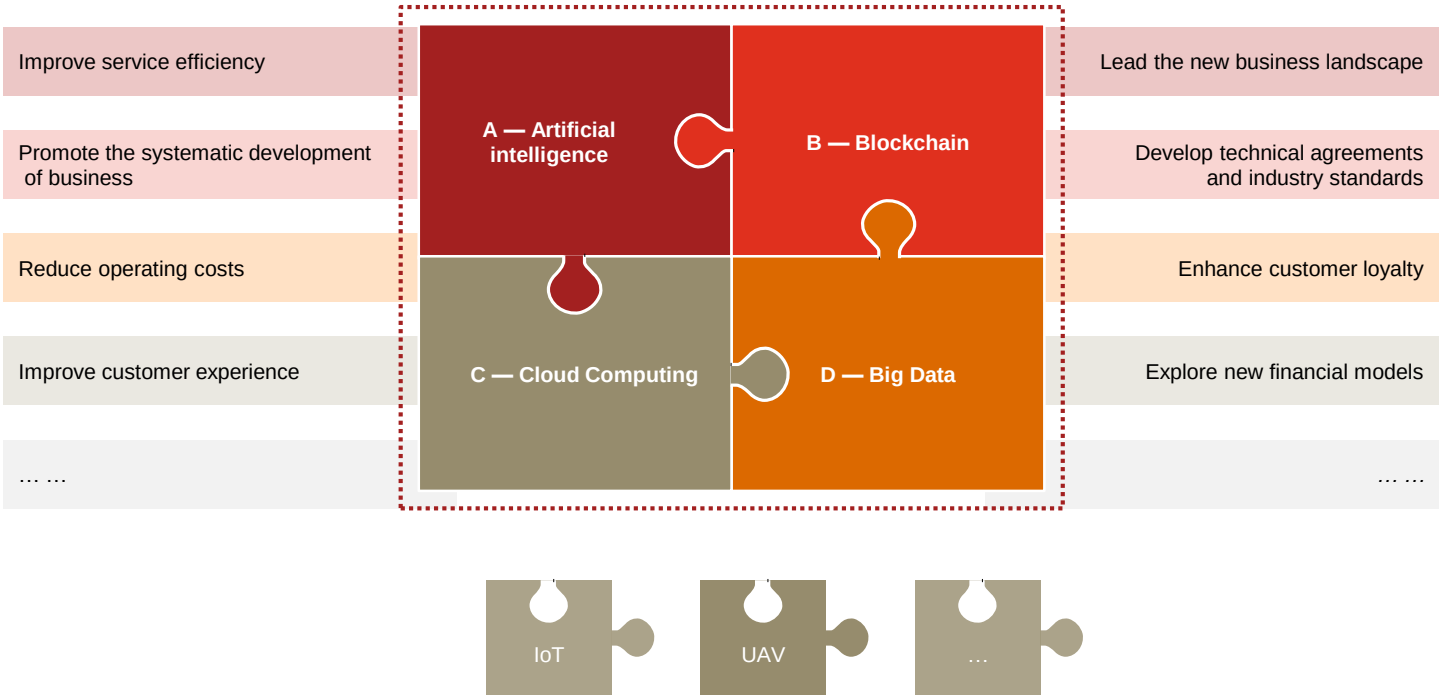
II. The impact of fintech

From PwC's perspective, fintech will impact the financial services sector in five aspects:

1. Fintech companies tend to snatch away the revenues of traditional financial institutions and force them to be more competitive and vibrant;
2. Technology disrupts the logic of traditional financial institutions and empowers them to adjust their strategic direction;
3. Electronic channel services occupy the entrance, driving traditional financial institutions to achieve full channel integration and coordination;
4. Innovations in fintech companies have sprung up, inspiring traditional financial institutions to innovate their business models;
5. Business innovation drives management innovation, forcing traditional financial institutions to reform their organisational model and IT architecture.

III. Typical applications of ABCD (AI, Blockchain, Cloud Computing, Data & Analytics) in financial services

The rapid development of technology has brought tremendous changes in the traditional financial service model from both demand and supply ends. We have our fintech jigsaw shown in the chart below and we'll explain them one by one from market situation and application scenarios perspective in China.



A — Artificial Intelligence

The AI market in China is developing rapidly. China's 2020 AI market is expected to grow from 1.2 billion RMB in 2015 to 9.1 billion RMB. In 2015, nearly 1.4 billion RMB (up 76% year-on-year) funds flowed into the AI market [2].

In terms of government policies, China's National Development and Reform Commission released a three-year implementation plan including Internet Plus and Artificial Intelligence in May 2016. The plan identified the support to AI development in six specific areas: funding, system standardisation, intellectual property protection, human resources development, international cooperation and implementation arrangements [3].

AI is a hot topic in China, but compared to developed countries, there're still a lot to catch up with basic theory, chip, system, ecology, hardware, software and project layout.

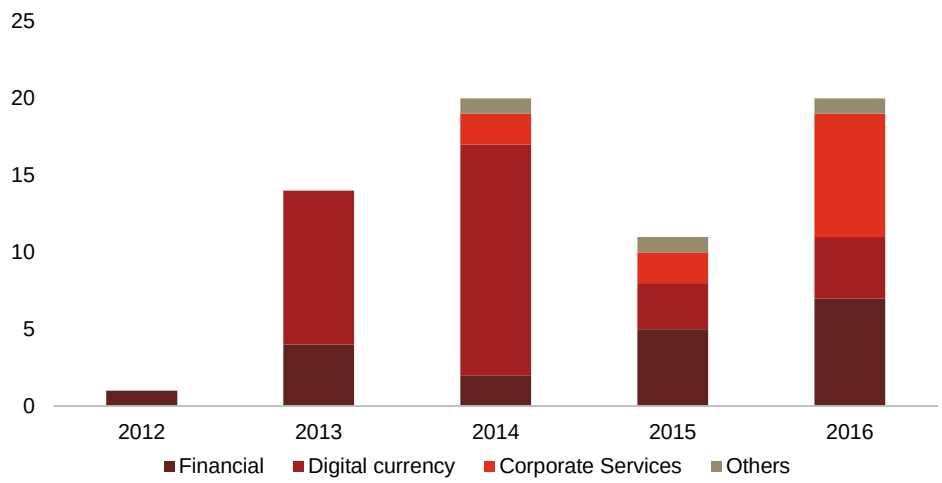
In China, AI's application scenarios in financial industry has four aspects:

1. Speech recognition and natural language processing applications, such as smart customer service and voice data mining;
2. Service robotics applications, such as room inspection and intelligence robot;
3. Machine learning, neural network application and knowledge map, such as customer persona, anti-fraud, intelligent risk control and robo-advisor;
4. Computer vision and biometrics applications, such as portrait surveillance warning, employee irregularities monitoring and core area security monitoring.

B — Blockchain

In China, most of the Blockchain entrepreneurial projects are in early stage and before "A round" of financing. As shown in the chart below, digital currency, corporate services and finance are top three applications of blockchain in China in 2015 and beyond. In the blockchain area, Chinese are more inclined to do business application startup other than the underlying technology platform. To standardise the digital currency market, China announced a ban on Initial coin offerings (ICOs) funding in early September 2017. Chinese regulators established a Central Bank Digital Currency Institute in 2016, with the goal of issuing a legal digital currency based on national credit in the future.

China blockchain project set up number

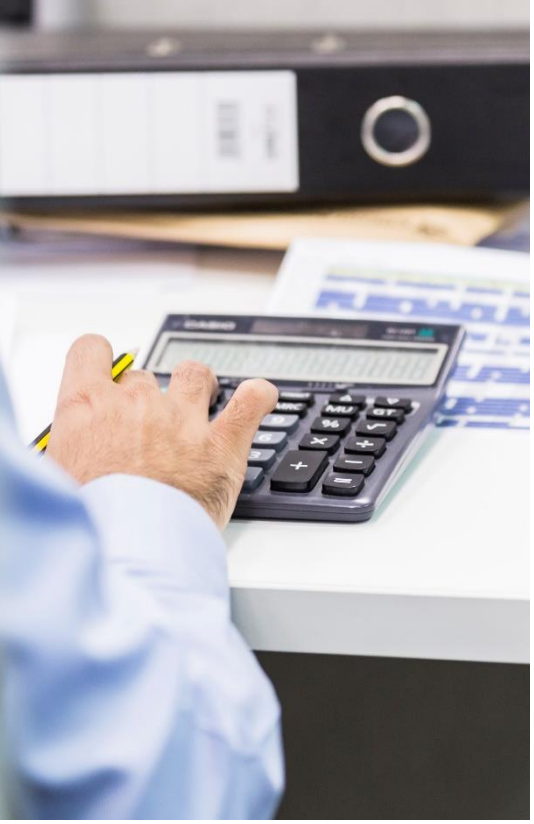


Source: 36 Kr Research Institute Fintech Industry Research Report 2017

There are several scenarios for blockchain in China, such as customer credit investigation, syndicated loan, money management, bill payment platform and medical insurance. There is still a long way ahead before a mature solution on the market.

2. Source: AI, Machine Learning and Data Fuel the Future of Productivity, Goldman Sachs Research

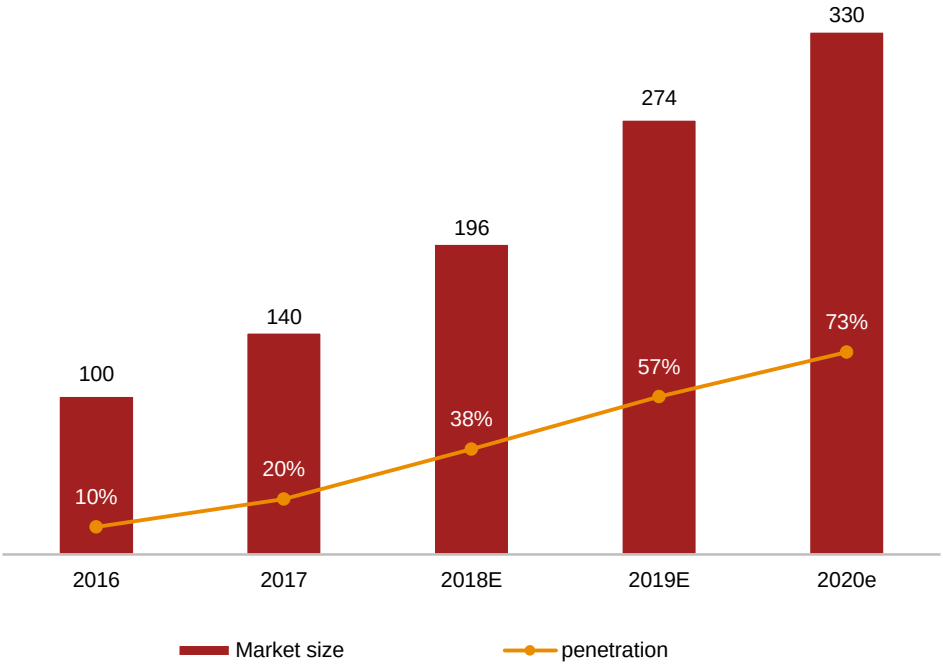
3. Source: AI, Machine Learning and Data Fuel the Future of Productivity, Goldman Sachs Research



C — Cloud Computing

At present, China's financial cloud market is at an initial stage of development with low market penetration, but is growing fast. Meanwhile, domestic policies encourage the financial sector to fully tap the financial cloud market, therefore big potential can be expected.

Forecast and Penetration Rate of China's Financial Cloud Market * Forecast (100 million yuan) [4]



Note: * Permeability refers to the proportion of institutions with cloud applications;
* * The average growth of cloud services market in 2016-2020 is 32%

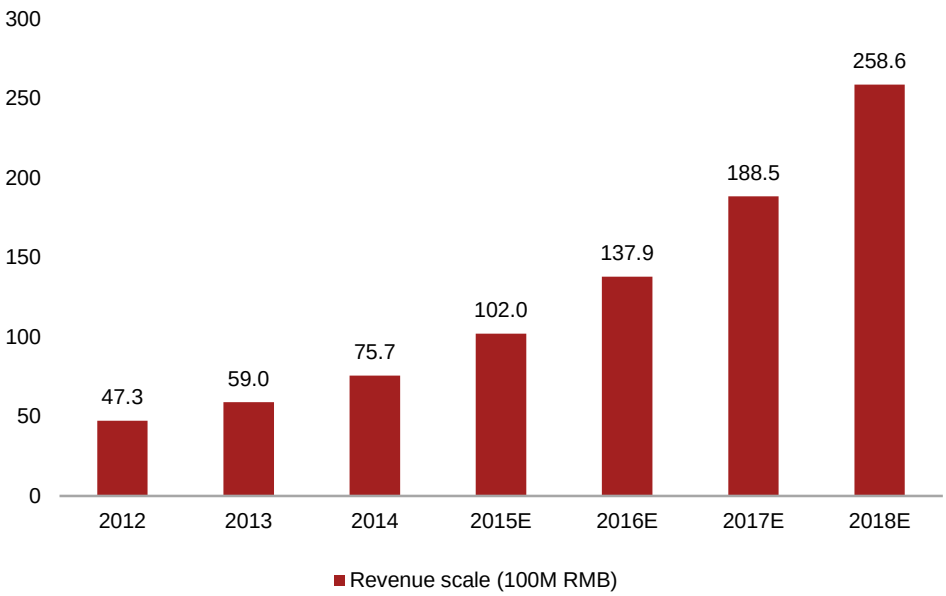
Despite the favourable policies, there are four major challenges for China's financial institutions' cloudification: cloud migration and other capabilities are not enough; high requirements of safety and risk control; low degree of automation; no positive effect after cloudification makes it difficult to promote.

There are a large number of common modules that can be used directly for financial sectors, while some can be customised according to sub-sectors, such as retail platform, institutional platform, SME platform for banks, underwriting and claim systems for insurers, information and investment systems for trust, fund and securities.

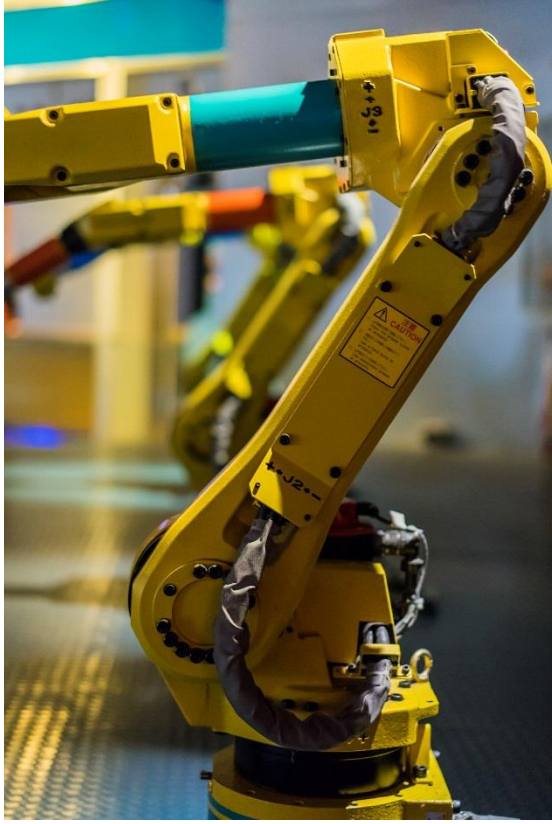
4. Source: 2016 China Cloud Computing White Paper — China ICT Research Institute, 2016-2017 Medical Cloud Application Trends Research Report, iResearch Cloud Services Report, IDC Report, China Banking Regulatory Commission, People's Bank of China, PwC Analysis

D — Data & Analytics

Data, which is rapidly expanding and growing, can be a great accelerator to future development of enterprises as it can help enterprises better understand the market and realise the optimal allocation of resources.



Source: 2016-2022 China big data industry market operation trend and development prospect report, Zhiyan Consulting Group



In China, policy benefits, large amount of accumulated data and huge analytical demands will jointly promote the rapid development of the industry. However, a lot still needs to be done because of the gap of data quality, data processing and analysis expertise.

China's financial sector features the following big data applications: large deposit marketing; credit risk control; intelligent enterprise risk control; managing the marketing opportunities; precise marketing; public opinion analysis; big data governance, and so on.

IV. Recommendations

Looking forward, we would like to suggest Chinese financial institutions to take the following actions on fintech innovation to reap the full benefits brought by fintech:

- Develop a fintech driven top-level design and incorporate it into long-term development strategies;
- Establish independent fintech innovation system and explore new mode of financial services;
- Explore emerging technologies implementation roadmap, launch pilots on digitising and transformation of existing business processes; and
- Focus on technology-driven capacity-building, effectively promote deep integration of finance and technology.

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