

Confidential

China’s Financial and Tax-related Transaction Digitalization Market and China’s Transaction-based Big Data Analytics for SMB Financing Market *Independent Industry Report*

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Scope, Methodology and Key Assumptions

Scope

- Timeframe:
Historical period: 2019 to 2022
Base year: 2023
Forecast period: 2024 to 2028
- Target Markets:
The China’s Financial and Tax-related Transaction Digitalization Market
The China’s Transaction-based Big Data Analytics for SMB Financing Market

Key Assumptions

- The social, economic and political environments of the PRC, and other primary countries worldwide will remain stable during the forecast period, which will ensure a sustainable and steady development of defined markets.
- There are no significant adverse material changes in government policies in respect of the defined markets.

Frost & Sullivan and Its Methodology

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Overview of China's Enterprise Digitalization Market

Definition and Classification of China's Enterprise Digitalization Market (1/2)

Key Findings

- Enterprise digitalization solutions are digitalization solutions that improve the level of business intelligence, and the digitalization and automation of business processes. By business functions, enterprise digitalization can be classified, by business functions, into the digitalization of (1) marketing and sales, which mainly covers the front-end functions (2) internal operation, which mainly covers back-end functions, and (3) transaction, which links the front-end and back-end activities and primarily focuses on providing digital payment and financial and tax-related transaction digitalization to facilitate the transactions between businesses.
- Baiwang is an industry-leading provider of enterprise digitalization solutions through the self-developed Baiwang Cloud platform.

Commerce and marketing digitalization

- Commerce and marketing digitalization solutions enable enterprises to manage marketing activities, discover sales leads and manage client relationships, thereby achieving customer and sales growth.

Transaction digitalization

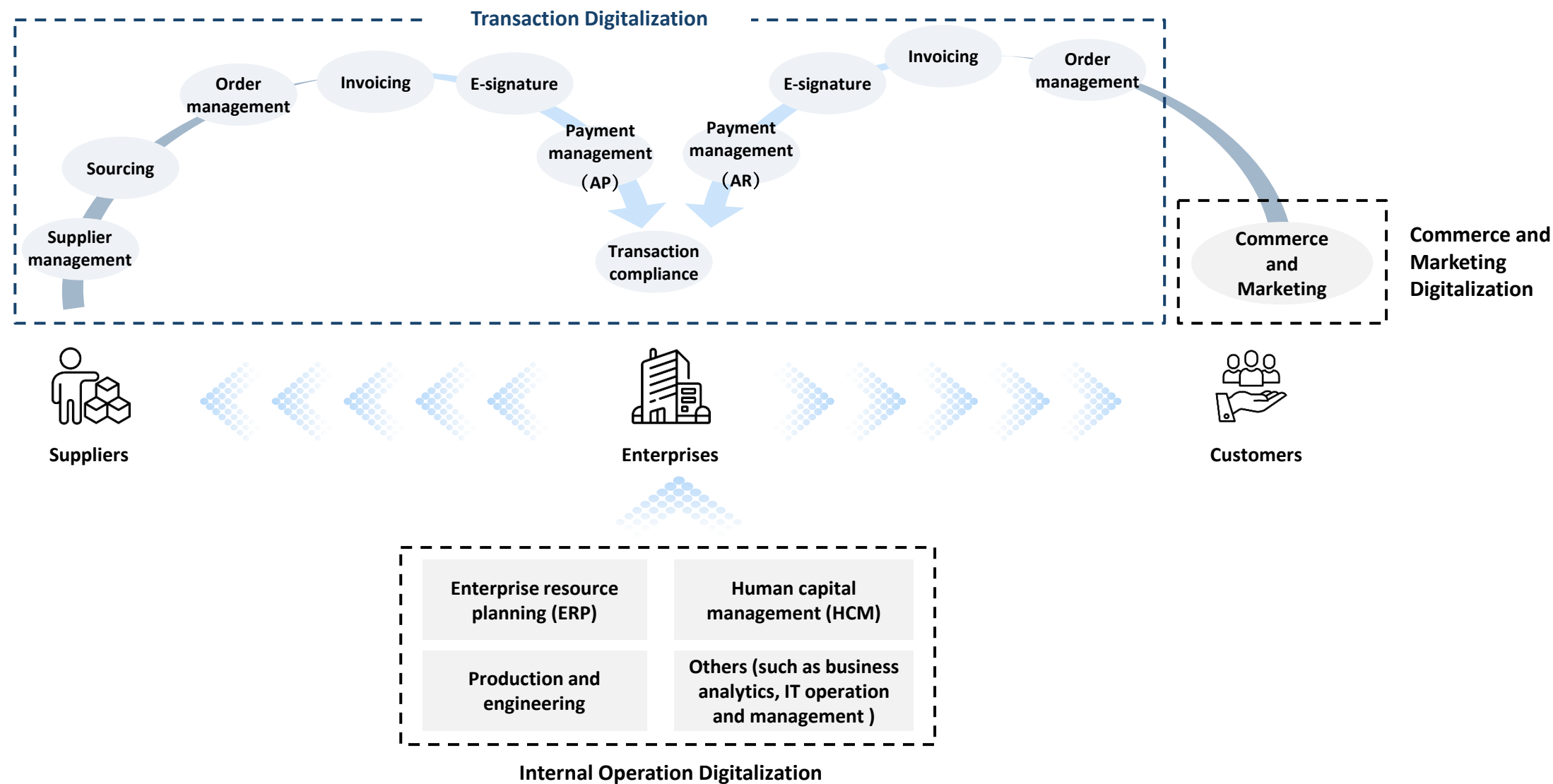
- Transaction digitalization solutions enable full-cycle management for transactions between enterprises and their customers and suppliers, from supplier management and product and service sourcing to order management, invoicing and transaction compliance management.

Internal Operation digitalization

- Internal operation digitalization solutions enable enterprises to digitalize daily operational activities within the enterprises, such as resource planning and management, and human capital management.

Overview of China's Enterprise Digitalization Market

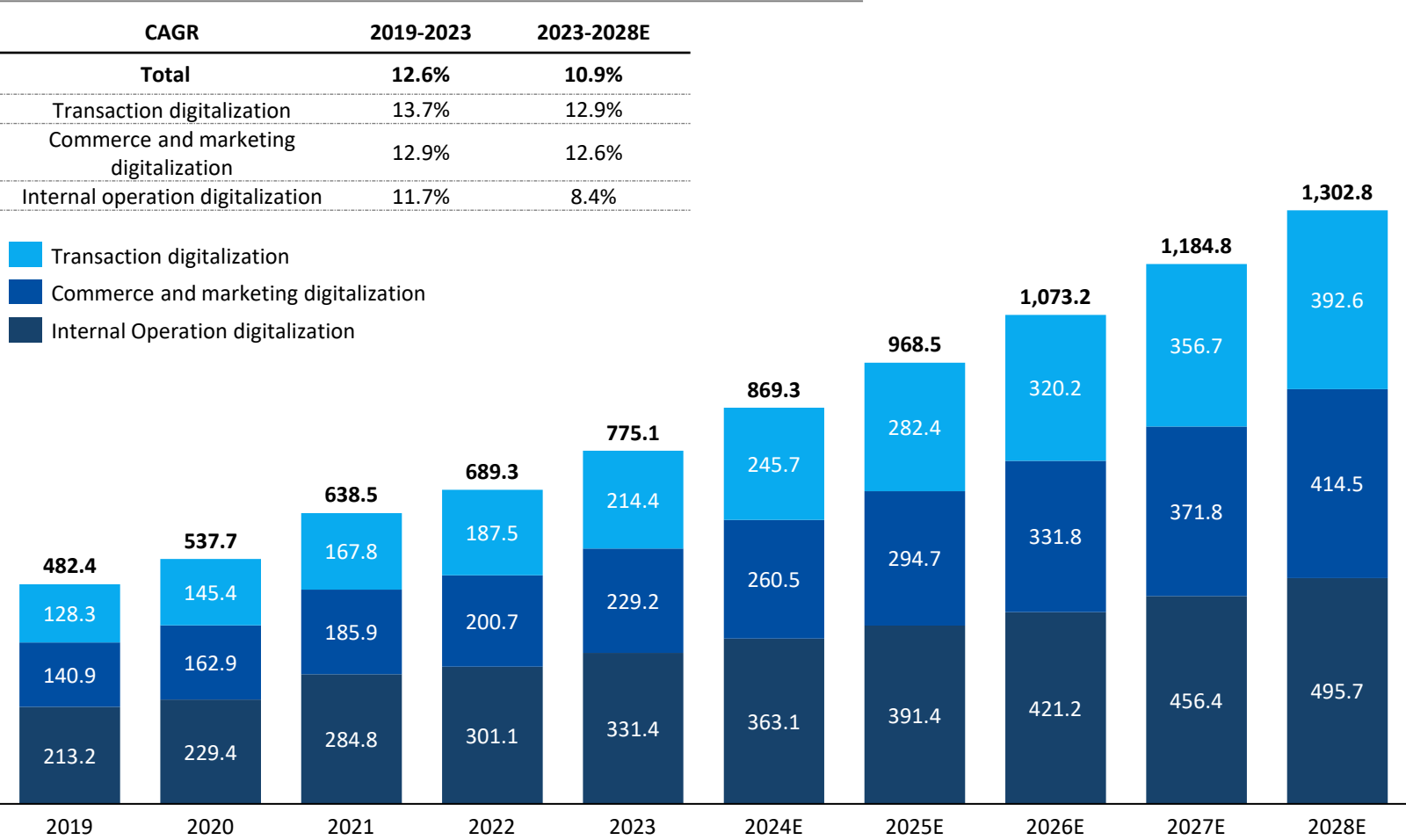
Definition and Classification of China's Enterprise Digitalization Market (2/2)



Overview of China’s Enterprise Digitalization Market

Market Size of China Enterprise Digitalization Market

Market size of China’s enterprise digitalization market, in terms of revenue
RMB Billion, 2019-2028E



Key Findings

- There is an increasing awareness of digital transformation among enterprises in China as they have seen the overall improvement in operation efficiency. Enterprises have increasingly recognized the benefits brought by enterprise digitalization solutions, including improvement in efficiency, cost-saving and compliance, which contribute to the continual growth of China’s enterprise digitalization market. The market size of enterprise digitalization in China, in terms of revenue, has increased from RMB482.4 billion in 2019 to RMB775.1 billion in 2023, with a CAGR of 12.6%. Among them, transaction digitalization is a key segment with strong future growth potential in China’s enterprise digitalization market, increasing from RMB128.3 billion in 2019 to RMB214.4 billion in 2023, with a CAGR of 13.7%.
- Looking forward, driven by the rising adoption of cutting-edge technologies, the market size of enterprise digitalization in China is expected to grow rapidly and reach RMB1,302.8 billion in 2028, representing a CAGR of 10.9% from 2023 to 2028. The growth rate of transaction digitalization market is expected to outpace that of the overall enterprise digitalization market, because enterprises internal operation digitalization is a prerequisite for them to effectuate transaction digitalization, and the internal operation digitalization market has reached a more mature stage and demonstrated relatively slow growth rate.

Overview of China’s Enterprise Digitalization Market

Drivers of China Enterprise Digitalization Market

1	Prominent need for efficiency improvement	<ul style="list-style-type: none">As enterprises expand in scale, the complexities with respect to enterprises’ overall business management increase accordingly, which gives rise to their demands for efficient, automated and reliable solutions. Moreover, the impact of COVID-19 pandemic on the offline activities has accentuated the importance of digitalized operations. The growing demand for digitalization, automation and operational efficiency is expected to propel the adoption of enterprise digitalization solutions among enterprises in China.
2	Adoption of cutting-edge technologies	<ul style="list-style-type: none">Cutting-edge technologies, such as cloud computing, big data analytics, AI and blockchain technologies have sparked the innovation and digital transformation for enterprise operations. For instance, enterprises can utilize data insights for their real-time and fact-based decision-making. As more enterprises recognize benefits of cutting-edge technologies, the demand for digital transformation is expected to continue to increase.
3	Favorable government policies	<ul style="list-style-type: none">Government authorities in China have promulgated favorable policies to propel the development of enterprise digitalization. For instance, the State Council of China, jointly with the Central Committee of Communist Party of China, issued Overall Layout Plan for the Construction of Digital China (數字中國建設整體佈局規劃) in 2023, which regards digitalization as an important engine for China’s modernization.

Overview of China’s Enterprise Digitalization Market

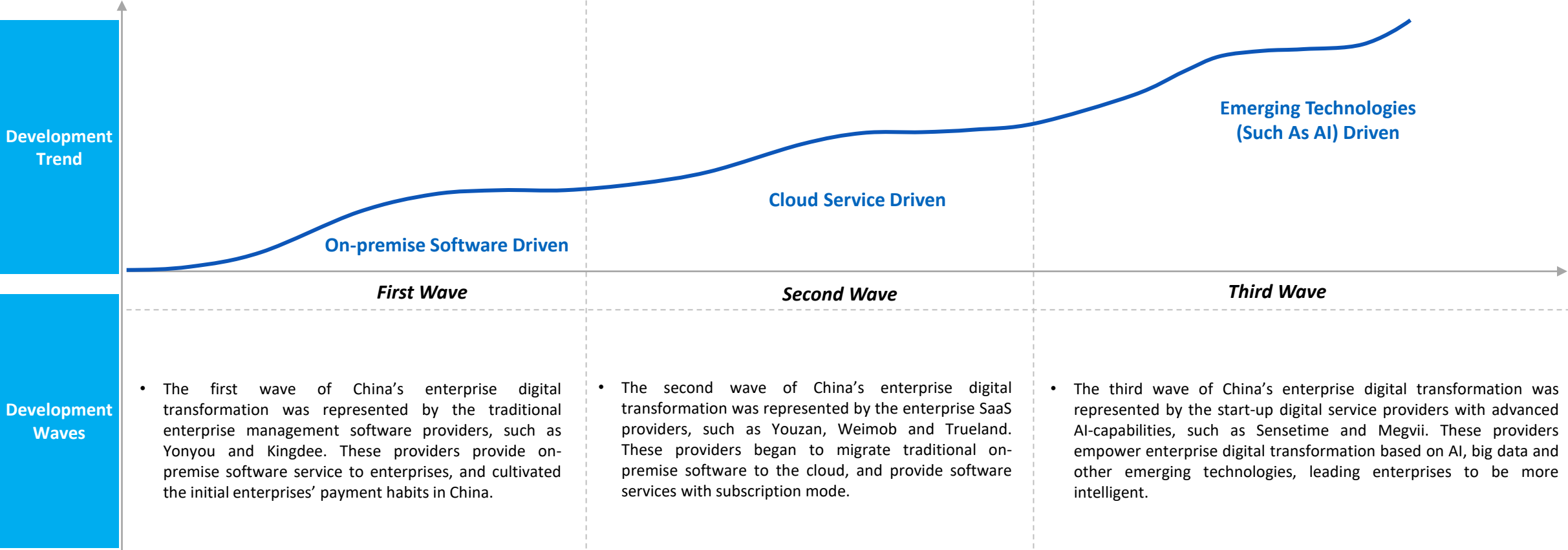
Pain Points

	Pain Points	Solutions
Risk and Compliance Management	<ul style="list-style-type: none">Enterprises with huge amount of database that stores customer information and other data with high security requirement have a high risk of data leakage and loss. Moreover, compliance is a time consuming task, enterprise do not have enough time and right tools to manage regulatory compliance.	<ul style="list-style-type: none">Digital tools can deliver a complete view of consumer and business risk that enable enterprises to quickly focus resources on major issues, in the mean time, improve investigation precision and achieve more effective, end-to-end compliance management.
Low Operation Efficiency	<ul style="list-style-type: none">Enterprises may encounter a series of operation efficiency issues in terms of employee management, production, department corporation, financial issues, and other daily operations, which significantly delay enterprises' growth. The reasons behind the low operation efficiency are mainly involves into ineffective communication, lack of technical tools, as well as the discontinuity and non-transparency of information.	<ul style="list-style-type: none">Advanced technology solutions have revolutionized how organizations function internally, with disruptive digital tools streamlining business operations for cost efficiency. Digital operations incorporates agility, automation, and intelligence into existing operational models (or creates new models) to achieve process excellence. Enterprises are taking advantage of virtual assistants, low code environments, and AI to turbocharge their existing business processes.
High Operational Cost and Limited Profitability	<ul style="list-style-type: none">Operational cost comprise the expenditures that a business incurs as a result of performing its normal business operations. The high operational cost may occur due to high employee cost, production cost, supply chain management cost, or other excess operational costs. The traditional enterprises without digital tools are hard to identify and monitor these issues, as a result, caused constant low profitability.	<ul style="list-style-type: none">Digital tools enable enterprises centralize the entry of information from each area and making it available to the rest of the company in real time, help companies make the right decisions to reduce costs. By utilizing cloud-based systems, the information can be securely hosted, thus significantly save the cost compared to traditional physical management. On the other hand, digital transformation helps enterprises rethink their business models, improve customer experience, and expand income resources, thus, increase business revenue.

Overview of Enterprise Digitalization Market in China

Development History of Enterprise Digitalization in China

- Enterprise digitalization services refer to the use of digital technologies, such as mobile services, analytic tools, big data, and cloud technologies to improve enterprises' operating efficiency and facilitate the digital transformation of enterprises' various internal and external business operations.
- Enterprises can choose cloud-based or on-premise services during digital transformation. Cloud-based service refers to the software products and solutions that are installed through cloud infrastructure, such as private, public and hybrid cloud infrastructures. On-premise service refers to the software products and solutions installed within the user's premise.



Overview of China’s Enterprise Digitalization Market

Favorable Policies (1/2)

Policy/Regulation	Issued Date	Issued Department	Key Content
Opinions of the CPC Central Committee and the State Council on Establishing a Data Base System to Maximize a Better Role of Data Elements 《中共中央、国务院关于构建数据基础制度更好发挥数据要素作用的意见》	2022	State Council of China & CPC Central Committee	<ul style="list-style-type: none"> The Opinion aims at accelerating the establishment of a data-based system, fully maximizing China’s advantages of massive data scale and rich application scenarios, activating the potentiality of data elements, strengthening, improving and expanding the digital economy, enhancing new drivers of economic development, and forming new competitive advantages of the state.
Notice by the State Council of Issuing the “14th Five-Year” Development Plan for the Digital Economy 《国务院关于印发“十四五”数字经济发展规划的通知》	2021	State Council of China	<ul style="list-style-type: none"> By 2025, the digital economy will enter a period of comprehensive expansion, the added value of the core industries of the digital economy will account for 10% of GDP, the leading and development capability of digital innovation will be greatly improved, the level of intelligence will be significantly enhanced, and the integration of digital technologies and the real economy will achieve remarkable results, the economic governance system will become more complete, and the competitiveness and influence of China's digital economy will be steadily increased.
Opinions of the CPC Central Committee and the State Council on Improving the Systems and Mechanisms for Market-based Allocation of Factors of Production 《关于构建更加完善的要素市场化配置体制机制的意见》 印发——引导要素向先进生产力集聚》	2020	State Council of China	<ul style="list-style-type: none"> This policy document can be seen as a milestone for formalizing, or legitimizing, the role of data in value-creation as well as recognizing and trying to handle the complexity involved in ownership and utilization. And the “Big-Data Governance Structure” was proposed for data security and privacy protection, which will be applied at national, industrial and entity-level.
Notice by the General Office of the State-owned Assets Supervision and Administration Commission of the State Council of Accelerating the Digitalization of State-owned Enterprises 《国务院国资委办公厅关于加快推进国有企业数字化转型工作的通知》	2020	State-owned Asset Supervision & Administration Commission of the State Council	<ul style="list-style-type: none"> The Notice encouraging state-owned enterprises (SOEs) to take a digital, networked and intelligent development approach, enhancing their competitiveness, innovation capability, control capability, influence and risk-resistant capability, and improving basic industrial capacities and the modernization of industrial chains
The Special Action Plan for Digitalized Empowerment of Small and Medium-sized Enterprises 《中小企业数字化赋能专项行动方案》	2020	Ministry of Industry & Information Technology	<ul style="list-style-type: none"> The Plan is developed to profoundly empower SMEs with digital, networking and intelligent technologies, and supporting SMEs in epidemic prevention and control, resumption of work and production, and sustainable development.
Implementation Plan for Promoting the Actions of “Migrating to Cloud, Using Digital Tools and Enabling Intelligence” and Fostering the Development of New Economy国家发展改革委中央网信办印发《关于推进“上云用数赋智”行动培育新经济发展实施方案》的通知	2020	State Development & Reform Commission	<ul style="list-style-type: none"> The plan aims at deepening the digital transformation services, accelerate the enterprise to adopt cloud, data and intelligent technology. In particular, it is necessary to promote the digital transformation of SMEs, cultivate key industry application scenarios, and create “Internet+” upgrade version.
Overall Layout Plan for the Construction of Digital China 《数字中国建设整体布局规划》	2023	State Council of China & CPC Central Committee	<ul style="list-style-type: none"> The Plan points out that building a Digital China is an important engine for the advancement of Chinese-style modernization in the digital era and powerfully supports the construction of a new advantage in national competitiveness. Accelerating the building of a Digital China has important significance for, and deep influence on, the comprehensive construction of a modern socialist country and the comprehensive advancement of the great rejuvenation of the Chinese nation.

Overview of China’s Enterprise Digitalization Market

Favorable Policies (2/2)

- The “Fang Guan Fu”(放管服, reforms to streamline administration and delegate power, improve regulation, and upgrade services) reform initiatives, acting as key measures to transform government functions, improve business environment and revitalize market activities. “Fang Guan Fu” focuses on redefining the relationship between government and market through delegation of power, streamlining administrative procedures, and improving regulations and public services. The Chinese government also published a serious of policies and regulations to encourage enterprise digital transformation under the guidance of “Fang Guan Fu”

Policy/Regulation	Time	Department	Outline
Guiding Opinions of the State Council on Accelerating the Promotion of the "Internet + Government Services" Work 《国务院关于加快推进“互联网+政务服务”工作的指导意见》	2016	Regulatory Documents of the State Council	<ul style="list-style-type: none"> • The Opinions illustrates to further optimize the service process, innovate the service modes, promote data sharing, get through the information silos, implement open and transparent services, reduce institutional transaction costs, continuously improve the business environment, advance in depth the entrepreneurship and innovation among all people, offer conveniences to enterprises and the general public to the largest possible extent, enable the general public to undergo less formalities, easily access to services and face less troubles, and share the "Internet + Government Services" development achievements.
Notice of the General Office of the State Council on Issuing the Implementation Plan for Consolidation and Sharing of Government Information Systems 《国务院办公厅关于印发政务信息系统整合共享实施方案的通知》	2017	Regulatory Documents of the State Council	<ul style="list-style-type: none"> • The notice was proposed to effectively promote the integration and sharing of government information systems, and avoid self-government, self-contained systems, repeated investment, and repeated construction. Encouraging more regions to launch online government service platforms, covering government power lists, online processing and other services.
Implementation Opinions of the General Office of the State Council on Further Optimizing the Business Environment and Better Serving Market Participants 《国务院办公厅关于进一步优化营商环境更好服务市场主体的实施意见》	2020	Regulatory Documents of the State Council	<ul style="list-style-type: none"> • The Opinions aims at institutionalizing and standardizing the typical experiences emerging in various regions, and promoting the efficiency of resource allocation and product services through institutional reforms.
State Council Issues the Guiding Opinions on Accelerating the Standardization, Normalization, and Facilitation of Government Services 《国务院关于加快推进政务服务标准化规范化便利化的指导意见》	2021	State Council of China	<ul style="list-style-type: none"> • By the end of 2025, China will see a remarkable improvement in the standardization, normalization, and facilitation of government services, with the certificate-free policy fully implemented. New breakthroughs will be made in intensive and intelligent government services. The online and offline government services will be integrated deeply and developed concertedly. A government service system featuring with convenience, easiness, equality, inclusive benefits, high quality and efficiency will be set up completely.

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1. Overview of China's Enterprise Digitalization Market

2. Overview of China's Financial and Tax-related Transaction Digitalization Market

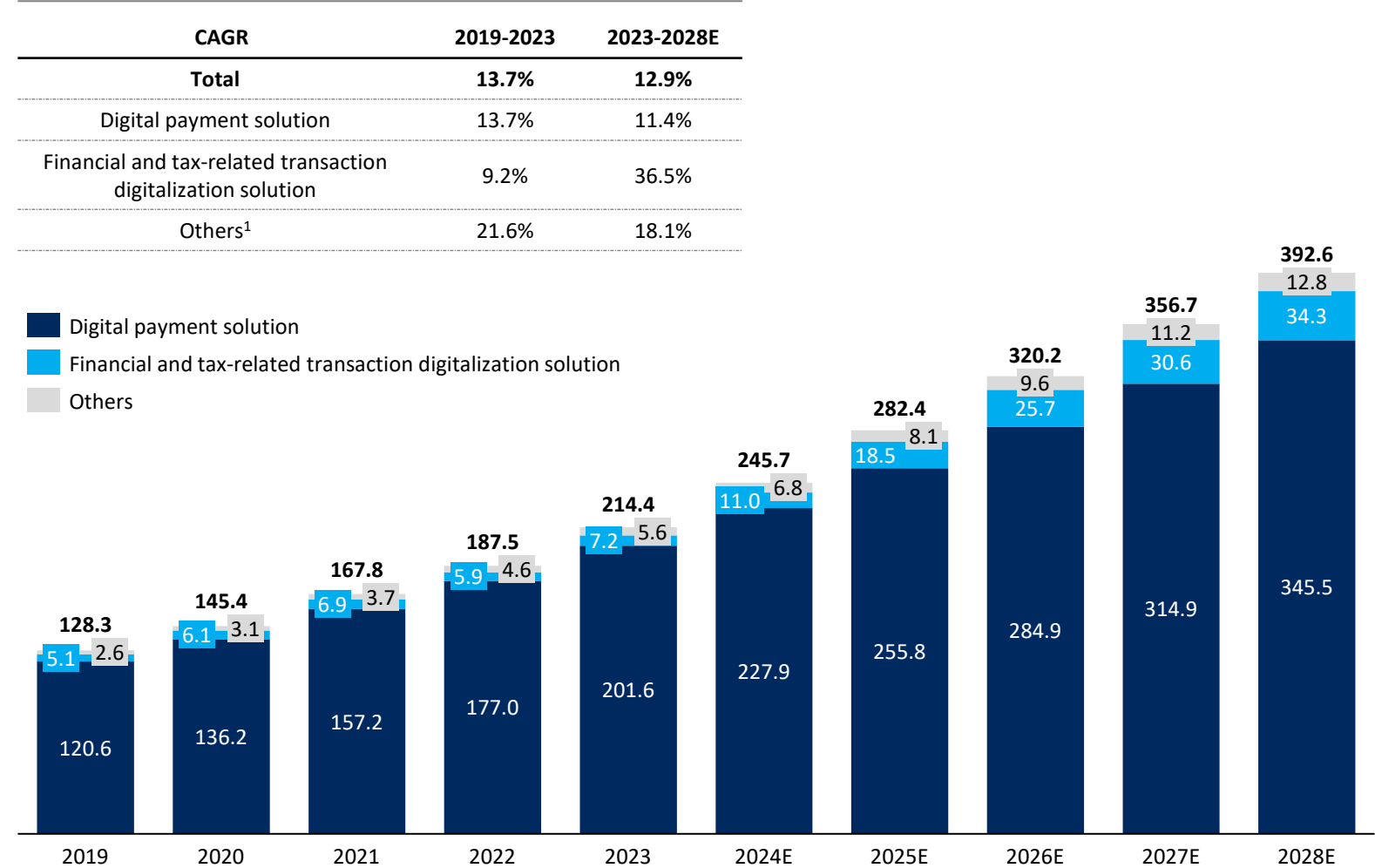
3. Overview of China's Big Data Analytics For SMB Financing Market



Overview of China’s Financial and Tax-related Transaction Digitalization Market

Market Size of Transaction Digitalization Market in China

Market size of China’s transaction digitalization, in terms of revenue
RMB Billion, 2019-2028E



Notes: 1) Include other transaction digitalization solutions such as eSignature solutions

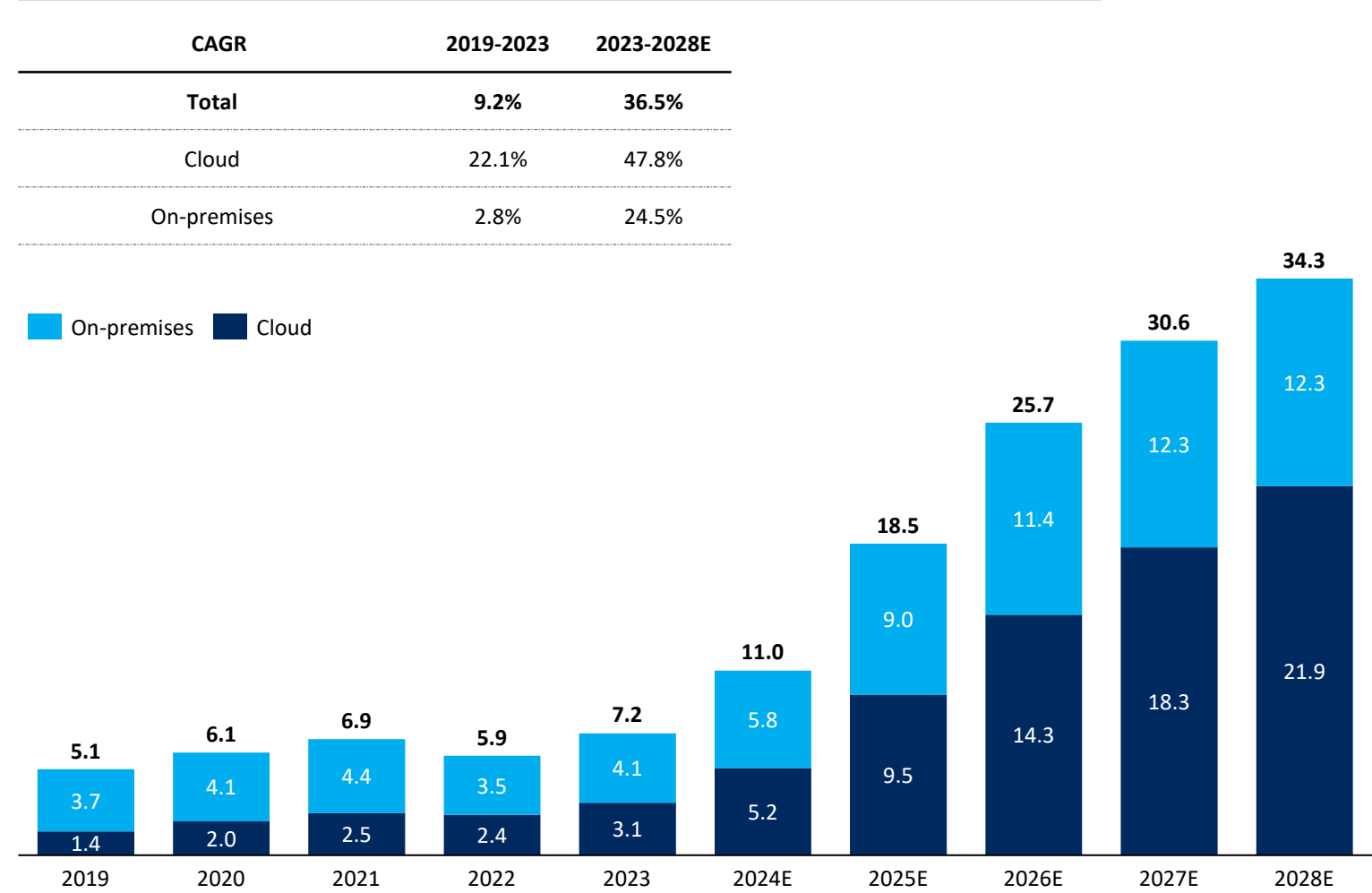
Key Findings

- The large number of enterprises in China, their massive volume of transactions and demands for digitalization contribute to the growth momentum of China’s transaction digitalization market in terms of revenue, which increased from RMB128.3 billion in 2019 to RMB214.4 billion in 2023, at a CAGR of 13.7%, and is expected to further increase to RMB392.6 billion in 2028, at a CAGR of 12.9% from 2023 to 2028. The growth rate of China’s transaction digitalization market is expected to outpace that of the overall enterprise digitalization market, because enterprises’ internal operation digitalization is a prerequisite for them to effectuate transaction digitalization, and China’s internal operation digitalization market has reached a more mature stage and demonstrated relatively slow growth rate. Transaction digitalization solutions comprise digital payment solutions, financial and tax-related transaction digitalization solutions, and various other solutions, such as contract management solutions. The following chart illustrates the size of China’s transaction digitalization market for the periods indicated.
- The market size of China’s financial and tax-related transaction digitalization market, as a percentage of the total transaction digitalization market in China in terms of revenue was 3.4% in 2023, and is expected to increase to 8.7% in 2028. The market size of China’s financial and tax-related transaction digitalization market, as a percentage of the total enterprise digitalization market in China in terms of revenue, remained relatively stable at 0.9% in 2023 and is expected to increase to 2.6% in 2028.

Overview of China’s Financial and Tax-related Transaction Digitalization Market

Market Size of Transaction Digitalization Market in China

Market size of China’s financial and tax-related transaction digitalization, in terms of revenue
RMB Billion, 2019-2028E



Key Findings

- China’s financial and tax-related transaction digitalization solutions consist of cloud and on-premises solutions. China’s cloud financial and tax-related transaction digitalization market, in terms of revenue, increased from RMB1.4 billion in 2019 to RMB3.1 billion in 2023, at a CAGR of 22.1%, and is expected to reach RMB21.9 billion in 2028, at a CAGR of 47.8% from 2023 to 2028. The proportion of China’s cloud financial and tax-related transaction digitalization market, in terms of revenue, in the overall financial and tax-related transaction digitalization market increased from 27.5% in 2019 to 43.0% in 2023 and is expected to reach 64.0% in 2028, driven by the increase in market demand for operational efficiency and market acceptance of cloud solutions.
- Starting from 2021, the recent development of Golden Tax Project has further stimulated the digital transformation of enterprises’ financial and tax management.
- As China’s financial and tax-related transaction digitalization market continues to develop, huge market opportunities continue to emerge across a multitude of industries, especially in light of the recent development of the Fourth Phase of the Golden Tax Project and the implementation of the digital invoice reform.
- The Fourth Phase of the Golden Tax Project is expected to generate market opportunities of around RMB7.0 billion in 2025, which are expected to increase gradually through the years from 2025 to 2028 and reach around RMB16.0 billion in 2028.
- The nationwide digital invoice reform brings about enterprise demands for upgraded financial and tax management centered on digital invoices. The adoption and proliferation of e-invoices and digital invoices have facilitated the digital transformation of enterprises’ financial and tax management.
- China’s financial & tax-related transaction digitalization market is still at an early stage of development, and most players in the market, including Baiwang, have not become profitable.
- Banks and insurance are also actively expanding their service scope from traditional financial services to corporate and tax services.

Overview of China’s Financial and Tax-related Transaction Digitalization Market

Definition and Classification of Financial and Tax-related Transaction Digitalization Market in China

Definition

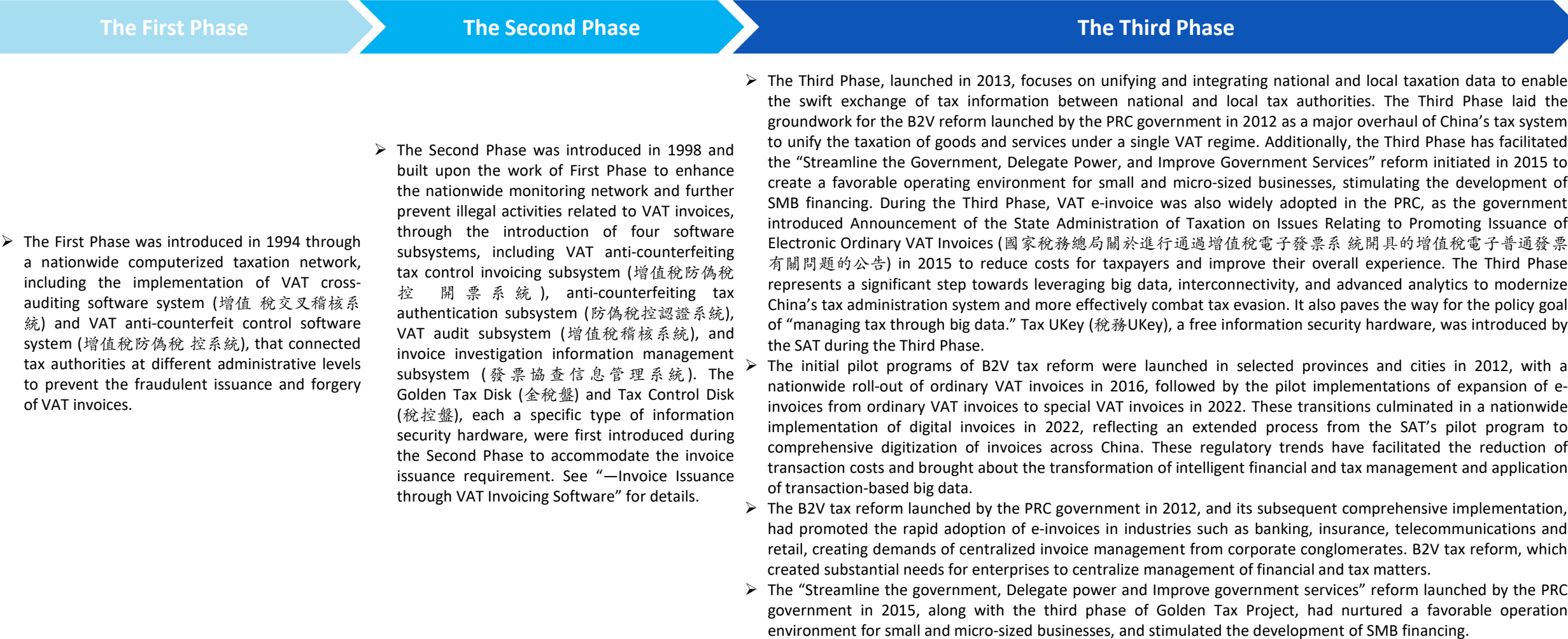
- Financial and tax-related transaction digitalization solutions enable enterprises to conduct financial and tax management based on transaction data, including invoices, bills, and other types of digital documents involved in business transactions. Financial and tax-related transaction digitalization solutions, by functions, mainly include tax invoice compliance management solutions, intelligent financial and tax management solutions, and intelligent supply chain collaboration solutions.
- Invoice refers to proof of receipt and payment issued and collected for purchase and sale of commodities, provision or acceptance of services, and other business activities.
- Transaction documents refer to documents that reflect business transactions, including, among others, invoices, receipts, bills, and other accounting records.
- The rapid development of compliance and information security technologies enable enterprises to more readily adopt financial & tax digitalization solutions that are reliable and secure.

Overview		Main Functions
E-invoice Compliance Management Solutions	<ul style="list-style-type: none"> • Tax invoice compliance management solutions centralize invoice management activities of an enterprise on a unified platform and digitalize the entire management process, including among others, issuance, delivery, verification and storage, which reduces the need for manual processing and improves transaction and management efficiency. Moreover, tax invoice compliance management solutions enable enterprises to strengthen their compliance status and lower error rates through built-in codes and algorithms configured based on relevant tax and accounting rules. 	<ul style="list-style-type: none"> • E-invoice issuance • E-invoice processing • Intelligent collection of invoice information • Cash inflow management • Validation, circulation, and compliance control
Intelligent Financial and Tax Management Solutions	<ul style="list-style-type: none"> • Intelligent financial and tax management solutions refer to a wide range of applications that digitalize management of enterprise spending, tax filing and accounting archive. By tracking and analyzing enterprises’ spending patterns and automating expenditure reimbursement processes, intelligent financial and tax management solutions help streamline enterprise budget control and the cumbersome manual reimbursement procedures. 	<ul style="list-style-type: none"> • Tax filing management • Electronic file archiving • E-invoice verification • Employee expenditure management • Travel, expense, and invoice management
Intelligent Supply Chain Collaboration Solutions	<ul style="list-style-type: none"> • Intelligent supply chain collaboration solutions assist with enterprises’ procurement process, ranging from product and service requisitioning to transaction settlement. 	<ul style="list-style-type: none"> • Supplier management: <ul style="list-style-type: none"> ✓ Supplier overview • Financial reconciliation and automated settlement: <ul style="list-style-type: none"> ✓ Order management and fulfillment • Contingent workforce: <ul style="list-style-type: none"> ✓ Outsourced worker seeking ✓ Collaborative transaction settlement

Overview of China's Financial and Tax-related Transaction Digitalization Market

History of Golden Tax Project in China (1/2)

- In the early 1990s, as part of its comprehensive economic reform program, the PRC government implemented the VAT and the accompanying major fiscal reform project “Golden Tax Project,” which mandates the use of information technologies to improve compliance with China’s VAT laws. Since its initial launch in 1994, China’s Golden Tax Project has progressed through the following phases.



Overview of China's Financial and Tax-related Transaction Digitalization Market

History of Golden Tax Project in China (2/2)

The Fourth Phase

- The Fourth Phase (also known as the digital invoice reform), introduced in 2021, marks the SAT's transition from "managing tax through invoices" to "managing tax through big data." The Fourth Phase involves collecting, integrating, and analyzing tax-related data from more fields through the digital invoice reform. The SAT has launched the digital invoice service platform (電子發票服務平台), with the Company and another software and technology service provider becoming the joint bid-winner and the exclusive service providers for the system application development of the digital invoice service platform. The digital invoice service platform currently consists of two systems: Direct Connection System, also known as the Natural System (樂企), and Web-based System. Direct Connection System allows large conglomerates and qualified large and mid-sized enterprises to directly connect their IT systems with the tax authority, while Web-based System allows enterprises to issue and conduct other invoice-related activities on the web. As of December 2023, the Digital Invoice Service Platform has passed the preliminary acceptance by the SAT.
- Starting in 2024, it is expected that the development of the digital invoice reform will provide substantial market opportunities for financial and tax-related transaction digitalization solution providers. For enterprises connecting to the Direct Connection System, apart from a small number of companies opting for self-construction, the vast majority of enterprises will connect through digital invoicing solutions with the direct connection engine provided by financial and tax-related transaction digitalization solution providers, either through on-premises deployment or cloud deployment. For enterprises connecting to the Web-based System, besides manually logging into the system on the web, they will also choose digital invoicing solutions with the web connection engine developed by financial and tax-related transaction digitalization solution providers, primarily through cloud deployment, to utilize value-added services such as automatic invoicing and digital invoice management to issue and process invoice at large scale. For enterprises, in particular small and micro-sized enterprises, which do not need to issue digital invoices at large scale or to use other value-added services, financial and tax-related transaction digitalization solution providers can also offer free digital invoicing solutions to help these enterprises issue digital invoices with certain free value-added features such as automatic filling of invoice title information.
- Enterprises in China are currently transitioning from the Third Phase into the Fourth Phase of the Golden Tax Project. Starting from the second half of 2024, it is estimated that approximately 100,000 large enterprises will gradually connect to the Direct Connection System. Additionally, about 20% of the roughly one million medium and large enterprises will gradually connect to the Direct Connection System, while the remaining 80% will connect to the Web-based System. For those utilizing the Direct Connection System through digital invoicing solution with the direct connection engine, if deployed on-premises, enterprises generally need to pay software fees, deployment implementation fees, and annual maintenance fees. If cloud-deployed, enterprises usually need to pay deployment implementation fees and annual software subscription fees. For those utilizing the Web-based System through digital invoicing solution with the web connection engine, enterprises generally need to pay deployment implementation fees and annual software subscription fees. The transition from the Third Phase into the Fourth Phase of the Golden Tax Project will create significant market opportunities for financial and tax-related transaction digitalization solution providers, with an estimated growth headroom exceeding RMB10 in 2028.
- The digital invoice pilot launched in 2021 and its nationwide implementation facilitates the reduction of transaction costs and brings about the transformation of intelligent financial and tax management and application of transaction-based big data. Implementation of the digital invoice reform was delayed during the COVID-19 pandemic. There was a pilot implementation of the digital invoice reform in 2023. By the end of 2023, the adoption of digital invoices is expected to cover all regions in China and involve over 50 million enterprises. Digital invoice reform has brought impetus to the digital transformation of enterprises' financial and tax management. Enterprises need to upgrade their existing VAT invoicing system for the issuance and management of digital invoices, which is expected to bring new business opportunity for Baiwang. It is expected that, by the end of 2023, more than 1.1 million enterprises will have needs for financial & tax digitalization solutions as a result of the adoption of digital invoices. Moreover, construction of digital invoice infrastructure from scratch is estimated to cost approximately RMB350,000 for average enterprise, and upgrade of the existing systems of an enterprise to accommodate the application of digital invoices will cost approximately RMB200,000. In addition to the SAT's digital invoice reform, the Ministry of Finance of the PRC(MOF) has also expanded the nationwide pilot application of electronic voucher accounting data standards and electronic accounting files. The adoption and proliferation of e-invoices and digital invoices have facilitated the digital transformation of enterprises' financial and tax management.
- The Digital Invoice Service Platform consists of two systems: the service system for large conglomerates and qualified large and mid-sized enterprises that enables direct connection between IT systems of these enterprises and the Digital Invoice Service Platform, also known as the Natural System (樂企) (the "Direct Connection System"), and the web-based digital invoice service system for other enterprises to access the Digital Invoice Service Platform (the "Web-based System").

Overview of China’s Financial and Tax-related Transaction Digitalization Market

Invoice Issuance through VAT Invoicing Software

- According to the F&S Report, there are currently three types of VAT Invoicing Software of the State Administration of Taxation of the PRC (國家稅務總局增值稅發票開票軟件) (“SAT’s VAT Invoicing Software”), each corresponding with a specific type of information security hardware, namely, Golden Tax Disk (金稅盤), Tax Control Disk (稅控盤) and Tax UKey (稅務UKey), the development of which was commissioned by the SAT. Accordingly, the three types of VAT Invoicing Software are typically referred to as VAT Invoicing Software (Golden Tax Disk version) (增值稅發票開票軟件(金稅盤版)), VAT Invoicing Software (Tax Control Disk version) (增值稅發票開票軟件(稅控盤版)), and VAT Invoicing Software (Tax UKey version) (增值稅發票開票軟件(稅務UKey版)), respectively. The history and development of the three types of information security hardware and their respective corresponding VAT Invoicing Software, including our cooperation with the SAT, was summarized in the following diagram.
- Market participants in China’s financial and tax-related transaction digitalization market, including us, have developed a series of financial and tax-related transaction digitalization software and solutions to enable enterprises in China to effectively manage key aspects for enterprise transactions, such as procurement, billing, invoicing, management of account receivables and payables, and tax filings, through the VAT Invoicing Software. Such financial and tax-related transaction digitalization software and solutions provide value-added services on top of the basic VAT invoice issuance function offered by SAT’s VAT Invoicing Software, and must interact with one of the three SAT’s VAT Invoicing Software for VAT invoice issuance and certain other functions.
- It is expected after China fully transitions into the Fourth Phase of the Golden Tax Project, all three information security hardware components, including Golden Tax Disk, Tax Control Disk, and Tax UKey, as well as their respective software will be gradually phased out, and the issuance and other invoice-related activities will be carried out through the digital invoice service platform through either Direct Connection System or Web-based System.
- In addition to invoice through the abovementioned three types of information security hardware and the corresponding VAT Invoicing Software, enterprises in China may issue invoices through other methods, including (1) through in-person application for paper invoice issuances at local branches of the SAT, (2) through tax server assemblies (稅控盤組) and tax chips (核心板) that are typically adapted and developed by Watertek and acknowledged by the SAT for use by enterprises in China for invoice issuance purpose, and (3) through the Digital Invoice Service Platform. Similarly, it is expected after China fully transitions into the Fourth Phase of the Golden Tax Project, invoice issuances through tax server assemblies and tax chips as well as paper invoice issuances will be gradually phased out.

• Golden Tax Disk was the first generation of information security hardware commissioned by the SAT, used for taxpayers’ invoice issuance. The SAT commissioned the development and manufacture of Golden Tax Disk, as well as the development of the VAT Invoicing Software (Golden Tax Disk version). Prior to the introduction of VAT Invoicing Software (Tax Control Disk version), VAT Invoicing Software (Golden Tax Disk version) was the only SAT’s VAT Invoicing Software available in the market.



• The SAT further commissioned the development and manufacture of Tax Control Disk, as well as the development of VAT Invoicing Software (Tax Control Disk version). Prior to the introduction of VAT Invoicing Software (Tax UKey version), enterprises in China typically purchased Golden Tax Disk or Tax Control Disk and installed the corresponding SAT’s VAT Invoicing Software in order to complete VAT invoice issuance.



• Since early 2020, the SAT launched Tax UKey, which has been provided by the SAT to enterprises in China free of charge. Tax UKey is a type of information security hardware typically developed by manufacturers selected by local branches of the SAT through public tendering process. Since the launch of Tax UKey and VAT Invoicing Software (Tax UKey version), new taxpayers will only obtain Tax UKey from the SAT and install VAT Invoicing Software (Tax UKey version) for VAT invoice issuance.

Overview of China’s Financial and Tax-related Transaction Digitalization Market

Main Differences between E-invoices and Digital Invoices

- Digital invoice is a new type of invoice that has the same legal status as traditional paper invoices, but does not require physical medium or conventional prepositive procedures to use. Digital invoices fully digitize the information on paper invoices, and through tag management, integrate various types of invoices into a single electronic invoice category. The adoption of digital invoices facilitates the formation of a nationwide and uniform tax code system, intelligently assigns the total invoice issuance amount, and sets up digital invoice accounts to realize the automatic transfer and data collection of invoices.

Key Content	
Pre-issurance Process	<ul style="list-style-type: none"> Before issuance, e-invoices require taxpayers to apply for invoice type approval, information security hardware, and invoice numbers from relevant tax authorities. In contrast, digital invoices do not require such prepositive procedure before issuance.
Issuance limitation	<ul style="list-style-type: none"> Same as traditional paper invoices, e-invoices can only be issued within a set quantity and face value limits, which requires taxpayers to apply for additional quantity and face value if such limitation is reached. Digital invoices utilize a “quota system,” where taxpayers can issue any amount and any number of invoices within the total face value granted by the SAT.
Invoice content	<ul style="list-style-type: none"> Digital invoices no longer display information such as address and bank account, invoice code, and cipher area that is typically found on e-invoices. Digital invoices have a 20-digit code, compared to the 8-digit code for e-invoices. Digital invoices also eliminate the 8 line-item restriction found on e-invoices.
Issuance platform	<ul style="list-style-type: none"> E-invoices are issued on public service platforms and can be issued offline. Digital invoices are issued on the Digital Invoice Service Platform, and can only be issued online.
Invoice types	<ul style="list-style-type: none"> E-invoices only include generic and special VAT e-invoices. Digital invoices integrate 17 standard invoice types into one electronic invoice category, and covers invoice types such as motor vehicle invoices, electronic passenger itineraries for air transportation, rail tickets, and general medical service invoices, among others.
Delivery method	<ul style="list-style-type: none"> After issuance, e-invoices require the issuer to deliver the electronic data file (in formats such as OFD) to the recipient via email, SMS or mail. On the other hand, digital invoices automatically send the electronic data file to both issuer’s and recipient’s digital invoice accounts, which can automatically collect data on various types of invoices.
File format	<ul style="list-style-type: none"> The electronic data file format for e-invoices is in OFD. Digital invoices add an internationally recognized XML pure data format while retaining formats like OFD and PDF.

Overview of China’s Financial and Tax-related Transaction Digitalization Market

Drivers and Future Trends of Financial and Tax-related Transaction Digitalization Market in China

1	Government-initiated tax and invoice reform	<ul style="list-style-type: none">An increasing number of government initiatives have aimed to promote enterprises’ digital transformation in the areas of invoice, financial and tax management to drive economic growth and achieve more effective administration.
2	Rapid development of compliance and information security technologies	<ul style="list-style-type: none">Financial and tax-related transaction digitalization solutions utilize advanced compliance and information security technologies to timely detect and rectify security loopholes, fraud and manual errors occurring in enterprises’ internal and external business activities. Furthermore, with the increasingly reliable IT infrastructure and the development of data security technologies, such as digital signatures, cryptographic algorithms and OFD template, financial and tax-related transaction digitalization solutions can enable secured end-to-end transaction process. These technologies are expected to further improve the reliability and effectiveness of financial and tax-related transaction digitalization solutions, which will drive enterprises’ adoption of such solutions.

Overview of China's Financial and Tax-related Transaction Digitalization Market

Entry Barriers of Financial and Tax-related Transaction Digitalization Market in China

1

Technology capabilities

- Leading market players typically possess more advanced technologies to assure functionality, reliability and security of solution offerings. Such technological capabilities would take significant amount of time for new market entrants to develop. Moreover, seasoned solution providers, having accumulated more industry-specific experience and know-how through serving customers of various industries, are more capable of providing industry-customized solutions that precisely target industry-specific pain points.

2

One-stop service capabilities

- Enterprises have increasing demands for one-stop financial and tax-related transaction digitalization solutions for centralized and convenient management. Such one-stop service capabilities require expertise on a diverse range of service areas, including invoice, financial and tax management, as well as supply chain collaboration. New market entrants require a substantial amount of time and resources to develop such expertise.

3

Experience in collaborating with regulatory authorities

- As the financial and tax-related transaction digitalization solutions, especially the tax invoice compliance management solutions, are designed to strengthen enterprises' compliance with applicable laws and regulations, leading market players that work closely with regulatory authorities and possess more accurate understanding of regulations and policies can develop more effective compliance solutions, as compared to new market entrants.

Overview of China’s Financial and Tax-related Transaction Digitalization Market

Competitive Landscape of Financial and Tax-related Transaction Digitalization Market in China

Ranking of China’s Financial and Tax-related Transaction Digitalization Solution Providers			
Ranking	Company	Revenue (RMB Million, 2023)	Market Share (%, 2023)
1	Company A	467	6.4%
2	Baiwang	358	4.9%
3	Company B	293	4.0%
4	Company C	220	3.0%
5	Company D	212	2.9%

Notes :

- 1) Company A is a listed company on Shanghai Stock Exchange with a registered capital of RMB1,863 million, founded in 2000 and headquartered in Beijing. Company A is a traditional invoice-based solution provider, whose business covers invoice issuance and invoice and tax compliance. As of December 31, 2023, the number of employees of Company A was approximately 18 thousand.
- 2) Company B is a private company with a registered capital of RMB88 million, founded in 2017 and headquartered in Shanghai. Company B is an emerging cloud solution provider whose business focuses on the automated process of external procurement sourcing and reconciliation and settlement. As of December 31, 2023, the number of employees of Company B was approximately 130.
- 3) Company C is a private company with a registered capital of RMB72 million, founded in 2016 and headquartered in Beijing. Company D is a cloud solution provider with software and value-added services offerings, including invoice issuance, enterprise reimbursement management, tax declaration, and tax compliance risk control. As of December 31, 2023, the number of employees of Company C was approximately 200.
- 4) Company D is a private company with a registered capital of RMB10 million, founded in 2014 and headquartered in Beijing. Company C is a cloud solution provider that helps enterprises achieve cost reduction and efficiency improvement through a cloud reimbursement platform. As of December 31, 2023, the number of employees of Company D was approximately 90.

Key Findings

- China’s financial and tax-related transaction digitalization market is relatively fragmented, with the top five market players accounting for 21.4% of total market share in terms of revenue in 2023, and more than 100 market players competing in such market in 2023.
- China’s financial and tax-related transaction digitalization market is relatively fragmented, with top five players accounting for 21.4% of total market share in terms of revenue in 2023
- The breakeven period for service provider in the financial & tax digitalization market in China may take over ten years.
- The digital invoice reform brought about an increase in the number of market participants in the financial and tax digitalization market, and the intensified market competition has caused a decrease in average price charged for financial and tax digitalization.
- The engagement of and sales through business collaborators are in line with the industry norms of the financial and tax-related transaction digitalization market.

Overview of China's Financial and Tax-related Transaction Digitalization Market

Key Information of Leading Financial and Tax-related Transaction Digitalization Solution Providers



Key Findings

- Baiwang has cutting-edge technologies, such as digital certificate, digital signature, OFD, big data analytics, AI and blockchain. Baiwang has strategically leveraged cutting-edge information security and compliance technologies, which are an indispensable component of the digital transaction infrastructure, to facilitate the digitalized processing and circulation of transaction documents.
- Since inception, Baiwang has closely tracked the development of China's financial and tax-related transaction digitalization market, and spearheaded market development throughout early stage (from 2015 to 2020) and current stage and future development. Baiwang is a pioneer and industry leader in China's financial and tax-related transaction digitalization market, dedicated to facilitating the digitalization of enterprise transactions in China. Baiwang has spearheaded the application of advanced technologies, such as OFD template management, digital signature management, digital certificate management and blockchain platform, in the financial & tax digitalization solutions.
- Baiwang is pioneered in the adoption of e-invoices in various business transaction processes. Baiwang has industry-leading capabilities in solution design and implementation.
- Baiwang's KA customers are primarily industry-leading companies and corporate conglomerates in China, including all the state-owned national commercial banks in China, a majority of the insurance companies licensed to operate in China, and a majority of the top five internet platform companies in China.
- Baiwang's cloud solutions, delivered in a secure cloud environment, free users from the burden of the heavy capital and operational costs typically associated with hosting on-premises applications, and are therefore well-accepted in the market for its cost-effectiveness, in particular among mid-market companies.
- Baiwang has industry-leading big data integration system.
- Baiwang's rich invoice and financial data assets and data analytics capability have provided it with the competitive edges that make it irreplaceable when serving financial service providers in collaboration with licensed credit reporting agencies, which typically lack access to data assets and analytics capability.
- The prices Baiwang offers to Watertek Group for such cloud and on-premises financial& tax digitalization solutions are within the range of our usual prices offered to other customers and comparable to the general market level.
- Baiwang has served seven out of top ten listed logistics companies with principal business operations in China ranked by Oriental Fortune.

Overview of China’s Financial and Tax-related Transaction Digitalization Market

Competitive Landscape of Financial and Tax-related Transaction Digitalization Market in China

Ranking of China’s Cloud Financial and Tax-related Transaction Digitalization Solution Providers			
Ranking	Company	Revenue (RMB Million, 2023)	Market Share (%, 2023)
1	Baiwang	220	7.1%
2	Company D	170	5.5%
3	Company E	120	3.9%
4	Company B	117	3.8%
5	Company A	93	3.0%

Notes :

1) Company E is a private company with a registered capital of RMB10 million, founded in 2015 and headquartered in Shanghai. Company E is an emerging cloud solution provider focusing on intelligent supply chain collaboration and VAT invoicing compliance via its cloud invoice management platform. As of December 31, 2023, the number of employees of Company E was approximately 110.

Key Findings

- Among the cloud financial and tax-related transaction digitalization solution providers in China, Baiwang ranked first in terms of revenue, accounting for a market share of 7.1%.
- SaaS products, such as Baiwang’s cloud financial & tax digitalization solutions, typically require substantial initial investment in R&D, product development and customer acquisition in order to garner market acceptance. The lag between profit making and initial investment is largely due to the subscription-based revenue model of SaaS products, which generates stable and recurring revenue flows after their customer base and market acceptance reach a certain scale. SaaS service providers need to devote substantial resources to sales and marketing to amass a vast customer base, from which they can continue to generate recurring subscription revenue during customers’ lifetime. At the same time, SaaS service providers also need to roll out products with compelling value propositions to a broad range of customers to ensure customer stickiness, which require significant upfront investment in R&D and product development. Such upfront investments may not generate expected return in time. As the business scale of SaaS service providers grows, they can gradually turn into profit making position, as the sustainable recurring revenue growth outpace operating costs and expenses, as a result of greater economy of scale and synergies in customer retention and product development. Similar to other SaaS solution provides, the breakeven period for service provider in the relatively niche market of financial & tax digitalization in China may take over 10 years.
- It usually takes more than 10 years for SaaS companies to achieve breakeven due to their subscription-based revenue model. Notable market participants in China's cloud financial and tax digitalization sector, such as Shanghai Xforceplus Information Technology Co. Ltd., Beijing Hose Information Technology Co., Ltd., Shanghai ZHENYUN Information Technology Co., Ltd., and Elephant Huiyun Information Technology Co., Ltd., have been operating their cloud businesses for nine, 10, seven, and eight years, respectively. These entities have yet to reach their breakeven points, with projections suggesting a timeline of two to three years or longer before their cloud services would become profit-making.
- In the cloud financial & tax digitalization solution market, downward pricing pressure of intensified market competition is expected to persist.

Overview of China’s Financial and Tax-related Transaction Digitalization Market

Competitive Landscape of Financial and Tax-related Transaction Digitalization Market in China

Ranking of China’s Financial and Tax-related Transaction Digitalization Solution Providers					
Ranking	Company	The number of invoice processing requests* fulfilled through cloud solutions (Billion, 2023)	Ranking	Company	The number of VAT invoice issued through cloud solutions (Billion, 2023)
1	Baiwang	0.7	1	Company A	3.1
2	Company A	0.6	2	Baiwang	2.6
3	Company C	0.4	3	Company C	1.3

Key Findings

- With approximately 0.7 billion invoice processing requests fulfilled and approximately 2.6 billion VAT invoices issued through Baiwang’s cloud solutions in 2023, Baiwang ranked first and second among financial and tax-related transaction digitalization solution providers in China, respectively.

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1. Overview of China's Enterprise Digitalization Market

2. Overview of China's Financial and Tax-related Transaction Digitalization Market

3. Overview of China's Big Data Analytics For SMB Financing Market



Overview of China's Big Data Analytics For SMB Financing Market

Definition of China's Big Data Analytics For SMB Financing Market

Key Findings

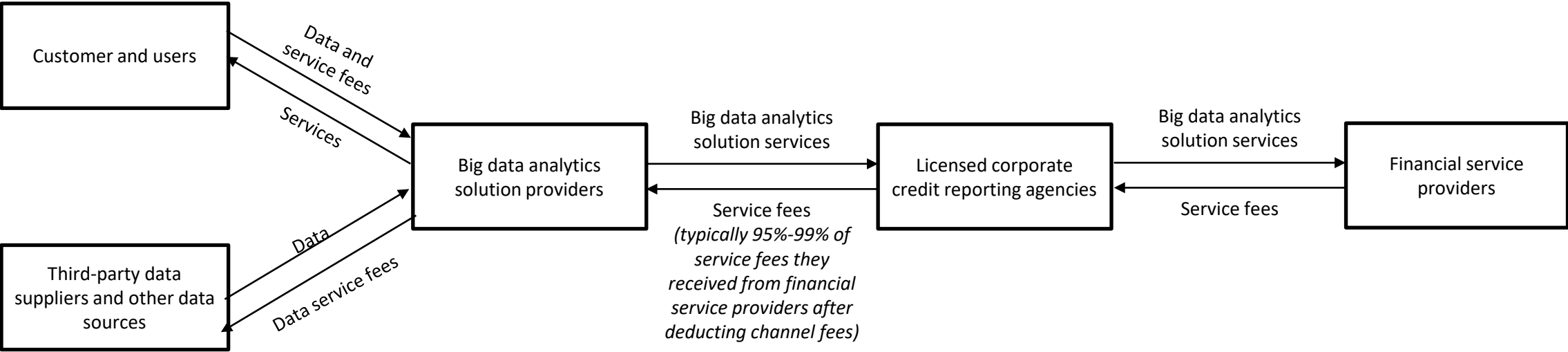
- Big data analytics solutions offer data-generated insights to identify and correlate hidden patterns based on massive volume of data. Participants of China's big data analytics market primarily include (1) data suppliers, which collect and transmit data related to consumer behavior, enterprises' operations, among others; (2) data analytics technology suppliers; and (3) big data analytics solution providers, which integrate data and data analytics technology into their product and service offerings.
- Customers of big data analytics solutions primarily include financial service providers and other enterprise customers. Enterprise customers typically adopt big data analytics solutions in the areas of marketing, risk management, product design, client relationship management and supply chain insights.
- Big data analytics solutions are quickly adopted by China's financial service industry, as big data analytics solutions can help financial service providers identify potential financial product users, customize financial product marketing strategies and detect and monitor credit risks.
- SMB financing refers to the provision of financing to small and micro-sized businesses by licensed financial service providers in China, including commercial banks, factoring and leasing companies, and micro-lending companies, among others.
- There is a rapid digitalization of financial services industry and the development of SMB financing in China.
- Financial service providers in China's transaction-based big data analytics for SMB financing market have launched a substantial number of credit facility products and loan products that give rise to huge potential market demands for our digital precision marketing services. Potential users choose credit facility products and loan products primarily based on interest rates, fee rates and terms of loans and/or credit facilities, rather than the identity of financial service provider that launched the relevant products.
- Financial service providers in China's transaction-based big data analytics for SMB financing market have launched a substantial number of credit facility products and loan products that gave rise to huge potential market demands for Baiwang's digital precision marketing services. The sales value of financial products launched by financial service providers is heavily dependent on the marketing capability of the big data analytics solution providers to precisely identify potential financial product users with matching financing needs.

Overview of China’s Big Data Analytics For SMB Financing Market

Introduction of Credit Reporting Agencies in China (1/2)

Key Findings

- There are two types of credit reporting agencies in China, namely individual credit reporting agencies (個人徵信機構) and enterprise credit reporting agencies (企業徵信機構). As of August 2023, there were two licensed individual credit reporting agencies and 149 licensed enterprise credit reporting agencies. Licensed enterprise credit reporting agencies are important market players in the big data analytics for SMB financing market, as it is common practice for big data analytics solution providers to collaborate with licensed enterprise credit reporting agencies to provide big data analytics services to financial service providers while ensuring compliance with the Administrative Measures for Credit Reporting Business (the “2021 Administrative Measures”) after it took effect. Under the collaboration arrangement between licensed enterprise credit reporting agencies and big data analytics solutions providers, licensed enterprise credit reporting agencies typically procure data and data analytics services from big data analytics solution providers and deliver such services to financial service providers, while maintaining the requisite licenses and government approvals for carrying out such activities. Such licensed enterprise credit reporting agencies are required to complete record-filing procedures with the People’s Bank of China as prescribed under the 2021 Administrative Measures, in order for them to provide credit reporting services for financial service providers. The following diagram illustrates the typical transaction and information flow among data suppliers, licensed enterprise credit reporting agencies, financial service providers and big data analytics solution providers after the 2021 Administrative Measures took effect.
- Licensed credit reporting agencies, while holding requisite credit reporting licenses, typically do not have access to transaction-based invoice data, which is usually supplied to them by big data analytics solutions providers, such as the Company, and as a result, licensed credit reporting agencies typically lack the ability to conduct data analysis based on transaction-based invoice data. Licensed credit reporting agencies, which typically lack analytics capability with respect to invoice data, primarily due to their lack of access to such data assets. Licensed enterprise credit reporting agencies typically lack proprietary data assets and access thereto, and as a result, many licensed enterprise credit reporting agencies would collaborate with big data analytics solution providers. Due to market competition and lack of differentiated product and service offerings, licensed enterprise credit reporting agencies typically have relatively low profit profiles.



Overview of China's Big Data Analytics For SMB Financing Market

Introduction of Credit Reporting Agencies in China

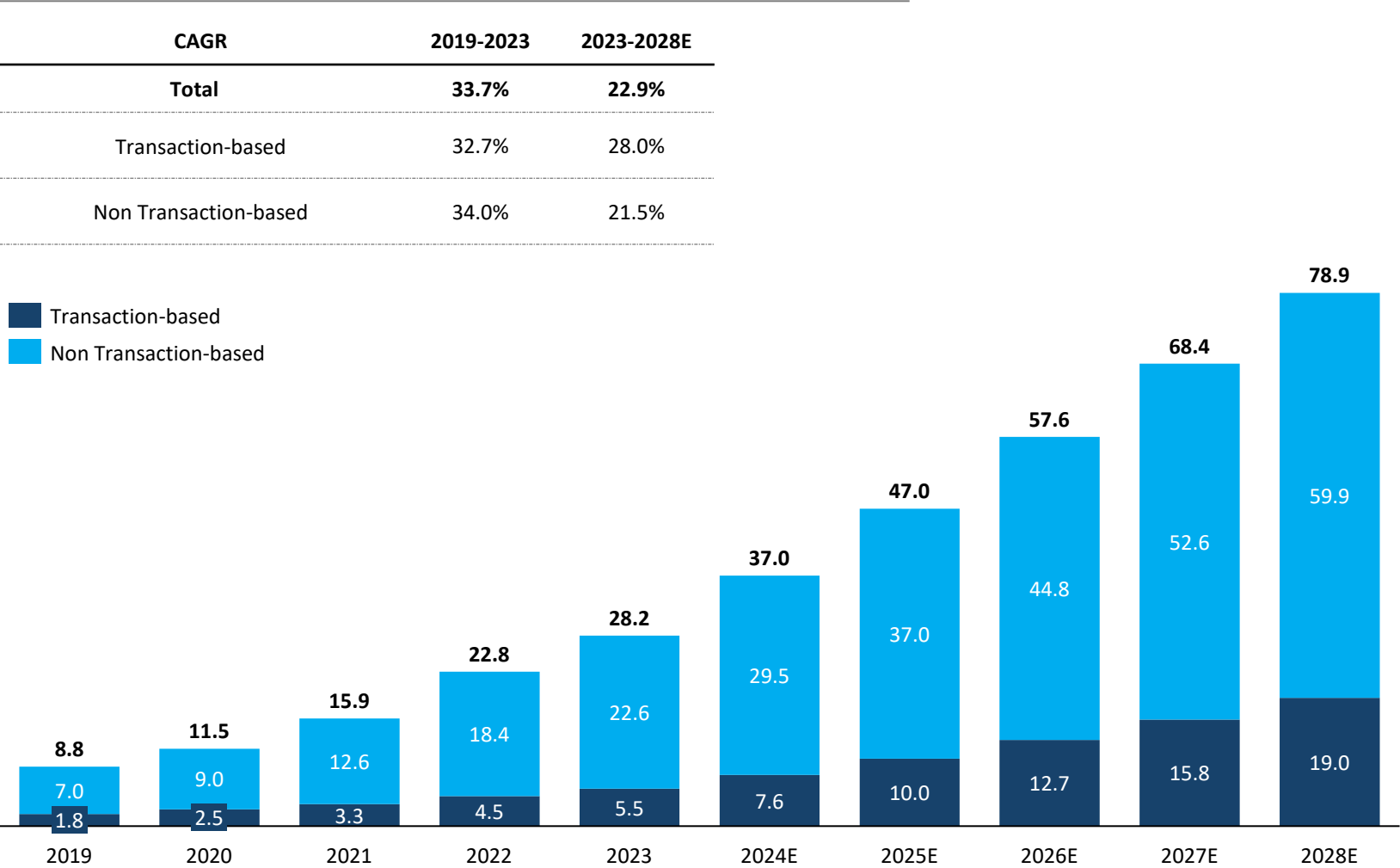
Key Findings

- It is common practice for big data analytics solution providers to engage and collaborate with licensed enterprise credit reporting agencies to provide big data analytics solutions to financial service providers to ensure compliance with the 2021 Administrative Measures after it took effect. For instance, both of 360 DigiTech, Inc. (3660.HK) and Lexin Fintech Holdings Ltd. (Nasdaq: LX) entered into collaboration agreements with licensed credit reporting agencies to ensure compliance with the 2021 Administrative Measures, according to their respective public filings. The industry average of 1% to 5% of the fee sharing ratio with licensed credit reporting agencies was based on research of major credit reporting agencies, such as Baihang Credit Services Corporation (百行征信有限公司) ("Baihang Credit") and Pudao Credit Company Limited (朴道征信有限公司) ("Pudao Credit"), and i-Xinnuo Credit Company Limited (爱信诺征信有限公司) ("i-Xinnuo Credit"), the background information of which is set out below for the SFC's reference.
- Baihang Credit, founded in March 2018 in Shenzhen with a registered capital of RMB1 billion, is the first licensed credit reporting agency in China that is allowed to conduct both individual credit reporting business and enterprise credit reporting business. Baihang Credit completed filing with the People's Bank of China for enterprise credit reporting business on July 13, 2020.
- Pudao Credit, founded in December 2020 in Beijing with a registered capital of RMB1 billion, is the second licensed credit reporting agency in China that is allowed to conduct both individual credit reporting business and enterprise credit reporting business. Pudao Credit completed filing with the People's Bank of China for enterprise credit reporting business on December 2, 2021.
- i-Xinnuo, founded in November 2015 in Beijing with a registered capital of RMB300 million, is a subsidiary corporation of Aisino Corporation that is listed on Shanghai Stock Exchange. i-Xinnuo completed filing with the People's Bank of China for enterprise credit reporting business on April 17, 2019.
- Due to intense market competition and lack of access to proprietary data assets, many licensed enterprise credit reporting agencies in China provide relatively standardized and similar services and typically have relatively low profit margin, and such licensed enterprise credit reporting agencies face challenges in effectively improving their financial performance and condition. Many licensed enterprise credit reporting agencies voluntarily renounced their licenses as a result of weak operating and financial performance or had their licenses revoked for failure to conduct credit reporting business for a period of six continuous months. After the effectiveness of the 2021 Administrative Measures, it is not uncommon for licensed enterprise credit reporting agencies to collaborate with big data analytics solution providers to serve financial service providers.
- In market of transaction-based big data analytics solutions for SMB financing in China, high referral fees were primarily due to intense market competition and the industry norm that marketing agents generally do not provide referral services exclusively to any single digital precision marketing service provider. The referral services provided by marketing agents are generally labor-intensive, and marketing agents typically need to deploy staff and/or collaborate with third-party agents to identify potential financial product users, and designate staff to provide on-site support for potential financial product users, which results in high labor costs for marketing agents and thus high average fee rate in favor of marketing agents.
- For credit facility products launched by financial service providers, Baiwang's referral fee ratios with marketing agents were consistent with the industry average referral rate with marketing agents of 0.1% to 1% of the value of financial products marketing agents assist in promoting in 2023. For loan products launched by financial service providers, Baiwang's referral fee ratios with marketing agents were consistent with the industry average referral rate with marketing agents of 0.1% to 2% of the value of financial products marketing agents assist in promoting in 2023.
- Baiwang charges information collection service fees based on the number of enterprises whose information is supplied to Guangxi United. The information collection service fees shall be settled monthly. Guangxi United shall charge financial service providers service fees based on the number of enterprises included in the enterprise operation reports delivered. Guangxi United generally pays us 95% of the service fees it received from financial service providers, which, is consistent with the industry average range of 1% to 5%.
- For credit facility products launched by financial service providers, Baiwang's referral fee ratios with marketing agents typically ranged from 0.46% to 0.58%, 0.3% to 0.69%, 0.1% to 0.72% and 0.39% to 0.79% in 2020, 2021, 2022 and the six months ended June 30, 2023, respectively. For loan products launched by financial service providers, Baiwang's referral fee ratios with marketing agents typically ranged from 0.07% to 0.97%, 0.05% to 1.18%, 0.17% to 1.6% and 0.2% to 1.14% in 2020, 2021, 2022 and the six months ended June 30, 2023, respectively. Such referral fee ratio with marketing agents in line with industry average referral fee ratios incurred by other digital precision marketing service providers Baiwang's referral fees to marketing agents is consistent with industry average referral fee ratios as incurred by other digital precision marketing service providers.

Overview of China’s Financial and Tax-related Transaction Digitalization Market

Market Size of Transaction Digitalization Market in China

Market size of big data analytics solution for SMB financing, in terms of revenue
RMB Billion, 2019-2028E



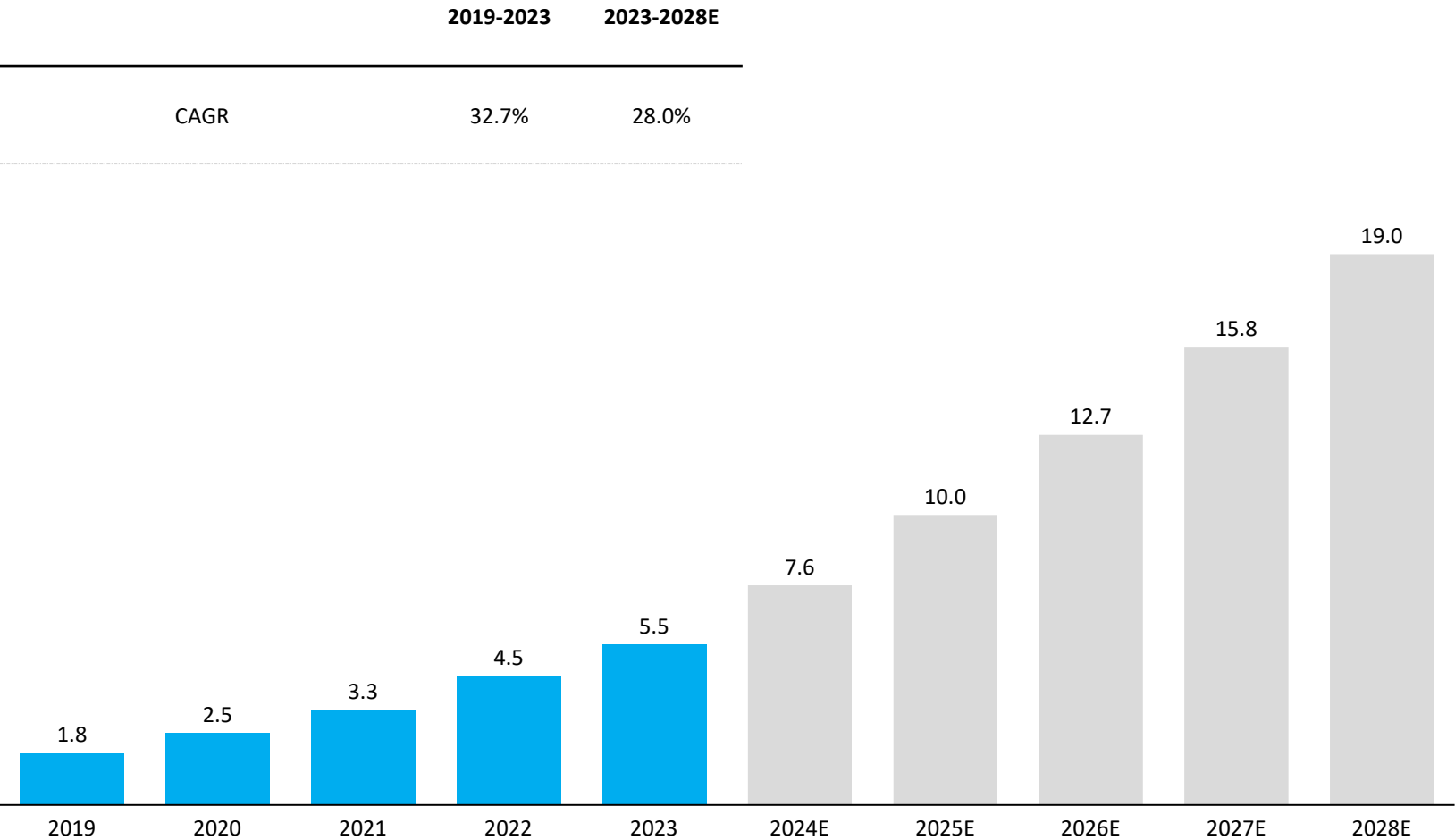
Key Findings

- Growth potential of China’s big data analytics for SMB financing market is evidenced by relevant loan balances with financial service providers in China, which increased from RMB36.9 trillion in 2019 to RMB70.9 trillion in 2023, at a CAGR of 17.7%, and is expected to reach RMB126.4 trillion in 2028, at a CAGR of 12.3% from 2023 to 2028. Financial service providers are willing to invest in big data analytics to leverage this market potential. China’s big data analytics for SMB financing market, in terms of revenue, increased from RMB8.8 billion in 2019 to RMB28.2 billion in 2023, at a CAGR of 33.7% and is expected to reach RMB78.9 billion in 2028, at a CAGR of 22.9% from 2023 to 2028.
- Policy trend in favor of SMB financing facilitates economic growth and promotes employment.

Overview of China’s Financial and Tax-related Transaction Digitalization Market

Market Size of Transaction Digitalization Market in China

Market size of transaction-based big data analytics solution for SMB financing, in terms of revenue
RMB Billion, 2019-2028E



Key Findings

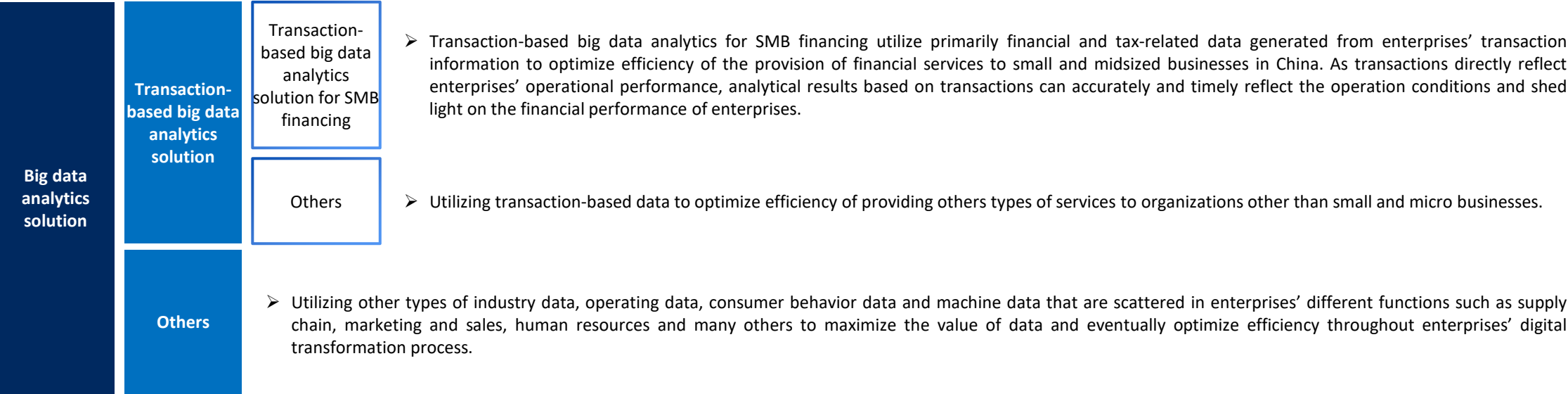
- Market size of transaction-based big data analytics solution for SMBS financing, in terms of revenue, increased from RMB1.8 billion in 2019 to RMB5.5 billion in 2023 with a CAGR of 32.7% from 2019 to 2023.
- Looking forward, market size of transaction-based big data analytics solution for SMBS financing, in terms of revenue, is expected to reach RMB19.0 billion in 2028 with a CAGR of 28.0% from 2023 to 2028.

Overview of China’s Big Data Analytics For SMB Financing Market

Definition of Classification of China’s Transaction-based Big Data Analytics For SMB Financing Market

Definition

- China’s transaction-based big data analytics for SMB financing market utilizes primarily financial and tax-related data generated from enterprises’ transaction information to optimize efficiency of the provision of SMB financing in China. As transactions directly reflect enterprises’ operational performance, analytical results based on transactions can accurately and timely reflect the operation conditions and shed light on the financial performance of enterprises.
- Transaction-based big data analytics for SMB financing have two major functions: marketing and risk management. As demands for financial services continue to increase in China, financial institutions are facing mounting challenges in efficiently and effectively identifying and reaching qualified financial product users. Big data analytics solutions built upon transaction data are able to reveal potential customers’ financing, investment and insurance needs and enable financial institutions to precisely identify potential customers for their financial products, and to subsequently launch tailored marketing campaigns. Transaction-based big data analytics have also become one of the advanced and innovative approaches for financial institutions to monitor and minimize risk exposure. To construct a reliable and comprehensive risk profile of customers, financial institutions need vast amounts of information to conduct relevant risk analysis. Big data analytics based on transactions, reflecting users’ financial condition and spending patterns and historical payment records, enable financial institutions to review and predict the trajectory of potential customers’ financing needs, and subsequently conduct risk evaluation and adopt risk mitigation measures.
- Financial institutions such as commercial banks and licensed credit reporting agencies often cooperate with external service provider to facilitate marketing activities and risk management activities throughout their provision of financial product recommendation services and suer recommendation services.






Overview of China’s Big Data Analytics For SMB Financing Market

Drivers and Future Trends of China’s Transaction-based Big Data Analytics For SMB Financing Market

1	Rising preference for independent data analytics solutions	<ul style="list-style-type: none">As financial service providers have attached greater importance to data objectivity and neutrality, many of them have procured independent big data analytics solutions for risk monitoring and assessment.
2	Growing demand for multi-dimensional data resources	<ul style="list-style-type: none">In order to understand and verify the financial and operation status of financial product users, financial service providers increasingly rely on multi-dimensional data resources, such as invoice and transaction data, based on which they can also customize marketing strategies and recommend products correspondingly.
3	Technology advancement	<ul style="list-style-type: none">Technology advancement in AI, cloud computing and other technologies in recent years have improved the precision and effective risk control of big data analytics solutions, which is expected to promote the adoption of big data analytics solutions among financial service providers and drive overall market growth.

Overview of China’s Big Data Analytics For SMB Financing Market

Entry Barriers of China’s Transaction-based Big Data Analytics For SMB Financing Market

 Technology barrier	<ul style="list-style-type: none">Transaction-based big data analytics solution providers need to keep enhancing their technological capabilities and optimizing precision and accuracy of their solution offerings, in order to keep up with market trends and customer demands. A fundamental challenge for new market entrants is to properly utilize the vast volume and diversity of transaction-related data generated from various business activities. Deriving useful insights from such data requires sophisticated data processing infrastructure and robust analytical capabilities. Moreover, different transaction documents typically bear different formats or structures, presenting challenges for new market entrants to consolidate and analyze data consistently.
 Data barrier	<ul style="list-style-type: none">Effective solutions are based on authentic, voluminous, multi-dimensional and high-quality transaction data accumulated over time. New market entrants, with limited industry resources, may lack sufficient access to such data.
 Brand barrier	<ul style="list-style-type: none">Financial service providers value data security and solution reliability. Financial service providers are more willing to collaborate with reputable solution providers with secure and reliable solution offerings. New market entrants may not be able to establish brand influence and reputation at the outset of their business.

Overview of China’s Big Data Analytics For SMB Financing Market

Competitive Landscape of China’s Transaction-based Big Data Analytics For SMB Financing Market

Ranking of China’s Transaction-based Big Data Analytics For SMB Financing Market			
Ranking	Company	Revenue (RMB Million, 2023)	Market Share (%, 2023)
1	Company A	697	12.6%
2	Baiwang	352	6.4%
3	Company F	131	2.4%
4	Company G	43	0.8%
5	Company E	30	0.5%

Notes :

- 1) Company F is a listed company on the Hong Kong Stock Exchange with a registered capital of RMB530 million, founded in 1993 and headquartered in Shanghai. Company F is an enterprise digitalization solution provider. As of December 31, 2023, the number of employees of Company F was approximately 12,000.
- 2) Company G is a listed company on Shanghai Stock Exchange with a registered capital of RMB3,436 million, founded in 1988 and headquartered in Beijing. Company G is an enterprise digitalization solution provider. As of December 31, 2023, the number of employees of Company G was approximately 25,000.

Key Findings

- Baiwang ranked second in the market of transaction-based big data analytics for SMB financing in 2023 in terms of revenue, representing a market share of 6.4%.
- Capitalizing on favorable government policies and prominent market demand, Baiwang has KA customers which are primarily industry-leading companies and corporate conglomerates in China, including all of China’s national banks, a majority of all insurance companies licensed to operate in China, and some of the major internet platform companies in China.
- Baiwang has deployed a suite of cutting-edge AI technologies, including knowledge graph, machine learning and natural language processing, to support our data analytics capabilities, which combined with multi-dimensional transaction-related data accumulated from our financial & tax digitalization solutions, have enabled us to offer effective data-driven intelligence solutions to empower our customers’ business decision-making and risk management.
- Transaction-based big data analytics for SMB financing market are relatively fragmented with increasingly intense market competition. Top five players in China’s market for transaction-based big data analytics for SMB financing accounted for 22.7% of total market share in terms of revenue in 2023, with a total of more than 150 players competing in such market.

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Appendices



Appendices

Items	Key Contents
1	<ul style="list-style-type: none">With the rapid development of digital economy and shared economy, contingent workforce has become an important labor service mode.
2	<ul style="list-style-type: none">The business models of and business activities conducted under our contingent workforce management services of Baiwang are consistent with industry practice. For example, the prospectus of Lucas GC Ltd (LGCL), a NASDAQ-listed technology-driven online agent-centric human capital management service provider in China, states that, for flexible employment recruitment services it provides, it also receives the whole salary package on behalf of the individual service providers in addition to a service fee from its corporate customers, and serves as the delegating company to pay the individual service providers who performed the work for its corporate customers, and therefore, it bears the obligations of paying salaries and deducting the taxes in due course for the individual service providers. Such business models and arrangements are also applied with other market participants including XinPayroll Technology (薪宝科技), HuiYongGong (慧用工), BiAnCaiSui (比安财穗), ChengXinYun (橙薪云), among many others who focus on the provision of contingent workforce management services in China.
3	<ul style="list-style-type: none">It is a standard industry practice to use the “dollar-based retention rate” or “revenue retention rate” as a reliable measure of a company’s business performance, as used by Snowflake Inc. (SNOW.NYSE) and Ming Yuan Cloud Group Holdings Limited (0909.HK) in their respective offering documents, and “KA customers” is also a commonly utilized operating metric.
4	<ul style="list-style-type: none">Enterprises in the wholesale and retail services industry gradually recovered from the adverse impact of COVID-19 pandemic.
5	<ul style="list-style-type: none">It is consistent with industry practice to develop software and solutions using open-source components or sourcing necessary components from third parties, and these components are only intended to implement certain specific functional modules of the software and solutions and do not constitute standalone functional software or solutions.

Thanks !

F R O S T & S U L L I V A N

