

CrossRef DOI of original article:

1 The Legal Regulation Model of Open Banking in China

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4 Received: 1 January 1970 Accepted: 1 January 1970 Published: 1 January 1970

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6 **Abstract**

7 Although, open banking has been developed rapidly in China since 2018, there is not a clear
8 legal regulatory framework. Open banking can stimulate competition, provide better services
9 to customers, and reduce the traditional ?screen-scraping? risk. However, it causes concerns
10 over data security, customer privacy, data abuse and challenges to current Chinese regulatory
11 system. Therefore, it is necessary to establish a better regulatory system for open banking in
12 China. Through learning from regulation forms in other jurisdiction, it is found that ?active
13 guidance? regulation is more appropriate for China which requires government to provide
14 standards for open banking but not force banks to share data. Under the ?Active Guidance?
15 model, it is necessary to improve current Chinese regulatory and legal regime including
16 establishing feasible rules for data portability implementation, constructing a multi-level
17 regulatory system for data sharing, as well as changing data privacy protection mode from
18 ?Notice- Consent? to ?Data Autonomy?.

19

20 **Index terms**— open banking, data sharing, data autonomy, data privacy, data portability.

21 **1 Introduction**

22 Under the age of digital economy, the most precious property is "data", which is called the "new oil" 1 . On 9
23 th April 2020, Chinese state council issued the policy Opinions of Building a More Complete Market-Oriented
24 Allocation System and Mechanism for Factors, which firstly indicated that, except for land, labor, capital,
25 technology factors, "data" has become 5 th major factor of production. ?? This policy emphasized the status
26 and importance of data in China and stimulated the potential development of data market. Data also plays
27 a significant role in financial market. Many countries and areas such as United Kingdom (UK), United States
28 (US), Australia, Hongkong, Singapore and European Union (UK) have taken measures to encourage Fintech
29 companies to take advantage of data to innovate financial products. They develop the "open banking" model
30 to authorize customers with data portability right to give Fintech companies access to their financial data for
31 obtaining better financial services and products. Open banking U can bring many benefits such as stimulating
32 Fintech industry, strengthening competition in financial market, providing customers with better products etc.
33 However, open banking may bring some risks, which require government legal regulation. Different countries
34 and areas implement distinct supervision and regulation model. EU and UK applied the perspective regulation
35 model which forces banks to share data through legislations, but US takes the voluntary model which authorizes
36 enterprises to decide how to share data and relevant standards of data sharing. Hong Kong and Singapore take
37 the active guidance regulatory model where government only sets standards without forcing banks to share data.
38 Open banking also developed quickly in China, however, legal framework of open banking is not mature, which
39 might be a

40 **2 Background**

41 It is necessary to understand the definition and characteristics of open banking before exploring the proper
42 regulation model in China. Also, it is supposed to consider the differences in culture, economic and financial

6 C) PRACTICE AND POLICIES OF OPEN BANKING IN CHINA

43 development from other regions regarding open banking. Therefore, it is reasonable to consider the current open
44 banking practice and relevant rules and policies in China.

45 3 a) Definition of Open Banking

46 There is no uniform definition of "open banking" all over the world. EU legislation defines "open banking" as a
47 term which broadly describes a financial system in which personal financial data can be shared with

48 4 b) Open banking characteristics

49 Open banking focuses on serving consumers, with API or SDK technology as the core technology and
50 financial ecology as the main form. ?? According to the definition of open banking, there are three
51 main characteristics of open banking including data portability, customer autonomy and recipient account-
52 ability. ?? 3 DELOITTE. How to flourish in an uncertain future Open banking. Report. 2017.
53 P9-11. <https://www2.deloitte.com/uk/en/pages/financialservices/articles/future-banking-open-banking-psd2-flourish-in-uncertainty.html> (Access on 11 May 2023). ?? Advisory Committee on Open Banking. Fi-
54 nancial Report. 2021. <https://www.canada.ca/en/department-finance/programs/consultations/2021/final-report-advisory-committee-open-banking.html> (Access on 11 May 2023). ??

57 5 i. Data portability

58 The International Standards Organization (ISO) defines data portability as the "ability to easily transfer data
59 from one system to another without being required to re-enter data." ??0 Based on these definitions, consumers are
60 able to share their relevant bank data with TPPs under open banking, which is consistent with "data portability".
61 Data portability in open banking is supported by interoperable standardized data technology, primarily APIs".
62 ??1 ii. Customer autonomy Consumer autonomy is the ability to reflect on what one has good reasons to do in
63 the marketplace, and to act accordingly, which is a foundational principle of liberal democracy whereby marketers
64 are granted license to influence consumers, provided they respect their autonomy. ??2 Open banking authorizes
65 consumers to control the sharing of their banking data, and it is supported by the legal rights of customers to
66 share their data through open banking. ??3 iii. Recipient accountability Open banking makes the recipients
67 (TPPs) of shared customer banking data accountable to customers. ??4 Therefore, Fintech companies which
68 receive banking data should be responsible for protecting these data from leaking or stealing etc., and regulation
69 over TPPs are very important.

70 Generally, these three characters of open banking both reflect the goals of improving competition, encouraging
71 innovation, and enhancing consumer protection. 15

72 6 c) Practice and policies of open banking in China

73 Open banking has been developed quickly in China since 2018, however, there is no mature legal system
74 to supervise open banking. Before exploring proper supervision model, it is necessary to find the 16 The
75 implementation of China's commercial bank open banking is mainly through the establishment of open platforms,
76 but not all banks disclosed their open platforms. Most open platforms of commercial banks are only used and
77 maintained internally and would only be disclosed when it is necessary to connect them with partners. In
78 principle, when banks establish their own open platforms, they have the "passive ability" to acquire customers,
79 that is, users can apply by themselves through documents and service instructions on open platforms and obtain
80 corresponding services by themselves. 17 The following Table 1 shows the open banking practice among several
81 commercial banks in China. 16 Internet Finance Association of China. Open Banking Development Research
82 Report. Preface part. 2019. 17 Under this policy, commercial banks with certain fintech capabilities have begun
83 to build their own open platforms to achieve the goals of cost saving, unifying interface standards, serving more
84 scenarios, and integrating more scenarios. ??1 In January 2022, the PBOC issued the Fintech Development
85 Plan (2022-2025), proposing to rationally use fintech to enrich the level of the financial market, optimize the
86 supply of financial products, continuously expand the reach radius and radiation scope of financial services,
87 bridge the digital divide between regions, groups and institutions, and make the development achievements of
88 fintech more extensive, deeper and fairer to benefit the broad masses of the people and help achieve common
89 prosperity. ??2 In January 2022, the China Banking and Insurance Regulatory Commission issued the Guiding
90 Opinions on the Digital Transformation of the Banking and Insurance Industry, emphasizing the need to actively
91 develop industrial digital finance, build a digital financial service platform, promote the construction of open
92 banking, and strengthen scenario aggregation and ecological docking. ??3 In January 2022, the China State
93 Council issued the Fourteenth Five-Year Plan for the Development of the Digital Economy, which put forward
94 the priority actions of "digital inclusive financial services" and clarified the key directions for comprehensively
95 promoting the construction and development of digital inclusive financial services in the context of promoting
96 common prosperity. ??4 c.

97 7 Policies of strengthening the protection of data and personal 98 information

99 In February 2020, the PBOC issued the Technical Specifications for the Protection of Personal Financial
100 Information, which clarifies the security protection requirements for the collection, transmission, storage, use,
101 deletion and destruction of personal financial information from two aspects: security technology and security
102 management. Regulatory authorities further strengthen the protection of open banking user information,
103 establish and improve security assessment and technical security index systems, and improve information release
104 and open service risk compensation mechanisms. ??5 In February 2021, the PBOC issued the Guidelines for Data
105 Capacity Building in the Financial Industry, which points out the direction and basis for financial institutions to
106 carry out data work, guides financial institutions to strengthen data strategic planning, focus on data governance,
107 strengthen data security protection, promote data fusion applications, fully release the value of data, consolidate
108 the data foundation for open banking to accelerate digital transformation and development, and build core
109 financial competitiveness that adapts to the development of the digital economy era. ??6 In April 2021, the
110 PBOC issued the Financial Data Security Data Life Cycle Security Specification, which puts forward standards
111 for promoting the implementation of data security management and data security protection in the financial
112 industry. It is aimed to provide scientific basis and guidance for the financial

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114 9 III. Benefits and Flaws of Open Banking

115 Open banking can bring many benefits for the society. Open banking can stimulate competitions in financial
116 industry, providing customers with better financial products and services. Also, open banking can reduce the data
117 risks brought by the traditional "screen scrapping" measure taken by Fintech companies before. Nevertheless,
118 open banking also causes some concerns among the public, such as the risks of data security, invasion of privacy
119 and the data abuse. Furthermore, open banking may challenge the current regulatory system.

120 10 a) Benefits

121 Data is the "new oil" in the financial world²⁸, through making usage of data, open banking can bring benefits
122 to the Fintech companies, customers, banks and the whole society.

123 i. Stimulate competition Open banking was legally established in the UK in 2017²⁹ and in Australia in 2019.
124 ??0 In both jurisdictions, the primary objectives for doing so were similar: improve competition, to encourage
125 innovation, and to enhance consumer protection. ??1 Policymakers from different regions share a common
126 goal of increasing competition in attempting to promote open banking. Open banking is aimed to strengthen
127 competition in the financial sector by allowing a huge number of Fintech companies to access personal financial
128 data. ??2 In the past, there existed the problem of lack competition and innovation in the financial industry.
129 While small banks struggle to find resources to innovate, large banks have limited incentives to do so due to
130 their oligopoly rents and government guarantees as systemically important financial institutions. This caused
131 the competitionresistant financial market. Open banking creates a great opportunity for Fintech companies since
132 small banks lack the ability to innovate, and large banks lack the incentives to do so, but Fintech companies
133 have both. ??3 In recent years, many Fintech companies have sprung up to attempt to disrupt the financial
134 sector through using new technologies and tapping into new markets. These companies have tended to focus
135 on addressing two of the most severe financial frictions: asymmetric information and switching costs. Data
136 portability in open banking can ameliorate these two issues since customers can transfer their banking data
137 to TPPs as they like more conveniently. By using technology to automate and improve decision-making, it is
138 possible to promise to lower frictions in the financial sector and bring more competition into the financial market.
139 ??4 ii.

140 11 Better financial products for customers

141 As open banking strengthens competition in the financial market, more Fintech companies and other TPPs
142 would have easier access to financial industry. This in turn allows consumers to have more opportunities to enjoy
143 financial services and products from a wider variety of Fintech companies and other financial services providers,
144 which help consumers better control their financial lives. ??5 For example, consumers are allowed to aggregate
145 their income, bill payment, and spending data to better understand whether they can afford a new home or
146 a major purchase. Open banking can also help consumers obtain better rates through sharing their complete
147 financial and non-financial data with lenders. By this way, consumers can provide a more holistic picture of their
148 financial situation and potentially obtain more favorable terms.³⁶ Also, it is possible for consumers with adverse
149 credit histories to qualify for more loans, as lenders could review payroll data. ??7 Except for this, open banking
150 can stimulate inclusive finance development in China since it can help small and medium-sized enterprises to
151 obtain short-term loans and financing by giving lending institutions a better understanding of their cash flows.
152 ??8 This is a win-win measure. Lenders can judge the bad debt risk through analyzing the financial information
153 of small and medium-sized enterprises. On Global Journal of Human Social Science- Year 2023 () H

154 The Legal Regulation Model of Open Banking in China the other hand, with the help of a wider range of
155 financial data, these enterprises with sound cash flows data can obtain better loan rates, while reducing the loss
156 risk of lenders Simultaneously.

157 iii

158 12 . From "screen scrapping" to APIs in open banking

159 Open banking can encourage Fintech companies and other financial service providers from "screen-scrapping"
160 to APIs. ??9 Traditionally, many financial service institutions utilize screen-scraping to collect information
161 which is the process of scanning a website and extracting data, to access consumer information. For example,
162 when Fintech companies cannot access customer data directly, they utilize screen-scraping to manually collect
163 banking data using the online banking login credentials of their consumers. While screen-scraping allows for
164 these companies to quickly gather information, it poses risks. Screenscraping has significant flaws as a method
165 of data collection. Initially, by collecting the login credentials of consumers, screen-scraping increases the fraud
166 and identity theft risks faced by users. Secondly, screenscraping may prevent banks from knowing when third
167 parties access their customers' data, which reduces the effectiveness of their anti-fraud and cybersecurity systems.
168 Thirdly, when consumers authorize Fintech companies to access their data through screenscraping, they do not
169 always understand that they are revealing their login credentials to the Fintech. ??0 Screen-scrapping risks
170 could be alleviated by APIs in open banking, improving the safety, scope of access, and consent of the consumer.
171 ??1 Regarding risks posed by screen-scraping, the U.S. Treasury has recommended consumer data changes that
172 "would effectively move firms away from screen-scraping to more secure and efficient methods of data access."
173 Therefore, it is significant to develop open banking to provide Fintech companies and other financial service
174 providers with direct access to the data. 42

175 13 b) Risks

176 Even open banking can bring many social and economic benefits, it still causes wide concern regarding data
177 security and customer privacy protection, abuse of data risks as well as suspicion to the validity of financial
178 supervision. It is necessary to find relevant risks for designing a proper regulatory model for China.

179 14 i. Data security and customer privacy

180 Open banking triggers the privacy protection problem. Financial privacy laws of many countries predate the
181 emergence of the Fintech sector and offer consumers relatively limited control over how companies use their
182 financial data. ??3 There are concerns over data security and customer privacy regarding their financial lives
183 since personal information is being transferred to third parties. ??4 ii. Abuse of data Open banking would
184 increase both the number of entities that collect personal financial data and the amount of information that
185 private companies know about individuals' financial lives. As industry experts observe, with the development of
186 open banking, the risk monetizing or misusing consumers' data is likely to increase as a wider range of companies
187 obtain access to it. ??5 These companies might abuse consumers' personal data by using the data beyond the
188 purpose and scope authorized by consumers, and it is hard for consumers to know of it. ??6 Even if consumers
189 found that their data was abused or leaked illegally, it is hard for them to be compensated from this since there
190 might be several companies or institutions have access to their data, it is hard for consumers to prove exactly
191 which party abused or leak their data.

192 iii. Regulatory challenges Open banking is very different from traditional banking business, and the existing
193 regulatory system of commercial banks is based on current financial practices, and the digitalization of traditional
194 financial products and businesses would bring great difficulties to legal regulation. When dealing with the risk of
195 data sharing in open banking, it might be difficult for the existing legal regulatory system to monitor financial
196 risks effectively. to introduce open banking frameworks. However, these regions adopted different regulation
197 models of open banking due to the difference in their culture, economy, financial markets, etc. Generally, there
198 are three types of regulation models as follows.

199 i. EU and UK: Compelling Model EU and UK adopted the statutory model for open banking development,
200 which forces banks to authorize consumers with data portability and access to data. EU extensively highlighted
201 the importance of data portability and data transfer issue. Cecilio Madero Villarego, senior competition official
202 in the EU, said in late 2019: "Among other things, we will continue to make sure that digital incumbents
203 don't make it too difficult for consumers to switch to competitors or use them in parallel." 51 E.U. Council
204 passed the Revised Directive on Payment Services (PSD2) in 2015, which aimed to go further than the initial
205 Payment Services Directive in opening up banks to data sharing arrangements and competition from fintech
206 firms. 52 PSD2 forces banks and other payment providers to grant access to consumer accounts to third-party
207 providers for account information aggregation services. Also, it requires payment providers to ensure that any
208 time consumers access their account or initiate transactions, payment processors confirm that they consented to
209 the transaction. ??3 Also, the Article 20 of the EU General Data Protection Regulation ("GDPR") mandates
210 that individuals have a right to data portability. ??4 This reserves the term "portability" to a required transfer
211 when one person wishes to transfer the data. These legislations establish the legal foundation of open banking
212 development.

213 The application of the legal obligation to share data under UK open banking is complicated, including PSD2
214 and GDPR, and compliance is required by Account Servicing Payment Service Providers. 55 However, not all
215 commercial banks are required to share data and comply with specific UK data sharing standard. The UK
216 established open banking to address a competition problem in the retail banking market, identified by the UK
217 Competition and Markets Authority ("CMA"). Open banking in UK also allowed the EU to implement its PSD2.
218 The CMA Order established an Open Banking Implementation Entity ("OBIE") to create UK data standards
219 for data sharing. The UK Standards were required to cover not only APIs, data formats, and security, but also
220 governance arrangements and customer redress mechanisms. Further, these standards were mandated to have
221 the features necessary for banks to comply with the open banking requirements of PSD2. ??6 However, only the
222 nine banks and building societies specified under the CMA Order, known as the "CMA9," are required to comply
223 with the data sharing obligations. ??7 ii through guidelines and nonbinding documents. This guidance serves
224 as the basis of its open finance strategy, which suggests that the regulator-led approach is another possible data
225 governance style. ??5 Hong Kong has begun regulating open banking since 2018. 66 Hong Kong's regulations
226 do not require banks to share account and transaction data. The regulations issued by Hong Kong Monetary
227 Authority require the largest banks to develop open APIs, but they permit banks to choose which TPPs can
228 access customer data. ??7 Different from other jurisdictions, Hong Kong requires banks to conduct ongoing
229 supervision and due diligence of the TPPs they partner with and establish contractual terms that mitigate the
230 risk that customer data will be misused. ??8 The HKMA believes that this model would strike a balance between
231 innovation and consumer protection since it requires banks to play a custodian-like role with respect to customer
232 data. companies. This is based on the belief that U.S. market would be best served by a solution developed by
233 the private sector. ??8 Although section 1033 of the Dodd-Frank Act requires providers of financial products and
234 services to make available to a consumer, upon request, any information in their possession or control "relating
235 to any transaction, series of transactions, or to the account including costs, charges and usage data." 59 However,
236 it only creates an express data access right in favor of customers themselves, but it says absolutely nothing about
237 whether financial institutions must also share this data with third parties. ??0 In US, there is not a welldeveloped
238 legal framework for open banking, and the burden of developing common data sharing standards has largely fallen
239 to the financial services industry itself. 61 US adopted this model due to the characteristic of its financial market:
240 fragmentation. The United States is home to the world's largest, most fragmented, and most diverse financial
241 services industry. ??2 The fragmentation makes it very hard to rapidly respond to new market developments,
242 and therefore it is reasonable to sustain coordination between regulators and industry. This can explain why the
243 US has taken what has been described as a "market-driven" approach to open finance. ??3 because of the policies
244 ensuring its implementation efficiency. However, it fails to take into account the size and strength of banks and
245 tends to pursue "absolute fairness" and therefore leading to unfair opening consequences, accelerating the loss
246 of competitiveness of small and medium-sized banks. Also, administrative orders may stifle commercial and
247 technological creativity. ??0 More importantly, the "regulation-driven" model requires a complete and mature
248 legal regulation system. The compelling model derived from EU and UK, which was adopted by Australia,
249 Brazil, Mexica and other countries. ??1 Compelling regulatory model forces banks and other payment provider
250 institutions provide data to Fintech companies or other TPPs following the instructions of consumers. This model
251 is effective in promoting open banking since some banks would be reluctant to share consumers' data to other
252 companies to protect competitive advantages. Actually, there is a tension between data sharing and the economic
253 interests of many banks that collect personal financial data. These banks may depend on collecting large amounts
254 of personal financial data to maintain a competitive edge and therefore those economic interests can disincentivize
255 banks from giving consumers control of their data. ??2 Therefore, under compelling model, banks must authorize
256 customers with data access which can effectively stimulate open banking development. However, in compelling
257 model, regulators play a significant leading role in data sharing and open banking development and therefore it is
258 required to provide regulators with a clear legal implementation framework. This legal framework must contain
259 unambiguous legislations regarding data rights and data sharing obligations, the clear allocation and cooperation
260 of regulatory powers, regulatory-led thirdparty access certification and unified technical standards. ??3 However,
261 unlike EU or UK, there is no clear and feasible legal framework in China supporting regulators to compel banks to
262 share data. Although article 45 of the Chinese Personal Information Protection Act regulates that if individuals
263 request the transfer of personal information to their designated personal information processor, satisfying the
264 requirements provided by the state internet information department, the personal information processor shall
265 provide a channel for the transfer, ??4 legal basis for data portability, there are no other rules or legislations
266 supporting the implementation of data portability. And there are no other relevant legislations or rules regarding
267 open banking in China. Therefore, due to the absence of feasible and mature legal framework, it is not reasonable
268 for Chinese government adopt the compelling model. In addition, the compelling model is not proper due to the
269 special financial market and regulation environment in China. The data opening of large commercial banks that
270 occupy a dominant position in data can further expand their business, obtain cooperation opportunities, and
271 win the dividends brought by data sharing, while small financial institutions with scarce customer information
272 and poor data information face the dilemma of losing business resources and further expanding competitive
273 disadvantages. If adopting the compelling regulationdriven model and forcing data sharing among all banks,
274 it will strengthen the data integration of monopoly financial institutions and aggravate the centralization of
275 financial data. ??5 Also, e-commerce platforms and thirdparty payment businesses are well-developed in China.

18 A) ISSUE FEASIBLE RULES FOR DATA PORTABILITY IMPLEMENTATION

276 Internet financial enterprises optimizes financial business and provides financial services, which has gradually
277 occupied more and more shares in the Chinese financial field, and even be able to compete with certain banks.
278 According to the business model of open banking, one-way data openness is tantamount to creating an unequal
279 competition where e-commerce platforms can rely on the richer data resources of financial institutions to develop
280 more quickly, while traditional financial institutions such as banks are very easy to lose the advantages of basic
281 data. Accordingly, the mandatory "regulatory-driven" model may affect the financial stability and exacerbate
282 unfair competition in the financial market of China. ??6 ii. Voluntary Model is not Appropriate for China
283 Voluntary model is adopted by US which neither does not require regulators to force banks to share data, nor
284 issue specific technical or data sharing standards. It is driven by the market where institutions make agreements
285 about data sharing and relevant security, APIs standards. The voluntary "market-driven" model can achieve a
286 balance of interests of all parties in the market. However, under this model, there is no effective financial data
287 sharing standard and the enthusiasm of banks to carry out financial data sharing is not high since there is no
288 government promotion, which is difficult to make breakthroughs. ??7

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290 The Legal Regulation Model of Open Banking in China intends to allow private enterprises to develop open
291 banking rather than limiting their innovation ability by regulatory uncertainties, so it adopts this model. ??8
292 However, due to the different cultures and financial market development, it is not proper for China to adopt the
293 US model. Firstly, without regulation, public confidence in open banking might be impaired and this voluntary
294 model may cause disorder in China's financial market due to the lack of uniform standards of data sharing.
295 Secondly, without proper regulatory limitations, there might a risk of monopoly since large banks are free to
296 make agreements regarding data sharing and impose barriers preventing Fintech companies from entering into
297 the financial market, which might impair competition in the financial sector. Also, the absence of uniform
298 standards would decrease the interoperability of open banking system, which may cause high negotiation fee due
299 to the financial fragmentation in the market. ??9 Furthermore, as discussed before, US adopted the market-driven
300 model since US financial market is too fragmented and it is hard for regulators to design and respond quickly.
301 80 However, unlike US, Chinese financial market is not so fragmented and the Chinese PBOC has already issued
302 several policies clarifying the data sharing standard. Therefore, the US market-driven model is not suitable for
303 China due to difference in financial markets of two countries.

304 iii

305 16 V.

306 How to Establish the Legal Regulation Structure of Open Banking in China under the "Active Guidance" Model
307 Generally, under the active guidance model, Fintech companies should reform data and technologies in order to
308 have the ability to connect with traditional financial institutions. For large commercial banks, they should change
309 attitude and accept open banking mode, while for small and medium banks, due to the lack of sufficient technique
310 powers, they should cooperate to construct their open banking platform. For better coordination between these
311 parties in open banking practice, regulators should give the development direction and issue instructive rules,
312 encouraging cooperation between banks and Fintechs while protecting privacy and data security of customers.
313 ??2 It is required to issue some government instruction in standards setting and provide a feasible legal framework
314 giving instructions to banks and TPPs, Global Journal of Human Social Science -Year 2023

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316 The Legal Regulation Model of Open Banking in China 44 however, banks should not be forced to share data
317 through legislation now. Currently, there is not a feasible legal framework for open banking regulation in China.
318 For regulating and stimulating development of open banking and reducing social risks, it is necessary to improve
319 current legal system to establish a feasible framework to facilitate data portability implementation and construct
320 a multi-level regulatory system of open banking. Also, traditional regulatory method for privacy protection is
321 insufficient in open banking, it is necessary to transfer to "data autonomy" approach for protecting privacy.

322 18 a) Issue Feasible Rules for Data Portability Implementation

323 Article 45 of Chinese Personal Information Protection Act (valid from November 2021) sets the basis of data
324 sharing for consumers, which indicates that where individuals request access to or copy their personal information,
325 the personal information handlers shall promptly provide it. If individuals request the transfer of personal
326 information to their designated personal information processor, satisfying the requirements provided by the state
327 internet information department, the personal information processor shall provide a channel for the transfer. ??3
328 This clause seems to regulate the foundation of data portability, however, there are no other rules or legislations
329 clarifying specific details and procedures for the implementation of data portability. Also, there are no regulations
330 indicating the definition of data portability. These would be barriers to open banking development in China. A
331 data-oriented financial regulatory system needs focus on creating interoperable standards for data sharing. Not
332 only is it important to create clear ownership rights over data, and clear access rights, but also it is necessary
333 to ensure that this data is stored and managed in standardized ways. Interoperability is integral to the proper

334 functioning of a market in data, and without it, transaction costs and market leverage may threaten to impede
335 competition within the sector. ??4 Therefore, it is necessary to improve legislations to increase the feasibility of
336 data portability and interoperability of open banking systems. As discussed before, Chinese PBOC has issued a
337 series of policies clarifying the standards which increase interoperability from the perspective of technology. It
338 is not difficult to technically promote data sharing, but it is more difficult to achieve comprehensive protection
339 of data from a legal point of view. It is necessary to combine the powers of technology and legislation. Not
340 only should we bring technology into the orbit of the rule of law and constrain its risks, but also utilize more
341 technical methods to improve the protection ??3 Article 45 of Chinese Personal Information Protection Act. ??4
342 level of data sharing security. ??5 Currently, it is crucial to increase interoperability from legislative perspective
343 to clarify the definition and condition of portability, the scope of shard information and accountability in open
344 banking.

345 i. Implementation details of data portability Article 45 of the Chinese Personal Information Protection Act
346 is only a principal provision without sufficient operability. Chinese government and relevant institutions should
347 issue detailed implementation rules as soon as possible, including the conditions, types, methods, costs, and risk
348 prevention of data portability. Also, it is necessary to clarify the definition of data portability. Since open banking
349 and data portability were introduced from UK and EU, it is reasonable to apply the definition of data portability
350 in GDPR which indicates that "the data subject shall have the right to receive the personal data concerning
351 him or her, which he or she has provided to a controller, in a structured, commonly used and machine-readable
352 format and have the right to transmit those data to another controller without hindrance from the controller
353 to which the personal data have been provided". ??6 ii. Scope of shared information Also, it is required to
354 clarify the scope of shared information. The shared information scope is distinct between different countries. In
355 UK, it is required to provide information regarding the following accounts: transaction information for personal
356 current account products, including personal current accounts; basic bank accounts, packaged accounts, reward
357 accounts, student or graduate accounts, and youth accounts; and business current account products, including
358 business current accounts. Under UK open banking, the CMA Order requires that the Read/Write Data Standard
359 provides access to transaction information for covered accounts and initiates payments on behalf of customers on
360 those accounts. The detail of the data to be shared, including the data fields for each of the accounts, is provided
361 by the UK Standards. ??7 However, the shared information in Australia is much broader. Australia's open
362 banking rules apply to a wide array of consumer data, including product data, customer data, account data, and
363 transaction data. ??8 The Legal Regulation Model of Open Banking in China the financial industry would be
364 the first industry to be regulated, but that other industries would also come under its rules. ??9 For China,
365 currently, it is better to limit the shared information in financial industry due to the limitation of technologies
366 and legal basis. Also, it is necessary to divide information according to its sensitivity and significance and
367 gradually expand the scope of shared data based on the sensitivity level. According to Chinese national standard
368 "Information Security Technology Personal Information Security Specification, "personal sensitive information"
369 refers to "personal information that may endanger personal and property safety once leaked, illegally provided,
370 or abused, and can easily lead to damage to personal reputation, physical and mental health, or discriminatory
371 treatment." ??90 It is necessary to limit the sharing scope of sensitive information and require desensitization
372 treatment under some circumstances to protect privacy of consumers.

373 iii.
374 Accountability Accountability regarding open banking should be clarified, which can encourage institutions
375 more attention to data protection and increase public confidence in open banking market. In Hong Kong, banks
376 should burden to duty to conduct ongoing monitoring and due diligence of the TPPs they partner with and
377 establish contractual terms that mitigate the risk that customer data will be misused. ??91 Hong Kong believes
378 that this approach will "strike a balance between innovation and consumer protection" because it requires banks
379 to play a custodian-like role with respect to customer data. ??92 China can also adopt this approach and impose
380 responsibilities on banks to monitor Fintech and TPPs. However, the banks should not be the only accountable
381 party, TPPs should also have the duty to protect consumers' data. Banks and their partners TPPs be jointly
382 liable for data abuse, leakage or loss. Furthermore, regulators should issue a more unambiguous and detailed
383 standard for data security protection and impose sanctions on data theft, leakage, abuse as well as the illegal
384 usage of data without customers' consent. ??93 b) Construct a multi-level regulatory system for data sharing i.

385 19 Current Legislation and Rules Regarding Data Sharing in 386 China

387 The main goal of China's implementation of open banking is promoting the digital transformation of financial
388 institutions and fully tapping the value of data. Currently Chinese legislations and rules regarding data protection
389 and data dealing. Firstly, Article 42 of the Chinese Cybersecurity Law expresses that network operators must
390 not disclose, tamper with, or destroy the personal information they collect; and personal information shall not
391 be provided to others without the consent of the person being collected. However, this is not the case where
392 the specific individual cannot be identified after processing and cannot be restored. Network operators shall
393 employ technical measures and other necessary measures to ensure the security of the personal information they
394 collect and prevent information leakage, damage, or loss. When leakage, damage, or loss of personal information

19 CURRENT LEGISLATION AND RULES REGARDING DATA SHARING IN CHINA

395 occurs or may occur, remedial measures shall be immediately employed, and users shall be promptly informed
396 and reported to the relevant competent departments in accordance with provisions. ??4 Secondly, Article 1038
397 of the Chinese Civil Code indicates that information processors must not disclose or tamper with the personal
398 information they collect or store; without the consent of individuals, their personal information shall not be
399 illegally provided to others, except where the specific individual cannot be identified after processing and cannot
400 be restored. Information processors shall employ technical measures and other necessary measures to ensure
401 the security of the personal information they collect and store, and prevent information leakage, alteration,
402 and loss. When leakage, alteration, or loss of personal information occurs or might occur, remedial measures
403 shall be promptly employed, and individuals shall be notified in accordance with provisions and reported to the
404 relevant competent departments. ??5 Thirdly, Article 23 of the Chinese Personal Information Protection Law
405 more specifically regulates the data dealing and transferring issue. It indicates that where personal information
406 processors provide information to other personal information operators, they shall inform the individuals of
407 the name or surname and contact information of the recipients, purpose and methods of processing and types
408 of personal information. Also, it is required to obtain the separate consent from them. The recipient shall
409 process personal information within the scope of purposes, following processing methods and types of personal
410 information. Where the receiving party changes The Legal Regulation Model of Open Banking in China the
411 original purpose or method of processing, it shall reobtain the individual's consent in accordance with the
412 provisions of this Law. ??6 Furthermore, Article 29 of the Implementing Measures for the Protection of the
413 Rights and Interests of People's Bank of China Financial Consumers shows that banks and payment institutions
414 handling consumer financial information shall follow the principles of legality, propriety, and necessity, and
415 obtain the express consent of financial consumers or their guardians, except as otherwise provided by laws and
416 administrative regulations. Banks and payment institutions must not collect consumer financial information
417 unrelated to business, must not use improper methods to collect consumer financial information, and must not
418 covertly force the collection of consumer financial information. Banks and payment institutions shall not refuse
419 to provide financial products or services on the grounds that financial consumers do not consent to the processing
420 of their financial information, except where the processing of their financial information is necessary for the
421 provision of financial products or services. Where financial consumers are unable or refuse to provide necessary
422 information, making it impossible for banks or payment institutions to perform their anti-money laundering
423 obligations, banks and payment institutions may take restrictive measures against their financial activities in
424 accordance with the relevant provisions of the Anti-Money Laundering Law of the People's Republic of China.
425 When it is truly necessary, banks and payment institutions may refuse to provide financial products or services
426 in accordance with law. ??7 ii. Establish a Multi-level Regulatory System of Data Sharing Although Chinese
427 Cybersecurity Law, Chinese Civil Code, Chinese Personal Information Protection Law and the Implementing
428 Measures for the Protection of the Rights and Interests of People's Bank of China Financial Consumers establish
429 relevant legal basis for personal information sharing, but the above legal provisions obviously only focus on
430 the protection of personal information rather than sharing information, and there lacks the encouragement and
431 mandatory provisions for data sharing. ??8 Therefore, there is no mature legal regime for data sharing in
432 China. Except for government regulatory system, making use of the market and social power is also important.
433 It is necessary to establish a multi-level regulatory system for data sharing which should contains supervising
434 parties such as banks, TPPs, customers, social associations and judges. ??6 Article 23 of the Chinese Personal
435 Information Protection Law. ??7 Firstly, as discussed above, banks and TPPs should be jointly liable for data
436 protection. Learning from the active guidance regulation model in Hong Kong, banks are supposed to supervise
437 the data application actions of their TPPs, which can keep the balance between innovation and financial security.
438 Secondly, Fintech companies and TTPs which receive the data should be mainly responsible for data protection.
439 Therefore, it is necessary to require these companies to design internal supervision systems in their companies to
440 prevent data loss or leakage. Thirdly, Chinese government should build a special compliant system for customers
441 for dealing with matters relevant to data sharing issues in open banking. Social supervision from customers can
442 play a crucial role in data sharing since customers are the party whose interests would be seriously impaired
443 by data abuse. Therefore, it is necessary to authorize customers with compliant rights, which can also educate
444 customers on the significance and value of data. Also, an open banking association should be established to deal
445 with data sharing matter. As discussed before, open banking brings many challenges to the traditional regulatory
446 system due to the information asymmetry and technical issues. ??9 Therefore, it is necessary to organize the open
447 banking association composed of technical and financial experts, which can better supervise data sharing matters
448 and provide more information to government officials. The cooperation between associations and government
449 regulators is significant for sound development of open banking. Finally, judicial aid is also necessary which
450 is the last resort for customers. Currently, there is no specific Statutory Financial Interpretation regarding
451 open banking judicial practice. However, data sharing matter is relevant to privacy and personal information
452 protection and therefore, judges can refer to the rules, Statutory Financial Interpretation and legislation relevant
453 to personal data and privacy in Chinese Personal Information Protection Act, Chinese Civil Code and other
454 relevant legislations. In general, it is reasonable to establish a multi-level regulatory system including different
455 monitoring bodies for data sharing in open banking. c) Data Privacy Protection: From "Notice-Consent" to
456 "Data Autonomy" Traditionally, financial privacy laws in many countries follow a "notice and consent" model,

457 which requires enterprises to notify consumers of their data collection practices and give consumers the option
458 to opt-in or out. However, the "Notice-Consent" approach has significant structural flaws that limit its efficacy.

459 **20 47**

460 Notice and consent laws place an unmanageable burden on consumers by requiring them to read lengthy and often
461 opaque-written privacy policies, which consumers do not have time to read and often struggle to understand.¹⁰¹
462 Moreover, even if consumers had the time to read all of the privacy policies that they are presented with in a
463 given day, they are often unable to assess the risks of sharing their data.¹⁰² Better protecting customer privacy
464 in digital economy era requires us to replace the traditional "data privacy" with a more comprehensive concept
465 "data autonomy." Data autonomy grants customers a set of rights over their data that wrests control over data
466 back from the large financial institutions that, until now, have maintained a vice grip over it. It can satisfy
467 the data protection requirement and secure information be accessible and shareable, which is more consistent
468 with open banking development trajectory. While data autonomy requires important changes in legal rights and
469 responsibilities, it is better matched with "open banking" rules.¹⁰³ Authorizing customers greater control of
470 data sharing could potentially mitigate the traditional privacy protection problems brought by "noticeconsent"
471 regulation method.¹⁰⁴ If consumers can affirmatively decide and continuously control which company can have
472 access and use their financial data, they will have a greater ability to preserve their personal expectations of
473 financial privacy when they share their data with a third party.¹⁰⁵ However, there are still certain risks of
474 "data autonomy".¹⁰⁶ Firstly, similar to traditional "noticeconsent" regime, consumers are generally unable
475 to independently manage their data privacy due to the lack of time and knowledge to understand what most
476 companies do with their data. Secondly, as more companies access personal financial data, consumers will find
477 it increasingly difficult to keep track of how their data are used or who has access to it, this might increase
478 the privacy risk and it is hard for customers to find accountable parties.¹⁰⁷ Thirdly, there is tension between
479 consumer privacy and the economic interests of banks and certain companies that collect personal financial data
480 to maintain a competitive edge.¹⁰⁸ Those economic interests can disincentivize these enterprises from giving
481 consumers meaningful control of their data.¹⁰⁹ Under "active guidance" model without compelling data sharing,
482 it might be difficult for banks to support the "data autonomy" approach.

483 Therefore, it is important for legislators and policy makers to strike a balance in this regard. Although the
484 desires of consumers should dictate how their data are used, companies should not be foreclosed from reasonably
485 using data to improve their own services or from fulfilling regulatory compliance obligations. China can learn from
486 UK for balancing the interests between the bank and customer. UK Although U.K. regulations allow consumers
487 to choose how their data are used, they do not prevent Fintech companies from providing innovative services.
488 Rather, they require TPPs to explain their services clearly and allow consumers to select their desires. The third
489 parties are only authorized to use and share personal data which is necessary to provide the requested services
490 or for other reasonable purposes.¹¹⁰ Generally, U.K. rules play a role in offsetting the tension between banks
491 and customers by allowing consumers to affirmatively choose and continuously control which parties access their
492 data, through centralized licensed platforms.¹¹¹ Learning from UK, Chinese regulations should limit the scope
493 of data usage and balance the data application between banks and TPPs. Also, it is necessary to establish
494 centralized platforms and require platforms to obtain licenses before helping customers share data, which can
495 help regulators pre-cautiously reduce data abuse risk and provide timely remedies for data abuse. The Legal
496 Regulation Model of Open Banking in China⁴⁸ some risks at the same time. Therefore, it is urgent to establish
497 an effective regulatory system in China. Through learning from regulation forms in other jurisdiction, "active
498 guidance" regulatory model should be more appropriate. Currently, without sufficient legal basis, it is reasonable
499 to adopt the "active guidance" regulatory model, which can reduce the risk of disorder in the financial market
500 and decrease negotiation costs among banks and TPPs. Therefore, the "active guidance" model can help open
501 banking improve during the transition period. Under this model, current Chinese regulatory and legal regime
502 needs to be improved as well. It is suggested to issue more feasible rules for data portability implementation,
503 establish a multi-level regulatory system for data sharing including different supervision parties, as well as transfer

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RECOMMENDED REVISIONS TO SECTION 1033 OF THE DODD-
FRANK ACT. 2022. N.C. J.L. & Tech. 24. P73.

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Figure 1:

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Figure 2:

Figure 3:

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Industrial and
Commercial Bank of
China(ICBC)
Shanghai Pudong
Development Bank
(SPD Bank)

Bank of China(BOC) Bank of China proposed the concept of open platform as early as 2012, and officially released the BOC Open Platform in 2013, opening more than 1,600 interfaces, involving transnational finance, collection and payment, mobile payment, as well as map services, network inquiry, exchange rate quotation and other services. China Everbright Bank On the one hand, China Everbright Bank actively integrates financial products and services into the production scenarios of cooperative companies. On the other hand, China Everbright Bank would build the mobile banking app into an open mobile financial ecosystem, making mobile banking a hub for extensive connection with external partner companies and Internet users, and a platform for customers operation.

Figure 4: Table 1

	The Legal Regulation Model of Open Banking in China
IV.	What Legal Regu- latory Model should be Applied for Open Banking in China
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Global Journal of Human Social Science -	47 43 THE AUSTRALIAN GOV SURY. REVIEW INTO OPEN CUSTOMERS CHOICE, CONVI DENCE. 2017. https://nla.gov.au/2817047138/view (Access on 10 May 2023). 44 Ce Magnuson. Data Autonomy. 2021 L. Rev. 74. P75.
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Figure 5:

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Figure 6:

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Figure 7:

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Figure 8:

Suitable for China In general, active guidance regulatory model should be applied in China, which not only can increase interoperability and reduce transaction costs, but also stimulate better development of open banking. As discussed before, under active guidance regulatory model, government regulators only issue relevant standards for open banking such as data sharing, instead of utilizing statutory legal authority to force banks to share data. On the one hand, issuing uniform standards under active guidance model can increase interoperability and reduce negotiation fees of banks and Fintech companies. As mentioned above, Chinese PBOC has issued several policies clarifying technical specifications and standards regarding data sharing and APIs of open banking including Code for Security 78 Steven T. Mnuchin & Craig S. Phillips. A FINANCIAL SYSTEM THAT CREATES ECONOMIC OPPORTUNITIES: NONBANK FINANCIALS, FINTECH, AND INNOVATION. Report to President Donald J. Trump. 2018. https://home.treasury.gov/sites/default/files/2018-07/A-Financial-System-that-Creates-Economic-Opportunities—Nonbank-Financi....pdf?mod=article_inline (Management of Application Programming Interfaces (APIs) of Commercial Banks(2020), Technical Specifications for the Protection of Personal Financial Information(2020),

. "Active Guidance" Regulatory Model is More

Figure 9:

Figure 10:

Figure 11:

504 the data privacy protection regime from traditional "Notice-Consent" to "Data Autonomy" model. 1 2 3
505 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

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