



# "Opening" Banking

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*Open banking is a set of application interfaces, standards, and rules that offers a more seamless experience for users and allows the easier movement of money among financial institutions. In this article, we discuss some of its promises and challenges, particularly for adoption in the United States.*

**S**mart" is a popular adjective for almost everything: smartphone, smart car, smart home, smart city, smart grid, and so on. Likewise, "open" is becoming a popular modifier: open science, open access, open software, open source, and open borders, among others. So, what's next? How about *open banking*? The term was completely new to us—it might be new to you.

Let's first discuss what open banking "supposedly" is. We begin with a few introductory facts that we uncovered. Then, you can speculate on what you might be able to do with it—that is, what can it do for you or to you?

- › "Open banking" originated and was first implemented in Singapore.<sup>1</sup>

- › Investopedia offers a definition.<sup>2</sup>
- › The same concept is named *financial planning digital services*.<sup>3</sup>
- › According to Moneythor, "In Europe and the UK, its effect has been most notable due to the early introduction of mandatory regulation there. In line with Europe's PSD2 regulation, all financial institutions in the region are required to share customer data with third party providers through an API [application programming interface] infrastructure. With secure access to this data, third parties can use open banking to provide personalised and customised experiences to customers that carve out competitive advantage for newcomers in an industry that is notorious for its high barriers to entry."<sup>3</sup>

- › Open banking standards in the United Kingdom have evolved to their current version from the open banking Implementation Entity.<sup>4</sup>
- › Open banking is not currently in the United States.<sup>5</sup>

As you know, banking is rarely easy. Changing banks or dealing with financial assets among different family members demonstrates that banking transactions are not always simple. Conversely, if you've had your credit card

information or government identity number stolen or if someone fraudulently attempted to take out a loan or purchase something in your name, you appreciate why onerous controls are placed on financial institutions. Thus,

for the existing definitions? Can open banking be made more secure through defined and enforced protocols, rules, regulations, and new or existing cybersecurity technologies?

### The idea of open banking is not yet well known to consumers—even in those countries where it is making progress.

privacy, cybersecurity, and the mobility and ease of transactions among stakeholders needs refinement.


So now, open banking steps in. Open banking supposedly fosters this refinement. It promises the easier sharing and movement of information among financial institutions along with a strong balance of cybersecurity, privacy, and user friendliness. Open banking gives the right to consumers to share their own information rather than to credit-rating agencies to collect and provide such data, thus giving more choice of what to share and with whom. Australia, New Zealand, Singapore, and some countries in the European Union have already moved in this direction.

However, the idea of open banking is not yet well known to consumers—even in those countries where it is making progress.<sup>6</sup> In the United States, it appears to need more support. Detractors fear that it will bring on a financial “Wild West”—a free-for-all that encourages unscrupulous actors to exploit citizens.

There are many questions worth exploring, including the following:

- › What technologies, rules, protocols, and regulations are needed

- › Can open banking be borderless?
- › Is a single definition for open banking needed?
- › Do cryptocurrencies play a role here?
- › What would happen to credit-rating agencies and their scores?
- › And many more . . .

**T**he advantages of mobility, freedom of choice, and enhanced market competition are tempting. However, more research that helps balance convenience and market opportunities with cybersecurity and privacy are warranted. Stay tuned! 

#### REFERENCES

1. “Singapore Financial Data Exchange (SGFinDex).” Monetary Authority of Singapore. <https://www.mas.gov.sg/development/fintech/sgfindex> (accessed July 19, 2021).

2. “Open banking.” Investopedia. <https://www.investopedia.com/terms/o/open-banking.asp> (accessed July 19, 2021).
3. “Open banking in Singapore: Comparing PSD2 & FPDS,” Moneythor, Apr. 29, 2020. Accessed: July 19, 2021. [Online]. Available: <https://www.moneythor.com/2020/04/29/open-banking-in-singapore-comparing-psd2-fpds/>
4. Open Banking. <https://standards.openbanking.org.uk/> (accessed July 19, 2021).
5. “A look at what lies ahead in this country.” CU Today. <https://www.cutoday.info/THE-feature/A-Look-At-What-Lies-Ahead-in-This-Country> (accessed July 19, 2021).
6. “Open banking will give consumers control of their data, but most Australians still haven’t heard of it.” Which-50. <https://which-50.com/open-banking-will-give-consumers-control-of-their-data-but-most-australians-still-havent-heard-of-it/> (accessed July 19, 2021).

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