Research note

Who is Driving Financial Market Governance of Cryptocurrencies in Japan? Actors and Institutions behind Japan's FinTech Revolution

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Summary

The spread of FinTech around the globe has posed new challenges for financial market governance. As disruptive new products and technologies such as cryptocurrencies and blockchain reshape financial markets and lead to new forms of financial services, established financial institutions and government agencies alike face the challengers' new businesses. Among these are cryptocurrency exchanges and a variety of startups. Changes in countries' financial market governance have been the consequence, ranging from outright prohibition of new products and services to fierce competition in creating and fostering optimal conditions for the emergence and development of even more digital financial innovations. Despite a multitude of private sector and regulatory initiatives in Japan over recent years, the country remains a rather unexplored case-wrongly so, as the Japanese government has not only created comparatively comprehensive regulation of cryptocurrencies but has also devised new ways and means of integrating new market actors while attempting to hedge against the associated risks, each in close cooperation with private market actors. It is therefore worthwhile to examine the governance processes behind these changes and their effects on broader financial market governance in Japan and the country's political economy in general. The present paper contributes to this endeavor and sheds light on the actors and institutions behind Japan's FinTech governance.

Keywords: FinTech, cryptocurrencies, Japan, financial market governance, political economy, financial innovation, disruption

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Introduction

Financial Technology (FinTech) is on the rise on a global level as many jurisdictions are currently in the process of regulatory reform to make their financial markets more attractive for FinTech startups and investments. According to a report by Deloitte (2017, 17), London, Singapore, and New York are the most attractive FinTech hubs worldwide, while Tokyo exhibits only moderate attractiveness and is number two in Northeast Asia (worse than Hong Kong, slightly better than Taipei, and much better than Shanghai and Shenzhen). In terms of venture capital firms' FinTech investments, Japan, with roughly 90 million USD (same as Singapore), lags behind the People's Republic of China (7.7 billion USD), the US (6.2 billion USD), and the UK (780 million USD) as well as the Hong Kong Special Administrative Region (170 million USD) (Deloitte 2017, 19; Deloitte Tohmatsu 2017, 2). The Global FinTech Index 2020 finds Japan at rank 22 of 65 countries behind China (21), South Korea (18), and India (15) as well as the top three of the US, the UK, and Singapore. Within the Asia-Pacific region, Tokyo ranks 7 after Singapore (1) and Hong Kong (4) but ahead of Beijing, Seoul, and Shanghai (ranks 8, 9, and 10, respectively).

In terms of the number of FinTech startups, Japan achieves a similar ranking (23 out of 107 countries), although the gap between the leader (the US with 3,904 FinTech firms) and Japan (41 FinTech firms) is large (Haddad/Hornuf 2019, 97). Behind the international competition lie political and economic efforts at the national level to not only keep up with but preferably also set the pace in the emerging digital world economy of which digital finance will be an essential part. Japan is no exception to this general rule and has seen numerous FinTech initiatives in recent years, both at the public and private levels. The latest examples include the Financial Market Entry Office, launched by Japan's financial regulator the Financial Services Agency (FSA) in 2021 with the goal of assisting foreign financial firms establishing operations in Japan (Japan Times 2021a); efforts at creating a central bank digital currency (CBDC) by the Digital Currency Forum made up of major Japanese companies, the country's three megabanks, and Japan's central bank (Okamoto 2020); and cooperation between MUFG Bank and the US cryptocurrency exchange Coinbase that grants MUFG's customers access to a variety of cryptocurrencies (Japan Times 2021b).

Questions arise as to how successful these endeavors will be, whether they are being coordinated, and, if so, how and by whom. Little research has been published so far to answer these questions, although the answers are highly likely to shed some light not only on how Japan is conducting its FinTech Revolution,¹ but also

¹ Gomber et al. (2018, 223) use the term to describe a global increase in venture capital funding for FinTech startups and the disruptive effects of the corresponding technological change on the financial sector.

on the current state of Japan's political economy, especially in the financial realm. So who is in charge?

Theoretical approach and definitions

Financial systems are part of the political economy of states. They can be regarded as being comprised of several components. One way of structuring these components is to divide them into institutions, markets, and infrastructures (OECD 2018, 23), whereby markets as "arenas in which buyers and sellers come together to exchange goods and/or services" (Vogel 2018, 11) are themselves one type of institution that is built by governments, firms, and/or individuals (Vogel 2018, 1, 3). Institutions, in turn, can be conceived as systems of rules that structure the courses of action open to actors. They comprise both legal rules and social norms (Scharpf 2000, 77). Institutions either restrict or facilitate decisions and determine how actors assess the results of these decisions. Therefore, institutions determine actors' preferred options for action, i.e. actors' preferences, by limiting the options that actors have under given circumstances. As institutional change involves high costs, institutions are path dependent (Scharpf 2000, 77 ff., 82).

Actors are self-interested and market governance can either happen against their will or with their consent (Lütz 2002, 47, 53). Governance "[...] refers to all processes of governing, whether undertaken by a government, market, or network; whether over a family, tribe, corporation, or territory; and whether by laws, norms, power, or language" (Bevir 2013 cited in Vogel 2018, 10). Different levels can be involved in governance processes such as the national level, the international level, and the global level (i.e. global governance) (Lütz 2002, 51), and financial markets often involve a high degree of competition at the international and global levels (Lütz 2002, 20).

Seen from this actor-centered, institutionalist perspective, financial market governance is therefore the result of the interaction between self-interested public and private actors, constrained but not determined in their actions by institutions located on different levels.

Financial market governance in Japan

Two major developments led to changes in the structure and functioning of post-WWII Japanese financial market governance: regulatory reform as a result of the Japanese financial and economic crisis following the burst of the bubble economy at the beginning of the 1990s, and the gradual strengthening of the prime minister's position vis-à-vis strong politico-economic actors such as the ministerial bureaucracy as well as intra-party groups.

Until the first liberalization of the Japanese financial market in the 1970s, Japan's postwar financial system had three main characteristics (Dekle/Kletzer 2003, 308). First, corporate finance relied almost exclusively on loans from commercial banks.

Second, the government provided deposit insurance to the commercial banks and Japan's then non-independent central bank, the Bank of Japan (BOJ), acted as the lender of last resort. Third, the system was characterized by the absence of an independent supervisory institution, as the Ministry of Finance (MOF) lacked both the motivation and the capacity to fulfill that role. Vogel (1996, 168) finds additional characteristics: highly segmented financial markets, artificially low interest rates, isolation from international financial markets, and government control of entry to and exit from the market. As such, the Japanese financial system was an integral part of the developmental state (Johnson 1982).

The old system has been widely characterized as informal (see, e.g., Laurence 1996; Neville 1997; Amyx 2001) or discretionary (Walter 2006; Takahashi 2011, 18). Financial reforms occurred in the form of bureaucratic-led bargains (Vogel 1994, 220 f.) as the MOF was the dominant actor in financial market governance, with its "dual role of regulator and business provider" (Markham 2003, 383). The BOJ was not independent but subordinate to the MOF. This enabled the MOF to engage in strategic lending, a practice known as window guidance, and to act as a lender of last resort in the convoy system of shared risk management among banks.² Other actors involved in financial regulation and governance were the Ministry of International Trade and Industry (MITI, since 2001 METI); the Ministry of Post and Telecommunications (MPT); peak councils of banks, securities companies, insurance companies, credit associations and cooperatives; the members of advisory councils and various LDP intra-party committees; and groups such as the Policy Affairs Research Council (PARC) and financial *zoku giin*.

This system was transformed for the first time in the 1970s, when large Japanese industrial firms started to raise money in the Euromarkets rather than borrowing from banks. As a result of this shift towards equity financing, larger Japanese banks became interested in obtaining access to the securities business as they were simultaneously under pressure from the postal savings system, to which they lost market share in savings deposits. Further pressure to liberalize financial markets came from the MOF's need to pay interest on ten-year government bonds issued in large quantities for the first time in 1975, as well as from US pressure on Japan to internationalize the ven so that it would rise in value relative to the dollar. Hence the MOF as the main actor of this first wave of financial reform liberalized the Euroyen bond market, allowed foreign institutions to set up trust subsidiaries in Japan, liberalized interest rates, and broke up the segmentation of the financial system (Vogel 1996, 173 f.). The speed of the reforms varied, however, depending on the degree of political sensitivity. Interest rate liberalization and desegmentation of the financial system met the most opposition and therefore took the longest as the MOF was keen to uphold the convoy system which sought to prevent bank failures (Vogel 1996, 176). At the end of this "path of least resistance" (Tiberghien

² The main bank system was the corresponding private sector part of Japanese financial governance.

2005) stood compromises: in interest rates, the postal savings system was allowed to preserve an interest advantage but had to link its rates to the rates offered by banks; in desegmentation, banks received access to the securities business, however delayed and under stringent conditions. The ruling LDP was largely absent in both cases despite strong clientelist ties to some of the would-be losers of the reforms, thereby turning the MOF into the main actor steering the reform process (Vogel 1996, 177; 185).

The next transformation of Japan's financial system occurred due to the Japanese post-bubble financial and economic crisis that was mainly a result of the liberalization process that had started in the 1970s in combination with inadequate supervision of the financial sector (Tiberghien 2005; Hanazaki/Horiuchi 2003). The MOF's credibility had been damaged by the extent of the crisis and the ministry's inability to get it under control. At the same time, the weak state of the financial sector greatly reduced its ability to resist reforms. As a result, the LDPled government of Prime Minister Hashimoto Ryūtarō enacted far-reaching financial reforms known as Japan's financial "Big Bang" that comprised, among others, the opening of foreign exchange markets, the abolition of the ban on holding companies, and further desegmentation of financial markets (Vogel 2006, 84). As a result of these reforms, the institutional structure of the system experienced considerable change, too: the BOJ gained institutional independence from the MOF and the Financial Supervisory Agency (FSA, renamed Financial Services Agency in 2000) was founded as an independent regulator (Amyx 2004, 197 ff.; Cargill/Hutchison/Ito 2000, 39 ff.). As a result, financial governance responsibilities were divided and the MOF's previously important role was reduced.

The Japanese government remained an important actor in leading financial system reform as Prime Minister Koizumi Jun'ichirō's postal privatization reform shows (Mishima 2007). This is partly a consequence of administrative reforms that strengthened the position of the political executive relative to the bureaucracy and intra-party groups (Köllner 2006; Köllner 2007).

Notwithstanding all these changes, there has also been continuity. Despite the creation of the FSA, the government retained discretion in regulating, supervising, and monitoring the financial system to a large degree. The MOF was partially able to regain some of its former strength by setting the terms of restructuring the financial sector (Vogel 2006, 84 f.). The main bank system largely managed to survive, and Japanese banks still rely less on financial markets as sources of funds and targets for investment than banks in other countries. Hence Japan's financial system has not transformed in the direction of a liberal market economy (Vogel 2018, 92; see also Walter 2006). In addition, the formal independence of the BOJ contrasts with attempts by different Japanese administrations to interfere in monetary policy (Dwyer 2012).

FinTech as disruption

FinTech (i.e. Financial Technology) as such is nothing new, as its beginnings can be traced back to the liberalization of the financial services sector starting in the 1980s. Although no common definition of FinTech exists,³ it can be broadly defined as "technology-driven innovation in the financial services sector" (OECD 2018, 8) and has recently gained (renewed) prominence and importance in the context of new technological developments.

One such technology is the internet-based blockchain. It can be used for a variety of purposes (Campbell-Verduyn 2018, 7; Livingston et al 2018; Yuan/Wang 2018, 1425 f.) and is the underlying technology that enables some cryptocurrencies (CCs). CCs are forms of digital money that use asymmetric cryptography to ensure the legitimacy of transactions between users (Berentsen/Schär 2018, 12). The first and best-known cryptocurrency is Bitcoin, which was created by an unknown individual (or group of individuals) using the pseudonym Satoshi Nakamoto. Bitcoin emerged in 2009, when it was publicly traded for the first time (Bariviera et al. 2017, 83). The first Bitcoin transaction in USD happened in 2010 and established the Bitcoin-USD exchange rate (Yuan/Wang 2018, 1422), with other fiat currencies following. The original goal of the Bitcoin creator(s) was to generate a completely decentralized payment system that avoids intermediaries such as banks and other financial institutions and enables direct transactions between two parties (Hütten/Thiemann 2018, 31 f.; Jia/Zhang 2018, 92 f.). In order to accomplish this goal, the Bitcoin network uses blockchain technology and the internet. Other CCs followed and already by 2016 over 260 actively used CCs existed on the global level. The number had risen to 1,500 by 2018 (Yuan/Wang 2018, 1422) and over 15,400 by 2021 (Coinmarketcap 2021a). Bitcoin retains the leading position with a market share of around 40 percent, followed by Ethereum at around 21 percent and Binance Coin at roughly 4 percent (Coinmarketcap 2021b).

Many authors (see, e.g., Diordiiev 2018, 51; Rodima-Taylor/Grimes 2018, 125; Siciliani 2018, 169) emphasize FinTech's disruptive potential, however most often without elaborating upon its meaning.

Christensen et al. (2004, 293) define a disruptive innovation as

"[...] an innovation that cannot be used by customers in mainstream markets. It defines a new performance trajectory by defining new dimensions of performance compared to existing innovations. Disruptive innovations either create new markets by bringing new features to nonconsumers or offer more convenience or lower prices to customers at the low end of an existing market."

A disruptive technology can be broadly defined as "a technology that changes the bases of competition by changing the performance metrics along which firms compete" (Danneels 2004, 249).

³ For an overview of different FinTech definitions, see OECD (2018, 10).

The main actors in these definitions are firms divided into two groups: incumbents and entrants. Whether a technology is disruptive to firms depends on whether the technology is consistent with the firms' business models (Danneels 2004, 247). While the *ex ante* determination of disruptive technologies is problematic (Danneels 2004, 251), the disruptions themselves, once they have occurred, can further be divided into sub-categories such as low-end disruptions and new-market disruptions (Danneels 2004, 250). In addition, the effects of disruptive technologies on incumbent firms have been found to vary between national contexts (Danneels 2004, 254 f.).

Gomber et al. (2018, 228) point to the difference between a breakthrough innovation and a disruptive innovation on the one hand, as well as a radical innovation and disruptive innovation on the other hand. While a breakthrough innovation does not have a well-defined domain of application, a disruptive innovation lacks a well-defined problem that can be targeted for solution. According to this classification, blockchain technology can be labelled disruptive and FinTech innovations in total can be classified as both radical (i.e. the firm can continue to use the existing business model but has to create new technical competencies) and disruptive innovations (i.e. the firm has to create a new business model but can continue to use its existing technical competencies) (Gomber et al. 2018, 228).

Temelkov (2018) finds that FinTech companies predominantly disrupt the banking sector in multiple ways, some of which hold true for CCs as well. FinTech startups, i.e. the entrants, often offer the same financial services as their traditional bank counterparts, i.e. the incumbents, but at lower cost and a higher level of accessibility, thereby turning the banks' comparatively high operating costs and networks of physical locations into competitive disadvantages. Further, unlike banks, FinTech companies such as payment and intermediation services providers as well as crowdfunding platforms generally do not depend on deposits to make a profit. FinTech companies' additional advantage over banks is their ability to use big data in order to offer customized solutions, a flexibility that banks most often lack. Significant decreases in customer bases and profits for banks could be the consequence. FinTech companies' disadvantages are mainly in the fields of trust and security, as well as regulation and compliance (Temelkov 2018, 138, 140 f.).

In the aftermath of the Global Financial Crisis (GFC), however, customers' trust in traditional banks in general was damaged and their compliance costs increased due to new regulation. Banks therefore try to avoid business with risky borrowers such as small and medium-sized enterprises (SMEs), thereby prompting the latter to search for alternative lending sources of the kind that FinTech companies partly offer (Temelkov 2018, 138). The degree of potential disruption, therefore, not only depends on the technological innovation itself but also on the state of the banks, especially after the GFC, and the regulatory environment. Therefore, it is first necessary to determine the state of the Japanese banking sector at the time when

CCs entered the Japanese financial market. As the advent of CCs is closely connected to the GFC (Temelkov 2018, 137; Hütten/Thiemann 2018, 29 f., 31 f.; Jia/Zhang 2018, 92 f.), the consequences of the GFC for Japanese banks also have to be taken into account.

The state of the Japanese banking sector in 2007, i.e. one year before the GFC and two years before the creation and distribution of Bitcoin, was still marked by the effects of the Japanese financial crisis that had started in 1990 and led to the socalled lost decades. Japanese banks' profitability was still very low, as were lending margins and loan demand from corporates. Despite the 1998 Big Bang financial reforms, diversification from traditional lending activities still remained limited (Hall 2009). While the GFC had only limited effects on the Japanese financial sector as Japanese banks' exposure to contagious financial products was relatively low (a result of the above-mentioned sounder regulatory regime set in place after the Japanese financial crisis of the 1990s), it affected Japanese exportoriented companies due to the slowdown in global economic growth. Therefore, the FSA, while complying with financial regulation such as Basel III on the international level, managed to relax supervision standards to encourage banks' lending to SMEs on the national level as long as the SMEs were in a restructuring process, thereby *de facto* allowing banks a renewal of non-performing loans (NPLs) on a frequent basis. In addition, the FSA allowed the banks to omit reporting these loans as NPLs (Harada et al. 2015, 62 f.). This is in line with Walter (2006), who finds that Japan's financial regulatory system has moved towards a neoliberal model only on the surface while maintaining discretion. Hence it can be argued that the condition of the Japanese banks was quite strained when CCs entered the Japanese financial market from 2009 onwards, so that CCs' disruptive potential was reinforced. This put Japanese authorities in a difficult position as on the one hand, they did not want to let the banks down, while on the other hand, they were keen to use CCs' potential to create growth in Japan's still sluggish economy.

Actors, institutions, and adaptation

The main motivation behind Japan's FinTech revolution is two-fold. First, it was part of the Abe administration's policy measures to revitalize the Japanese economy. In its 2016 Japan Revitalization Strategy, the Japanese government stated its intention to promote FinTech and create FinTech ecosystems (Kantei 2016, 23, 47), and the government's Council on Investments for the Future lists FinTech as one of five strategic fields to be developed in order to establish Society 5.0. Among the goals mentioned are an increase in cooperation between FinTech firms and financial institutions, improvement of productivity of corporations through FinTech, and the promotion of a cashless society (Kantei 2017, 5, 18–21).⁴

⁴ For a list comprising other government-led initiatives, see Ohira (2017, 19 f.).

Second, it is an expression of the government's concern that Japan might lose the global FinTech competition. The second of these, of course, is closely connected to the first and among the actors that share this concern are the incumbents, i.e. the Japanese banks. Struggling with weak loan demand and very low interest rates, the banks' core lending business is under pressure. At the same time, however, Japanese banks are sitting on large deposits from individual customers to most of whom they have not been able to sell investment products or other services due to high numbers of personnel needed under the predominant business model of personal marketing. Therefore, the banks are keen to use technology developed by FinTech startups in order to sell assets to existing customers. They were not able to do so, however, due to article 16-3 of the Banking Law that prohibited them from making large investments in non-banks (Braithwaite/Harding 2016; Wilson 2016; Lewis 2019). Although Watanabe (2019, 282) points to legal loopholes that in general allowed banks to invest in FinTech startups previously, the rule was a comparative disadvantage for the banks as it did not apply to non-banks, which were hence allowed to operate some financial services by applying FinTech, and large companies such as Sony and Rakuten had already made use of this opportunity. The reason why this relative advantage of non-banks over banks emerged in the first place was "Japanese politicians' concern over excessive influence of banks over tech startups" (Yap 2017, 29). This concern relates to corporate governance reform since Japan's financial and economic crisis and corresponding government efforts to break up keiretsu structures, i.e. conglomerates usually situated around a main bank. In March 2016, the Diet changed the Banking Law and abolished the former 5% (in some cases 15%) limit on investments. Although the Japan Fair Trade Commission (JFTC), worried by potential conflicts of interest and monopoly positions of the three large Japanese banks SMBC, Mizuho, and Bank of Tokyo-Mitsubishi UFJ, had expressed concern over the change of the Banking Act, METI, the MOF, and the FSA prevailed, so that the FSA is now in a position to approve applications for said investments on a case-by-case basis (Yap 2017, 29). Vice Premier, Finance Minister, and Minister of State for Financial Services Aso Taro voiced support for the legislation amendment, saying that it would enable cooperation between banks and startups. He emphasized that the MOF's role had changed from financial regulator to nurturer of the financial industry (Braithwaite/Harding 2016), which, given the MOF's history of failed financial supervision that led to the establishment of the FSA in the first place (see above), has an ironic undertone.

The government also played an important role in the FSA granting the Japan Virtual Currency Exchange Association (JVCEA) self-regulatory status. While this has been regarded as a reaction to two major cryptocurrency exchange hacks (Uranaka 2018), the LDP had asked the Japan Cryptocurrency Business Association and the Japan Blockchain Association to form the JVCEA (Carmody et al. 2018, 8). An FSA official reportedly said that it was faster having experts instead of bureaucrats make the rules (Uranaka 2018).

Three other legal developments, both of them related to CCs, are worth examining. The first is the regulation of CCs themselves. In the 2016 amendment to the Payment Services Act that took effect in April 2017, virtual currencies (kaso tsūka), which include CCs, were defined as proprietary value and a means of payment, but not as legal tender. This made the transfer of CCs in principle subject to taxation. The amendment also introduced the category of virtual currency exchange service providers (kaso tsūka kokan gyosha) and made it mandatory for them to register with the FSA (Ishikawa 2017, 128). As the amendment was a reaction to the Mt. Gox cryptocurrency heist and the following guidance issued by the Paris-based Financial Action Task Force regarding anti-money laundering (Gonzalez 2018, 28), the amendment must be understood as trying to incorporate the guidelines while at the same time establishing consumer protection (Ishikawa 2017). The amendment was preceded by the FSA's establishment of a working group and the issuance of the group's final report. Among the working group's members were representatives of corporations (including, for example, Rakuten), consumer interest groups, large banks (Tokyo-Mitsubishi UFJ and Mizuho) as well as researchers from different Japanese universities (FSA 2015). The amendment of the Payment Services Act mainly followed the recommendations of the working group's report (FSA 2015; Library of Congress 2019).

Following the Coincheck hack of January 2018, the FSA set up another study group. The group submitted its report in December 2018, proposing further regulation of cryptocurrency exchange providers. This time, members were almost exclusively professors from different Japanese universities. Representatives from ministries, the BOJ, the Japanese Bankers Association, the JVCEA and other institutions had only observer status (FSA 2018).

Similarly, a 2019 amendment to the Financial Instruments and Exchange Act regarding initial coin offerings was preceded by the establishment of a corresponding study group chaired by Kokubun Toshifumi, professor at the Tama Graduate School of Business. Members comprised, among others, Kanō Yūzō, CEO of the cryptocurrency exchange bitFlyer Inc., the three large Japanese banks, as well as Tokyo Electric Power (Tama University 2018).

While the criteria for the selection of the members and observers of the working and study groups are unclear at this point, the visible pattern is that the establishment and work of the study groups has preceded regulatory change and regulatory change has mainly followed the recommendations of the study groups. In addition to playing an active part in establishing the groups, Prime Minister Abe appointed Hirai Takuya minister in charge of information technology policy and minister of state for science and technology policy (Kantei s.a.). Hirai, formerly chairperson of the LDP's IT Strategy Special Committee and the FinTech Promotion Parliamentarians' Federation (Haring 2018), advised the study group on initial coin offerings (ICOs) chaired by Kokubun Toshifumi (Hagiwara/Nakamura 2018) and is reportedly known as a proponent of blockchain technology (Terenzi 2018).

This coordinated governance approach by which the regulators grant the regulated entities considerable involvement in the regulation process itself is quite common in Japanese financial market and corporate governance. The FinTech study groups resemble forums for business leaders to directly express their needs, such as the Industrial Competitiveness Council (ICC) (Tiberghien 2007, 134 f.), while the main difference is that the prime minister does not chair the FinTech study groups. In this regard, the FinTech study groups resemble the Economic Strategy Council of 1998 (Tiberghien 2007, 137).

Similarly, the granting of self-regulatory status to private sector associations is quite common in Japan, as the case of the Japan Securities Dealers Association shows (Japan Securities Research Institute 2016, 348 f.).

The BOJ seems to play only a minor role in the government-led process. While BOJ Governor Kuroda Haruhiko warned at the 2019 World Economic Forum that FinTech firms might disrupt the banking sector, especially payments and settlement (Kihara/Bendeich 2019), Kuroda and other BOJ representatives emphasized FinTech's potential to stimulate the growth of the Japanese economy as well as the importance of the parallel existence of central and decentralized systems (Kuroda 2016; Nakaso 2016). Hence the BOJ's position mainly reflects the policy of the Japanese government to use FinTech in general and CCs in particular to revive the Japanese economy. This political course was continued and arguably even extended by the creation of the Digital Agency, thereby adding the goal to not only digitize Japanese finance but also the state's administration (Nagata 2021).

There is support for the government's approach among relatively new business associations that have been founded as counterparts to established and powerful large businesses. The Japanese Association of New Economy (JANE), founded by Rakuten CEO Mikitani Hiroshi in 2012, is one example. Although Rakuten had briefly been a member of the most powerful business association Keidanren from 2004, Mikitani made Rakuten leave the association again in June 2011 and instead founded JANE. JANE's members are companies that mostly deviate from the clientelistic structure of Japan's political economy that has been in place for most of the period since the end of the Second World War. JANE represents companies that not only have a strong economic interest in deregulation, reform, innovation, and the benefits of globalization, but that also enter the political arena to challenge vested interests such as nuclear power (Harner 2012). JANE has lobbied ministries such as METI for the promotion of FinTech (JANE 2016).

Conclusion

Financial market governance of CCs in Japan resembles general patterns of Japanese financial market governance in many ways. The use of *shingikai* and other informal groupings, the blurring of institutional boundaries resulting in potential conflicts of interest, the granting of self-regulatory status to private-sector associations, and the incorporation of multiple actors and interests in a network-like structure are some of the main examples. Path dependency is also found in the continuation of underlying topics: regulation partly runs the risk of recreating or reinforcing the very structure the government has actually tried to reform since the outbreak of the Japanese financial and economic crisis.

The reason for this can be found in the constellation of actors and competitive dynamics stemming from the international and global levels. Due to the dual structure of large banks with high amounts of capital and small startups lacking big customer bases, the government, in its attempt to jump-start Japan's FinTech revolution against international competition, sees no other choice but to foster cooperation between incumbents and challengers. The fast pace of this endeavor stems from the fact that even the incumbents have a strong interest in nurturing FinTech startups so that they can use new technology in order to increase their profits. The absence of fierce resistance to a purposeful development of the FinTech market also facilitates the government's role as the main actor in this process.

The success, both in terms of the government's main goal, i.e. the revitalization of the Japanese economy, and consequences for patterns of innovation in Japan, is yet to be seen. It also depends on the level of analysis. As financial market governance of CCs and other FinTech products in Japan is an ongoing process, further research on these questions is needed.

References

- Amyx, Jennifer A. 2001. "Informality and Institutional Inertia. The Case of Japanese Financial Regulation." *Japanese Journal of Political Science* 2 (1): 47–66. Accessed 14-08-05. doi: 10.1017/S1468109901000135.
- Amyx, Jennifer A. 2004. *Japan's Financial Crisis. Institutional Rigidity and Reluctant Change.* Princeton/Oxford: Princeton University Press.
- Bariviera, Aurelio F., María José Basgall, Waldo Hasperué, and Marcelo Naiouf. 2017. "Some stylized facts of the Bitcoin market." *Physica A* 484: 82–90. Accessed 18-04-16. doi: 10.1016/j.physa.2017.04.159.
- Berentsen, Aleksander, and Fabian Schär. 2018. "A Short Introduction to the World of Cryptocurrencies." *Federal Reserve Bank of St. Louis Review* 100 (1): 1–16. Accessed 18-07-02. doi: 10.20955/r.2018.1-16.
- Braithwaite, Tom, and Robin Harding. 2016. "Japan banks target fintech start-ups after law change." *Financial Times*, September 25. Accessed 19-11-30. https://www.ft.com/content/1ce8fffc-8162-11e6-bc52-0c7211ef3198.

- Campbell-Verduyn, Malcolm. 2018. "Introduction. What are blockchains and how are they relevant to governance in the contemporary global political economy?" In Bitcoin and Bevond. Cryptocurrencies, Blockchains, and Global Governance, edited by Malcolm Campbell-Verduyn, 1-24. London/New York: Routledge. Accessed 18-04-16. https://library.oapen.org/bitstream/handle/20.500.12657/29557/1000376.pdf?sequence= 1&isAllowed=v.
- Cargill, Thomas F., Michael M. Hutchison, and Takatoshi Ito. 2000. Financial Policy and Central Banking in Japan. Cambridge/London: The MIT Press.
- Carmody, Kody, Kelsey Robarts, Yiran Wang, and Troy Wiipongwii. 2018. "Crypto in East Asia. Regulations and Regulators." The William and Mary Blockwonks Lab, 29. Mai. Accessed 19-01-22. https://www.academia.edu/36742657/Crypto In East Asia Regulations and Regulators.
- Christensen, Clayton M., Scott D. Anthony, and Erik A. Roth. 2004. Seeing What's Next: Using the Theories of Innovation to Predict Industry Change. Boston: Harvard Business Review Press.
- Coinmarketcap. 2021a. "Today's Cryptocurrency Prices by Market Cap." Accessed 21-12-09. https://coinmarketcap.com/.
- Coinmarketcap. 2021b. "Major Cryptoassets By Percentage of Total Market Capitalization (Bitcoin Dominance Chart)." Accessed 21-12-09. https://coinmarketcap.com/charts/.
- Danneels, Erwin. 2004. "Disruptive Technology Reconsidered. A Critique and Research Agenda." Journal of Product Innovation Management 21 (4): 246-258. Accessed 19-06-26. doi: 10.1111/j.0737-6782.2004.00076.x.
- Dekle, Robert, Kletzer, Kenneth. 2003. "The Japanese banking crisis and economic growth: Theoretical and empirical implications of deposit guarantees and weak financial regulation." Journal of the Japanese and International Economies 17 (3): 305–335. Accessed 14-09-05. doi: 10.1016/S0889-1583(03)00041-8.
- Deloitte. 2017. "A tale of 44 cities. Connecting FinTech: Interim Hub Review 2017." Deloitte. Accessed 19-11-24. https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/Innovation/deloitte-ukconnecting-global-fintechhub-federation-innotribe-innovate-finance.pdf.
- Deloitte Tohmatsu. 2017. "Japanese Fintech in the Global Context" Deloitte, 23. Oktober. Accessed 19-11-24. https://www2.deloitte.com/content/dam/Deloitte/jp/Documents/ financial-services/bk/en-japan-of-fintech.pdf.
- Diordiiev, Viktor. 2018. "Blockchain Technology and its Impact on Financial and Shipping Services." Economy, Ecology, Socium 2 (1): 51-63. Accessed 19-06-26. doi: 10.31520/2616-7107/2018.2.1-5.
- Dwyer, Jennifer Holt. 2012. "Explaining the Politicization of Monetary Policy in Japan." Social Science Japan Journal 15 (2): 179-200. Accessed 14-05-19. doi: 10.1093/ssjj/jys009.
- FSA. 2015. Kinyū shingikai kessai gyomu nado no kodoka ni kansuru wākingu gurūpu hōkoku kessei kōdoka ni muketa senryakuteki torikumi (Report of the Financial System Council Working Group on the Sophistication of Payment and Settlement Services -Strategic Initiatives for Enhancing Payment and Settlement Sophisticated Services). FSA, December 22. Accessed 19-12-01.

- FSA. 2018. "Report from Study Group on Virtual Currency Exchange Services". FSA, December 21. Accessed 19-11-24. https://www.fsa.go.jp/en/refer/councils/virtualcurrency/20181221-1.pdf.
- Gomber, Peter, Robert J. Kauffmann, Chris Parker, Bruce W. Weber. 2018. "On the Fintech Revolution: Interpreting the Forces of Innovation, Disruption, and Transformation in Financial Services." *Journal of Management Information Systems* 35 (1): 220–265. Accessed 19-06-26. doi: 10.1080/07421222.2018.1440766.
- González, Marta. 2018. "Blockchain in Japan." EU-Japan Centre for Industrial Cooperation. Accessed 19-12-01. https://www.eu-japan.eu/sites/default/files/publications/docs/ blockchaininjapan-martagonzalez.pdf.
- Haddad, Christian, Lars Hornuf. 2019. "The emergence of the global fintech market: economic and technological determinants." *Small Business Economics* 53 (1): 81–105. Accessed 19-11-24. doi: 10.1007/s11187-018-9991-x.
- Hagiwara, Yuki, and Yuji Nakamura. 2018. "Japan Unveils Guidelines for Allowing Initial Coin Offerings." *Bloomberg*, April 5. Accessed 19-01-22. https://www.bloomberg.com/ news/articles/2018-04-05/japan-plans-first-step-toward-legalizing-initial-coin-offerings.
- Hall, Maximilian J.B. 2009. "Japan: the banks are back! Or are they?" Journal of Financial Regulation and Compliance 17 (1): 16–28. Accessed 14-09-30. doi: 10.1108/13581980910934018.
- Hanazaki, Masaharu, and Akiyoshi Horiuchi. 2003. "A review of Japan's bank crisis from the governance perspective." *Pacific-Basin Finance Journal* 11 (3): 305–325. Accessed 19-10-27. doi: 10.1016(S0927-538X(03)00026-X.
- Harada, Kimie, Takeo Hoshi, Masami Imai, Satoshi Koibuchi, and Ayako Yasuda. 2015. "Japan's financial regulatory responses to the global financial crisis." *Journal of Financial Economic Policy* 7 (1): 51–67. Accessed 18-12-12. doi: 10.1108/JFEP-12-2014-0077.
- Haring, Bruce. 2018. "Blockchain Advocate Named Japan's Minister of Science, Technology and IT." *BlockTribune*, 5. Oktober, https://blocktribune.com/blockchainadvocate-named-japans-minister-of-science-technology-and-it/ Accessed 19-01-22.
- Harner, Stephen. 2012. "Can Rakuten maverick CEO Mikitani's New Organization Change Japan?" Forbes Asia, October 10. Accessed 19-11-05. https://www.forbes.com/sites/stephenharner/2012/10/10/can-rakuten-maverick-ceomikitanis-new-organization-change-japan/.
- Hütten, Moritz, and Matthias Thiemann. 2018. "Moneys at the margins: from political experiment to cashless societies." In *Bitcoin and Beyond. Cryptocurrencies, Blockchains, and Global Governance*, edited by Malcolm Campbell-Verduyn, 25–47. London/New York: Routledge. Accessed 18-04-16. https://library.oapen.org/bitstream/ handle/20.500.12657/29557/1000376.pdf?sequence=1&isAllowed=y.
- JANE. 2016. "Towards the Realization of a Smart Financial Nation. Building an Innovation-Inducing Society." JANE, July 28. Accessed 19-11-24. https://jane.or.jp/app/wpcontent/uploads/2018/12/20160728_FinTech_Eng.pdf.
- Japan Securities Research Institute. 2016. Securities Market in Japan. 2016. Accessed 19-01-13. http://www.jsri.or.jp/publish/english/pdf/english_08.pdf.
- Japan Times. 2021a. "FSA opens office to give English guidance to foreign financial firms entering Japan." Accessed 21-09-24. https://www.japantimes.co.jp/news/2021/01/17/ business/english-foreign-financial-firms-japan/.

- Japan Times. 2021b. "Top U.S. operator Coinbase ties up with MUFG to start Japan cryptocurrency exchange." Accessed 21-09-23. https://www.japantimes.co.jp/news/ 2021/08/19/business/economy-business/coinbase-mufg-cryptocurrencies/.
- Jia, Kai, and Falin Zhang. 2018. "Between liberalization and prohibition: Prudent enthusiasm and the governance of Bitcoin/blockchain technology." In *Bitcoin and Beyond. Cryptocurrencies, Blockchains, and Global Governance*, edited by Malcolm Campbell-Verduyn, 88–108. London/New York: Routledge. Accessed 18-04-16. https://library.oapen.org/bitstream/handle/20.500.12657/29557/1000376.pdf?sequence= 1&isAllowed=y.
- Johnson, Chalmers. 1982. MITI and the Japanese Miracle. The Growth of Industrial Policy, 1925–1975. Stanford: Stanford University Press.
- Kantei. 2016. "Japan Revitalization Strategy 2016." Accessed 19-12-02. https://www.kantei.go.jp/jp/singi/keizaisaisei/pdf/hombun1 160602 en.pdf.
- Kantei. 2017. "Council on Investments for the Future." Accessed 19-12-02. https://www.kantei.go.jp/jp/singi/keizaisaisei/pdf/miraitousi2017_summary.pdf.
- Kantei. s.a. "The Cabinet. Hirai Takuya." Accessed 19-12-01. https://japan.kantei.go.jp/98 abe/cabinetlist2/daijin/hirai takuya.html.
- Kihara, Leika, and Mark Bendeich. 2019. "BOJ's Kuroda warns fintech firms could disrupt banking system." *Reuters*, January 24. Accessed 19-11-17. https://www.reuters.com/article/us-davos-meeting-fintech-kuroda/bojs-kuroda-warnsfintech-firms-could-disrupt-banking-system-idUSKCN1PI2MR.
- Köllner, Patrick. 2006. "Präsidentialisierung' des Premierministers? Die japanische Exekutive in der Regierungszeit von Jun'ichirō Koizumi." Japan aktuell 14 (2): 45–58.
- Köllner, Patrick. 2007. "Die Machtposition des japanischen Regierungschefs. Grundlegende institutionelle Parameter und jüngere Entwicklungen." *Japanstudien* 18 (1): 271–301. Accessed 18-06-18. doi: 10.1080/09386491.2007.11826945.
- Kuroda, Haruhiko. 2016. "Innovations in payments and FinTech the central bank's perspective, Remarks by Mr Haruhiko Kuroda, Governor of the Bank of Japan, at the Forum on Payment and Settlement Systems, Tokyo, 17 March 2016." Accessed 19-01-18. https://www.bis.org/review/r160317b.pdf.
- Laurence, Henry 1996. "Regulatory Competition and the Politics of Financial Market Reform in Britain and Japan." *Governance: An International Journal of Policy and Administration* 9 (3): 311–341. Accessed 14-05-13. doi: 10.1111/j.1468-0491.1996.tb00245.x.
- Lewis, Leo. 2019. "MUFG plans fintech push top unlock sleeping assets." *Financial Times*, April 9. Accessed 19-11-30. https://www.ft.com/content/54a7ea3a-5a71-11e9-9dde-7aedca0a081a.
- Library of Congress. 2019. "Regulation of Cryptocurrency: Japan." Accessed 19-12-01. https://www.loc.gov/law/help/cryptocurrency/japan.php#_ftn3.
- Livingston, David, Varun Sivaram, Madison Freeman, and Maximilian Fiege. 2018. "Applying Blockchain Technology to Electric Power Systems." Council on Foreign Relations Maurice R. Greenberg Center for Geoeconomic Studies Discussion Paper, July. Accessed 18-11-23. https://cfrd8-files.cfr.org/sites/default/files/report_pdf/ Discussion_Paper_Livingston_et_al_Blockchain_OR_0.pdf.

- Lütz, Susanne. 2002. Der Staat und die Globalisierung von Finanzmärkten. Regulative Politik in Deutschland, Großbritannien und den USA. Frankfurt/New York: Campus Verlag.
- Markham, Jerry W. 2003. "Super Regulator: A Comparative Analysis of Securities and Derivaties Regulation in the United States, the United Kingdom, and Japan." *Brooklyn Journal of International Law* 28 (2): 319–410. Accessed 14-08-28. https://heinonline.org/HOL/Page?handle=hein.journals/bjil28&div=18&collection=jour nals.
- Nagata, Kazuaki. 2021. "Japan launches Digital Agency to push ahead with long-overdue reforms." Japan Times, September 1. Accessed 21-09-24. https://www.japantimes.co.jp/ news/2021/09/01/national/politics-diplomacy/digital-agency-launch-japan/.
- Nakaso, Hiroshi. 2016. "FinTech its impacts on finance, economies and central banking Remarks by Mr Hiroshi Nakaso, Deputy Governor of the Bank of Japan, at the University of Tokyo - Bank of Japan Joint Conference on 'FinTech and the Future of Money.'" Tokyo, November 18. Accessed 19-01-18. https://www.bis.org/review/r161214a.pdf.
- Neville, Ann. 1997. "Financial Deregulation in Japan." *Australian Journal of Political Science* 32 (3): 369–382. Accessed 14-09-02. doi: 10.1080/10361149750805.
- OECD. 2018. "Financial Markets, Insurance and Private Pensions: Digitalisation and Finance." Accessed 19-01-18. https://www.oecd.org/finance/private-pensions/Financialmarkets-insurance-pensions-digitalisation-and-finance.pdf.
- Ohira, Koichiro. 2017. "Fintech in Japan." Institute for International Socio-Economic Studies. Accessed 19-11-05. https://static1.squarespace.com/static/559659a8e4b07b7dda4b5c3b/t/5980382bbf629ae2 68ea51d8/1501575216949/201707+FinTech+Japan.pdf.
- Okamoto, Takuya. 2020. "Japan prepares for digital currency, in line with China and others." *Japan Times*, December 24. Accessed 21-09-24. https://www.japantimes.co.jp/news/2020/12/24/business/economy-business/japan-digital-currency/.
- Rodima-Taylor, Daivi, and William W.Grimes. 2018. "Cryptocurrencies and digital payment rails in networked global governance. Perspectives on inclusion and innovation." In *Bitcoin and Beyond. Cryptocurrencies, Blockchains, and Global Governance*, edited by Malcolm Campbell-Verduyn, 109–132. London/New York: Routledge. Accessed 18-04-16. https://library.oapen.org/bitstream/handle/20.500.12657/ 29557/1000376.pdf?sequence=1&isAllowed=y.
- Scharpf, Fritz W. 2000. Interaktionsformen. Akteurzentrierter Institutionalismus in der Politikforschung. Opladen: Springer Fachmedien Wiesbaden GmbH.
- Siciliani, Paolo. 2018. "The Disruption of Retail Banking. A Competition Analysis of the Implications for Financial Stability and Monetary Policy." *Journal of Financial Regulation* 4 (2): 167–189. Accessed 19-07-30. doi: 10.1093/jfr/fjy006.
- Takahashi, Wataru. 2011. "The Japanese Financial Sector's Transition from High Growth to the 'Lost Decades': A Market Economy Perspective". *Kobe University Discussion Paper Series*, 29. Accessed 14-09-01. https://www.rieb.kobe-u.ac.jp/academic/ra/dp/ English/DP2011-29.pdf.

- Tama University. 2018. "Call for Rule-making on ICO. Proposal by ICO Business Research Group." Center for Rule-making Strategies. Accessed 19-01-18. https://www.tama.ac.jp/crs/2018_ico_en.pdf.
- Temelkov, Zoran. 2018. "Fintech Firms. Opportunity or Threat for Banks?" International Journal of Information, Business and Management 10 (1): 137–143. Accessed 19-09-24. http://ijibm.elitehall.com/IJIBM_Vol10No1_Feb2018.pdf.
- Terenzi, Carlos. 2018. "Japan's New Minister of Science supports Blockchain Technology." UseTheBitcoin, October 6. Accessed 19-01-22. https://usethebitcoin.com/japans-newminister-of-science-support-blockchain-technology/.
- Tiberghien, Yves. 2005. "Navigating the Path of Least Resistance: Financial Deregulation and the Origins of the Japanese Crisis." *Journal of East Asian Studies* 5 (3): 427–464. Accessed 18-10-29. https://www.jstor.org/stable/pdf/23417874.pdf?refreqid=excelsior% 3A603899552761e8b0b6016e48a35a9c5b.
- Tiberghien, Yves. 2007. Entrepreneurial States. Reforming Corporate Governance in France, Japan, and Korea. Ithaca: Cornell University Press.
- Uranaka, Taiga. 2018. "Japan grants cryptocurrency industry self-regulatory status." *Reuters*, October 24. Accessed 19-11-26. https://www.reuters.com/article/us-japancryptocurrency/japan-grants-cryptocurrency-industry-self-regulatory-statusidUSKCN1MY10W.
- Vogel, Steven K. 1994. "The Bureaucratic Approach to the Financial Revolution. Japan's Ministry of Finance and Financial System Reform." *Governance: An International Journal of Policy, Administration, and Institution* 7 (3): 219–243. Accessed 14-08-08. doi: 10.1111/j.1468-0491.1994.tb00179.x.
- Vogel, Steven K. 1996. Freer Markets, More Rules. Regulatory Reform in Advanced Industrial Countries. Ithaca: Cornell University Press.
- Vogel, Steven K. 1999. "Can Japan Disengage? Winners and Losers in Japan's Political Economy, and the Ties that Bind Them." *Social Science Japan Journal* 2 (1): 3–21. Accessed 14-05-19. https://www.jstor.org/stable/pdf/30209743.pdf?refreqid=excelsior% 3Ac0cb6ed16abad76c7dc8941b58bff878.
- Vogel, Steven K. 2006. Japan Remodeled. How Government and Industry are Reforming Japanese Capitalism. Ithaca: Cornell University Press.
- Vogel, Steven K. 2018. *Marketcraft. How Governments Make Markets Work*. New York: Oxford University Press.
- Walter, Andrew. 2006. "From developmental to regulatory state? Japan's new financial regulatory system." *The Pacific Review* 19 (4): 405–428. Accessed 14-06-24. doi: 10.1080/09512740600984507.
- Watanabe, Shinji. 2019. "Fintech kigyō no teikei ni kansuru bunseki" (Analysis of Fintech Business Alliance – evidence from Japan): Abstracts of Annual Conference of Japan Society for Management Information, Juni. Accessed 19-11-24. https://www.jstage.jst.go.jp/article/jasmin/201906/0/201906 280/ pdf/-char/ja.
- Wilson, Thomas. 2016. "Japan looks to kickstart 'fintech' revolution." *Reuters*, 27. März. Accessed 19-11-30. https://www.reuters.com/article/us-japan-fintech/japan-looks-to-kickstart-fintech-revolution-idUSKCN0WT01F.

- Yap, Brian. 2017. "Asia's fintech battleground. The region's financial hubs are vying for supremacy in the emerging sector. It's a tight race." *International Financial Law Review* 36 (4): 28–29. Accessed 19-09-10. https://heinonline.org/HOL/Page?collection=journals&handle=hein.journals/intfinr36&i d=254&men tab=srchresults.
- Yuan, Yong, and Fei-Yue Wang. 2018. "Blockchain and Cryptocurrencies. Model, Techniques, and Applications." *IEEE Transactions on Systems, Man, and Cybernetics: System* 48 (9): 1421–1428. Accessed 18-10-01. doi: 10.1109/TSMC.2018.2854904.