



Harvard Law School Program on International Financial Systems
International House of Japan

Symposium on Building the
Financial System of the 21st Century:
An Agenda for Japan and the United States

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Final Report

2018 Symposium on Building the Financial System of the 21st Century: An Agenda for Japan and the United States

The twenty-first Japan-U.S. Symposium on Building the Financial System of the 21st Century was held in Washington, DC, from October 19-21, 2018. Sessions addressed the impact on financial institutions of “Trumponomics” and financial deregulation, financial technology and banking, and the causes and consequences of persistently low long-term interest rates in the most developed economies.

第 21 回 日米国際金融シンポジウム 「21 世紀金融システムの構築：日本と米国にとっての課題」

第 21 回日米国際金融シンポジウム「21 世紀金融システムの構築」が、2018 年 10 月 19～21 日に米国ワシントン D. C. にて開催され、「トランプ政権の経済政策および金融規制緩和の国際的金融機関への影響」、「金融テクノロジーと銀行」、「最先進国経済における長期金利の低迷持続の原因と影響」の 3 つの議題について議論がなされた。

<セッション 1> トランプ政権の金融規制緩和：国際的金融機関への影響

セッション 1 では、トランプ政権の経済政策および金融規制緩和が国際的金融機関に与える影響について議論がなされた。日米政府の共通の関心事項として、経済成長を最優先とした規制改革への取り組みがあること、またこの取り組みが欧州の各国政府が強調し続けているそのほかの面での安定とは対照的なアプローチであることを確認した。そこで、日米と欧州の異なるアプローチを踏まえてどのように国際協調を行っていくのかについて議論が重ねられた。

<セッション 2> 金融テクノロジーと銀行：脅威と機会

本セッションでは、新たなテクノロジーが金融セクターにどのような変化をもたらすかについて議論がなされた。まず、これまでの新たなテクノロジーや新規参加者が、既存の金融機関や規制当局、顧客、財政の安定にもたらす脅威と機会について話し合った。とりわけ、財政の安定と既存の金融機関との公平な競争の場を確保しつつ、同時にイノベーションを促すようなかたちで FinTech 新興企業を規制するにはどのような方法が最適に関心が向けられた。

<セッション 3> 長期金利の低迷持続：原因と影響

セッション 3 では、長期金利の低迷持続の原因と影響について議論がなされた。参加者は、自然利子率が永久的に下がっていくのか、またこの状況が物価下落の誘因となる潜在成長力の低下もしくは急速な生産性向上を反映したものなのかといった課題を取り上げ、さらに、低金利が銀行や保険会社、証券会社を含む金融機関に及ぼす影響についても議論した。最後に、参加者は各中央銀行がこの状況に対応するために金融政策をどう運営すべきかについて討論した。

Session 1: Trumponomics and Financial Deregulation: Impact on International FIs

In Session 1, participants discussed the impact of Trump administration economic policies and financial deregulation on global financial institutions. They saw common interests between the U.S. and Japanese governments in pursuing regulatory reforms that prioritized economic growth, contrasting this approach with those of European governments that continued to emphasize stability over all other goals. There was considerable discussion as to how international cooperation might operate in light of the diverging approaches of the U.S. and Japan on the one hand and Europe on the other.

Trumponomics

Participants began with a discussion of “Trumponomics.” They agreed that there were three main elements to the administration’s economic policies: stimulatory fiscal policy, pro-growth regulation, and “fair and reciprocal” trade.

The centerpiece of Trump administration fiscal policy to date was the large tax cut passed in late 2017. Participants agreed that the tax cut was stimulatory, but there were mixed opinions as to its microeconomic effects. Many participants applauded pro-investment elements such as the corporate tax cut, arguing that they would contribute not only to current growth but also to longer-run potential growth. Others expressed concern about what they saw as regressive elements, which could exacerbate growing income and wealth inequality. There was also discussion of the sustainability of fiscal policy. Many participants noted that tax cuts had not been matched by spending cuts; indeed, fiscal spending had risen considerably. Despite the administration’s professed concern over deficits, this mix would inevitably lead to growth in the fiscal deficit. Some participants argued that the stimulative effects of current Trump administration fiscal policies would wane over the course of 2019, and that unless additional spending or tax cuts occurred, the effective withdrawal of fiscal stimulus would likely contribute to a substantial slowdown or even recession by 2020. Turning to the U.S.-Japan impact, participants noted that fiscal stimulus together with rising interest rates would likely lead to higher U.S. trade and current account deficits (both multilateral and bilateral with Japan) and an appreciation of the dollar against the yen. In light of the Trump administration’s strong criticisms of trade imbalances and yen depreciation, the macroeconomic picture seemed likely to exacerbate trade tensions.

With regard to trade policy, participants agreed that the Trump administration presented a distinctive new approach compared to previous administrations. While some elements represented continuity with the past, the administration’s singular focus on reducing deficits (including bilateral deficits), preference for bilateral over multilateral agreements, willingness to impose unilateral and targeted tariffs, and confrontational rhetoric were seen as significant breaks from the past. Many participants expressed consternation over the administration’s stated preference for bilateral agreements, which they saw as weakening the global trading system and complicating the ability of global supply chains to operate. They warned that this would likely harm growth in many countries, including the U.S. and Japan, both of which relied heavily on global markets and supply chains. There was some debate over the administration’s willingness

to threaten or impose trade remedies for allegedly unfair trade practices by other countries. Some participants argued that there were indeed many unfair trade practices that adversely affected U.S. firms, and that the WTO and existing FTAs were not able to properly enforce them. Others disagreed, either because they saw the administration's definition of "fair" as arbitrary or because they worried that unilateral actions would threaten the multilateral system. They argued that deficiencies in rules or enforcement should best be dealt with in a cooperative manner. Finally, there was considerable debate over the confrontational approach of the administration. Some argued that it was simply a negotiating tactic, noting that the agreements to date, such as the USMCA ("new NAFTA") were generally supportive of existing trade agreements and practices, despite the volley of threats and insults that preceded agreement. Others felt that the threats represented President Trump's core desire to attack the multilateral trading system and worried that the efforts to gain short-term relative advantage versus individual trading partners would alienate countries that would be potential allies in reforming global trade rules or in confronting Chinese practices that disadvantaged firms from the U.S., Japan, and EU.

Participants agreed that Chinese trade and economic practices had been a particular focus of Trump administration trade policies and rhetoric; however, there was disagreement about whether the goal was simply eliminating those practices or to be a key element in a broader effort to contain China or slow its rise as a global power. They noted that Japan was also a frequent target of Trump administration rhetoric and pressure, which some attributed to the president's personal experiences in the New York real estate markets in the 1980s. Two issues were raised of particular concern to Japan. First was U.S. pressure to engage in bilateral negotiations, which many participants saw as an attempt to use market leverage to get "TPP-plus" access to Japanese markets without reciprocating or rejoining TPP. Second was the administration's apparent determination to make currency central to trade agreements, including binding disciplines on exchange rates and exchange rate policy. This was seen by many participants as a dangerous development for Japan.

The third element of Trumponomics was a pro-growth regulatory agenda. One element was an emphasis on deregulation, with the administration seeking to reduce regulations and simplify rules with the objective of allowing businesses to focus on growth and for markets to operate without interference. Many participants also noted a greater emphasis on cost-benefit analysis in rulemaking, as well as a shift in priorities as to which costs were most important. (This was particularly true with regard to environmental policy, for example.) There was considerable discussion throughout Session 1 about regulatory policy—and especially financial regulation—that is elaborated upon below.

Looking at Trump administration policies holistically, a number of participants questioned whether the approach could be understood as coherent, noting that while the fiscal and regulatory agendas prioritized economic growth above other policy concerns, the administration's trade policy constituted a drag on growth. They also pointed out that stimulatory fiscal policy conflicted with the administration's stated goal of eliminating the country's trade deficit. Nonetheless, there was considerable support for elements of Trumponomics, especially the financial regulatory agenda.

Diverging Approaches to Regulation

Participants discussed a series of dilemmas and questions facing financial regulators, including the trade-offs between growth and stability, whether to regulate entities or functions, whether regulation and supervision should be principles-based or rules-based, and how to define a level playing field. They noted that, despite commitments to some common principles and rules at the global level, countries often pursued diverging approaches to regulation. This raised concerns about coordination among regulators, competitive effects for financial institutions, and complications for cross-border transactions and multinational financial institutions.

A particular focus of discussion was what many participants saw as diverging approaches to regulation between the U.S. and Japan on the one hand and Europe on the other. Both the U.S. and Japan were increasingly emphasizing the importance of growth-oriented policies. In the U.S., this could be seen in a variety of moves, including the recent modification of the Dodd-Frank Act to provide regulatory relief for non-systemically important financial institutions and to roll back “goldplating” of capital requirements. Japanese regulators similarly had been voicing concerns for several years about overreach by international regulatory bodies in banking, insurance, and derivatives. However, despite a general sense of relief that the U.S. was rolling back some of the more burdensome post-crisis regulations, a number of participants cautioned that it was not clear what the effects would be on Japanese financial institutions. While Japanese financial institutions would benefit from lower corporate taxes and to modify the interpretation of the Volcker Rule to allow for more market-making activities, a number of participants pointed out that it was as yet unclear whether major Japanese banks with small U.S. operations would continue to be regulated as systemically-important banks (G-SIBs). The crux of the question was whether G-SIB designation—and all the enhanced supervision, capital requirements, living will requirements, and stress testing that entailed—would be based on U.S. operations or global operations. Many participants argued strongly that G-SIB regulation by U.S. authorities should be based solely on the size of their U.S. operations, but worried that they would in fact receive no regulatory relief despite the raised thresholds for G-SIB designation. Still, overall, there was a sense among participants that U.S. and Japanese financial institutions and regulators shared more common interests with each other than they did with European regulators.

European regulators were seen by participants as continuing to be fixated on reducing financial vulnerability by increasing regulations on financial institutions across the board, regardless of the regulatory burden on financial institutions or the effect on financial institutions’ ability to finance productive investment. Participants pointed out that this was as at least as true in a number of respects for the UK as for the rest of the EU, as seen for example in the ringfencing mandated by the Vickers Rule—and some argued that the UK would likely continue down the track of more burdensome regulation after Brexit. This divergence created challenges for the U.S. and Japan in three ways. First, more burdensome regulations affected U.S. and Japanese financial institutions operating within Europe. Second, some European initiatives were seen to have extraterritorial effects, such as the General Data Protection Regulation (GDPR), Solvency II, and MiFID II rules on unbundling and dark pools. Third, a number of participants worried that European regulators were imposing their approach in international regulatory bodies such as the Basel Committee and the International Association of Insurance Supervisors (IAIS).

Key Issues for Regulators

With the initial G20 financial regulatory agenda was almost fully implemented, participants identified a variety of challenges that continued to face regulators in the U.S., Japan, and Europe. Some of these were new challenges, while others showed continuity with the concerns that had led to post-crisis G20 efforts at regulatory cooperation and standard-setting. In some cases, a number of participants argued that the challenges were side effects of post-crisis regulation itself, calling for a reappraisal of local regulation and global standards.

A major concern for many participants was fragmentation of global financial markets and financial services. In derivatives, a number of participants argued that EU rules on clearing and counterparties were already leading to fragmented markets, and they worried that the EU would require further onshoring of clearing and other operations in reaction to Brexit. Brexit was seen as having two negative effects for Japanese and U.S. financial institutions. One was that most had based their European operations in the UK. Depending on how Brexit was managed, they might be forced to move significant portions of their personnel and functions elsewhere in the EU; regardless of the final outcome, planning was already requiring considerable time, attention, and expense. Second, some expressed concerns that the EU's existing equivalence determinations for financial supervision in the U.S. and Japan might be reconsidered—and even imperiled—if the Brexit agreement did not ensure that UK financial supervision were considered equivalent. More generally, participants pointed out that many jurisdictions were choosing to ringfence bank capital, making it harder (and thus more expensive) to pursue a global approach to managing capital. Some argued that ringfencing would also prevent multinational financial institutions from moving capital across borders in case an affiliate in a particular country needed it to deal with losses or a crisis; while this would protect depositors and governments in other countries from possible losses, it could actually increase the vulnerability of each affiliate. On top of these concerns, participants expressed continued frustration over overlapping and sometimes contradictory regulations. In general, multinational financial institutions would choose to meet the strictest standards across their global operations, raising costs relative to local rivals; however, where standards actually contradicted each other, it was argued that international regulatory cooperation was necessary for financial institutions to operate across borders.

Many participants pointed to regulation of data as an example of contradictory regulations among major jurisdictions. This was an emerging issue that had not been a focus of the initial G20 post-crisis financial regulatory agenda, and participants expressed concern that jurisdictions were pursuing not only contradictory regulatory approaches, but also ones with extraterritorial implications—in other words, it might not be possible for multinational financial institutions to follow different practices in different jurisdictions, but would have to face the contradictions across their operations. Participants pointed to two areas in particular where diverging approaches to regulation of data were creating problems for financial institutions. One of these was data privacy, where the EU had taken on a much more interventionist and extraterritorial approach than the U.S. The introduction of GDPR meant that any entity doing business in the EU or with EU customers was restricted in its use of data (for example, for cross-marketing or selling data), at the risk of large-scale financial penalties. In contrast, U.S.—and, to a lesser extent, Japanese—rules on data privacy were much less restrictive. Data localization was another concern for multinational financial institutions. A number of jurisdictions had imposed data

localization rules stating that customer and operations data for local operations had to be stored on local servers (and in some cases, could not be stored in overseas servers). This would complicate efforts to centralize information management or to reduce costs by storing it in the cloud or in less expensive jurisdictions. Meanwhile, home regulators in many cases continued to insist on access to a financial institution's global operations, creating an impossible situation. Thus, participants argued that it was essential that global regulatory bodies engage with data issues in order to enable cross-border transactions and prevent further fragmentation.

As in previous years, another concern among participants was about risk migration. They argued that the trend of the last decade had been toward greater regulation of banks and insurance companies, raising their costs and reducing their flexibility. For banks, it was argued that risk-weighted capital rules—exacerbated for G-SIBs in the U.S. by stringent stress testing—were preventing them from lending to the borrowers most in need of credit, including small businesses and even many mortgages. As a result, new players had entered the field, including fintechs and non-banks of various sorts. This was seen as particularly true in the U.S. (whereas in Japan, the result was reduced availability of credit, particularly in rural areas). The lighter regulations facing these new players made them more competitive versus banks, but also probably less safe. The migration of credit from banks to other types of financial institutions also meant the migration of risk from well-capitalized, well-supervised banks to less capitalized and less transparent entities, raising the possibility of new concentrations of risk in the economy, akin to the years before 2008. Similarly, a number of participants worried that fintechs and asset management firms were increasingly offering financial products and services that were in competition with insurance companies. They argued that this not only amounted to unfair competition, but also created risks of which customers were not aware. With regard to both banking and insurance, participants raised particular concerns about fintechs—not only with regard to capital buffers and risk management, but also fraud, data privacy, and data protection. (Some participants conversely raised concerns that moves to regulate fintechs could retard beneficial innovation in favor of preserving incumbent financial institutions. Issues related to fintech are discussed extensively in the summary of Session 2.) Looking at the whole picture, some participants warned that overregulation in banking and insurance, combined with “regulatory vacuums” in other areas of finance, was creating conditions for the next financial crisis.

Finally, a number of participants expressed concerns about divergent approaches to regulation of insurance. One major concern was that EU insurance regulators would be successful in making Solvency II the basis of global standards. Compared to U.S. and Japanese standards, Solvency II was seen as stunting insurance firms' ability to invest in growth assets. The restrictive approach of Solvency II was seen as problematic in a world of low interest rates, and thus a particular concern for Japanese insurers. With regard to fintech participation in insurance, some participants lauded the Japanese Financial Services Agency as having found the right balance between allowing innovation and preventing unfair competition. Perhaps ironically, they remained frustrated by what they saw as unfair competition from a traditional player, Japan Post Insurance.

International Cooperation

Observing such regulatory divergence, participants expressed concern about what would happen as an increasingly globalized financial industry coincided with declining international coordination. Thus, they discussed the prospects for enhancing cooperation, as well as the potential impacts of the failure to do so.

A key question for many participants was whether the U.S. was still in a position to set the global regulatory agenda. A number of participants were skeptical, arguing that the Trump administration's unilateralist "America First" approach had alienated potential allies, who had come to doubt the willingness of the U.S. to provide public goods (e.g., acting as global lender of last resort) or to necessarily abide by its international commitments. Other participants disagreed. They pointed out that U.S. financial markets remained the largest and most vibrant in the world and that U.S. financial institutions were among the world's most competitive global players. They also argued that the growth-oriented approach of the U.S. administration provided an attractive alternative to what they saw as a more hidebound European approach. With regard to skepticism that the U.S. would keep its commitments, they emphasized that U.S. officials continued to participate in global forums and regulatory bodies and that U.S. agencies were leaders in applying rigorous cost-benefit analysis to proposed regulation. They expressed hope that U.S. and Japanese officials would find common cause in shaping global standards, including not only banking and derivatives, but also insurance and data.

While much of the discussion focused on rules and standards, participants also discussed the issue of how regulatory and political divergence might affect crisis management. Several participants worried that the U.S. under the Trump administration would be less willing to contribute to the resolution of a financial crisis outside its own borders, whether by serving as lender of last resort through the Fed (whose powers had been curtailed by Dodd-Frank) or supporting an IMF-led bailout in the event of a currency crisis. Others were less concerned, arguing that providing public goods in such cases would be in the interest of the U.S. and predicting it would act accordingly. There was also some disagreement about the prospects for coordination in case of a failure of a multinational financial institution. A number of participants were optimistic, pointing out that regulators in the U.S., Japan, and Europe had been preparing the ground for such an event by requiring G-SIBs to create resolution plans, setting up colleges of supervisors, and establishing clear procedures through MOUs. Others were more skeptical. They argued that, in the event of major failures that could be costly for governments to manage, political leaders rather than working-level bureaucrats would likely be making decisions about whether and how to provide funds or allow capital to leave the country. They predicted that the involvement of political leaders would make cooperative solutions less likely, as they would not want to be held accountable for the possibility of using taxpayer funds to help foreign governments or financial institutions. President Trump's unilateralist proclivities made it even less likely.

Another concern was the Trump administration's stated preference for bilateral over multilateral cooperation. Given the global nature of many financial markets and institutions, many participants expressed concern that an emphasis on bilateral cooperation would only exacerbate the fragmentation that was already being driven by diverging national regulatory approaches. A similar concern was raised over trade negotiations, where participants worried that global supply

chains would be disrupted by the creation of a spaghetti bowl of bilateral agreements with different rules and coverage. They worried particularly about the effects on supply chains in electronics and IT hardware, which were not only complex and highly international, but were in many cases related to economic and military security and typically involved China. Others were more optimistic. They argued that bilateral agreements were not necessarily in competition with multilateral cooperation; rather, they argued that bilateral agreements could serve as templates for broader cooperation. They noted that this had long been a strategy of the U.S. for setting multilateral trade agendas. Several pointed to the digital commerce provisions of the newly-agreed USMCA as a good example of that strategy. In this sense, they expressed hope that negotiations on a U.S.-Japan FTA could become the basis for global trade and financial regulation going forward. Others were skeptical. They argued that TPP, whose centerpiece was U.S.-Japanese cooperation, was designed precisely for the purpose of laying out new rules that other countries (most prominently China) would be required to follow. However, President Trump had withdrawn the U.S. from TPP, with the express intent of using market power to forge bilateral deals that would advantage U.S. firms. Finally, a number of participants argued that the Trump administration had not shown a strong commitment to cooperative trade relations with Japan—rather than focusing on creating rules to level the playing field, govern new forms of commerce, and constrain state-owned enterprises and anti-competitive practices, the administration had imposed tariffs on Japanese steel (refusing to provide waivers that were offered to other allies), threatened to impose tariffs on Japanese automobiles, called for “reciprocal trade” in the auto sector, and demanded currency provisions and a formal commitment to reducing bilateral trade imbalances. Some even worried that the revised CFIUS rules would be used to block Japanese investments in the U.S., even though the main target was clearly China.

In the end, participants agreed that trust was essential to meaningful international cooperation, both in terms of rules and standards and in terms of crisis management. Opinions remained mixed as to whether there was sufficient trust among leading states to achieve the cooperation necessary to keep finance global. Many hoped that there was enough trust to allow the U.S. and Japan to work together in advancing a growth-oriented financial regulatory agenda at the global level.

Session 2: Financial Technology and Banking: Threats and Opportunities

In Session 2, participants discussed the ways in which new technologies were transforming the financial sector. They discussed how new technologies and new entrants both threatened and offered opportunities for incumbents, regulators, customers, and financial stability. A particular concern was how best to regulate new fintech actors in a way that promoted innovation while also ensuring financial stability and a level competitive playing field with existing financial institutions.

Defining Fintech

Participants agreed that “fintech” encompassed a large variety of technologies, practices, and entities, each of which had its own particular impacts on markets and users of financial services. Moreover, not all fintech was seen as disruptive, and in many cases did not even mean an incursion of new actors. While new client-facing practices such as mobile money and crowdfunding offered significant new competition to traditional financial institutions, much of the fintech revolution was operational in nature—for example, allowing asset managers to pursue high-frequency trading practices, improving credit evaluation and Know Your Customer (KYC) verification, and lowering the cost of tracking and recording transactions.

At its core, the advent of fintech was associated with a series of developments, including increased speed and processing power of computers, the development of Big Data and new tools to analyze it, artificial intelligence and machine learning, advances in cryptography, and the ubiquity of digital devices among retail users of financial services. Whether those technological developments threatened or opened opportunities for existing financial institutions or new entrants depended on the particular functions they enabled, as well as the demands of clients in particular jurisdictions.

Participants discussed several technologies as having particular potential to disrupt existing practices and actors. One of these was the combination of artificial intelligence (AI) and Big Data. A number of participants predicted that this would transform credit scoring, as financial institutions drew on a broader array of often high-frequency data to better understand customers’ ability to service their loans. In addition, AI and machine learning would allow more rapid adaptation of credit models. Others voiced concerns about reliance on these new models of credit scoring, both because the models had not been verified over a range of economic conditions and because the black-box nature of machine learning would complicate regulation and supervision. They worried that reliance on untested models could have negative effects on financial stability, even if they were a less expensive method of credit scoring. In contrast, there was considerable enthusiasm for the use of AI and Big Data in streamlining and improving the accuracy of KYC, which could reduce expenses and the risk of large penalties. AI-enabled roboadvising was another function that was seen as offering benefits to both customers and asset managers, and a number of participants predicted that it would enable asset managers to offer a range of services at different prices to meet the needs of customers.

There was also considerable discussion of distributed ledgers. Some of this discussion focused on cryptocurrencies, which were seen as largely providing an alternative to services offered by existing financial institutions. But there was considerably more enthusiasm for the ways in which they could be used by existing financial institutions to reduce the cost and increase the resilience of record-keeping and settlement. In this regard, a number of participants cautioned that it was important to bear in mind the distinction between public distributed ledgers (such as for bitcoin) and permissioned distributed ledgers. The bitcoin verification system required significant computing power, time, and energy usage, all of which made it unsuited to the purposes of high-volume financial institutions. In contrast, a variety of major financial institutions were already experimenting with permissioned systems that could potentially increase efficiency, although there was no consensus as to whether they were likely to displace existing systems and approaches. Several participants noted that public distributed ledgers and cryptocurrency usage were likely to be most important in jurisdictions where trust in public authorities and financial institutions was low—such as in some of the former Soviet republics, where cryptocurrencies were commonly used.

Participants also discussed the importance of platformization, whether through retail-based platforms such as Amazon, Rakuten, or Alibaba, social networks, or customized financial services and contracting platforms like Ethereum. Several saw this trend as potentially having significant disruption to existing and new financial services providers. Participants noted several distinctive features of platforms that could disrupt existing systems and financial institutions. One was a tendency toward monopoly due to network effects, as increasing scale and scope of services provided through the platform increased its attractiveness, decreased its costs, and expanded its access to valuable customer data. Related to this characteristic, a number of participants worried that, even when other financial institutions were able to offer services through particular platforms, the platform itself would be in a position to extract much of the profit to itself. Finally, the rise of platforms raised concerns about whether and how they should be regulated—for example, when platforms are used by other firms to offer financial services, who should be held responsible for compliance with prudential regulation, KYC, data privacy and security, etc.? A number of participants worried that platforms that did not define themselves as financial service providers could nonetheless create concentrations of risk or skirt compliance with key financial regulations. There would also be competitive implications if platforms were not subjected to the same regulatory burdens as their competitors.

Fintech also operated differently across different jurisdiction. For example, participants noted that the fastest growth in mobile money and digital payments had been in China and some developing countries that had vast populations of “unbanked” people who had access to mobile phones or smartphones. In these countries, payments services like Alipay or M-Pesa had operated as an engine of financial inclusion, enabling unbanked people to store and transfer money safely, cheaply, and quickly. Other digital financial services for the working classes and new middle classes were built on top of those platforms, expanding the availability of financial services. Alipay, for example, was using a range of new financial technologies to improve its financial service offerings, including the use of proprietary Big Data for credit scoring and taking advantage of platformization to build unprecedented scale and scope in payments services. In contrast, in countries such as the U.S. and Japan, most mobile and digital payments were scaffolded upon existing platforms like VISA and Mastercard, leaving them as the primary players in payments. Similarly, Big Data credit scoring was more important in developing

financial systems, where full-file credit reports and analytics were not available to financial institutions. In the U.S. and Japan, in contrast, Big Data remained a supplement to existing methods of data gathering and analysis.

While participants discussed at length what was new about fintech, many argued that it was equally important to focus on what remained unchanged. Looking at the adoption of new financial technologies by existing financial institutions, they argued that fintech was not a fundamental transformation of the business but was rather just offering more efficient ways of managing standard tasks, from trading to credit analysis to record-keeping. In this sense, they saw the current wave of fintech to be just part of a long continuum of financial institutions innovating and adopting new practices in response to technological, economic, and legal developments. Others felt that the current fintech wave was different in important respects, offering new products and services, new algorithms and analytical techniques, and new sources of data that could significantly change the relationship of financial institutions with their customers, patterns of financial inclusion, competitive conditions, regulatory practices, and even definitions of what it meant to be a financial institution.

Uses and Implications

Beyond the general discussions of new financial technologies, participants also focused on several particular examples. One such topic of debate was digital currencies. Participants agreed that it was important to distinguish among different types of digital currencies. While privately-issued “currencies” like bitcoin had received much of the public attention, they were seen as differing significantly from public digital currencies (issued by central banks as legal tender) and tokens (whose value is based on an underlying asset such as a central bank-issued currency). Participants questioned whether privately-issued digital currencies should be considered as commodities or securities or legal tender, and many argued that the price volatility of a digital currency like bitcoin and the revealed preference of its owners to speculate on future price increases meant that it was an asset. In addition, a number of participants argued that private cryptocurrencies should not even be allowed to exist. They noted that the anonymous nature of cryptocurrency transactions enabled money laundering, tax evasion, and illegal transactions—and given the relatively high price of bitcoin transactions, they argued that anonymity was really the main point of using them for transactions. Finally, if any private digital currencies actually did take off as a major vehicle for payments and credit, they worried about the impact on central banks’ ability to manage monetary policy and monitor financial stability. In contrast, public digital currencies were seen as an extension of central banks’ existing operations, although they raised key issues for the role of banks and payments systems.

There was also discussion of ongoing experimentation with distributed ledgers for financial services. Several participants brought up one of the most highly-publicized such experiments, the declaration by the Australian Stock Exchange that it would replace its existing electronic settlement system with a permissioned distributed ledger. While some participants were enthusiastic about the potential benefits of the change, others were highly skeptical. They noted that the changeover would require every ASX participant to change its IT systems to accommodate the proposed settlement system, but that there was no assurance or even expectation that settlement would be made more accurate or efficient or that costs would be lowered for users. They also raised questions about whether the proposed system was even

technologically feasible. Pointing out that implementation of the replacement had already been postponed indefinitely, these participants predicted that it would never happen. Despite the uncertain state of the ASX initiative, other financial institutions and firms continued to experiment with distributed ledgers for other functions, including shipping, trade finance, custody, and post-trade settlement.

Several participants also raised the issue of “insuretech,” which they saw as potentially offering significant new efficiencies to insurers. Unlike with some of the other financial technologies discussed at the Symposium, most participants in this discussion focused on how existing insurance firms could adapt the technologies rather than on the threat of new entrants. To some extent, this appeared to be due to the heavily-regulated nature of insurance markets and the relative difficulty of unregulated new entrants offering particular insurance products. Insuretech included the promise of client-facing technologies, improvements in claims adjustment and risk assessment, and streamlining of business processes. As an example of client-facing technologies, some participants cited the use of biometric verification or voice recognition to reduce fraud and increase the security of transactions. There was also discussion of how use of sensors, Big Data, and AI could improve the speed, accuracy, and cost-efficiency of claims adjustment—for example, it was noted that casualty insurers were developing systems to rapidly assess damage due to natural disasters such as hurricanes by using satellite imagery and data on rainfall and windspeed, benefiting customers who might otherwise have to wait much longer for a claims adjuster to arrive and assess each individual situation. Insuretech appeared to raise fewer issues of market disruption or regulatory challenge than some of the other fintech stories, largely because technologies were being used to supplement rather than supplant existing processes and practices.

Participants also discussed the implications of new financial technologies and fintech companies. A key question was who would be the winners and losers. While predictions varied considerably depending on the particular jurisdiction or sector, participants advanced several general expectations. One issue was whether the entrance of fintech companies would displace traditional financial institutions or simply expand markets. While some participants felt that market expansion would be more important than displacement in some cases—for example, emerging economies where low-cost digital payments services could offer new opportunities for financial inclusion—in general, they expected a redistribution of value from traditional financial institutions to new actors and clients. In some cases, this would be due to increased competition either because new fintechs faced fewer regulatory burdens or just due to an increased number of players in a given market. Even in cases where fintechs chose not to enter sectors as competitors in order to avoid regulation, a number of participants argued that incumbent financial institutions would be forced to rely on them for technology services or as platforms. A second, partially related point, was that many participants agreed that the scalability and network effects associated with many of the new financial technologies would likely lead to increased concentration—as in the case already of platforms such as Alipay. To compete would require high levels of investment in research and development. Finally, a number of participants argued that the existing advantages of traditional financial institutions would likely dissipate over time. They noted, for example, that the largest customers for retail asset managers in Japan and the U.S. were currently in their fifties or older, and had become accustomed to personal service either through brick-and-mortar shopfronts or phone consultations; in twenty years, however, many of those customers would be replaced by a younger generation that was much more

comfortable with digital technologies and would likely not value such personal service as highly. Thus, incumbent firms would have to balance the costs associated with the preferences of their current customers with the investment needed to attract very different future customers—many of whom would likely be open to new, tech-savvy market entrants. To many participants, one of the implications of these forces was that small financial institutions would likely find themselves unable to compete. In particular, there was considerable pessimism about the business models of small banks—at best, some argued, such banks would essentially become servicers for platforms, utterly dependent on the platforms for services from payments to settlement to customer interfaces to data security.

Regulatory Challenges

Participants agreed that the emergence of new financial technologies and fintech firms posed a variety of challenges for regulators, including whom to regulate, what to regulate, and how to regulate.

One major challenge was the question of whom to regulate. Participants noted that many fintechs saw themselves as tech firms rather than financial institutions, and in many cases the lines between technological and financial services was blurred. For some tech firms, provision of financial services was a small part of their business model, or one that was in place just to support core functions. The development of payment capabilities through social networks or messaging apps was one example—at what point did the payment function become systemically important enough (or enough of a fair competition issue) to regulate? And should such a firm be regulated across the board as a bank, with all the capital, liquidity, and KYC requirements that implied? Several participants pointed to the example of China, where Alipay had become the biggest provider of payment services in the country but was still not regulated as a bank, as a negative example—they argued that it not only had unfair advantages relative to regulated financial institutions, but also potentially posed a serious systemic risk. Another aspect of the “whom to regulate” dilemma was whether financial regulators should oversee providers of financial institutions’ core technologies. For example, if banks were dependent on platforms and vendors for key services such as record-keeping, data analytics, or customer data protection, who should be responsible for ensuring the integrity of those services—the bank or the provider? With increased outsourcing of such core functions, participants agreed that regulators would need to clarify the issue of responsibility. Finally, some participants argued that the question of “whom to regulate” was misplaced—rather than relying on regulation of entities, the flux created by emerging financial technologies made it all the more important to focus on regulation by function.

The second question was what to regulate. Participants agreed that prudential regulation should be imposed on fintechs where they were engaged in core activities of regulated financial institutions. Beyond that, various participants proposed additional areas in which fintechs, whether operating as financial institutions themselves or providing core services to regulated financial institutions, should be subject to financial regulation. A key one for many participants was data security and privacy. With more and more regulated financial institutions outsourcing their data storage and client interfaces to outside firms, these participants worried that there was insufficient supervision of how customer data was being shared and made secure. They also emphasized that it was important to make clear where responsibility for those functions lay,

whether with the vendor or the financial institution. There was also considerable support for ensuring that fintechs be held to the same standards of KYC and anti-money laundering compliance to which currently regulated financial institutions were held. This was not only to ensure a level playing field, but also out of concern that criminal behavior could be facilitated through less-regulated payment systems and providers of other financial services. Finally, for big fintechs, a number of participants argued that there should be resilience planning. While there were no Japanese or U.S. equivalents to the role played by Alipay in the Chinese payments system, there might be other firms that had systemic enough roles that a failure could reverberate through the financial system.

Turning to the question of how to regulate, participants agreed that it was important to promote innovation while at the same time preventing negative effects on customers or financial stability. They agreed that many of the new financial technologies offered potential benefits ranging from improved financial inclusion to better credit scoring and risk management practices to lower costs to users of financial services. However, participants had real concerns. With regard to fraud and customer protection, they pointed to a variety of cases in which fintechs had either defrauded customers, misused their data, or not properly protected their investments. Although many agreed the problem in the U.S. and Japan was not as bad as in China during the initial years of its fintech revolution, they also noted that the two biggest failures of cryptocurrency exchanges to date, Mt. Gox and Coincheck, had occurred in Japan. Many participants were equally, if not more, concerned about the potential for systemic risk across multiple dimensions. For example, some worried that machine learning-based automatic trading systems could lead to excessive volatility of asset prices and herd behavior, potentially leading to market crashes. Participants were also concerned about the unforeseen consequences of the increasingly widespread use of new data sources and algorithms. New credit scoring systems based on retail and behavioral data were unproven and could lead to poor credit decisions; moreover, to the extent that they had been empirically verified, they had not been through multiple business cycles, leading some participants to be skeptical of whether they could account for the credit risk effects of a major downturn.

To address concerns of systemic risk and customer protection, participants agreed that greater regulatory clarity was essential, both for existing financial institutions that needed to understand a changing regulatory environment and for fintechs that might not understand that their financial activities would make them subject to financial regulations. They felt that it was imperative that tech firms engaged in financial services develop a greater understanding both of how financial markets work and of the legal context in which they were operating. In this regard, a number of participants emphasized the importance of communication between regulators, financial institutions, and tech firms to clarify for all sides how best to promote the use of new technologies without creating new risks or legal vulnerabilities. Thus, they advocated the establishment of fintech advisory councils for regulators as well as other venues to ensure regular communication between regulators and fintechs on emerging technologies, risk analysis, and legal obligations. Several participants gave examples of useful moves in that direction, including the SEC's new Strategic Hub for Innovation and Financial Technology (FinHub). In addition, there was strong support for the concept of regulatory sandboxes, both in order to facilitate communication and to allow for controlled experiments with a variety of new technologies, services, and business models.

All of these considerations highlighted the significant challenges facing regulators. One was the challenge of ensuring that they had sufficient knowhow and technical capabilities both to understand the new fintech business models and to monitor them in practice. Few regulatory agencies around the world (with the possible exception of Singapore, which some participants considered a model of the regulatory sandbox approach) were seen as having sufficient technical capabilities to effectively understand, let alone regulate or supervise some of the new technologies disrupting financial services. Several participants encouraged regulatory and supervisory agencies to seek out expertise through consultants or public-private advisory mechanisms rather than relying solely on developing the capabilities of their own staff. Another major challenge for regulators would be cross-border cooperation—while cooperation on established financial regulation and supervision was already challenging, participants worried that agencies did not yet have clear protocols or MOUs or even common understandings of regulatory challenges in place. However, the profusion of digital services and outsourcing of data meant that it might often be unclear which jurisdiction was responsible for regulating a particular company or function, raising the possibility either of regulatory gaps, contradictions, or overlaps.

Japan-Specific Issues

In addition to the general principles and examples described above, participants also discussed some issues that they saw as specific to Japan. Some participants warned that Japanese financial institutions might not be up to the challenge of keeping up with fintech developments. They noted that Japanese financial institutions still often preferred to promote from within, but that this could retard efforts to rapidly ramp up introduction and use of new technologies and practices. Some were also critical of the capabilities of the Japanese software industry, which they saw as less innovative and open to new ideas than that of the U.S. Smaller financial institutions, such as regional banks, were seen as facing particular challenges. The regional banks were already struggling due to low margins and weak local economies, making it even harder for them to find the resources to take advantage of new platforms and technologies. Bigger banks, insurers, securities firms, and asset managers would be better able to manage the transition and improve their offerings, despite the challenges that they too faced. Thus, the fintech revolution was seen by many participants as likely to accelerate the decline of small banks and exacerbate concentration in the banking sector.

There were conflicting views about what Japanese customers desired from their financial institutions. Some participants argued that Japanese customers continued to desire a level of personal service that would retard the shift toward more phone-based payments, roboadvising, and other fintech services. Others disagreed. They noted that Japanese banks and asset managers had already moved well along the road to less human interaction and more online transactions, and predicted that the younger generation would continue to demand more convenience and lower costs, like their counterparts around the world. At the least, Japanese financial institutions would likely need to follow a mixed strategy in managing their expansion of digital services for customers. In addition, a number of participants argued that expansion of digital services would be harder in Japan than elsewhere because Japanese residents still far preferred cash over other payment options. Some felt that this was cultural, while others suggested that they preferred the anonymity that cash provided. Either way, they felt, Japan would take much longer to be a cashless society than China or the U.S., with implications for how banks would need to operate.

Finally, a number of participants lauded the Japanese Financial Services Agency for its progress in developing frameworks and practices for regulation and supervision of fintech. They pointed out that some of the biggest cryptocurrency operations in the world were based in Japan and agreed that Japanese regulators had provided valuable guidance for them by clarifying rules regarding exchange and taxation as well as having officially declared that cryptocurrencies could be used as legal tender in commercial transactions. Others considered this permissive approach to cryptocurrencies to be dangerous.

While it appeared that Japanese regulators were ahead of the game in some respects, participants agreed that the regulatory framework was still a work in progress. The JFSA had shifted to a more conservative approach to regulating cryptocurrencies and tokens since the failure of Coincheck earlier in the year, and several participants expressed frustration with what they saw as the slow pace—for example, Initial Coin Offerings were still not allowed, although regulators were working in that direction. A number of participants also encouraged the JFSA to continue its work toward implementing formal regulatory sandboxes rather than following a piecemeal approach to innovation.

Session 3: The Persistence of Low Long-Term Interest Rates: Causes and Consequences

In Session 3, participants discussed the causes and consequences of persistently low long-term interest rates. They addressed whether the natural rate of interest had declined permanently, and whether this reflected declining potential growth or rapid productivity growth that was leading to falling prices. There was also discussion of the effects of low rates on financial institutions, including banks, insurance companies, and securities firms. Finally, participants debated how central banks should manage monetary policy to respond to the situation.

Causes of Low Long-Term Interest Rates

Participants observed that standard assumptions about the behavior of interest rates and inflation had broken down over the last two decades. In particular, they noted the apparent disappearance of the Phillips Curve, flattening of yield curves, and breakdown of a clear relationship between interest rates, money supply, and inflation across the developed economies. They also noted that economic growth rates and measured productivity growth had slowed considerably over the period, and particularly after the global financial crisis of 2008.

One question for participants was the fate of the Phillips curve. Many participants agreed that the U.S. and Japanese economies had absorbed most of their excess capacity and that unemployment now exceeded the level of full employment. Others disagreed, arguing that standard measures of unemployment underestimated the level of labor slack. They saw this to be particularly true in the U.S., where labor force participation remained at lower rates than in decades past. These participants advocated a continuation of expansionary fiscal and monetary policies in order to bring in more women and potential workers on welfare to the labor force. In Japan, some participants argued there was still considerable room to move labor from part-time to full-time and from contingent contracts to regular employment. While wages were finally rising to reflect tight labor markets in the U.S., Japanese wage growth remained surprisingly flat despite labor markets that looked historically tight on the basis of standard measures of employment and unemployment as well as growth that many economist believed continued to exceed potential. Some participants felt that Phillips curves had apparently disappeared in the developed economies; however, others argued that it had simply become flatter and (especially for Japan) more L-shaped.

Looking at Japan, one explanation for why inflation was flat was that, despite downward wage rigidity among regular employees, to the rise of the gig economy and greater reliance on part-time labor had helped employers to hold down labor costs, with the net effect of dampening wage inflation. Participants also noted that inflation expectations had not shifted and that Japanese households had shown themselves to be very sensitive to even small rises in prices, leading firms to be more cautious about raising prices or increasing investment. Aging society and declining population also reduced firms' incentives to invest. Between declining labor force and weak investment, it was argued that the potential growth rate and thus the natural real rate of interest (r^*) had declined to a low level.

This explanation fit with the more general story of secular stagnation among the developed countries, although Japan was further down the path due to its demographics. The secular stagnation hypothesis held that low nominal interest rates were the result of low potential growth and low r^* . Reasons given for secular stagnation included low productivity growth, excessive savings, a preference for safe assets, and of course demographic changes. Under standard measurements of productivity and inflation, it was estimated that the equilibrium real rate for Japan had been close to zero for the last quarter century.

Some participants advanced a more optimistic alternative hypothesis, which they termed “secular innovation.” This explanation was based on alternative measures of productivity, which suggested much faster productivity growth than standard measures. This meant significantly lower inflation (actually, higher rates of deflation) but also higher real rates of economic growth. The crux of this argument was that central banks’ statistical methods of measuring inflation did not properly account for improvements in quality, which could for example be seen in extraordinary declines in the costs of a variety of goods and services including such varied items as photography, lighting, and audiovisual entertainment. If that were correct, then the cause of low inflation was not inadequate demand, but rather innovation. While innovation would raise potential growth and equilibrium real rates, that effect would be small and would be obscured by the decline in inflation. Many participants appeared skeptical of the secular innovation claim. They expressed doubt that productivity growth was at historically high levels, even if quality improvements were being inadequately measured.

Stepping away from potential growth and r^* , some participants also raised the question of why central banks seemed to have lost the ability of central banks to manage inflation over the last three decades. Several possible explanations were advanced for this phenomenon. One was that changes to the financial systems of developed economies had made it harder for central banks to define, and therefore measure, money supply. It was suggested that this might account for the disconnect between assertive monetary policy measures and apparent sluggishness of money supply growth. Others argued that low inflation in developed economies reflected price competition from emerging economies in an increasingly globalized world where the cost of moving goods across borders had dropped, barriers to cross-border trade in services had been significantly reduced, and prices had become more transparent. As a result, both firms and labor had lost pricing power. Similarly, it was argued that globalization of finance had led to convergence of asset prices around the world, which might be having the effect of holding down U.S. and Japanese interest rates to some extent. A third possibility was that higher capital requirements for banks reduced the pass-through of monetary policy; however, many participants were skeptical, since the decline in potential growth had begun well before the imposition of post-crisis capital requirements.

Consequences of Low Long-Term Interest Rates

Turning to the consequences of low long-term interest rates, participants focused on the effects on banks and insurance firms. They identified a number of potentially negative effects, including compression of net interest margins, lower profitability, incentive to shift portfolios to riskier loans, and vulnerability to higher rates if they were to reemerge. Empirical studies of Japanese and U.S. banks suggested that long-term low interest rates did indeed reduce net interest margins; however, that did not necessarily translate directly into lower profitability since some

were able to overcome the reduction through cost-cutting or expansion of other business. Those banks that were unable to diversify their business models, such as Japanese regional banks, were more adversely affected by low interest rates. Meanwhile, the decline in demand for loans also hurt banks prospects.

Insurance companies and pension funds were also seen as vulnerable to persistently low long-term interest rates, in two ways. First, they would have a hard time finding investible assets that would give them the returns needed to meet their clients' needs. Second, as long-term investors, their asset base was particularly vulnerable to rises in interest rates. However, while low interest rates created serious challenges to insurers and pension funds, the deterioration of balance sheets was likely to be gradual and thus manageable.

Another concern expressed among participants was that low interest rates might encourage riskier loans by banks. It was argued that the evidence was mixed on this point. In the aggregate, the main evidence that banks might be involved in riskier lending was some increase in maturities. However, some participants argued that drilling down into specific sectors, such as real estate, revealed pockets of riskier lending. A number of participants suggested an alternative concern related to the quality of bank loans. They argued that the most serious effect of persistent low interest rates was that lenders had little incentive to differentiate between good and bad companies as long as they could service their debt, distorting resource allocation and reducing economic growth. Unfortunately, there appeared to be no way around that problem for Japan, since raising interest rates would bring the economy back into deflation and strengthen the yen, both of which would negatively affect growth.

Finally, if the secular innovation hypothesis were correct, there should be several macroeconomic consequences. On the bright side, real GDP growth would remain healthy, contributing to improved prosperity despite low measured growth. At the same time, it would imply that asset prices should be rising, which could have significant social and political implications. It was noted that asset prices were indeed rising in the U.S., which could support the secular innovation hypothesis. However, many participants argued that rising U.S. asset prices were more a reflection of the business cycle, continued easy money, fiscal stimulus, and lower corporate taxes, making it difficult to make a case that they were driven by secular innovation.

Finally, participants discussed the policy implications of the various analyses that had been put forward. Many participants agreed that central banks should be cautious about raising interest rates, despite what appeared to be above-potential growth. They noted that inflation remained low in both Japan and the U.S., and that in Japan average wages had not been rising much due to the shift from regular employees to part-time labor and the gig economy. While some believed the Fed still had some room to raise rates without choking off growth, most participants appeared to agree that the Bank of Japan should not move away from its current inflation target and should not raise interest rates.

At the micro level, it was suggested that financial supervisors continue to closely monitor the assets and performance of banks, insurers, and pension funds, and to model potential risks if interest rates were eventually to rise. While most of the risks were seen to be long-term, it was noted that there were nearer-term risks for some financial institutions including Japanese

regional banks, so supervisors and investors should pay particular attention to them. Finally, some participants encouraged governments to keep focusing on supply-side policies that might improve productivity growth and contribute to stronger growth prospects. This was seen as particularly important for Japan, whose potential growth was declining due to an aging society.

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