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Legal Impacts of AI on Democracy and Financial Stability from a Japanese Perspective

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Abstract

After laying out the basics surrounding generative AI (Artificial Intelligence) and introducing Japan's efforts, this paper examines how democracy and financial regulation including Central Bank Digital Currencies (CBDCs) can be made to work well in a human-centered manner in the face of increasing AI. Specifically, the paper proposes the use of AI technology to implement "broad listening" in order to improve the situation in representative democracy, where representatives are prone to corruption. "Broad listening" should also be actively utilized in financial regulation, as it can accurately absorb public opinion and allow various financial participants to accurately report risks to the regulator, even though AI can easily become a black box.

Key Words: AI, Hiroshima AI Process, Democracy, CBDC, Financial Regulation, Broad Listening

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I. Introduction

The law presupposes the society that currently exists, while AI has the potential to drastically transform it. Japan's 2019 "Human-Centered AI Principles" stipulate that humans must retain the ability to judge and decide how to utilize AI, rather than being controlled by it (Social Principles, 2019). However, Professor Geoffrey Hinton of the University of Toronto, a globally renowned AI researcher, has issued a stark warning: there is a high possibility that AI will surpass human capabilities and dominate humanity within a few years, and we currently do not know how to regulate AI effectively to ensure safety (MSNBC, 2023). Thus, while a detailed comparison between existing AI laws in the EU and Japan remains important, it is also necessary to consider the potential for social transformation brought about by AI and to rethink the future role of law accordingly. Thus, we will first (1) outline the current state of AI adoption and (2) summarize the status and challenges of Japan's AI promotion policies. It will then proceed to its main focus, namely (3) the issues of digital democracy and (4) CBDC (Central Bank Digital Currency) and financial regulation. In doing so, the paper highlights two recent major academic theories from Japan and abroad and discusses the challenges of developing them further.

First, we address the challenges to democracy pointed out by Professor Lawrence Lessig of Harvard University, known for advocating the concept of "Code as Law." He argues that autonomous organizations like democratic governments and corporations—which he labels "Analog AI"—are prone to corruption, as governments meant to regulate corporations end up being influenced by corporate donations (Lessig, 2024). He warns that the introduction of AI ("Digital AI") could amplify this problem, as AI can manipulate human weaknesses (e.g., social media addiction fostering bias and "filter bubbles," which refers to a phenomenon in which Internet users are exposed to information that is based on the same opinions and interests as their own, and are blind to the opinions and interests of others.

This tendency is easily encouraged by the fact that algorithms for social networking sites and Youtube have filtering functions that sort content according to users' interests), leading to an even greater risk of AI dominating democracy. However, his analysis remains somewhat vague and lacks concrete solutions. Therefore, we will (1) refine Professor Lessig's arguments and (2) examine specific AI solution examples such as Audrey Tang's "Join" initiative in Taiwan and Takahiro Yasuno's "Broad listening" project in Japan (which uses the AI tool "Talk to the City") to explore the challenges of digital democracy. Based on this perspective, the paper will also discuss practical measures that could be implemented today concerning the Hiroshima AI

Process and CBDC and financial regulation.

Second, we also consider the monetary issues raised by Associate Professor Yusuke Narita of Yale University (Narita, 2025), specifically the potential disappearance of money following the collapse of the "law of one price." Narita predicts that with the advancement of blockchain and AI technologies, traditional credit guarantees and evaluations once provided by governments and banks could be replaced by algorithms and other digital technologies. In such a future—possibly a century from now—individual historical data would replace money as the basis of value. In this scenario, where data lies at the heart of the economy and "multi-pricing" for single items becomes the norm, the very need for state-led redistribution might be fundamentally questioned. Given the intriguing nature of this theory, we will also consider it within the available space.

To promote international rule-making on the rapid development and diffusion of generative AI, Japan has been promoting the Hiroshima AI Process, with the G7, to formulate international rules for AI, and currently 55 countries are participating in the process (Hiroshima AI Process, 2024). However, China, Russia and Uzbekistan have not joined the process amid the U.S.-China confrontation. Therefore, in my opinion, in addition to regional diplomatic efforts such as the China-Japan-Korea (CJK) Summit to involve China, it would be important to introduce AI tools such as broad listening (“Global Broad listening,” so to speak) of citizens around the world.

Second, while many countries around the world are considering the introduction of Central Bank Digital Currency (CBDC), the U.S. banned the introduction of CBDC by presidential decree in January 2025. The author argues that the introduction of CBDC requires sufficient explanation to the public (Kubota, 2023, 2024a, 2024b), and the Bank of Japan and the Ministry of Finance are aware of this, but sufficient explanation to the public has not yet been provided. However, as the use of AI advances in the future, sufficient explanation to the public will become even more important than it is now, since AI tends to become a black box. In such a case, we propose the introduction of the above-mentioned AI tool such as “Broad listening” to promote sufficient understanding among the public and to secure their trust in the authorities, rather than merely educating them.

In addition, various financial authorities have expressed their views on the relationship between financial regulation and AI. There is a danger that AI adoption will expand among financial institutions and third parties, such as the cloud, and that risks will spill over into the financial system as a whole in a black box. Therefore, it is desirable for human-controlled financial authorities and financial institutions to expand the human oversight network for AI by implementing AI tool such as “Broad

listening," which encompasses a variety of financial participants.

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II. Methodology

This paper is a lecture given by the author at the Tashkent State University of Law (TSUL) on April 2, 2025, during the Inno-Cyber Law Week 2025. The audience was diverse, including students as well as experts and academics. For this reason, I will first explain;

- The basics surrounding AI and
- The current state of AI efforts in Japan, and then examine
- How to enforce the current representative democracy as AI is increasingly adopted and
- The challenges associated with AI's increased involvement in CBDC and financial regulation.

This research employs a qualitative methodological approach to examine AI governance in Japan and its implications for democratic systems and financial regulation. A qualitative approach was selected because it allows for in-depth analysis of complex legal frameworks, regulatory policies, and governance structures that cannot be adequately captured through quantitative methods alone. This methodology enables comprehensive exploration of the nuanced relationship between technological advancement and legal frameworks across different jurisdictions.

The target population for this study encompasses AI governance frameworks with a specific focus on Japan's regulatory landscape. The sampling strategy employs purposive sampling to identify and analyze key legislative documents, policy papers, and regulatory guidelines that directly address AI governance in Japan. This includes Japan's AI Strategy, data protection regulations, and financial technology governance frameworks. Additional comparative elements from other jurisdictions serve as contextual references to position Japan's approach within the global regulatory landscape.

Data collection primarily relies on document analysis of primary and secondary sources. Primary sources include official legal texts, government policy documents, and regulatory frameworks published by Japanese authorities, including the Ministry of Economy, Trade and Industry (METI), the Financial Services Agency (FSA), and the Cabinet Office's Council for Science, Technology and Innovation. Secondary

sources encompass scholarly literature, expert commentaries, industry reports, and policy analyses. All materials were obtained from official government websites, legal databases such as Westlaw Asia and LexisNexis, and academic repositories including HeinOnline, JSTOR, and Google Scholar. The research prioritized sources published within the last five years (2020-2025) to ensure currency and relevance to rapidly evolving technological and regulatory landscapes.

The research instruments for document analysis involved a systematic framework for evaluating legal and policy texts. This framework assessed several dimensions:

- The scope and objectives of AI regulation,
- Mechanisms for ensuring democratic accountability,
- Approaches to balancing innovation and risk management, and
- Provisions addressing financial system stability and consumer protection.

The analysis followed a structured approach of identifying key themes, extracting relevant provisions, and contextualizing findings within broader governance discussions.

To ensure validity and reliability, several measures were implemented. First, triangulation was employed by cross-referencing multiple sources to verify factual claims and policy positions. Second, source evaluation criteria were applied to assess the credibility of materials, prioritizing peer-reviewed academic publications, official government documents, and reports from established research institutions. Third, temporal relevance was maintained by focusing on recent publications that reflect current technological capabilities and regulatory responses. Additionally, the research emphasized materials authored by established legal scholars, policy experts, and government officials with recognized expertise in technology regulation.

The data analysis employed doctrinal legal research methods combined with policy analysis techniques. The doctrinal approach involved systematic examination of legal provisions, regulatory frameworks, and jurisprudential principles relevant to AI governance. This was complemented by thematic analysis to identify recurring patterns and emergent themes across the collected materials. Comparative analysis was utilized to contextualize Japan's approach against international benchmarks and alternative regulatory models. The integration of these analytical approaches allowed for a comprehensive understanding of both the formal legal structures and their practical implementation in governing AI technologies.

Regarding ethical considerations, this research utilized publicly available information and did not involve human participants, thus minimizing direct ethical

concerns. Nevertheless, the study adhered to scholarly standards of academic integrity by properly attributing all sources and maintaining intellectual honesty in the interpretation of findings. All secondary sources were appropriately cited to acknowledge original authors and their intellectual contributions. Additionally, the research maintained objectivity by considering diverse perspectives on regulatory approaches, without advocating for specific policy positions that might reflect personal biases.

This study operates within certain delimitations and limitations. The delimitations include a primary focus on Japan's AI governance framework, with only contextual references to other jurisdictions rather than comprehensive comparative analysis. Temporally, the study concentrates on developments between 2020 and 2025, while acknowledging the historical context of earlier regulatory approaches. The limitations include potential language barriers in accessing and interpreting Japanese legal documents in their original form, relying instead on official translations and expert analyses. Additionally, the rapid evolution of AI technologies and regulatory responses creates inherent challenges in capturing the most current developments, particularly those occurring after the data collection phase concluded in early 2025.

The research proceeds under several key assumptions. First, it assumes that official government documents accurately represent the regulatory intent and enforcement priorities of Japanese authorities. Second, it assumes that scholarly analyses of these frameworks provide meaningful insights into their practical implementation and effectiveness. Third, the research assumes that lessons from Japan's approach have potential relevance for other jurisdictions developing their own AI governance frameworks, despite contextual differences in legal traditions and technological development. Finally, it assumes that democratic governance principles remain fundamental considerations in evaluating AI regulatory frameworks, regardless of cultural and political differences across jurisdictions.

III. Results

There is no strict definition of AI, nor do I intend to attempt it in this paper. However, since many of the participants are students. The Generative AI (Gen AI) is a type of artificial intelligence (AI) that can create new content, including text, images, videos, and music. It uses machine learning to learn from existing data and create new data. This Gen AI is still a tool under our control. AI Agents, which is a new keyword that does not yet seem to be in vogue in Uzbekistan, but is now catching on in Japan. They are software systems that use AI to pursue goals and complete tasks on behalf of users, and show reasoning, planning, and memory. Thus they have a level of

autonomy to make decisions, learn, and adapt like human beings.

Artificial General Intelligence (AGI) is a hypothetical type of AI that could match or surpass human intelligence. AI, reasoning with neural networks, is far smarter than we humans. Rather, AI can pretend not to be smart and deceive humans, but we humans do not know how to regulate AI, and how to make AI safe. Thus, AI can be a threat to Human beings in a few years by exceeding human abilities, though AGI has been thought to be a science fiction. In fact, a Nobel prize Professor Geoffrey Hinton at the University of Toronto has warned that this will happen within a few years and warned that we should seriously consider how to manage AI that is smarter than we are (MSNBC, 2023).

LLM, such as Chat GPT, is a type of Gen AI that specializes in natural language processing and achieves a higher level of language understanding by learning from vast amounts of text data. Because LLM generates language based primarily on word co-occurrence relationships, it does not fully take causal relationships and logical consistency into account. As a result, it may generate sentences that are grammatically natural but erroneous in terms of content, which is called hallucination.

Hallucination in AI, often occurred in LLMs, refers to the phenomenon in which AI erroneously generates patterns or information that do not exist due to the limitations of the training data or its algorithms. There are various methods to counter hallucination, such as improving the quality of prior data learning, developing models to detect it, and improving explainability of AI reasoning, but perfect countermeasures are difficult to implement. Because of the fabrication of false facts, court cases, etc., it is necessary to check by human hands in fact-checking, etc. However, if humans rely on AI too much and skip checks, they may miss something. This issue is the most important one at this time, but since this paper focuses on the near future, we will not go into it further.

The reasoning process by AI is a black box to the humans who use it as a tool. Thus Explainable AI (XAI), a set of technologies that help users understand how AI models make decisions by explaining why AI output is accurate and preventing false or biased predictions, has been advocated. However, unexplainable AI decisions can be manipulated or misinterpreted, leading to security vulnerabilities. For example, if the behavior of an AI system cannot be understood, a malicious actor could exploit this opacity to manipulate the results without being detected. Challenges of XAI include:

- Limitations and trade-offs of explanation (explainability vs. accuracy, loss of information through simplification);

- User understanding, and risk of overconfidence and misunderstanding;
- Possibility of manipulation or bias in explanations,
- Risk of exposing personal information, and e) difficulty in evaluating explainability.

Within national policy, the financial sector is highly specialized, and there has been an emphasis on expert administration (e.g., “central bank independence”) and “market principles”. On the other hand, there has been rapid digitization of currencies such as “CBDC” and other digital currencies, digitization of finance and financial regulation such as “FinTech” and “RegTech”, and the introduction of AI. As a result, how humans manage AI has become as important for CBDC and financial regulation as it is for democracy.

CBDC is a digital currency issued by a central bank, rather than by a commercial bank. It is also a liability of the central bank and denominated in the sovereign currency, as is the case with physical banknotes and coins. Though many countries including Uzbekistan and Japan are preparing for adopting CBDC, in Jan. 2025 the US President Donald Trump banned federal agencies from creating a CBDC through an executive order, for protecting US citizens from risks of possible invasion of privacy, etc.

How to address the possibility that combining Gen AI with CBDC could increase efficiency, but could also be misused to strengthen state control, creating challenges to privacy protection and transparency? For example, while central banks can make objective policy decisions through improved data analysis capabilities, this can create the risk of government intervention and the challenge of AI becoming a black box. In order for central banks to maintain their independence, the challenge is how to maintain a system in which final decisions are made by humans, in addition to ensuring transparency of AI, strengthening security, and improving legislation.

IV. Discussion

A. Japanese Legal Initiatives on AI

The U.S. and China are the two world leaders in AI development, with other countries following suit. Japan shares similarities with Uzbekistan in that it is not competing to be dispatched, but rather to improve its ranking as much as possible, so introducing Japan's situation will be helpful to Uzbekistan.

1. Human-centric principle in 2019

Japan was late in adopting smartphones and the Internet and lost the global economic race. However, it has been quick to respond to AI, especially in the

formulation of standards. The OECD AI Principles (2019, 2024) recommend "respect for the rule of law, human rights, and democratic values, including fairness and privacy," and in 2019, when they were first enacted, the Japanese government codified similar basic principles as the Social Principles for AI, Its first principle is Human-Centric, which means that people must judge and decide for themselves how to use it when using AI. As noted above, this is the most basic perspective on how to interact with AI.

2. Hiroshima AI process: May 2023

Meanwhile, the Japanese government, unusually, has also moved toward the formulation of a unified international standard for AI, called the "Hiroshima AI Process," which "will be gathering broader support from a diverse range of actors, including governments beyond the G7 including developing and emerging economies, ….and will facilitate building up inclusive global governance on AI for the common good of the world….". In the Hiroshima Process International Code of Conduct for Organizations Developing Advanced AI System, 2023, it recommends to take appropriate measures against: "harmful bias and discrimination or lead to violation of applicable legal frameworks, including on privacy and data protection"; "threats to democratic values and human rights, including the facilitation of disinformation or harming privacy", etc.

This principle reflects the U.S. desire to rival China in privacy concerns, and may be suddenly difficult for the Chinese government to accept. The Process was launched in May 2023, following the G7 Hiroshima Summit, and the Policy Framework was agreed upon by the G7 in Dec. 2023, the Reporting Framework has been operationalized since Feb. 2025. 55 Member countries joined as of Dec. 2024 including India, UAE, and Turkey, while China, Russia, and Uzbekistan have not (Hiroshima AI Process, 2024). It is still difficult to predict when the two countries will come to a compromise. A tyrannical state may turn out to be more resistant to the AI hegemony struggle than a human-centered democracy.

Regarding AI, US and China are the two AI giants, but the two is in trade conflict. G7 Hiroshima AI process has not involved Russia, China and Uzbekistan. Then how should we establish uniform AI rules? My idea is that, in addition to regional diplomatic efforts such as the China-Japan-Korea (CJK) Summit to involve China, it would be important to introduce broad listening as to be explained later ("Global Broad listening," so to speak) of citizens around the world.

3. Global competition for the AI laws

Currently, the EU passed an AI law in May 2024 that includes fines, while the

U.S. deregulated its AI policy in January 2025, withdrawing the previous administration's AI policy by presidential decree. Against this backdrop, Japan's Cabinet approved the AI bill in March 2025. According to this bill, Japan takes an intermediate strategy between the U.S. and Europe, granting the State the authority to investigate, demanding transparency and accountability in critical risks of AI development, government active use of AI, but not imposing fines. In order to improve the environment, while risks are difficult to foresee, we have prepared minimum regulations to help understand the risks, because in most cases existing laws can handled them.

To understand the Japanese government's approach, the Press Conference speech on March 5, 2025 by Prof. Yutaka Matsuo, University of Tokyo, chair Government committee, both in Japanese and English, may be helpful (Matsuo, 2025). In this speech, Prof. Matsuo said that "innovation and risk countermeasures are not trade-offs; they can go hand in hand. …Because of the Japanese national character of not taking risks unlike Americans, we decided that clarifying the minimum rules would promote innovation better." In other interview, he also said that "Japan has already lost a lot in the global technology development race over AI, and it will be difficult for Japan to grab the world's leading edge anytime soon."

Thus, since Japan's strategy is not so powerful, I believe that it is necessary to develop a specific strategy on how to win the international standardization competition in some specific fields. My idea in "Quantum-resistant cryptography" is "three steps" (Kubota, 2023). In 2024, the US National Institute of Standards and Technology (NIST) has conducted international standardization of cryptography, and the world will proceed accordingly. Japan's strategy may be to

- Quickly accumulate implementation know-how in Japan in accordance with the US NIST standards. Then,
- Focusing on relatively small applications, Japan will put the world's most advanced products into practical use ahead of other countries. Finally, we will
- Work for international standardization on a national scale, and encourage the expansion of adoption not only by domestic governments and companies, but also overseas.

B. AI and Democracy

Below, we would like to present various discourses on the current possible challenges and benefits that AI brings. After that, redefining Professor Lessig's theory, we introduce efforts in Japan and Taiwan as possible AI solutions, and point out issues for future consideration.

1. Challenges

According to Prof. Lawrence Lessig at Harvard Law School, our collective misperceptions, such as the people's belief that the "election was stolen" in the US Presidential Election in 2020, are the product of existing artificial intelligence (AI), called Analog AI, even before the emergence of Digital AI (Lessig, 2024). Humans intend to control effectively by setting up rational institutions called Analog AI such as Democracy, Corporations, etc. For example, Humans control Democracy by elections, and its Democracy controls Corporations by regulations. Corporations are adopting Digital AI for their effective control. However the reality is sometimes vice versa. Corporations control Democracy by bribes, Democracy control Humans by dictators. As AI is smarter than Humans, AI easily dominates Humans through corporations and democracy. Thus we need to protect Democracy even before the AGI.

In my opinion, Lessig's largest contribution is in pointing out that the current representative democracy itself has flaws that can easily be taken advantage of by AI. The next challenge, we believe, is how to improve democracy. In my opinion, it is important to establish a system that broadly reflects the will of the human people and eliminates bribery and tyranny through the introduction of "broad listening," which will be discussed later. In the following, I would like to point out those humans, who have been thought to have the ability to make rational judgments, are surprisingly irrational and vulnerable, and may be targeted by AI.

For example, cases in which humans lack rational judgment include the following: a) excessive use of SNS, which is harmful to the human's normal state of mind; b) an easily overlooked sophistry, by exaggerating or oversimplifying it, such as a strawman argument, which attacks the misrepresentation instead of the original argument, by combining original counterpart's assertion (X) and different one (Y) as one, and criticize X by attacking Y, not X; and c) over choice, when human is overwhelmed by too many options, it can lead to decision fatigue, avoiding making a decision, or sticking to the default option.

Another example is Esq. Roy Kohn's Three Rules of Winning for Trump, in the movie called the Apprentice (2024). Rule No. 1 is always attack your opponents. No. 2 is never admit wrongdoing (deny everything and never admit defeat). No.3 is always claim victory no matter what happens, even if you lose. The film is based on the true story of President Trump, whether or not the current President actually follows these three rules to that extent, our democracy and Humans are weak against such arguments without ethics (Madman Films, 2024).

According to Prof. Michael Sandel at Harvard University, the Democratic

Party's past neo-liberal and financial deregulation policies are the reason for the Democratic Party's failure (Sandel, 2025). The defeated Democrats have promoted neo-liberal globalization with the Republicans for decades and only bail-outed rich banks in the 2008 World Financial Crisis and didn't respect the dignity of working-class people. As a result, Democrats are considered as Wall-street friendly. Thus Democrats need to admit that it was wrong that the free trade and financial deregulation have not resulted in higher incomes for all citizens, but rather have contributed to inequality. In my opinion, this is the result of the Democrat's disregard for the will of the people, and the key to capturing the will of the people is the active use of broad listening, which I will discuss later.

Separation of powers (legislative, executive and judicial) within a state is for preventing abuse of power. According to Prof. Crisis, J. Heath at the University of Toronto, the U.S. has customary judicial primary practices, the U.K. (in custom) and Canada (by legislation) have parliamentary predominance, and France has executive (presidential) predominance in the Constitution (Heath, 2025). Though the administrative state needs to be subjected to more careful judicial oversight, it is precisely frustration with the status quo that is driving voters toward increasingly desperate solutions, like voting for Trump in US. Thus she finds "it extremely difficult to see how anyone breaks out of this vicious circle." On the other hand, in Japan, issues such as administrative dominance (e.g., abuse of government ordinances), weakening of the Diet (e.g., prolonged rule by the ruling party), conservative tendencies in the judiciary, and incomplete neutrality of the Board of Audit have long been pointed out, and thorough information disclosure and respect for minority opinions have been advocated. In order to maintain a democratic system and control autonomous organizations without aiming for a dictatorial despotism like China and Russia, the key is to rebuild democratic institutions by utilizing AI tools that enable thorough disclosure of information and respect for minority opinions. AI can be good or bad, but it is important to make efforts to bring it closer to good.

Again, it is important how to engage the judiciary, an undemocratic force, within the framework of democracy. In fact, if not properly pre-designed by law, populism will be unchecked, as the U.S. presidency has been. Therefore, it is desirable that adopting AI tool like "broad listening" be introduced in a manner that allows human reason to work properly, rather than in a manner in which the will of the people is absolute.

2. Benefits

Technology can contribute to more representative, transparent, responsive, and participatory democracy, and these infrastructures can be designed to protect

individual human rights and democratic systems. Here we will finally explain “broad listening” and introduce some of the other benefits that AI can bring. Unlike "broadcasting" (one-to-many communication), "broad listening" aims to collect and digest many voices efficiently. Broad listening, inspired by Ms. Audrey Tang in Taiwan, adopted in Tokyo by Mr. Takahiro Anno, by using the AI tool "Talk to the City," efficiently summarizes and digests thousands of voices with the help of AI, by the following steps (Share Info Press, 2025a; Nishio, 2024):

- Opinion Gathering: SNS, Surveys, Even tens of thousands of opinions can be targeted;
- Analysis by AI: Classification, Sentiment and Trend Analysis;
- Summarize and Visually Review Results; and
- Providing Reports that are focused on only the necessary information to speed up decision making for Human Decision Makers. With this tool, the opinions of the people are directly reflected, rather than a few selected people, such as councils and deputies. As a result, the will of the voters can be accurately captured, and corruption and fraud by representatives can be detected. It overcomes previous challenges like information overload and bias, strengthening democracy. Mr. Anno also launched the "Digital Democracy 2030 Project" to further expand the initiative (Share Info Press, 2025b).

Taiwan has implemented a more advanced, national-scale initiative. Through the digital public platform “Join,” anyone, including non-voters, can submit political petitions online anytime. If a petition gathers over 5,000 signatures within 60 days, the government must review and respond within two months (Ohno, 2022). Ms. Audrey Tang, who developed Join and promoted digital democracy in Taiwan, emphasizes that this system practices participatory democracy alongside representative democracy, promoting open government (transparency, accountability, inclusiveness). This success is underpinned by factors like high-speed broadband, the national ID system, visualization technologies like “Pol.is,” and citizen-led platforms like “vTaiwan.”

While these initiatives are promising, scaling them nationwide in Japan would require improving broadband infrastructure, refining the “My Number system,” and thoroughly promoting government transparency to earn citizens’ trust. Moreover, participatory democracy alone may not be sufficient to curb the autonomous organizations such as courts, independent commissions, the military, and central banks.

Although future scenarios, like “unconscious democratic control” of politicians to prevent legislators to outburst by showing democratic digital polls (Azuma, 2011) has not been adopted, practical measures to check are urgently needed to prevent

representatives from running amok. There is also a risk of bias during opinion summarization, together with necessity of careful countermeasures for citizens unfamiliar with digital environments.

Again, Professor Lessig's theory highlights the dilemma where, although democracy aims to produce rational institutions such as elite representative governments by democracy and corporations regulated by such democratic governments, corporations distort governmental policies through donations, leading to a cycle of corruption of democracy. He names this runaway autonomy "Analog AI" and warns that the similarly autonomous "Digital AI" could exploit human vulnerabilities and dominate democracy. Although highly insightful, Lessig's theory has limitations: (1) the said human vulnerabilities is only an example and there are more; (2) the scope of "Analog AI" within democracy is unclear, especially when corporations are included, blurring the focus; (3) there is no concrete proposal for democratic checks on representatives who deviate from their mandate (although Japan and Europe are cited as examples of countermeasures, specific points are still unclear.) Therefore, we redefine "analog AI" as an "autonomous organization" (an organization legitimately elected or delegated in a democracy system, but whose representatives pursue their own interests beyond the scope of the mandate of the appointing body and over which the appointing body has no control.

C. AI and Finance (CBDC, Financial Regulation)

In general, the current technology related financial regulation can ruin the rule of law and democracy when it is combined with highly developed AI. Thus we need to reconsider the existing expert regulations that can neglect democracy such as "central bank independence" and "global market-oriented capitalism," in order to respect democracy to an adequate level. However, today, due to the time constraint, I wouldn't touch this anymore. Instead, first, I will speak about an important legal issue in adopting CBDCs, and second, I will introduce some discussions on AI and Finance.

1. CBDC

In Japan, system development and legal reform are under consideration for the introduction of a central bank digital currency (CBDC), but unlike the U.K., the U.S., New Zealand, etc., the authorities are aware of the need for public explanation but have not yet implemented it, and public awareness is still low. Regarding the CBDC, I previously made the following recommendations that, under the Constitution, there is a need to fulfill accountability (protection of privacy, security, etc.) to the public over the introduction of CBDCs (Kubota, 2023, 2024a, 2024b). Though the U.K., U.S., N.Z., and many other countries have conducted public consultations, Japan has not

and many people still do not know about CBDCs. Though the Japanese authorities (MOF, BOJ) are fully aware of this issue and are currently discussing how to make it into a bill, the public consultation has not been done.

Still I think that it's not moral, but legal issue: (1) in light of fiscal democracy (Article 83 of the Constitution), which requires the Diet to examine the appropriateness of CBDC budget after a thorough cost-benefit analysis as in the EU; (2) according to Article 3, Paragraph 2 of the Bank of Japan Act, the Bank needs to be accountable to the public in exchange for enjoying "central bank independence"; and (3) the Japanese people have the right to be educated about CBDC under Article 26 of the Constitution. Possible objections are: a) it has been already provided a certain level of information disclosure, explanation, and education on CBDC, and even if consultation with the public is lacking compared to other countries, it may not be in violation of its legal obligations; and b) there is some technical leeway (legislation by congressmen, not by cabinet) to avoid legal duty of public consultation.

However, it cannot be said that there is no risk that, in the event of an unforeseen major privacy or security problem with CBDC in the future. In such case, the decision making process can be called into question, and judicial or political liability will be imposed on the Government and the BOJ. Therefore, from a risk management perspective, it is safer to exhaust public explanation and consultation.

In addition, we should note that, though many countries including Uzbekistan and Japan are preparing for adopting CBDC, in Jan. 2025 the US President Donald Trump banned federal agencies from creating a CBDC through an executive order, for protecting US citizens from risks of possible invasion of privacy, etc. Although not widely reported, there is a certain amount of opposition to CBDC in the U.K. and elsewhere. In addition, if the already discussed AI and CBDC are combined, the various democratic governance issues discussed in the AI could arise. For example, while central banks can make objective policy decisions through improved data analysis capabilities, this can create the risk of government intervention and the challenge of AI becoming a black box. In order for central banks to maintain their independence, the challenge is how to maintain a system in which final decisions are made by humans, in addition to ensuring transparency of AI, strengthening security, and improving legislation.

One way to help address the challenges that may arise as a result of the linkage between CBDC and AI would still be to incorporate AI tools such as "broad listening" into the implementation and operation of CBDC, and to objectively gather a wide range of opinions from the public and financial professionals who use CBDC. There is also a risk that in the distant future when data will replace money as the standard of

value, there is a risk that CBDCs will encompass data and turn into a powerful tool for AI to manage humans.

2. AI and finance

According to the speech by Ms. Nellie Liang (USA) at the FSB, financial use cases are three (Liang, 2024):

- Automating some back-office functions or providing routine customer service (e.g., fraud and money laundering detection tools),
- Chat-bot services for customers, and
- Integration into in-house products (e.g., supply chain risk management using AI). AI poses several risks such as:
  - Risks to individual financial institutions (model risk from improper model design and misuse, external cyber-attacks, deep fakes, etc.);
  - Risks to the broader financial system (see next);
- Competitive environment change; and
- Risk implications for consumers and investors.

Regarding financial stability, she says that "we should also consider whether AI use by financial firms could present financial stability risks – that is, risks to the broader financial system. For example, AI models may introduce or amplify interconnections among financial firms if model outputs are more highly correlated because they rely on the same data sources, or if firms are using the same model." So how do we prevent systemic risk from emerging in a highly AI-enabled financial system? In my opinion, one way is to use AI to establish a mechanism for early detection of risks. In this case, AI tools such as "broad listening" could be used as a device to collect the voices of market participants in the field widely and promptly.

As mentioned above, the conflict between the U.S. and China makes it difficult to unify international norms on AI, but it may be possible to unify those areas of common interest between the U.S. and China, such as financial stability. It has been pointed out that the adoption of AI may cause financial instability by promoting procyclicality (business cycle amplification effect) and flash crashes (instantaneous plunges in stock prices and other markets).

One measure would be to receive timely information from various financial system participants using AI tools, leading to quick responses by financial authorities. Financial participants tend to be hierarchically structured, and it is difficult for voices from the frontline to reach the top, but AI tools will facilitate this. The Hiroshima AI process "is expected that the Hiroshima AI Process will be gathering broader support from a diverse range of actors, including governments beyond the G7 including

developing and emerging economies, private sector, academia, and civil society, and will facilitate building up inclusive global governance on AI for the common good of the world, and thus enable people around the world to benefit from safe, secure and trustworthy AI," and if a broad range of opinions can be gathered by AI tools such as global "broad listening" from international financial participants, the process may lead to the formation of international norms that go beyond the U.S.-China conflict, taking financial stability as a starting point. Furthermore, in the world of "one product, many prices," the financial industry is expected to become a data-handling industry and become GAFA, considering measures to stabilize finance may directly lead to measures to stabilize society. The impact of AI on finance is enormous, but due to the limited space of this paper, we would like to discuss it further in the future.

Conclusion

In this paper, we laid out the basics surrounding generative AI (Artificial Intelligence) and introducing Japan's efforts, for the reference for students in Uzbekistan. Then we examined how democracy, CBDC and financial regulation can be made to work well in a human-centered manner in the face of increasing AI. As a solution we proposed is the extensive use of AI tools such as "broad listening" to improve the current democracy and finance. It can also improve Hiroshima AI Process to involve all the world including China to make a uniform global AI rules at least on our common goal such as financial stability. It also contributes to the transparency and accountability of CBDCs and Financial Regulation, by avoiding AI as a black box.

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