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PUBLIC CONSULTATION

Draft OECD high-level guidance regarding policy considerations on responsible innovation and adoption of distributed ledger technology (DLT)

DEADLINE FOR RESPONSE: 31 August 2021

OECD

Background

In 2017, the OECD launched the [Going Digital project](#), a cross-cutting look at the impacts of digitalisation across the policy spectrum. Through the first phase of that project (2017-18), there were a number of important pieces of policy research and analysis on the digital transformation, including the Integrated Policy Framework that is designed to cut across policy silos to fully realise the potential of digital transformation and address its challenges. It includes seven building blocks – access, use, innovation, trust, jobs, society, and market openness – that are supported by quantitative indicators and practical policy guidance, such as the [Going Digital Toolkit](#).

As the Going Digital project advanced, frontier technologies, including blockchain and other distributed ledger technologies (DLT) (referred to herein collectively as "Blockchain"), increasingly became an important focus of the OECD's work. To support this, in 2018 the Blockchain Policy Centre (the Centre) was established as one of the three pillars of Phase II of the Going Digital project (2019-2020) alongside artificial intelligence[1] and jobs, skills and social inclusion in the digital economy. Designed to offer a global reference point for policymakers, the Centre helped bring together the work on Blockchain from across the OECD, which has published research relating to this technology for more than five years. The Centre has supported the work of the Committee on Financial Markets (CMF), which leads the blockchain pillar of the Going Digital project in cooperation with the Committee on Digital Economy Policy (CDEP), and has promoted a cross-cutting approach to exploring Blockchain-related issues across policy areas at the OECD.

In 2019, drawing on its growing body of research on the policy implications of Blockchain and based on discussions with CMF and with CDEP, work began on exploring the development of an OECD Recommendation on Blockchain, with a view to providing high-level, non-sector-specific guidance on responsible innovation and adoption of Blockchain, to all actors involved in the development and use of blockchain, including but not limited to governments. To assist in this endeavour, as well as to support the work of the OECD on Blockchain more broadly, the [Blockchain Expert Policy Advisory Board (BEPAB)](#) was set up.

The BEPAB is a multi-stakeholder and multi-disciplinary group of over 100 experts from government, industry, academia and civil society, that was drawn from more than 50 jurisdictions on the basis of nominations from CMF and CDEP delegates. The role of BEPAB was to:

- provide input to the OECD on upcoming industry developments and their policy implications;

- support the OECD's flagship blockchain event, the Global Blockchain Policy Forum;

- champion the OECD's work relating to blockchain and the Organisation's role as a global reference point on the policy implications of this technology, and;

- act as one of the reference groups in the development of high-level guidance on responsible innovation and adoption of Blockchain.

After its establishment in 2019, the BEPAB met five times to discuss and share ideas on a policy framework for blockchain innovation and adoption, as well as providing comments on successive drafts in writing. In addition, on 28 February 2020, the BEPAB and the Going Digital Steering Group, made up of Committee Chairs and representatives of OECD Member country delegations, held a joint

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[1] With respect to artificial intelligence, in 2019, the OECD adopted the Recommendation on Artificial Intelligence [OECD/LEGAL/0449] at the OECD Ministerial Council Meeting.

session to discuss the development of draft high-level guidance, as well as how to further advance the OECD's work on blockchain more generally.

With the increase in use and rapid development of the technology and its applications, the draft high-level guidance currently under discussion within the OECD and set out below seeks to provide a clear and coherent policy considerations relevant for all stakeholders in the Blockchain ecosystem, on responsible blockchain innovation and adoption to prevent and mitigate risks, while preserving incentives to innovate, collaborate, and compete. While certain of the policy issues identified are also of relevance to other emerging technologies, the specific features of certain blockchains, in particular, for example, their distributed and decentralised governance, present important and unique challenges.

The development of the high-level guidance to this point has unfolded through an iterative process, with successive revised draft policy frameworks receiving input from the BEPAB, national delegates, and other experts, including consideration by the CMF and CDEP and consultation with more than 10 other OECD Committees and other bodies.

The elements of responsible innovation and adoption of blockchain which have been identified to date as part of the guidance are (i) recognising the need for *Compliance and Adherence* with existing relevant requirements, (ii) on the importance of promoting *Governance, Transparency, and Accountability*, in blockchain-based systems, (iii) facilitating *Interoperability* through different means, (iv) safeguarding *Digital Security and Data Privacy,* and (v) fostering *Education and Skills Development* in line with the needs of different stakeholder groups.

At this stage in the development of the proposed high-level guidance on responsible blockchain innovation and adoption, the CMF and CDEP have decided to undertake a broader public consultation on the draft elements of the proposed guidance.

Context for the proposed high-level guidance

The OECD's research has shown that applications based on blockchain and other distributed ledger technologies (DLT) have the potential to transform the functioning of a wide range of industries. Blockchain is a transformational technology, which can allow an immediate, transparent and secure digital transfer of value and ownership within a network. The technology has characteristics of a "General Purpose Technology", which means it is pervasive, improvable over time, and able to open up the field for complementary innovations. At the same time, it has a number of limitations, which mean its use will not be appropriate in all circumstances, and that it also raises certain risks.[2] Governments across the world have expressed a growing interest, particularly in light of the Covid-19 pandemic which has evoked a significant increase in digitalisation,[3] in how technology could impact our economies, financial systems, infrastructure and other activities in societies, as well as its use as a tool to deliver policy objectives. In the financial sector for example, multilateral bodies such as the Financial Stability Board (FSB), Financial Action Task Force (FATF), International Organization of Securities Commissions (IOSCO), and the Committee on Payments and Market Infrastructures (CPMI) all have published guidance or reports related to DLT applications . Similar topics have also been broadly explored by the OECD, including blockchain and artificial intelligence, as described in the section above.

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[2] For examples of blockchain applications in a broad range of sectors, as well as some of its potential benefits and risks, see OECD (2018)The OECD Blockchain Primer: https://www.oecd.org/finance/OECD-Blockchain-Primer.pdf

[3] OECD (2020), Keeping the Internet up and running in times of crisis, http://www.oecd.org/coronavirus/policy-responses/keeping-the-internet-up-and-running-in-times-of-crisis-4017c4c9/

With respect to blockchain, a number of jurisdictions, both OECD and non-OECD Member alike, have already issued over-arching blockchain strategies, including Australia, China, the European Commission, Germany, India, and Switzerland, while others, including France and Italy, are currently developing such strategies.[4]

Concurrently, work exploring the policy implications of specific applications of Blockchain and initiatives to build Blockchain infrastructure has grown. For example, in the area of Central Bank Digital Currencies, the Bank for International Settlements has published six research reports in the last 12 months, in addition to the many papers published on this topic by individual Central Banks over the same period. The European Blockchain Partnership was created in 2018 to cooperate in the establishment of a European Blockchain Services Infrastructure, which now has seven pilot projects under developments, while China has established its own Blockchain Service Network. Private sector blockchain infrastructure projects such as Liink, the JPMorgan led interbank information network or WeTrade, a consortia of 16 banks supporting global trade finance, are examples of commercial investment in the infrastructure needed to underpin Blockchain-based applications and deliver services.

In addition, specific legislative and regulatory responses, both proposed and already effective, have also been developed. For instance, the European Commission has recently proposed a regulatory framework on the Markets in Crypto-Assets (MiCA), the US President's Working Group on Financial Markets has issued a Statement on Key Regulatory and Supervisory Issues Relevant to Certain Stablecoins, while legislation and regulatory guidance on applying anti-money laundering/countering the financing of terrorism rules to virtual assets, as well as their tax treatment, has already been implemented by many countries. Regulators have also been responding to some of the risks raised by developments in the sector, including fraudulent use of Initial Coin Offerings and engaging in ICOs in violation of securities laws, as well as alleged avoidance of legal obligations by certain crypto-exchanges.

Reflecting this growing international interest, the OECD's own research on blockchain and its policy implications has also grown significantly in the last two years, covering a diverse range of issues. These have included the use of ICOs for financing of small and medium-sized enterprises, the implications of blockchain for competition policy, the technology's role as a digital enabler for sustainable infrastructure, its use in the public sector, its role in supply chain due diligence, how blockchain's use may affect outcomes in corporate governance including through potentially greater transparency in proxy voting processes, and the possible use of blockchain-based asset tokenisation in financial markets.

Policymakers and regulators have a strong interest in the implications of technological developments for their economies, financial systems and citizenry generally. This includes ensuring that they stay abreast of, and where appropriate are responsive to, the implications of this emerging technological area, including because it may imply higher productivity, foster trust and confidence in institutions, and the creation of highly-skilled jobs. Equally, however, a number of its features, including its potential for highly distributed and completely decentralised governance, ease of operation across borders, and its implications for digital security, raise important issues and concerns. Providing a timely, balanced, global response to these challenges is therefore key, with the lack of regulatory certainty already identified as an impediment to greater blockchain innovation and mainstream adoption[5] and the lack of global consensus opening up opportunities for regulatory arbitrage.

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[4] OECD (2020), OECD Digital Economy Outlook 2020, OECD Publishing, Paris, https://doi.org/10.1787/bb167041-en.

[5] PwC Global Blockchain survey, 2018; Deloitte Global Blockchain survey 2018

Working discussion draft for public consultation

OECD high-level guidance regarding policy considerations on responsible innovation and adoption of distributed ledger technology (DLT)

I.   Definitions:

- **'Blockchain'** is a subset of distributed ledger technologies (DLT). In this document, the term "Blockchain" is used to refer to all types of DLT, including the protocol, network, and application layers. DLT is a combination of technologies that together create a digital, shared and self-updating ledger of verified transactions or information among parties in a network. DLT uses various types of multi-party consensus mechanisms to validate and record transfers and has various governance systems, ranging from "centralised" models through to instances where there is no control by a central authority(ies) (also known as "decentralised"). For readability and clarity, certain sections of this document refer to 'Blockchain and its applications', but the application layer is covered by all references to Blockchain.

- **'Blockchain Stakeholders'** refers to all organisations and individuals involved in, utilising, or affected by Blockchains, directly or indirectly, including but not limited to governments, enterprises, workers, developers, academics, consumers, and citizens.

- **'Blockchain Actors'** refers to those Blockchain Stakeholders playing an active role in the Blockchain ecosystem, including in setting practices and policies, and includes organisations, consortia and individuals, including but not limited to governments, that develop, operate or regulate Blockchains or their applications.

II.   Policy considerations on responsible innovation and adoption of Blockchain.

All Blockchain Actors, as appropriate to their role and involvement in Blockchains, are encouraged to take an ethical and responsible approach to Blockchain innovation and adoption that harnesses its opportunities and mitigates its risks, by:

1.   Compliance and Adherence

Putting in place mechanisms to assess and ensure Blockchain applications' compliance and adherence to relevant policy, legal, and regulatory requirements, including in the case of more decentralised Blockchains and those operating across borders.

2.   Governance, Transparency, and Accountability

Encouraging that the governance frameworks of Blockchains and their applications are transparent and clearly defined, consistent with legal and regulatory obligations, including by:

a) Taking an inclusive, multi-stakeholder approach to the governance of Blockchains, including the development of measures to ensure accountability, including in the case of wind-down of a Blockchain or its applications, particularly in the case of more decentralised Blockchains;

b) Providing transparency, as appropriate, to Blockchain Stakeholders on the use of Blockchains, their design and operation, their governance frameworks, related incentive mechanisms, and on the identities, roles and responsibilities of the relevant Blockchain Actors involved in any Blockchain, in particular with respect to accountability for compliance obligations;

    c) Undertaking initial and regular assessments of Blockchains in relation to compliance with this guidance, aimed at continuous verification and validation over their lifecycle through proportionate approaches, for example, assessment by design, and promote transparency of the results of such assessments to the maximum extent appropriate, as well as providing for remediation if applicable; and

    d) Disclosing any changes to governance frameworks or code of Blockchains in a responsible and timely manner.

3. Interoperability

Facilitating interoperability of Blockchains, including through open standards and with non-Blockchains and with existing IT systems, to support the flow of data and improve protection and individual control of personal identifying information and other personal data.

4. Digital Security and Data Privacy

Providing digital security and safeguarding privacy in the application of Blockchains, including by:

    a) Taking measures to understand and mitigate digital security and privacy-related risks relevant to Blockchains and their applications, including those related to digital identity management, access control, governance and infrastructure.

    b) Taking responsibility for risk management, supported by business continuity and aligned with relevant privacy and digital security standards and risk management functions, including by acting transparently, for example, by providing timely reports on security incidents including those affecting personal data; and

    c) Due to the specific features of many Blockchains, including their near immutability, longevity, and distributed nature, only gathering and storing personally identifiable data where strictly necessary for the intended purpose of the Blockchain application and in compliance with relevant policy, legal, and regulatory frameworks.

5. Education and Skills Development

Fostering understanding of Blockchain and the development of Blockchain-related skills , as well as supporting those displaced by Blockchain and paying due regard to the interests of consumers, including by:

    a) Promoting understanding of Blockchain and its potential applications, benefits, and risks amongst all Blockchain Stakeholders, including as to where and how decision-making takes place in more decentralised Blockchains, and in order to prevent the emergence of digital divides;

    b) Supporting a fair and secure work environment by ensuring workers are appropriately informed and consulted on how Blockchains are deployed in their workplaces, and;

    c) Endeavouring to provide opportunities and relevant training to build skills, as well as to assess the potential impact of, and assist fair transitions for those displaced by Blockchain applications.