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EN

Digital Assets and Private Law Working Group

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DIGITAL ASSETS AND PRIVATE LAW CONSULTATION SUBMISSIONS

1. At the close of its seventh session, the UNIDROIT Working Group on Digital Assets and Private Law decided that the draft Principles on Digital Assets and Private Law were sufficiently developed to undertake a public consultation, with a focus on receiving feedback from the industry.

2. The UNIDROIT Working Group on Digital Assets and Private Law has 15 Members, 22 Observers from International, Regional, and Non-Governmental Organisations, and 22 Individual Observers. The Working Group has met seven times between 2020 to 2022 and has been supported by a Drafting Committee which has met 15 times between 2021 to 2023. The Working Group initially divided itself into four subgroups to develop different sections of the Principles. The Working Group also organised four ad-hoc workshops on specific topics to further develop the Principles.

3. Following a request from the UNIDROIT Governing Council, a Steering Committee was established for the project on Digital Assets and Private Law. The Steering Committee is composed of 27 States and the one regional economic integration organisation. The Committee was consulted twice in 2022 and provided feedback on the Draft Principles prior to the Working Group's sixth and seventh sessions.

4. Following the request of the Working Group at its seventh session, the UNIDROIT Secretariat launched a public consultation on 10 January 2023. The consultation was officially open for six weeks (until 20 February 2023) but continued to accept responses until 28 February 2023. In order to promote the consultation, the UNIDROIT Secretariat:

a. Set up a dedicated Public Consultation Webpage which included an Online Form through which comments could be submitted on any part of the Principles. Between 10 January – 25 February 2023, the webpage was visited 3995 times.

b. Invited all the Members and Observers of the Working Group to share the webpage with interested stakeholders and amongst their networks.

c. Invited all members of the Steering Committee to participate in the consultation and share the webpage with other interested stakeholders within their governments.

d. Invited all UNIDROIT Correspondents, members of the UNIDROIT Alumni Association, and other interested stakeholders directly to contribute to the consultation.

e. Shared the webpage for the consultation through various other channels, including social media, publishing an article on Trade Finance Global, as well as speaking about the consultation at events in different parts of the world.

f. The consultation webpage was also shared by various governments, universities, law firms, and industry participants in the form of online articles, blog posts, newsletters, and other publications.

5. After filtering for duplicates and spam, in total, 44 different sets of comments were received which included 341 individual comments. One commentator opted to stay anonymous. A summary table of all the respondents can be found below. All of the individual comments can be found in Annex 1 of this document and have been sorted according to the specific parts of the Principles they address. The European Association of Private International Law (EAPIL) submitted a Position Paper in response to the consultation, with a particular focus on Principle 5. This Position Paper can be found in Annex 2 of this document.

Summary Table of Comments

#	Author (as submitted)	Affiliation (as submitted)	Number of Comments	Submission Date
1	Dr Benjamin Hayward	Monash University	2	12-1-2023
2	Omar Alawad	Bankruptcy Commission - Saudi Arabia	1	17-1-2023
3	David Morán Bovio	University Professor / University of Cádiz (Spain) / Unidroit Correspondent	20	19-1-2023
4	Andres Alonso Quintero Rodriguez		4	20-1-2023
5	Kelvin F.K. Low	National University of Singapore	4	20-1-2023
6	Inho Kim	School of Law, Ewha Womans University	2	24-1-2023
7	Eric De Romance		9	27-1-2023
8	Spyridon V. Bazinas	Kozolchyk National Law Center	18	30-1-2023
9	David Gibbs-Kneller	University of East Anglia	11	3-2-2023
10	Julien Chaisse	City University of Hong Kong	5	6-2-2023
11	Omran Abdulkarim Mahmood Al Mulla	Bahrain	1	7-2-2023
12	Dr. Gizem Alper	Academic & Attorney	5	8-2-2023
13	Takahito Kawahara	Government of Japan (MOFA)	3	8-2-2023
14	Martha Angélica Alvarez Rendón	Mexican Ministry of Foreign Affairs	6	10-2-2023
15	Stéphanie Saint Pé	France Post Marché	18	17-2-2023
16	Johan David Michels and Professor Christopher Millard	The Cloud Legal Project, Queen Mary University of London	4	17-2-2023

17	Alejandro Horacio Luppino	Embassy of Argentina in Italy	5	17-2-2023
18	Clément Fontaine	Aix-Marseille University	9	17-2-2023
19	Gilberto Martins De Almeida And Ian Velásquez	Instituto De Direito E Tecnologia (IDTEC)	6	17-2-2023
20	Matthias Lehmann, Gilles Cuniberti and Antonio Leandro	European Association of Private International Law	1	19-2-2023
21	Nicole Purin	Deputy General Counsel, OKX ME	23	19-2-2023
22	Faruk Kerem Giray	Correspondent of Turkey	8	19-2-2023
23	Sumant Batra	Insolvency Law Academy	6	20-2-2023
24	Walter Arevalo (President) And Victor Bernal (Directive Council) On Behalf Of ACCOLDI - Colombian Academy Of International Law	ACCOLDI - Colombian Academy of International Law	6	20-2-2023
25	Japan Virtual And Crypto Assets Exchange Association	Japan Virtual and Crypto Assets Exchange Association	5	20-2-2023
26	Michele Graziadei And Marina Timoteo	University of Torino	7	20-2-2023
27	Nicholas Mallia	ECSDA	1	20-2-2023
28	Thiebald Cremers	Amafi, Association Française Des Marchés Financiers	1	20-2-2023
29	Hubert De Vauplane	Kramer Levin	2	20-2-2023
30	Centre for Commercial Law at The University of Aberdeen	University of Aberdeen	23	20-2-2023
31	Gerard GARDELLA	Haut Comité Juridique de la Place Financière de Paris	6	20-2-2023
32	Dr. Thomas Nägele, Ll.M.	NAEGELE Attorneys at Law LLC	1	20-2-2023
33	The Centre For Robotics, Artificial Intelligence & Technology Law	SVKM's Pravin Gandhi College of Law; Student Committee	5	20-2-2023
34	Finance, Competitiveness & Innovation Global Practice	World Bank Group	10	20-2-2023
35	Cassandre Vassilopoulos & Mark Kepeneghian	Kriptown	15	20-2-2023
36	Office For Financial Market Innovation And Digitalisation	Principality of Liechtenstein	9	20-2-2023

37	Silvana Fortich, Anabel Riaño (Docentes Investigadoras Departamento De Derecho Civil); Adriana Castro (Directora Departamento De Derecho De Los Negocios); Valeria Facio-Lince, Juan Alejandro Solano Y Juan Sebastián Ortiz, Monitores Departamento De Derecho De Los Negocios	Universidad Externado De Colombia	18	21-2-2023
38	Anonymous	Anonymous	3	21-2-2023
39	Bernadette Harkin	Ashurst LLP	10	21-2-2023
40	Koji Takahashi	Doshisha University	1	21-2-2023
41	Pedro Mendoza Montano	UNIDROIT´S Correspondent in Guatemala	23	21-2-2023
42	Patricia Cochoni	Parfin Pagamentos Ltda.	4	24-2-2023
43	Lukas Wagner / Melih Esmer	NYALA Digital Asset AG/ EBS Law School	15	27-2-2023
44	Lucas-Michael Beck	Bundesverband deutscher Banken e.V. / Association of German Banks	5	27-2-2023

Annexe 1 – All Comments

Comments submitted to the Digital Assets and Private Law Online Consultation

General Comments

1. Comment 1

Kelvin F.K. Low
National University of Singapore
My main concerns with these Draft Principles stem from the apparent analogy between control as set out in principle 6 and possession as it muddies the distinction between tangible assets and intangible assets in most legal systems, which can present conceptual problems later on. I realise that the drafters clarify that control should not be regarded as identical to possession but one important distinction between control and possession presents quite serious problems. This could possibly be justified if it were still believed that the future of digital assets were as bright as had previously been made out but after the events of last year, this must very much be in doubt. I will limit my specific comments to principles 4, 6, and 8.

2. Comment 2

Inho Kim
School of Law, Ewha Womans University
The Draft is a fulfilling work addressing challenging issues to be encountered in this emerging field. The impressive guidance of the Draft will provide insights for further development. I appreciate the working group's efforts and time for this great work.

3. Comment 3

Eric de Romance
The necessity to have clarified legal aspects is fundamental to help the activities to be less volatile as the effects of any action can be more anticipated. The ideas given within this text are interesting but maybe some more concrete elements would need to be clarified in particular when we begin to speak about enforcement and recognition of the property rights. Globally I welcome those clarifications or the pointing out of some doubts and lack of clarity.

4. Comment 4

Spyridon V. Bazinas
Kozolchyk National Law Center
The Kozolchyk National Law Center expresses its appreciation to UNIDROIT and the Working Group preparing the Draft Principles on Digital Assets and Private Law (the "Draft Principles"). The Draft Principles are a generally well-developed text but could further be improved.

5. Comment 5

Julien Chaisse
City University of Hong Kong
The draft UNIDROIT Principles on Digital Assets and Private Law is important as it aims to address the legal challenges posed by digital assets and provide a harmonized framework for their regulation. I believe the principles do provide a balanced approach to the regulation of digital assets, taking into account both the need for legal certainty and the importance of flexibility in adapting to technological innovations.

6. Comment 6

Dr. Gizem Alper
Academic & Attorney

My general comment is that attention should be drawn to uniform commercial laws, especially the CISG and the Unidroit principles for contracts and the comments could encourage the use thereof. Also, the comments could mention the concept of hybrid contracts without defining it, and in a parallel manner- encourage the use of uniform laws where the "other aspect" of the digital asset transaction is concerned for a dispute (When of course there is no choice of law clause). As a note, hybrid law has been regulated in the 2022 UCC Amendments Article 2.

7. Comment 7

Takahito Kawahara
Government of Japan (MOFA)
1. Japan appreciates the opportunity to express its comments concerning the DRAFT UNIDROIT PRINCIPLES ON DIGITAL ASSETS AND PRIVATE LAW. We would also like to express our sincere gratitude to the Working Group and the UNIDROIT Secretariat for their efforts in the preparation of the draft principles. 2. Japan supports the development of the draft principle. We are confident that the creation of the Principles will benefit those States contemplating reforms of their digital assets. As we are aware of the digital assets sector being involved in the process of the drafting, the Principles will ultimately benefit the digital assets sector as it will enhance legal certainty of transactions, including cross-border cases.

8. Comment 8

Johan David Michels and Professor Christopher Millard
The Cloud Legal Project, Queen Mary University of London
In this document, we respond to the "Digital Assets and Private Law Public Consultation" ('Consultation') of the International Institute for the Unification of Private Law ('UNIDROIT'). Our response is based on research undertaken with generous financial support from Microsoft Corporation as part of the Cloud Legal Project at Queen Mary University of London and the Microsoft Cloud Computing Research Centre, a collaboration between the Cloud Legal Project and the Department of Computer Science and Technology at the University of Cambridge. In its Consultation, UNIDROIT proposes a series of principles on digital assets and private law ('Principles'). We commend UNIDROIT on its careful treatment of a complicated topic. Below, we propose four areas of clarification. First, we recommend that UNIDROIT clarifies how the Principles apply to other types of digital assets, such as domain names, emails, and in-game assets. Second, we argue that recognising property rights in digital files can be beneficial. Third, we highlight the importance of property rights in digital assets under succession law. Fourth and finally, we raise questions as to the level of control that customers and providers can have in custody services, and how the concept of custody services applies to different types of digital assets. These arguments are set out in detail in the form below. Our response can also be found in full on SSRN here: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4362164.

9. Comment 9

Alejandro Horacio Luppino
Embassy of Argentina in Italy
The Argentine Republic is pleased to address the Working Group on Digital Assets and Private Law of the International Institute for the Unification of Private Law (UNIDROIT) and appreciates the invitation to our country to participate in sending contributions and comments within the framework of the second consultation process on the document Study LXXXII-PC "DRAFT UNIDROIT PRINCIPLES ON DIGITAL ASSETS AND PRIVATE LAW". In this regard, the following comments are submitted based on the contributions provided by various ministerial portfolios: It is important for Argentina that the draft "Principles on Digital Assets and Private Law" prepared by the Working Group adopt a practical and functional approach, since there are various jurisdictions represented in UNIDROIT. This would make it possible to facilitate the treatment of digital assets in civil law and common law countries. Indeed, the fact that the Principles are not drafted for application

in a specific jurisdiction means that they have the additional value of showing the importance of functional equivalents that allow the generation of synergies between diverse legislations.

10. Comment 10

David Morán Bovio
University of Cádiz (Spain) / Unidroit correspondent
"This comments synthesize meetings held with BBVA (one of the two more important financial institutions in Spain) Law experts, colleagues from University Pablo de Olavide (Seville-Spain) and from my University. -- A Preamble's lack was considered: it would help to realize the Principle's objectives. -- Presence of paralelism with UNCITRAL texts on electronic commerce could be more intense. -- Presence of EU MICA Regulation could be useful as references or footnotes to align texts. -- Diferences with WIPO perhaps ought to be reconsidered."

11. Comment 11

David Morán Bovio
University of Cádiz (Spain) / Unidroit correspondent
It is a typo or an indication: Principle 11, Marginal 8, uses the acronym BTC twice. But this acronym it is not clarifyed within the text

12. Comment 12

Sumant Batra
Insolvency Law Academy
We are submitting comments on Principle 2 to 6 and 19 only. These comments are in reference to the insolvency law in India.

13. Comment 13

Nicole Purin
Deputy General Counsel, OKX ME
The Unidroit Principles on Digital Assets and Private Law are an extremely welcome initiative at a time where global harmonisation of rules pertaining to digital assets is critical to provide (i) greater certainty and legal homogenity; (ii) assist lawyers/ judges and legislators to shape domestic legislation in line with global standards (essential in a highly globalised society); (iii) increase predictability of outcomes as well as the growth of commercial transactions in the digital assets sector.

14. Comment 14

Faruk Kerem Giray
Correspondent of Turkey
We firmly believe that your efforts to harmonize the principles on digital assets are admirable. As a correspondent, I support this project and these principles. With no doubt, these UNIDROIT principles will make digital asset transactions much more predictable. We also believe that, digital assets are the reality and one kind of the property. So that, it must be regulated as soon as possible. These principles will be more than a guideline for the legislators by considering the rules for holding, transfer and use of digital assets without excluding conflict of laws, custody, enforcement of security rights and insolvency regarding to digital assets.

15. Comment 15

Michele Graziadei and Marina Timoteo
University of Torino
"We appreciate the possibility to express our opinions on the Undroit draft principles on digital assets and private law. We share the aim to enhance legal certainty in this area of the law, and to work out solutions that can facilitate commercial transactions at the global level. Having these aims in mind, we respectfully summit a few general consideration on the draft.

Our comments concern some drafting choices that in our opinion are difficult to reconcile with the purposes stated by the commentary to the draft. We advance these observations to facilitate discussion, without having had the benefit of a fully study of the difficult issues covered by the draft, and therefore in a provisional way. "

16. Comment 16

Nicholas Mallia

ECSDA

The European Central Securities Depositories Association (ECSDA) welcomes the aim of the Unidroit Draft Principles on Digital Assets and Private Law (Principles) to facilitate transactions in digital assets. The Principles already provide a solid base that reduces legal uncertainty for both public and private stakeholders. Considering the cross-jurisdictional nature of digital assets, a regulatory regime that promotes predictability in cross-border transactions is essential. In this context, ECSDA is pleased to share the following views:

Balancing between fragmentation and flexibility
Fragmentation among legal jurisdictions must be avoided as it is detrimental to the cross-border nature of digital assets. Therefore, we welcome the intention of the Principles to cater for this dimension. To minimise fragmentation, definitions under Principle 2 should align with those of leading jurisdictions, for example the EU's Market in Crypto-Assets Regulation (MiCA).

In pursuit of the harmonised and predictable implementation of the Principles among States, we suggest limiting the discretion in 'cherry-picking' individual clauses. If not, regulatory arbitrage and fragmentation risk will increase. For example, we note the degree of flexibility afforded to States in implementing certain provisions of the Principles under Principle 13(5) related to the waterfall clause in cases of insolvency.

We understand that neither civil nor common law jurisdictions should be favoured as well as the need to give a certain degree of flexibility to States in implementing the Principles. In doing so, we emphasise that a proper balance between flexibility and minimising the risks of fragmentation is made.

Client interests' must be safeguarded during insolvency proceedings
Client's digital assets must be safeguarded in cases of insolvency of the custodian/sub-custodian/service provider. To this end, it is essential that the digital assets under custody are subject to clear insolvency procedures agreed with other custodians/sub-custodians and are segregated from the insolvent firm's assets (Principle 13).

Technology Neutrality
We welcome Unidroit emphasis on technology neutrality of the Principles. However, an unambiguous setup with clear safeguards will prove useful in insolvency cases. In this context, it may be prudent to highlight the benefits of clear allocation of responsibility and accountability of users as is found in permissioned, private DLT.

We thank Unidroit for the opportunity to comment on the Principles and look forward to the next steps.

17. Comment 17

Thiebald Cremers

AMAFI, association française des marchés financiers

Association française des marchés financiers (AMAFI) is a trade organisation working at national, European and international levels to represent financial market participants in France. It acts on behalf of credit institutions, investment firms, regardless of where they operate or where their clients or counterparties are located. AMAFI's members operate for their own account or for clients in different segments, particularly organised and over-the-counter markets for equities, fixed-income products and derivatives, including commodities.
These principles have been developed without the participation or invitation of all Member States. This is a critical governance issue, in particular considering the Unidroit's foundational principles according to which Member States are to be consulted and shall participate and contribute. AMAFI

deems that this deprives the proposed principles of any legitimacy and these principles should not find their way into applicable European legislation. It appears therefore highly inappropriate to expect States to adapt their legislation to comply with these principles.
On the substance itself, our general view, as an association representative of capital markets, is that there is no clear view on the type of assets that may be captured by these principles whose key concepts are neither clearly defined nor aligned with existing notions, making it impossible to assess their consequences. The interdependencies of these principles with private and securities law are so important that it is absolutely critical to consider, in an appropriate manner, the collateral effects any such changes may have.

In particular with regards to the notion of digital assets, there is no clear view on the type of assets that may be captured, as the notion is merely based on the recording of any such asset (by electronic means) and the concept of "control. No material distinction is made based on the rights attached to the asset, whether they are securities such as shares or bonds (already subject to carefully calibrated legislation), crypto-currencies or other non-security types of assets (where legislation is in the making). Elements other than the mere electronic registration should be considered in order to differentiate the various types of digital assets (securities, asset referenced tokens, utility tokens, e-money tokens).

For these very fundamental reasons we have a strong opposing view on these principles whose structure is so remote from current legislation and policy objectives the we do not deem it necessary to comment any further.

18. Comment 18

Hubert de Vauplane
Kramer Levin
"UNDROIT is conducting a public consultation on the draft Principles related to digital assets. As observers, we would like to contribute to this consultation. However, our remarks are limited to the scope of application of the Principles. "

19. Comment 19

Centre for Commercial Law at the University of Aberdeen
University of Aberdeen
We are, in principle, supportive of the UNIDROIT Principles on Digital Assets and Private Law. This is a novel area in which states are increasingly looking to adapt their domestic laws to the global paradigm shift represented by the possibilities of digital assets. We, therefore, welcome the purpose of the Principles and think that this is a useful tool which, depending on the level of adoption, can provide a degree of standardisation and uniformity among legal systems. We also welcome the flexibility and neutrality and the practical and functional approach that the Principles take, and think that this may be helpful for the adoption of the Principles as widely as possible. As we will further elaborate in our comments on Principles 1 and 3 below, the scope of the instrument is rather narrow. Therefore, other applicable rules (ie, in the Principles terminology, 'other law') will find a wide scope of application in relation to proprietary issues arising from digital assets. Therefore, states which consider adopting the Principles should undertake a careful exercise to identify whether and how the Principles would fit in with their existing regime, such as regarding insolvency. In terms of legal drafting technique, we wonder why the Principles state which issues other law applies to, instead of stating that the Principles do not apply to those issues. Although both approaches would have the same result, the latter might be preferable from a legal drafting technique. We, generally, find that some Principles and parts of the Commentary are rather technical (in particular in Section V) and may not be very accessible to non-subject specific readers. The Principles include various cross-references to other Principles and this means that the reader needs to bring all these internal references together to be able to understand and apply the Principles. In addition, this would probably lead to a result that states, which consider adopting the Principles, would need to adopt the Principles as a whole, not partially.

We find that the Commentary is helpful as an explanatory or guiding tool. However, some Principles cannot be understood accurately on their own, without the Commentary. This may pose issues given that the Commentary does not have the same legal value (or force) as the Principles.

20. Comment 20

Gerard GARDELLA
HAUT COMITE JURIDIQUE DE LA PLACE FINANCIERE DE PARIS

Created at the initiative of the French Financial Markets Authority (AMF) and the Bank of France, the High Committee for Financial Market Legal Studies (HCJP) conducts independent legal analyses and makes them public. Its members include lawyers, academics, and other qualified individuals. Its mission includes: (i) recommending proposals for reforms to enhance the legal competitiveness of the Paris financial market; (ii) assisting and supporting French public authorities in negotiating European and international legislation and regulation; and (iii) strengthening legal certainty by providing answers to questions of interest to both public and private financial sectors.

The HCJP has contacted the UNIDROIT secretariat on November 18, 2021 to request that two of its members be accepted as observers in ongoing work on digital assets, given the lack of French experts on the subject.

As a preliminary methodological remark, we want to emphasize that the absence of French members (as some of others EU members, even if some of them were present) in the Working Group on Digital Assets and Private Law at inception is in our view an important issue to the credibility of these Principles, in particular due to the fact that France was one of the few State who has implemented since 2019 a legal framework for digital assets. In our view, the composition of the working group could affect the legitimacy of the proposed principles.

Recognizing the importance of UNIDROIT's work on digital assets, the HCJP has reviewed the Principles project to determine if they could violate general principles of French law. The HCJP also considered the future European regulation on crypto asset markets ("MiCA Project") and Regulation (EU) 2022/858 of the European Parliament and of the Council of 30 May 2022 on a pilot regime for market infrastructures based on distributed ledger technology ('Pilot Regime) in its analysis.

Given the consultation period, the HCJP did not conduct a detailed review of the Principles, but rather focused on the matters it considers most important. We want to emphasize that this consultation period is a major issue since, considering the importance of the changes proposed, a longer period would have been necessary to be in a position to run through the principles with reasonable care.

21. Comment 21

Finance, Competitiveness & Innovation Global Practice
World Bank Group

"From a reading of the document (and the several references in the commentaries and illustrations) it seems that the Principles were primarily designed for crypto-assets but then their scope enlarged with the adoption of a technological agnostic approach and a broader definition of Digital Asset (some jurisdictions such as the US and Malaysia use Digital Asset as a synonym of crypto-asset, while other terms are used worldwide in a non-uniform manner such as crypto-asset, cryptoasset, virtual asset, digital token, digital currency, virtual currency, etc.).

Despite this, we are not clear (in particular from the definition of Digital Asset and definition of Control in Principle 6) how can the Principles be applicable to other than unique non-duplicable "tokens" based on a DLT/blockchain or similar technology. A proper definition of Digital Asset including DLT/blockchain (see below for definitions) with the addition of "similar technologies" (as for example the definition of crypto-asset used at EU's MiCA) would, in our opinion, be broad enough to accommodate future developments while, at the same time, in line with the spirit and wording of the Principles. On this regard to be noted that ""system"" and ""platform"", referred to in Principle 5, are not defined while apparently pointing to DLT/blockchain platforms.

On a number of occasions, there is a reference to the "UNCITRAL Model Law", however, without specification of what specific UNCITRAL Model Law is referred to in respective provisions – see specifically para. 8 of Principle 14, paras. 1 &2 of Principle 16, paras. 2,5&8 of Principle 17 (all paras.

under commentary). In most cases, it is assumed that the reference is to the UNCITRAL Model Law on Secured Transactions, but to avoid potential ambiguity, it is advisable to specify this clearly.

It would be beneficial to add to the Definitions section, the following concepts that appear across the text of the Principles: "blockchain technology" (see para. 5 of the Introduction), "fungible assets" (see par. 21 of Principle 2), "proprietary rights" (defined in para. 4 of Principle 3, but it will be also helpful to have the definition in a separate section), "White Paper" (see para. 2 of Principle 4), ""System / platform"" (see nos.1&2 of Principle 5), "NFT" (see para 16 of Principle 4), "multi-signature (multi-sig) arrangement" (see para. 10 of Principle 6), "full node" (see para. 10 of Principle 10), "light node" (see para. 10 of Principle 10), "cold wallet storage" (see para. 15 of Principle 10), "crypto-lending market" (see para. 2 of Principle 15), "close-out netting" (see para. 2 of Principle 17). ""Paras"" are with reference to the paragraphs in the relevant commentaries."

22. Comment 22

Cassandre Vassilopoulos & Mark Kepeneghian

Kriptown

The Principles are too much inspired by common law. They do not take sufficient account of the specificities of the civil law tradition. As a result, it is difficult to see how they can be used in civil law countries. However, the Principles should not favour one part of a country over another.

23. Comment 23

Office for Financial Market Innovation and Digitalisation

Principality of Liechtenstein

"Liechtenstein is one of the first countries to have a comprehensive regulation of the token economy covering private law, supervision of service providers, and digital securities. After publishing the Liechtenstein "Token and Trusted Technology Service Provider Act" (TVTG) in 2019 and gaining practical experience with digital assets, we want to share our knowledge and experiences by contributing to the UNIDROIT Public Consultation on Digital Assets and Private Law.
We appreciate the technology neutral, legal culture neutral and functional approach taken by the UNIDROIT principles, which aim to create a uniform framework for the interpretation and application of law to digital assets. However, we acknowledge that some rules are not entirely clear, such as those regarding linked assets and conflict of laws, which could hinder harmonization. We would like to comment on these Principles in particular."

24. Comment 24

Silvana Fortich, Anabel Riaño (Docentes investigadoras Departamento de Derecho Civil); Adriana Castro (Directora Departamento de Derecho de los Negocios); Valeria Facio-Lince, Juan Alejandro Solano y Juan Sebastián Ortiz, monitores Departamento de Derecho de los Negocios

Universidad Externado de Colombia

"We celebrate Unidroit's efforts, presenting such a prompt and concrete document.

We understood the Draft Principles are a proposal for general regulation of digital assets. However, the question arises as to the need to set up some rules concerning cryptocurrencies. For example, to resolve the discussion whether digital assets should be considered as currency; this would have implications even in the analysis of the use of digital assets as securities.

Regarding the concept of ""control"", please consider the next two comments:

On the one hand, digital assets pose the difficulty of anonymity, which would have an impact on the understanding of the notion of ""control"" that is handled along the principles.

On the other hand, the Draft Principles allow several meanings of the use of the term ""control"". In the opening lines in the Introduction section, paragraph 6 (page 3), it is announced that the term will not be adopted according to the Anglo-Saxon approximation, but the approximation of ""possession"" in some continental civil law jurisdictions. Later in the text, principle 2, paragraph 3, refers to principle 6 to show that the concept of control defined in the principles means exclusive control, subject to qualifications in the definition (although not defined in Principle 2). However, in Principle (5)(4)(C), commentary in paragraph 11 redirects to paragraph 4 from Principle 19. If ""control"" has different meanings in the text, it may be preferable to replace the word in some of the sections.

Finally, some formal comments:
A) We invite the working group to consider adjusting the title to reflect the real scope of the Draft Principles ""digital assets that are subject to control"" and only in relation to some aspects of private law. See Introduction, paragraph 11.
B) We invite the working group to review some of the wording, for example: "It is implicit in the requirement that the information also must be retrievable in a form that can be perceived". See Principle 2, paragraph 1. "

25. Comment 25

Pedro Mendoza Montano
UNIDROIT´s Correspondent in Guatemala
In general, the principles cover a broad concept of "digital asset". The interpretations and comments of each principle may vary, depending, of course, of the asset analized. The application of this law, locally, could be an intricate work, since it implies reviewing conflicts with other regulations.

26. Comment 26

Lukas Wagner / Melih Esmer
NYALA Digital Asset AG/ EBS Law School
We welcome UNIDROIT's initiative to propose harmonised Principles for the treatment of digital assets, and the opportunity to respond to these draft Principles. We are in favour of a harmonised minimum set of rules, and approve of the concise definition of digital asset. Furthermore, we are impressed by the level of detailed consideration that has been given to the broad spectrum of current and potential future use cases of digital assets.
At the same time, we consider the requirement for (every) national law to make digital assets subject to proprietary rights too far reaching and in contrast to a functional approach. Furthermore, and in line with a more functional approach, we would suggest to differentiate throughout the Principles between linked assets as defined in Principle 4 and assets where no such link exists (in Germany often referred to as intrinsic crypto assets), and limit the Principles in relation to linked assets to a definition of the link between the digital asset and the other asset as well as a broad description of the logic these linked assets should follow.

I. Treatment of All Crypto Assets as Property
Under Principle 3(1), digital assets shall be subject to property rights. We are rather sceptical whether this Principle makes sense for each kind of digital asset (in particular in light of the broad variations of digital assets as discussed under Principle 2 below, and ways of controlling these as discussed under Principles 6 et seq) from a structural point of view, and whether this requirement can be implemented in a sensible manner in every jurisdiction. There are deeply rooted conceptual and structural differences in the property regimes of different countries. Property is often understood as an absolute legal position that can be asserted against anybody as opposed to contractual relations with mere inter partes effect.
While the acknowledgement as a form of property might make sense in certain jurisdictions that have a more functional understanding of the concept of property, it might be in stark contrast to the current understanding and qualification of crypto assets in other jurisdictions that only recognise physical objects as being subject to property rights. These structural differences between digital assets and physical objects are, in principle, also acknowledged in paras 6 et seq of the commentary to Principle 6 (see our comments to Principle 6 below for further details).
German law, for instance, would have difficulties adapting to 'crypto property', as the concept of property is construed around and limited to tangible objects, and traditionally there was a very strict understanding of an agreement to transfer property, which needed to relate to specific objects that are clearly identifiable from the agreement. This requirement might not be addressable as part of a targeted legal reform in line with these Principles.
Furthermore, the proprietary approach, while seemingly straightforward in theory, could be difficult to apply to the dynamic developments in the crypto markets. Market participants might be better protected under an even more functional approach that sets out clear required outcomes (such as the exclusion of client assets from the insolvency estate of a custodian) as opposed to an attempt to force a proprietary treatment of these assets upon every jurisdiction, regardless of their conceptual and functional approach towards property. In jurisdictions that currently merely acknowledge the de facto capability of the holder to control the digital asset (as defined in these Principles), such proprietary

approach would ultimately add an additional layer of legal attribution of the digital asset that might conflict with the de facto control of the digital asset. The innocent acquisition rule under Principle 8 is then an attempt to reconcile conflicts between this 'legal layer' and the de facto position (ie the ability de facto to transfer the digital asset), which adds further complexity, while ultimately leading to the same outcome that would otherwise exist without both the 'legal layer' and the innocent acquisition rule, by merely acknowledging the factual nature of the holding of the digital asset. This raises the question whether the complexity and uncertainty (due to litigation as to the rightful attribution of an asset on the 'legal layer') created by these additional layers is justified in the limited cases where the mere factual treatment and the suggested 'legal' treatment (including a potential innocent acquisition) diverge, or whether ultimately satisfactory outcomes could also be reached on the basis of a mere factual treatment (which could be accompanied by insurance solutions or similar forms of compensation in extreme cases that warrant a compensatory element, and where non-proprietary claims against involved parties are not deemed satisfactory).
Instead of assuming that all crypto assets shall in all cases be subject to proprietary treatment, the Principles should therefore rather focus on an even more functional approach (as they purport to and mostly do already). In our opinion, cases that warrant a functional prescription as part of these Principles arise in particular where digital assets are held by a custodian (or similar intermediary) as described in Section IV (and further discussed under Principles 10 et seq below). However, in such cases there might be a claim of the customer against the intermediary that can be made subject to a property-like treatment (as is the case in Germany, where such a relationship can be considered fiduciary, and thus treated in the same way as property under insolvency law).

II. Linked Assets
A proprietary approach might, on the other hand, generally make sense for linked assets (as defined in Principle 4). In contrast to the above, proprietary questions will arise where the other asset linked to the digital asset is a right. Even in civil law systems which have a narrow understanding of property law as the law of tangible objects (such as Germany), as opposed to the rather wide and functional definition of property under common law (recognising choses in action and choses in possession as property), property-like questions also arise in relation to rights other than property, such as claims. The conceptual idea behind negotiable instruments such as bearer instruments is that a right is embodied in an instrument in a way that the ownership of the former follows the latter. In other words, the transfer of the instrument causes the transfer of the right. While there were many attempts to replicate this logic in the crypto markets in the form of a contractual link between a digital asset and a right initially (with several shortcomings), more recently, such logic has been implemented by national legislative initiatives for DLT-based bearer instruments such as the Token Act in Liechtenstein (Gesetz über Token und VT-Dienstleister – TVTG) or the German Electronic Securities Act (Gesetz über elektronische Wertpapiere – eWpG). These dedicated legal frameworks provide for different forms of registries as well as comprehensive requirements for the link between the digital asset and the other asset, and the transfer (of both the digital and other asset as linked). We therefore do not consider it necessary to address these cases in detail as part of these Principles. Rather, the Principles should focus on a definition of such link as well as a broad, conceptual description of the logic these linked assets should follow.
In any case, it should be made clear that even where no dedicated framework for such linked assets exists, a separate treatment of the digital asset and the other asset should be avoided. The question of the treatment of linked assets does not currently appear to be reflected in the international discussion about digital assets, which seems to view the proprietary treatment of the digital asset in isolation from the other asset, disregarding the link to and implications for the other asset. UNIDROIT should observe the legislative developments in this area and consider a separate dedicated Principles framework for such linked assets at a later stage.

27. Comment 27

Lucas-Michael Beck
Bundesverband deutscher Banken e.V. / Association of German Banks
In general, we welcome the UNIDROIT initiative to develop Principles on Digital Assets and Private Law.

Structure of the Principles

28. Comment 1

Spyridon V. Bazinas

Kozolchyk National Law Center
1. All scope issues should be addressed in Principle 1, Scope, including that the Draft Principles apply to proprietary rights in digital assets (currently addressed in Principle 3) and to rights in linked assets (currently addressed in Principle 4). 2. All definitions should be included in Principle 2, Definitions, including the definition of "control" (currently in Principle 6, Control) and the definitions related to custody (currently included in Principle 10(1)). 3. All substantive law issues should be addressed first (Principles 1-4 and 6-17), then private international law issues (Principle 5) and last procedural and insolvency law issues (Principles 18 and 19). 4. Principle 7 deals with a procedural law issue (identification in a proceeding of a person in control and rebuttable presumption on that matter). So, it should be included in Principle 18, which should exclude this matter from the procedural matters referred to other law. 5. Principle 8 deals with a special case where there is a transfer of a digital asset. So, it should remain in the same section. But the section should be entitled "Transfers" and Principle 8 should appear after Principle 9, which deals with the general issue of the rights of transferees.

29. Comment 2

David Gibbs-Kneller
University of East Anglia
I see no apparent issue with the structure of the principles

30. Comment 3

Clément Fontaine
Aix-Marseille University
The principles are good in their structure. Since the definition of digital asset in principle depend on the definition of Principle 2 depends on definition of control written in principle 6, maybe it could be easier to bring them closer and place the control in principle 4.

31. Comment 4

David Morán Bovio
University of Cádiz (Spain) / Unidroit correspondent
It could be helpful to offer an Annex or anything like that with a full list of the points to be considered by "other law" for this to meet the Principles.

32. Comment 5

Nicole Purin
Deputy General Counsel, OKX ME
The Structure of the Principles as illustrated in the draft consultation is solid and well balanced. It covers the key elements and the focus on susceptibility of digital assets to being the subject of property rights is a fundamental tenet that may provide best practice across jurisdictions.

33. Comment 6

Walter Arevalo (President) and Victor Bernal (Directive Council) on Behalf of ACCOLDI - Colombian Academy of International Law
ACCOLDI - Colombian Academy of International Law
The content and guidelines regarding the spirit of jurisdictional neutrality in the introduction "II. NEUTRALITY AND THE RELATIONSHIP OF THE PRINCIPLES TO NATIONAL LAW", should be implemented as a principle itself, its content is fundamental to understand the other principles and leaving it in the introduction could "water-down" its relevance, specially when this neutrality is fundamental for other principles such as P5 and P6.

34. Comment 7

Centre for Commercial Law at the University of Aberdeen
University of Aberdeen
We think that the structure of the Principles is overall logical, but may benefit from some refinements regarding Principles 1 and 3 which we will elaborate on in our comments to those Principles.

35. Comment 8

The Centre for Robotics, Artificial Intelligence & Technology Law
SVKM's Pravin Gandhi College of Law; Student Committee
These principles are not general; they only regulate a specific area of private law. Such as rules of private law relating to intellectual property or consumer protection. But the down side to it is that, they do not address all contractual and proprietary issues relating to the digital assets covered by the Principles as States may have a wide range of other laws and there is no attempt to identify the specific law that may apply. The Principles address a wide range of legal issues relating to cryptocurrencies, but they specifically propose that the following laws should regulate proprietary matters involving digital assets: (a) The digital asset explicitly designates the law applicable to such issues as being the State's domestic law (excluding that State's rules regarding conflicts of laws); (b) the domestic law of the State (excluding its rules on conflicts of laws) explicitly designated in the system or platform on which the digital asset is recorded as the law applicable to such issues, if clause (a) is not applicable; (c) It suggests two choices if neither (a) nor (b) apply. A: The forum State should specify the relevant aspects or provisions of its law which govern proprietary issues in respect of a digital asset, and the law applicable by virtue of private international law of the forum. B: The forum State should specify the Principles that govern proprietary issues in respect of digital assets and the law applicable by virtue of private international law. Option A allows a state to apply its own domestic laws, while Option B requires the forum to apply the law otherwise applicable under private international law rules.

36. Comment 9

Finance, Competitiveness & Innovation Global Practice
World Bank Group
"It would be beneficial to relocate the definitions from Principle 2 to a separate section prior to the Introduction in order to provide a clear and comprehensive understanding of key concepts, such as digital assets, from the onset of the document rather than delaying their inclusion until Principle 2 (see in General comments our suggestions in terms of new definitions). Given the extensive and intricate subject matter covered within the nineteen outlined principles, it is recommended that an Executive Summary be included at the beginning of the document, providing a succinct overview of the key elements and recommendations within the principles. This approach can be similar to that utilised in the World Bank Principles for Effective Insolvency and Creditor/Debtor Regimes (see p. 5) and will aid policymakers in quickly gaining a comprehensive understanding of the key concepts and recommendations, facilitating ease of navigation within the document. On a minor note, the title of Section VI is not in caps locks as the titles of the other Sections."

37. Comment 10

Cassandre Vassilopoulos & Mark Kepeneghian
Kriptown
The articulation of the Principles needs to be reviewed as there are several concepts that could be explored further.

38. Comment 11

Silvana Fortich, Anabel Riaño (Docentes investigadoras Departamento de Derecho Civil); Adriana Castro (Directora Departamento de Derecho de los Negocios); Valeria Facio-Lince, Juan Alejandro Solano y Juan Sebastián Ortiz, monitores Departamento de Derecho de los Negocios
Universidad Externado de Colombia
"The document is clear and concise. However, as these are principles on digital assets and private law, there are no specific references to the areas of law involved in the major titles that give structure to the document and allow the subjects who intend to address the text to have clarity regarding its scope without the need to delve more deeply into it. We invite the working group to include this information (areas of law that the document intends to address) in an annotation or as best considered in this section. Some of the sections are drafted in a way it may seem that the document is intended to serve as model law rather than as principles. The working group may consider continuing the discussions whether the instrument may be adopted in the form of Principles, Model Law or recommendations to the member States. "

39. Comment 12

Pedro Mendoza Montano
UNIDROIT´s Correspondent in Guatemala
With regard to the structure of the Principles, I suggest that the rules relating to the scope of application could be set out in a more independent and self-explanatory manner. With the original structure, it is necessary to cross-reference different principles in order to extract their true applicability. For example, it is necessary to use the base standard set out in Principle 1, then to observe the definition of "digital assets" set out in Principle 2, then to analyze the concept of "control" based on Principle 6, and finally to verify the exclusions set out in Principle 3, in order to determine the true scope of application of the Principles. The current approach leads to a very convoluted body of principles that do not lend themselves to an easy reading as is the case with the UNIDROIT principles on international commercial contracts.

40. Comment 13

Lukas Wagner / Melih Esmer
NYALA Digital Asset AG/ EBS Law School
Overall, we agree with the structure.

41. Comment 14

Julien Chaisse
City University of Hong Kong
Overall, we agree with the structure.
I feel the structure of the draft UNIDROIT Principles on Digital Assets and Private Law is designed to provide a comprehensive and clear framework for the regulation of digital assets, addressing key private international law issues such as recognition and enforcement, jurisdiction, transferability, and interpretation.

Introduction

42. Comment 1

Eric de Romance

No comment besides the transition rules. As the text has the objective to clarify or to point out some crucial elements concerning the digital assets laws, I am not sure that the clause refering to the grace period should apply as proposed in the paragraph V - Transition Rules. This Grace Period cannot be a way to draw less informed investors into unacceptable situations, legally speaking. A period of adjustment could be envisaged but with the clarifications and Principles in place imposing to any new structurer of products to respect them as far as possible.

43. Comment 2

Spyridon V. Bazinas

Kozolchyk National Law Center

1. Paragraph 1 states: "These Principles are designed to facilitate transactions in digital assets of the type covered by the Principles, which are briefly described below. These are types of digital assets often used in commerce". A cross-reference should be included to the paragraphs in which those transactions are described. Paragraph 2 refers for this purpose to paragraph 17, but paragraph 17 refers to transfers and secured transactions and does not clarify whether these transactions are actual or imaginary or future.

2. The first sentence of paragraph 3 refers to market participants and courts as addressees of the Principles. But the second sentence of paragraph 3 refers also to legislators, as paragraph 4 does. And arbitral tribunals, which may also apply principles, are not mentioned at all. So, paragraphs 3 and 4 should be streamlined to refer to all addressees and explain the benefits of the enactment of legislation based on the Principles by States.

3. Paragraph 9 states that "The organisational neutrality of these Principles also does not mean that they are intended to be implemented outside of private law. These Principles cover only private law issues relating to digital assets and, in particular, proprietary rights". But Principle 18 refers to procedural law, including enforcement, which in many States is part of public law. So, paragraph 9 should explain that the Principles cover private law matters on the understanding that even procedural law is part of private law.

4. A better approach would be to refer to the issues covered by the Principles directly (e.g., rights of custodians and proprietary rights, including their enforcement within and outside insolvency), without attempting to categorize them under private or public law. If that approach were followed, paragraph 10 would not need to refer to issues of private law not covered in the Principles.

5. Paragraph 11 states that "These Principles apply only to a subset of digital assets. These are digital assets that are frequently used in commerce". But the Principles apply to contractual and proprietary rights in digital assets, not to digital assets. And this a second time the text refers to assets frequently used in commerce without explaining where and when. Thus, this statement should be revised to read along the following lines: "These Principles apply to the rights of transferees, secured creditors and custodians in a subset of digital assets. These rights are currently granted in the following actual transactions …".

6. Paragraphs 12 and 13 rightly refer to digital assets in linked assets covered by the Principles and to Central Bank Digital Currency in the form of a digital asset as scope issues, while the Principles refer to them as general principles issues (currently addressed in Principle 4). This inconsistency should be removed. These issues are scope issues and should be addressed in Principle 1.

44. Comment 3

David Gibbs-Kneller

University of East Anglia

The written response set out below generally raises points concerning principle, rather than specifics about the wording of the Principles.

I see no issue with recommending to states the adoption of rules that recognise digital assets as capable of being subject to proprietary rights and how conflicts of laws should be resolved. Beyond this, I do not think the case has been made out for these principles to be seen as 'best practice' approach to digital assets that will reduce costs and uncertainties. It is a model, and one that is,

arguably, not needed. There is no guarantee that the model will produce predictable results, free from inherent inefficiencies that would otherwise appear in the regulatory market. Better outcomes may be produced by leaving the majority of matters covered in the Principles to regulatory competition. For example, the principle that a good faith purchaser without notice should take title over the original owner may be a certain rule, but it may introduce inefficient credit terms into digital assets. As I explained in my forthcoming Law Quarterly Review article, (October 2023, available on request) if a creditor is not sure of their security, there is the risk of either increasing the cost of credit or immobilising the digital asset. Rarely is either option 'efficient'. Having different rules in different markets increases user choice, as opposed to adopting a single model law. Likewise, if the good faith without notice rule applies, this raises factual, rather than legal, questions that will attract litigation about 'good faith' and 'notice'. The straightforward common law rule that the owner's title is not lost to a good faith purchaser is unlikely to attract such litigation costs. There is also a general concern that to recommend states adopt the Principles is to recommend states adopt the principles of those who have written the model law, which are not universally accepted principles. Take the example of the good faith controller one step further. To give the innocent third-party controller of a digital asset better protection than a third-party purchaser of tangible goods, in those states where the nemo dat quod non habet rule is of general application the UNIDROIT principle will draw an irrational distinction between tangible property and digital assets because the only way to distinguish the two is the language spoken. The substantive reasons for protecting the original owner's title is lost to a semantic trap and a broad appeal to 'principles'. As my forthcoming LQR article showed, that is contrary to the rule of law because like cases are not treated alike, there is no equality before the law. As I argue later in response to the specific question on this point, the Principles provide no principled reason for departing from an established common law rule that has substantive reasons for it i.e. the need to protect property rights, in favour of other principles that protect the good faith without notice transferee in one context of digital assets.

Furthermore, to recommend states implement these principles as "best practice" it is possible it will not achieve harmonisation in a way that reduces legal uncertainty and costs for market participants but rather increases or redistributes them. The Principles will not exist in a vacuum and must be factually implemented by courts. To draw a comparison with the Convention on Contracts for the International Sale of Goods (1980), while 96 states have implemented it, the factual implementation has resulted in several factually different versions of the CISG. I see no reason why that would not happen with this model law, particularly as each state is left to implement the Principles. By creating a model law, rather than having regulatory competition, there is still uncertainty because precedent is a weaker, independent reason for making a decision and different variants of the Principles' implementation from state to state may irritate the intention of uniformity and cost reduction.

Take one example, drawing from my forthcoming publication. Imagine a creditor, in control of a digital asset, contracts with a custodian under a licence for use who sub-contracts to a client or other user on similar terms. Now suppose the intermediary-custodian defaults on the credit-licence terms. According to the principles, the creditor in control would have a security right to assert control over the digital asset against the innocent third-party with a licence to use. The Principles assert that conflicting law with this outcome would be "displaced". Nonetheless, that is potentially an unjust outcome. The creditor consented to the third party's licence to use who has not defaulted and is now seeking to ignore the burden of the consensual bargain made with the custodian while taking the benefit of it against the sub-user. In this situation an English judge may agree this is an unjust outcome, and lightly manoeuvre the concept of bailments, as they have done in other cases concerning tangible goods, to bind the creditor to the third party's licence to use.

That outcome would be contrary to the Principles and it puts market users back in a state of uncertainty and increased or redistributed costs because different states will have different rules regarding digital assets. Conflicting domestic provisions with an international model can increase/redistribute costs and/or uncertainty because first, if the Principles take priority, or have "displaced" other law, where there is a conflict, that takes us back to the first point; that the Principles are not necessarily best practice on what should be done. It is perfectly arguable, that a control principle, or other principles such as good faith transferees, should not take priority over competing claims to digital assets when there are other imperatives to consider, such as consent, justice, individual liberty, protection of property rights, registration, transparency, and so on, and states should be free to decide which imperatives it prefers to maintain the benefits of regulatory competition. Asserting priority to other claims may only redistribute costs in favour of another party without rationalising why those principles should be preferred to others, leading to inconsistencies and inequality in domestic law. Second, nor am I sure, on the wording of the Principles, that a concept such as bailments, if it were to apply, is displaced by the Principles. There is nothing expressly stated

in the Principles that a personal right to use is subordinate to a security right. This indicates a more general point about the interpretation of these principles. Without interpretative rules in the Principles, a notional plea that the Principles 'displace' other law where there is a 'conflict' will reduce certainty on when the Principles will displace other laws. Again, the CISG is awash with analogous examples of what its scope is. The obvious example is whether software is 'goods' and thus subject to the relevant provisions of the CISG or left to domestic law. So the bailments example is, probably, one of many situations the Principles do not expressly cover but may do so and each different state may come up with different answers as to whether there is a 'conflict'. To resolve those uncertainties concerning conflicts in the scope of the model law, the result is uncertainty, litigation and increased or redistributed transaction costs. That leads to the third concern of how this model law could introduce costs and uncertainties. Because states may factually implement the Principles differently and any international precedent is a weaker, independent reason for making a decision, the conflicts of laws rules will not necessarily reduce legal uncertainties or costs because there will be divergence between legal and factual implementation of the model law. Therefore, there will still be disputes to hear the case in a jurisdiction with the rules most favourable to each party.

Therefore, I remain unconvinced that adoption of these Principles will have the intended effect UNIDROIT believes they will do, as set out in the introduction. My conclusion is that the introduction overstates the benefits of adopting the Principles and should be rephrased to reflect its status as a model law, not best practice, and include clearer principles on its scope relative to "other law", perhaps with an interpretive principle. I do not think the Principles are going to achieve cost reduction and legal certainty generally and under a vague principle that other law is displaced where there is a conflict. Alternatively, leave how the Principles relate to other law as silent matter for states to decide when and if they implement some or all of the Principles. A response to these concerns may be that states are free to ignore the Principles and implement rules on digital assets how they see fit. That, however, simply begs the question of whether there is any need for an international model law on digital assets, beyond resolving conflicts of law questions and recognising their legal status.

NB: it is arguable that bailments could be extended to digital assets under English law, despite their intangibility.

45. Comment 4

Dr. Gizem Alper
Academic & Attorney
The following has been stated in the Introduction Part II: "Moreover, these Principles intend to only regulate a specific area of private law, and there are many issues of private law which are not addressed by the Principles. These issues concern, for instance, rules of private law relating to intellectual property or consumer protection. As a matter of principle, these areas of law are not addressed by these Principles, and national intellectual property and consumer protection laws therefore remain unaffected by them. Also, these Principles do not address many issues of private law relating to contract and property law. Examples of these issues not addressed by these Principles include whether a proprietary right in a digital asset has been validly transferred to another person, whether a security right in a digital asset has been validly created, the rights as between a transferor and transferee of a digital asset, the rights as between a grantor of a security right in a digital asset and the relevant secured creditor, many of the legal consequences of third-party effectiveness of a transfer of digital assets and some of the requirements for, and legal consequences of, third-party effectiveness of a security right in a digital asset, etc. etc." My comments: My main comment is concerning the encouragement of uniform commercial laws, i.e. CISG and soft- laws such as the UNIDROIT principles. The introduction states that "these Principles do not address many issues of private law relating to contract and property law." Although this derives from the "neutrality and functionality" approach of the text, I suggest that attention should be drawn to international commercial uniform laws and possible applicability.

46. Comment 5

Stéphanie Saint Pé
France Post Marché
- The preparation of these principles has not been made with the participation/contribution of all members' representatives. This is a strong governance issue (in particular considering the Unidroit

foundational principles according to which members are to be consulted and shall participate and contribute) which minimizes the legitimacy of the proposed principles and the opportunity to present these principles to EU authorities. It appears therefore impossible/useless/utopic to expect States to adapt current legislation in a view to comply with these principles.

- We will share high level views on the principles but we have obviously not been put in a position to run through the principles with reasonable care given the tight timing and considering the importance of the changes proposed and being considered since the creation of the dedicated working group (2 years if our understanding is correct). This is not acceptable.

- In the "neutrality and relationship of the principles to national law" paragraph, the concepts developed create confusion. There is a new notion of control being introduced. This is likely to trigger multiple inconsistencies whereas these principles are deemed to be "applied to any legal system or culture". As long as key concepts are not aligned with existing notions, the co-existence and application of these principles appears to be a heresy.

- The organizational neutrality aspect developed in introduction shed the light on difficulties that will emerge out of a potential application of these principles. Securities law has been fragmented for decades. The same goes for private law/commercial law and contractual law. Impacts are therefore underestimated in the proposed document and this is also largely due to evident abstraction of existing regional law (EU legislation) as well. Adopting any such principles without having a clear view on consequences could lead to high legal/regulatory uncertainty.

- In the "scope of the principles" sub-section, there is no precise definition of digital asset whereas it is a central notion. Compared to MiCA or the notion of financial instrument under MiFID, there is no clear view on the type of assets that may be captured by these principles (considering its features, mechanics, rights attached to it, etc). Therefore, the possibility to adopt any such principles and to understand the impact any such adoption may have appears to be vague/difficult to assess.

- Transition rules are proposed. The position is vague. Principles are supposed to apply only prospectively but there are some cases where some principles (which ones?) could apply to existing transactions. There is no more details/conditions being exposed here. This is unclear.

Section 2 of the document evidences tangible limits in the construction of these principles from a general/governance viewpoint. The approach is likely to be utopic and this is largely due to the absence of consultation of numbers of members including France (and associations involved in securities law). We raise this point as a major/critical one and hereby strongly challenge the merits of the principles. We strongly disapprove the process.

All elements tackled in the principles may have direct important impact under national, regional and international laws. There appears to be a lack of impact analysis. The consequence of the adoption of any such principles is neither considered, nor addressed. We cannot envisage having these principles taking precedence over other laws (including laws adopted at the European Union level) without having a clear/detailed view on the impact any such principles may have. We strongly push back on it.

Elements proposed in the below analysis are not exhaustive. Considering the governance issue spotted, we are not engaging in a deepest analysis.

47. Comment 6

Alejandro Horacio Luppino
Embassy of Argentina in Italy
In relation to the inclusion made at the end of paragraph 9 of section II "Neutrality and relationship between the Principles and the National Law" regarding the desirability of complementing the Principles with regulatory legislation on digital assets, we agree on the importance that the jurisdictions adopt complementary regulatory norms, however it is considered preferable to eliminate the references to the type of sanctions that the authorities should impose in case of non-observance of the alleged norms, In order not to prejudge the competences in the matter that are responsibility of the States.

48. Comment 7

Clément Fontaine
Aix-Marseille University
The digital asset can't be analyzed without its technologic side. Principle 3 defining digital asset also take into account this particularity by defining it through electronic record notion. However, electronic record may not be enough since it does not take into account the autorun aspect. indeed, digital asset are asset depending on prewritten and self-executing conditions. Moreover, some digital asset depends on public architectures such as Bitcoin or Ethereum. A difference between digital asset depending on those architecture and digital asset depending on private infrastructures should be made because it has an impact on private law. For instance, when there is a direct right between a holder and the digital asset depending on a public infrastructure, there is an indirect right when the digital asset depends on infrastructure administrator. Those differences should be then taken into account.

49. Comment 8

David Morán Bovio
University of Cádiz (Spain) / Unidroit correspondent
WIPO perspective seems different and perhaps alignment is needed

50. Comment 9

Nicole Purin
Deputy General Counsel, OKX ME
The introduction is comprehensive and incorporates very interesting concepts pertaining to interaction between the principles, private law and regulatory law. Core Concepts (IV) sets out very clearly the fundamentals of the principles and these are well structured - proprietary rights/control and the taking of security are extremely important legal principles that are attributed to digital assets and provide a stable model. In terms of Part V (Transition Rule), it might be preferable if this section were expanded further to provide greater clarity.

51. Comment 10

Walter Arevalo (President) and Victor Bernal (Directive Council) on Behalf of ACCOLDI - Colombian Academy of International Law
ACCOLDI - Colombian Academy of International Law
The content and guidelines regarding the spirit of jurisdictional neutrality in the introduction "II. NEUTRALITY AND THE RELATIONSHIP OF THE PRINCIPLES TO NATIONAL LAW", should be implemented as a principle itself, its content is fundamental to understand the other principles and leaving it in the introduction could "water-down" its relevance, specially when this neutrality is fundamental for other principles such as P5 and P6.

52. Comment 11

Centre for Commercial Law at the University of Aberdeen
University of Aberdeen
"The introduction is reasonable overall. We do, however, see value in having further explanation on the need for such a private law framework on digital assets at the international level. We infer, from para 4, that the Principles have been designed to apply in both domestic and cross-border situations. However, there is no clear indication of what counts as a cross-border situation. This (ie internationality) becomes particularly important for the application of Principle 5 on conflict of laws as it is that cross-border (or international) element that requires the conflict of law analysis. Para 19 addresses transition rules. We are not sure why this is included in the Introduction rather than under the Principles, as the legal value of the former and latter seem to differ. "

53. Comment 12

The Centre for Robotics, Artificial Intelligence & Technology Law
SVKM's Pravin Gandhi College of Law; Student Committee
"A review document titled ""Draft Principles and Commentary on Digital Assets and Private Law"" was released by UNIDROIT, the International Center for the Unification of Private Law, on January 10, 2023. This review basically intends that these Principles will provide guidance in the transactions covered by these Principles, their advisors/ lawyers, the courts and others who will consider the legal effects of these transactions. It suggests that international legislation be enacted in accordance with these Principles. While specific jurisdictions, such as the UK, have held consultations on the legal framework pertaining to crypto-assets, these Principles are meant to be applicable internationally. Firstly, these Principles are technology and business model neutral. Secondly, these Principles are jurisdiction neutral. Which means that they have not been drafted using the terminology of a specific jurisdiction or legal system and thus they facilitate the legal treatment of digital assets in all jurisdictions, including common law and civil law systems. Thirdly, these principles are organisationally neutral i.e. they take no position as to in what part of a State's laws its rules should be included."

54. Comment 13

Finance, Competitiveness & Innovation Global Practice
World Bank Group
Paragraph 1 of the Introduction is somehow circular and lacks clarity "these principles are designed to facilitate transactions in the type of assets covered by these principles" and "type of digital assets often used in commerce". It would be clearer something such as "these principles are designed to facilitate transactions in certain types of digital assets often used in commerce and described/defined below in Section XX". A minor point of clarification regarding the language in Paragraph 5 of the Introduction is that the wording implies that distributed ledger technology (DLT) and blockchain technology are separate types of technologies, when in fact blockchain is a subtype of DLT. Blockchain is the most widely recognised example of DLT and is a type of distributed ledger that utilizes cryptography to ensure the security and validation of transactions. Therefore, the reference to DLT and blockchain technology as distinct technologies in Paragraph 5 is not entirely accurate and should be revised accordingly. With reference to the statement in Paragraph 9 of the Introduction, which states that "States may wish to adopt rules that prescribe how a custodian of digital assets must segregate the digital assets it maintains for clients from its own assets," it is recommended that an option be included in this paragraph for States to also consider adopting rules on proof of reserves. In this respect, it is also important to note that, besides rules, States should include mechanisms for enforcing the segregation/proof of reserves to take place. This is in light of recent insolvencies of crypto companies, which have led to a significant amount of discussion on this topic. As an example, it is worth looking at the proof of reserves standards being adhered to by certain exchanges, as outlined in resources such as the following: https://coinmarketcap.com/alexandria/article/proof-of-reserves-these-exchanges-are-adhering-to-the-new-standard.

55. Comment 14

Silvana Fortich, Anabel Riaño (Docentes investigadoras Departamento de Derecho Civil); Adriana Castro (Directora Departamento de Derecho de los Negocios); Valeria Facio-Lince, Juan Alejandro Solano y Juan Sebastián Ortiz, monitores Departamento de Derecho de los Negocios
Universidad Externado de Colombia
"In the section entitled ""reasons for the principles"" adopts a structured and timely approach. The section is clear, direct and concise. In point II: Neutrality and the relation of the principles to national law: Paragraphs 9 and 10 establish which areas of law are involved in the principles, emphasizing that the central issue is private law. Specifically, paragraph 10 excludes the right of intellectual property, consumer protection and later says that there will not be many references to contract and property law. This reference is not in harmony with the scope of the principles, since later and on several occasions the document mentions that one of the main objects is the rights of the owner (Principle 1). Likewise, the information

contained in paragraphs 8 and 10 is contradictory, since the first raises organizational neutrality, being that States may consider one or more of the principles for general rules of private law, commercial law and consumer law; then paragraph 10 states that consumer protection rules are not affected by the principles as mentioned above in paragraph 8.

Regarding organizational neutrality, the text is unclear. First it recognizes that the principles could be applied regardless of whether it is a consumer relationship or not (Introduction, paragraph 8) but then it is stated that there are many issues that are not addressed in the principles, for example consumer protection. The issue of consumer protection seems to be fundamental, even if it is not a question of making specific regulations in this area.

Lastly, there is technical clarity on the scope of the document under the heading ""scope of the principles"". However, mention or clarification of areas of law is lacking. Although it is mentioned in the item entitled ""core concepts"" it is not done in ""scope of the principles"", and it is considered proper to harmonize the information there with the application to the areas of law involved. "

56. Comment 15

Pedro Mendoza Montano
UNIDROIT´s Correspondent in Guatemala

In the UNIDROIT principles on digital assets and private law, specifically from paragraphs 5 to 10 of the introduction, there is a discussion as to whether it is necessary to apply the principles to other areas beyond commercial law itself. On the one hand, the possibility of applying these principles to consumer protection law is discussed, while on the other, the possible application of these principles to regulatory law is mentioned.

In my opinion a partial adoption, in any legal system, of these principles in certain areas of law while excluding others could lead to legal uncertainty that would not justify their adoption from the outset. The principles rightly point out that they do not limit their adoption to a specific area of a state's domestic law, even if they are made with the area of commercial law in mind. There could be several scenarios in which a partial adoption of these principles could lead to an unsatisfactory outset. An example would be the negotiation or execution of an administrative contract for the purchase and sale or transfer of digital assets. In that case, not only would there be no common concept of what a digital asset is between the business person and the administrative entity, but there would not even be a common concept of what it is to have ownership over these digital assets. The administrative entity will base its approach on the national lex contractus while the business person will base its approach on these principles.

In relation to consumer protection, certain legal contradictions may arise, such as the right of consumers to "retract" from a transaction. Several technologies, including distributed ledger technology (DLT technology) do not allow the reversal of transactions. Once a transaction is confirmed in a blockchain, reversing it is virtually impossible. It is also true that this discussion could also be approached from the point of view that speculative goods are outside the scope of consumer law.

Within the introduction of the UNIDROIT principles on digital assets and private law, specifically in paragraph 5, emphasis is placed on the neutral model that is adopted for these principles, for the purposes of their application. It is important to place specific attention on the fact that the applicability of the principles is not reduced to a specific class of digital assets.

However, there might be a contradiction within the principles because Principle 1 indicates that the principles are directed to commercial law relating to digital assets. Under Principle 2, it is indicated that "digital assets" should be understood as those over which control can be exercised. Subsequently, control is defined on the basis of Principle 6.

In defining control within principle 6, paragraph 1 (b), requires that the person holding the digital asset should be able to identify himself as the one who holds the rights over it, either by means of the digital asset itself, the relevant protocols or the system. It is on the basis of this provision that a potential contradiction with the neutrality of technology stated in the introduction could be detected.

The foregoing is due to the fact that by exhaustively indicating the only possibilities through which it is viable to document which person exercises property rights over the asset, the scope of application of the principles is limited solely to those digital assets that have any of the 3 registration possibilities

indicated in Principle 6 (1) (b). Digital assets are goods in constant evolution, which allows them to be developed and processed using alternative methods to those stated in the standard, and these assets would unjustifiably fall outside the scope of application of the UNIDROIT Principles, without prejudice to the fact that there would still be control over them. Consequently, there could be a violation of the neutral model that is sought to be safeguarded in the scope of application of these principles.

57. Comment 16

Lukas Wagner / Melih Esmer
NYALA Digital Asset AG/ EBS Law School
In our view, only very few jurisdictions with a very broad understanding of property will be able to consider crypto assets as property due to the fundamental structural differences between digital assets and tangible objects (for these structural differences, see our comments to Principles 2 and 6 below). As pointed out above, we would therefore suggest to clarify that each jurisdiction has to decide whether crypto assets can be subject to property law in line with its structural understanding of property, but that functionally, to the extent possible, the same results should be achieved.

Principle 1: Scope

58. Comment 1

Spyridon V. Bazinas
Kozolchyk National Law Center
1. Principle 1 contains an unnecessarily general and vague statement ("These Principles deal with the private law relating to digital assets"). In addition, this statement is not correct to the extent that Principle 3(1) clarifies and Principle 3(3) excludes a number of private law matters from the scope of the Principles. So, Principle 3(1) and 3(3) should be included in Principle 1. Paragraphs 3 and 7 of the comments correctly refer to Principle 3(1) and 3(3) in this context, as they address scope issues. 2. A better approach as already mentioned, would be to refer directly, either indicatively or exhaustively, to the issues to which the Principles apply (e.g. proprietary rights of transferees, secured and custodians of digital assets subject to control). This approach would be a more precise statement of the scope of the Principles. It would also make unnecessary the categorization of those issues as private or public law issues, which may not be right for States in which procedural issues are public law issues. 3. If that approach were followed, again Principles 3(1) and (3) should be included in Principle 1, as they address scope issues and comments on them are correctly included in the comments on Principle 1. 4. The first sentence of Principle 4, Linked assets, also addresses a scope issue. So, it should also be included in Principle 1.

59. Comment 2

David Gibbs-Kneller
University of East Anglia
As explained, the scope is unclear regarding conflicts with "other laws".

60. Comment 3

Julien Chaisse
City University of Hong Kong
Principle 1 sets the foundation for the rest of the principles and provides a clear understanding of the purpose and application of the principles in the context of digital assets.

61. Comment 4

Martha Angélica Alvarez Rendón
Mexican Ministry of Foreign Affairs

We recognize that principle 1, and the document as a whole, is intended to direct the behavior of individuals and that its application and enforcement by authorities is not included. However, in the case of this type of commodities, it will be exceedingly difficult for authorities not to intervene.

62. Comment 5

Stéphanie Saint Pé
France Post Marché
"- The proposed approach is limited in terms of impact analysis. There is an evident lack of consideration of existing legal/regulatory framework. - It is clearly mentioned "there are many issues of private law which are not addressed by the Principles". This is triggering high regulatory uncertainty. There are indeed numbers of ramifications within private law/securities law and digital assets regulations. These inter-dependencies are important when considering setting up general guidance/principles. It is therefore not possible to envisage changing the rules for certain aspects without considering, in an appropriate manner, the collateral effects any such adjustment may have. "

63. Comment 6

David Morán Bovio
University of Cádiz (Spain) / Unidroit correspondent
Consumer (protection) Law exclusion appears difficult. As well as intellectual property. But the references to insolvency Law seems to contradict the absence of Public Law.

64. Comment 7

Gilberto Martins de Almeida and Ian Velásquez
Instituto de Direito e Tecnologia (IDTEC)
These Principles deal with the private law relating to digital assets. Suggestion: Modification: These Principles deal with certain private law aspects of proprietary rights over digital assets as defined herein. Commentary: There are different international norms which address private law relating to digital assets (as part of digital phenomena), such as UNCITRAL´s EC, EEC and ETR, all of which indicate their scope (respectively, e-commerce, electronic communications in international contracts, and electronic transferable records) at a deeper level than the one currently worded in Principle 1. In order to avoid possible unnecessary conflict or misleading impression, it seems convenient to align the enunciated scope with the framing outlined along the Commentary. In paragraph 1, the Commentary mentions that the Principles "cover only private law issues relating to digital assets and, in particular, proprietary rights". Having this in mind, it is commendable to mention that the scope of the Principles is somewhat limited to certain proprietary rights, and not all issues of private law related to digital assets. This modification is especially relevant, considering the commentary in paragraph 2, which states that the Principles "intend to address only a specific area of private law", and that issues such as "intellectual property or consumer protection", as well as "many issues of private law relating to contract and property law", are not addressed by the Principles. Also, the Principles selected a special category of digital assets, as indicated on the Commentary (These Principles apply only to a subset of digital assets. (…) They are distinguished from other digital assets by identifying them as digital assets that are subject to control). Therefore, it seems convenient to clarify that not every kind of digital asset is regulated by the Principles, and rather only the ones defined therein.

65. Comment 8

Sumant Batra
Insolvency Law Academy
The main issues faced in the event of insolvency in relation to digital assets include: • the issue regarding taking of custody of digital assets due to non-availability of private keys required in order to take control, for example where personnel of a company undergoing insolvency proceedings do not cooperate. • cross border issues owing to the decentralized nature of digital assets. • realization of digital assets during insolvency. • nature of security interest on such assets which will determine the claim of the relevant creditors in relation to such assets during insolvency proceedings. While Principle 14 (1) provides that digital assets can be subject to security interest it does not specify the nature of such security interest. FTX crypto exchange insolvency precedent: The recent FTX crypto exchange insolvency had major impact on the crypto markets around the world. We understand the following from the sources available in the public domain: One of the issues that arose in the above case was with regard to the realization of the crypto assets during insolvency proceedings which could be a challenging exercise and potentially take years on account of cross-border insolvency and competing jurisdictions. Given that anyone who holds funds on FTX will become a creditor, the FTX insolvency proceedings may have several creditors situated across various jurisdiction and settling the debts of such creditors in itself poses a logistical challenge. There has also been a tussle between US regulatory authorities and insolvency authorities in the Bahamas in relation to control of assets and information in relation to this collapse , although an agreement has now been reached between the two countries' teams leading the insolvency proceedings to work together to share information, secure and return property to their estates, co-ordinate litigation against third parties and explore strategic alternatives for maximizing stakeholder recoveries . Further, a group of FX customers have also filed a petition before the bankruptcy court overseeing the FTX insolvency proceedings for priority payment and a declaration that customer property held with the crypto exchange is not the company's property. The proceedings have commenced recently only and therefore, how these issues play out not only before the US courts, but also in different jurisdictions around the world remains to be seen. In the light of the aforesaid, we recommend that the Draft Guidelines should provide for the mechanisms to resolve the aforesaid issues. For example, (i) perhaps an international/domestic registry can be considered which will register charges on digital assets so that there is clarity on charge holders, title and claims can be easily verified; (ii) establishment of custodians may be considered who will hold the private key in trust and be bound by confidentiality so that when a company holding/having investment in digital asset goes into insolvency, the insolvency professional through order of court and State laws can access the private key and take custody and control of digital assets; (iii) formulation of cross border framework to provide for a framework of cooperation between countries in relation to control of digital assets and sharing of relevant information.

66. Comment 9

Nicole Purin
Deputy General Counsel, OKX ME
Section 1, Scope, appears comprehensive. It may be recommended to expand the section on how the principles may support/interact with regulations as there is a big drive by regulators to implement new regulations to cover digital assets, and the principles could provide guidance and harmonisation.In part 3, I would recommend to specify which gaps in private law the text is referring to.

67. Comment 10

Walter Arevalo (President) and Victor Bernal (Directive Council) on Behalf of ACCOLDI - Colombian Academy of International Law
ACCOLDI - Colombian Academy of International Law
"It is not clearly expressed at the beginning that the actual scope of the principles to be discussed is the commerce of digital resources rather than the commerce through digital means. The property being delimited by the draft then it's not the one that can be acquired through different technologies

by consumers, but a specific type of digital product which are then introduced as "digital assets". Therefore, the principles stated cannot be extended to any kind of digital commerce relationships, for there are being exclusively directed to the transference of property over digital devices which contains information that is capable of being retrieved. Then the scope of application of the principles is extremely limited to the particular interest in the commerce of data."

68. Comment 11

Japan Virtual and Crypto assets Exchange Association
Japan Virtual and Crypto assets Exchange Association
With respect to the treatment of digital assets such as crypto assets, various tokens (NFT, etc.), and stablecoins under private law, we welcome the clarification of the definition and the transfer and other legal frameworks based on the current practices.

69. Comment 12

Michele Graziadei and Marina Timoteo
University of Torino
Principle 1 adopts a sweeping statement to the effect that the principles "deal with the private law relating to digital assets". Although the commentary makes clear that the principles actually deal with some aspects of private law only, such a sweeping definition of their scope should be avoided, and the scope of the principles should be limited to what they actually cover, namely transfers, conflict of laws, custodianship, secured transactions, insolvency etc. Reference to the entire field of private law is bound to provoke uncertainty. The listing of the precise areas of the law to which the principles apply is enough to exclude any public law aspects of the principles.

70. Comment 13

Hubert de Vauplane
Kramer Levin
We consider that the proposed definition is particularly broad and would allow traditionnel assets, such as financial instruments, to be included in the category of digital assets governed by the Principles, as long as they are issued and recorded on a blockchain. The choice of qualifying an asset and subjecting it to a particular legal regime based on its form raises questions. Until now, assets have been legally qualified in accordance with the principle of technological neutrality. In other words, if an asset presents the same substantial charateristics as another asset, it belongs to the same legal category and is subjected to the same regulation. Accordingly, French law limits the category of « digital assets » created by the PACTE Act to those assets that do not fall under any other legal categories. As a consequence financial instruments issued and recorded on a blockchain are excluded from the category of « digital assets ». The European Union, through the draft MiCA regulation, adopts a broad conception of the « crypto-assets » category. Those assets are defined as any « digital representation of value or rights that can be transferred and stored electronically, using distributed ledger technology or similar technology », but limits the scope of application of this dedicated regulation to crypto-assets that do not meet the charateristics of named legal instruments (i.e., financial instruments, etc.). Therefore, the future European regulation follows the French approach, from which it is inspired. Under these systems, only digital assets that do not possess the characteristics of a named instrument, and in particular financial instruments, are subject to dedicated, special regulation. We believe that this methodological choice is the only one that complies with the rule, as reiterated by the FSB in its consultative document dated 11 October 2022: « same activity, same risk, same regulation ». And the legitimacy of this choice is not undermined by the need to adapt, marginally, existing legal regimes to allow digital assets to fall within their scope, as already achieved with the European Pilot Regime Regulation. Furthermore, this conclusion is necessary for obvious reasons of clarity and predictability of the rule of law. It is a matter of avoiding the cumulative application of distinct legal regimes to a legally identical asset, notwithstanding the technology that makes it possible to identify that asset. Whether recorded in an account or on a blockchain, a financial instrument remains a financial instrument and the applicable legal regime is that of financial instruments, including with regards to the assets' ownership and transfer of property. Therefore, the legal regime specific and applicable to financial

instruments recorded in an account or on a blockchain should be the same, regardless of how the instrument is represented or recorded.

It is also necessary to prevent difficulties in the articulation of different legal regimes. When a financial instrument is issued in a digital form, which provisions should be applied? The provisions of the Geneva Convention on Intermediated Securities or the UNIDROIT Principles? Which DIP rules would apply? What are the modalities for establishing guarantees? What are the custodians' obligations?
To conclude, the scope of application of the Principles should exclude traditional assets, and particularly financial instruments, which are subjected to their own regulation, and for which it has not been demonstrated that this regulation could not apply to their digital form. This conclusion is all the more compelling as financial instruments recorded on a DLT or on a blockchain present the same risks for investors and market stability as financial instruments recorded in a securities account.

71. Comment 14

Centre for Commercial Law at the University of Aberdeen
University of Aberdeen

"Principle 1 sets out the material scope of application as 'the private law relating to digital assets'. When this is read along with the Commentary, it becomes clear that the scope is actually limited to only certain aspects of the private law, which mostly centre on property law and insolvency law. We, therefore, suggest an amendment to the provision to indicate that the Principles deal with 'aspects of' the private law relating to digital assets.

Principle 3(3) deals with the matters excluded from the scope and we think that it may be better placed under Principle 1 dealing with the scope.

The territorial scope of the Principles is not defined, although it is inferred, as we noted in our comment above regarding the Introduction, that both domestic and cross-border situations are included in the scope."

72. Comment 15

Gerard GARDELLA
HAUT COMITE JURIDIQUE DE LA PLACE FINANCIERE DE PARIS

"The Principles project (the "Principles", or the "Project") appears to cover a broad range of digital assets, as it includes any electronically recorded asset (defined as "electronic records") that can be "controlled". Therefore, there is no clear view on the types of assets that may be captured by these Principles. This is a major issue since this renders very difficult the assessment of these Principles compared to existing legislation (such as MiFID, MiCA or French securities law). In our view, this creates difficulty in understanding and assessing the impact of the adoption of these Principles and impairs the possibility to adopt such Principles.
The HCJP considers that the Project should (i) exclude non-negotiable digital assets, and (ii) exclude all financial instruments (including when they are recorded on a DLT or a blockchain). The Project should therefore be limited to crypto-assets (with the exclusion of non-fungible and unique crypto-assets).
As for the first point, the HCJP recommends to limit the scope of the Principles to negotiable assets only. The current scope is so broad that it covers any form of rights or property that only have in common the digital representation. In other words, the Principles seem to infer that form prevails over substance, regardless of the existing legal classification of the right or property. It is a departure from the legal neutrality approach advocated by UNIDROIT, and above all, it represents a risk of creating dual legal systems based on the form of representation of a right or property. The illustration here is provided by the case of digital financial instruments mentioned below.
As for the second point, the HCJP considers that it should exclude financial instruments (including when they are registered in a DLT or a blockchain) from the scope of application of the Principles, in accordance with the standards adopted by international regulators, 'same activity, same risk, same regulation' (FSB – Regulation, Supervision and Oversight of Crypto-Asset Activities and Markets, Consultative Document – 2022, 11 Oct.) which, on this basis, are subject to specific provisions under French Law. Similarly, the legal framework established by the MiCA Project will only apply to digital assets that are not classified as financial instruments, in order not to interfere with the current regulations that apply to these instruments.
Furthermore, the HCJP believes that there is a very high risk of concurrent application of this definition with the definition provided under the Pilot Regime. In fact, the latter applies to financial instruments

"issued, registered, transferred and stored using distributed ledger technology" (article 2.11). However, these digital financial instruments are subject to the general legal regime of financial instruments, and are expressly excluded from the MiCA Project (Article 2.2 a). By maintaining such a broad definition, the UNIDROIT Principles would directly conflict with European law by incorporating digital assets that are subject to a specific legal framework into its scope of application, and would therefore apply to assets with differing legal or economic characteristics according to the same rules, although these assets would justify a different treatment. Moreover, the HCJP is questioning the scope of application of these UNIDROIT Principles in relation to the Hague Convention on intermediated securities of 2006. Indeed, the UNIDROIT Principles provide for a specific provision on conflicts of law and the HCJP also questions the competition of two legal rules for the same legal instrument (financial instruments). Based on the foregoing, the broad range of digital assets envisaged in the Project would raise numerous complicated issues that go far beyond the scope of this consultation. Therefore, our comments below assume a limited definition of digital assets restricted to crypto-assets (with the exclusion of non-fungible and unique crypto-assets) unless provided otherwise. "

73. Comment 16

Office for Financial Market Innovation and Digitalisation
Principality of Liechtenstein
We welcome that the UNIDROIT principles focus on private law pertaining to digital assets. The principles' broad definition of digital assets, which encompasses all cryptocurrencies and tokens, is also welcomed. By recognizing the functional equivalence of digital assets to "things", UNIDROIT has acknowledged that digital assets can be the subject of proprietary rights, regardless of whether they are considered "property" under national law. This approach aligns with Liechtenstein's stance, which has introduced tokens as assets sui generis into its legal system. To ensure legal certainty, it is necessary that digital assets and their transfer have third-party effect and that the bona fide acquisition is possible. We welcome the approach taken by UNIDROIT.

74. Comment 17

Silvana Fortich, Anabel Riaño (Docentes investigadoras Departamento de Derecho Civil); Adriana Castro (Directora Departamento de Derecho de los Negocios); Valeria Facio-Lince, Juan Alejandro Solano y Juan Sebastián Ortiz, monitores Departamento de Derecho de los Negocios
Universidad Externado de Colombia
"First, UNIDROIT`s proposal to address beyond regulation is important and timely. In this field a technological approach is more frequent than a legal approach. In addition, the scope of the Draft Principles is defined by ""private law in relation to digital assets"". However, in the development of the Draft Principles it is found that it does not address all private law issues but some specific areas of private law (Principle 1, paragraph 2; Principle 3, paragraph 7). In addition, the principles are not intended to refer to all digital assets, ""only those that are subject to control"". One of the main subjects of private law is the rights of the owner and it's the enforceability of his right against third parties. We agree on the importance of addressing this issue in relation to digital assets. Along the same lines, it would be appropriate to address other property rights that may be vested in such assets. The comments to Principle 1 mention the excluded areas of private law again (consumer law, intellectual property, among others). Although the text is emphatic and clear in relation to the exclusion, the basis for this decision is not sufficiently explained and, as noted before, there are some sections where it says otherwise. "

75. Comment 18

Pedro Mendoza Montano
UNIDROIT´s Correspondent in Guatemala
It is not clear if the concept of "principles law" is meant to overlap with certain aspects of consumer protection law. Particularly, taking into consideration that the third paragraph of the commentary to this principle brings up that consumer protection law will not be governed by these principles. However, the fact that the principles define the concept of "control", "custody" and "transfer of

property" over digital assets could have potential implications with consumer protection law in different jurisdictions.

76. Comment 19

Lukas Wagner / Melih Esmer
NYALA Digital Asset AG/ EBS Law School
In line with our suggestions above, it should be clarified either in the text of the Principle or in para 3 of the commentary that, in line with the practical and functional approach proposed by the Principles, and irrespective of whether the jurisdiction in question can consider crypto assets as property, functionally, the same results should be achieved to the extent possible.

Principle 2: Definitions

77. Comment 1

OMAR ALAWAD
Bankruptcy Commission - Saudi Arabia
The paragraph 8 in principle 2 defined the term "insolvency proceeding" in the principles, and the definition did not include the provision that an insolvency proceeding (relating to insolvency law). which makes this definition different from what was stated in the definition of an insolvency proceeding contained in the UNCITRAL Model Laws, such as the " UNCITRAL Model Law on Enterprise Group Insolvency 2019" And The "UNCITRAL Model Law on Recognition and Enforcement of Judicial Provisions on Insolvency 2018" and the "UNCITRAL Model Law on Cross-Border Insolvency 1997". Nor did the explanation of the definition did not indicate why it's different then the UNCITRAL's model texts. Based on the foregoing, it is proposed that consideration be given to including in the definition of insolvency an indication that the proceeding is related to an insolvency law as set out in the UNCITRAL Model Laws, or indication of why this was not provided for in the commentary accompanying the definition.

78. Comment 2

ANDRES ALONSO QUINTERO RODRIGUEZ
Sugiero evaluar si el principio 2 (2) podría ser adicionado en el sentido de incluir explícitamente en la definición de activo digital: i) la cualidad de poder ser avaluado en dinero; ii) el ser susceptible, o no, de control; y, iii) la posibilidad de estar compuesto, o no, de datos personales. --- I suggest evaluating whether principle 2 (2) could be added in the sense of explicitly include in the definition of a digital asset: i) the quality of being able to be valued in money; ii) being susceptible, or not, of control; and, iii) the possibility of being composed, or not, by personal data. Sugiero revisar si el principio 2 (5) (a) podría ser redactado en el sentido de incluir la hipótesis en que la transferencia de un activo digital se realiza con ocasión al procesamiento de datos por una inteligencia artificial a favor de una persona. --- I suggest reviewing whether principle 2 (5) (a) could be drafted in the sense of include the hypothesis that the transfer of a digital asset is carried out due to data processing by artificial intelligence in favor of a person.

79. Comment 3

Eric de Romance
Illustration 2 - paragraph 11 - 12 - 13. If the digital asset contains intellectual property, I cannot see how the holder of the property rights on the digital asset and the intellectual property included in the digital asset could be different as the presence and subsequent control of that information is the

essential part of the value of the digital asset. From another point of view the interest of the buyer to buy this specific digital asset relies fundamentally on the access to the information protected by the patents. In other words, we cannot split the holder of the property rights of a digital asset and the holder of the included information subject to intellectual property. This means that any transfer should transfer both properties and, in the same token, the Principles and the applicable law should be coherent.
Illustration 4 - paragraph 15. The case of files which can be copied / transferred / modified very easily without being in position to identify the "original version" is complex. If I agree on the comment saying that if those assets are excluded from the application of the Principles, we could miss some other assets. But on the other side, we have no possibility to identify the "real original" file. So it would mean that any person holding a property right on the file or one of its copies could claim tto be the original, which would give value to the asset considered. This situation will not find any easy solution. So I think those assets should be excluded from the definition of the digital asset. More practically, the holder do not have the control and to call them new assets does not change this reasoning as the differentiating factor of the digital asset is the information contained in the file and not the technical file pe se.
Paragraph 23 - This paragraph split the concepts of property of rights and control trying to deal with the specific case of the custody where the control is hold by the custodian and the property rights is hold by the investor. But on the same logic, the change of control through abnormal activity like hacking the private key could formalize this split when the situation in terms of laws and protection of the investors is not acceptable. The hacker cannot get the control on the assets licitly. So maybe the solution to say the contrary : the control and the property of rights are not the same but cannot be split with two different actors unless there is a specific contract formalizing and authorizing the split.

80. Comment 4

Spyridon V. Bazinas
Kozolchyk National Law Center
1. As already mentioned, Principle 2 should include all definitions, including the definition of "control" (currently included in Principle 6). 2. Principle 2(3) states that "'Principles law' means any part of a State's law which falls within the scope of these Principles". But this cannot be correct. If a matter within the scope of the Principles law is addressed by a State's law differently, this law cannot be Principles law. So, this definition should be revised to read along the following lines: 'Principles law' means any part of a State's law which implements or is consistent with these Principles".

81. Comment 5

Dr. Gizem Alper
Academic & Attorney
Principle 2 Commentary [N. 18]: "Pursuant to its principles of functionality and neutrality, these Principles do not prescribe a specific classification of digital assets. However, these Principles do require that digital assets can be the subject of proprietary rights. (see Principle 3(1)). This may mean, in certain jurisdictions, that digital assets must be classified as 'property', 'good', 'thing', or similar concept, but this would depend on the applicable law in question and is left for the specific States to decide. If a State's law includes a classification of different categories of assets which can be subject to proprietary rights, and these different categories have different consequences, it is recommended that the State's law should specify which category or categories of assets digital assets are. This is so that digital assets can be subject to proprietary rights. This could mean the introduction of a new category of asset, but again, this is left for the specific States to decide." My comments: As can be noted, it has been stated that digital assets could be classified as goods, property, or thing or similar concept; moreover, the states may introduce a new classification. I believe that the matter of a classification also requires a case- by- case analysis because digital assets in themselves bear different characteristics and at times, there may be a blurry line, especially for digital assets that may be classified as one category or the other. In line with a case- by- case analysis, I recommend mentioning and clarifying the concept of hybrid contract . In other words, although it may not be defined in the black letter law of a state, in cases where the classification of the digital asset is blurry, the states may choose to apply sale of goods law to the sales aspect and some other pertinent law to other aspects of the transaction. This addition will not hinder "functionality and neutrality", on the contrary, it will enhance functionality when, on a

case-by- case analysis, the best legal provision available could be sales law or another piece of legal instrument. Moreover, to further promote uniformity in international commercial law, this would enable the application of the CISG- where applicable as the sales law of a state.

82. Comment 6

Martha Angélica Alvarez Rendón
Mexican Ministry of Foreign Affairs
In the definition (8) of "Insolvency Proceeding", item (c) "the debtor's creditors' ability to enforce on them is limited by law" there is an error: the ability to execute an asset is not "limited," but rather "controlled."

83. Comment 7

Stéphanie Saint Pé
France Post Marché
- The proposed definitions are quite vague and do not allow to have a clear view on the scope and perimeter of the proposed principles. - More than a mere lack of precision, the notion used in the context of the paper may be considered as contradictory to the ones existing under existing rules. For example, the notion of digital assets is merely based on the recording of any such asset (electronic mean). There is no further elements to consider and we do not have a view on classification of assets in this context whereas the treatment should necessarily be different depending on the type of digital assets (asset referenced token/utility token/e-money token). This approach is likely to create issues while envisaging co-existence with forthcoming regulations such as MiCA and the introduction of the notion of security token under MiFID. - Examples/illustrations proposed are only limited ones. We cannot envisage using these specific/limited examples to build robust principles in the context of such a technical topic. - Mix-up between the notions of transfer, control and proprietary rights. These notions are traditionally fragmented (among civil law jurisdictions and the treatment is also different between common law and civil law jurisdictions). There is no impact analysis in the principles so we cannot anticipate building up a robust and viable framework based on these principles. In addition, the notion of "Principles law" appears to be a sort of miscellaneous category whereas private law in the context of digital assets must not be limited to the elements partially addressed in these principles. Same difficulties for the notion of insolvency law.

84. Comment 8

Johan David Michels and Professor Christopher Millard
The Cloud Legal Project, Queen Mary University of London
In this section, we make two recommendations. The first concerns how the Principles apply to different types of digital assets. The second concerns the benefits of recognising property rights in digital files. (1) APPLYING THE PRINCIPLES TO DIFFERENT TYPES OF DIGITAL ASSETS Under the Principles, a digital asset can be the subject of property rights. UNIDROIT defines a digital asset as "an electronic record which is capable of being subject to control". This definition has two components: first, an electronic record is defined as "information which is (i) stored in an electronic medium and (ii) capable of being retrieved". Second, a person must be able to control the electronic record. Control is defined as the exclusive ability to: • "obtain substantially all the benefit from the digital asset"; • "prevent others from obtaining" that benefit; and, • "transfer" these abilities "to another person". That said, control need not always be exclusive. UNIDROIT recognizes that "a person in control may wish to share its abilities with one or more other persons for purposes of convenience, security, or otherwise". Thus, a person's ability "need not be exclusive if and to the extent that: […] the person in control has agreed, consented to, or acquiesced in sharing that ability with one or more other persons".

By way of example, UNIDROIT refers to a crypto-currency token, like Bitcoin, which it refers to as 'digital asset Alpha'. It consists of two information elements. The first is Info Alpha, which is stored as part of the distributed ledger. This is like an Unspent Transaction Output (or 'UTXO') of Bitcoin, as reflected in the UTXO Set stored by Bitcoin nodes. The second is the 'key information' that allows a person to control the token by means of the associated private key. Together, Info Alpha and the key information make up Asset Alpha. Under the Principles, a person can own Asset Alpha without owning Info Alpha. This is because Info Alpha exists separately from Asset Alpha, in the same way that the information that makes up a UTXO exists separately from the Bitcoin it represents. As UNIDROIT puts it:

"Info Alpha is the same […] however or wherever that information might be stored, existing, or perceived. Digital Asset Alpha is distinct, however, because it is composed not only of the Info Alpha but also of the key information".

For example, imagine Alice owns a Bitcoin, as represented by a UTXO in the UTXO Set. Bob could print the information comprising Alice's UTXO and display it on a billboard. Doing so wouldn't infringe upon Alice's property rights, since Alice's ownership of her Bitcoin as a digital asset does not give her any proprietary claims to the UTXO as information.

We agree with this distinction between (i) a digital asset; (ii) the information comprising it; and (iii) the information used to control it. The digital asset is a conceptual entity that combines (ii) and (iii). (See also Fox: "The coins consisting in an unspent transactional output are just an ideational entity", D. Fox, "Cryptocurrencies in the Common Law of Property' in: D. Fox and S. Green, Cryptocurrencies in Public and Private Law, (OUP, 2019), at 6.29.) This approach provides welcome clarity to property rights in crypto-currencies. Yet crypto-currencies are merely one type of digital asset. In our research, we have identified at least four other types of digital asset that have featured in court cases which involved property rights in the context of private law. For example, disputes over control of domain names led to court cases in the UK, the US, and Canada (See Hanger Holdings v Perlake Corporation SA, Simon Croft [2021] EWHC 81 (Ch); Kremen v. Cohen 337 f.3d 1024, 1036 (9th cir. 2003); Canivate Growing Systems Ltd v Brazier, 2020 BCSC 232). Disputes over access to emails led to court cases in the UK and the US (Fairstar Heavy Transport v. Adkins & Anor [2013] EWCA Civ 886; Ajemian v. Yahoo 84 N.E.3d 766 (Mass. 2017). A table of cases is available as an Annex to our response, which can be downloaded from SSRN here: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4362164.

Further, the Dutch Supreme Court considered the question of property rights in items within video-games (or 'in-game items') in the context of the offence of theft under criminal law (RuneScape-arrest HR 31 January 2012, NJ 2012/536). In this case, two accused physically attacked a teenage victim, threatened him with a knife, and forced him to log into the computer game "RuneScape" on their computer. The first accused then took over the victim's account and dropped two virtual items in the game, which the second accused picked up, thereby transferring the items to the accused's account. The Dutch Supreme Court concluded that the in-game items could constitute property in the relevant sense, since the items had real-world value and were subject to exclusive factual control through a password-protected account. Although the concept of property in private law is separate from that in criminal law, this case illustrates how control of in-game items can also give rise to disputes. For example, in the Dutch RuneScape case, the victim could have tried to pursue a private law remedy against the accused for the return of his items. We therefore consider in-game items a sixth relevant type of digital asset.

Table 1: List of digital asset types in private law court cases

#	Asset type
1	Crypto-currency, such as Bitcoin
2	Digital files (e.g. documents, still images, video or sound recordings)
3	Domain names
4	Emails
5	Carbon credits or European Allowances to emit CO2 ('EUAs');
6	In-game items

In its consultation, UNIDROIT explains how the Principles apply to crypto-currencies, digital files, and social media pages. We encourage UNIDROIT to add explanations of how the Principles apply to domain names, emails, carbon credits, and in-game assets. In our view, these types of digital assets are also "frequently used in commerce", making it "important to have clear rules that apply to the key aspects of these transactions". Providing further clarity would align with UNIDROIT's aim to

"reduce legal uncertainty which practitioners, judges, legislators, and market participants would otherwise face in the coming years in dealing with digital assets".

- Recommendation 1: We recommend that UNIDROIT clarifies how the Principles apply to domain names, emails, carbon credits, and in-game items.

(2) THE CASE FOR PROPERTY RIGHTS IN DIGITAL FILES

UNIDROIT recognises that a password-protected digital file can be subject to control as defined in its Consultation. Yet it considers that extending property rights to digital files would have little real-world impact. Thus, it argues that digital files are "an example of digital assets that would not normally be disposed of and consequently would not benefit from or involve the need for the legal regimes that the Principles contemplate". By way of example, UNIDROIT highlights two scenarios in which a person might transfer a password-protected digital file. First, Alice might store the file on a hard drive, and then deliver the hard drive to Bob and tell him the password. In that case, the transfer requires physical delivery of the hard drive. Second, Alice might send Bob a copy of the file as an email attachment and tell him the password. This would result in the creation of a new electronic record on Bob's device (with identical contents). It would not amount to a change of control of Alice's (original) digital file. Thus, UNIDROIT argues that "unless the digital asset were associated with a protocol that facilitates the acquisition and disposition of such assets, the Principles law would not have any material utility or impact for these assets". In sum, as UNIDROIT puts it:

"Although an Excel or Word file with password protection could be a digital asset, the Principles law may have no material impact or utility for such assets."

This suggests that digital files can in theory be recognised as property under the Principles (and therefore under national law implementing them), but that in practice such property rights will have little meaningful impact.

In contrast, we have argued that there is a strong case for extending property rights to digital files. (See generally J.D. Michels and C. Millard, "The New Things: Property Rights in Digital Files?" (2022) The Cambridge Law Journal, 81(2).) To illustrate this, consider a third scenario. Suppose Alice stores a digital file called Doc.doc on the servers of cloud service provider B-Co. B-Co uses an identity and access management ('IAM') system, which includes user accounts with associated privileges and passwords. This system protects the confidentiality of digital files customers store in the cloud. It ensures that only Alice can log into her account and access Doc.doc. In this scenario, Alice has shared control of the digital file with B-Co. B-Co can decide to delete the file or to amend or view its contents. (This assumes Alice has not encrypted the file prior to uploading it. See further W. Kuan Hon, C. Millard, and J. Singh "Cloud Computing Demystified (Part 2): Control, Security, and Risk in the Cloud" (2022), https://ssrn.com/abstract=4030114.) Alternatively, B-Co could revoke Alice's access privileges or re-assign access privileges from her account to Charles's account. In the latter case, only Charles can log in and access Doc.doc. Thus, B-Co can change control of the file without creating a new copy and without physically delivering the underlying hardware. In this manner, secure cloud storage using IAM systems supports exclusive control of digital files, including changes of control. In this respect, it is functionally similar to "a protocol that facilitates the acquisition and disposition of" digital assets such as Bitcoin.

We argue that recognising Alice's property right in Doc.doc would be beneficial for two reasons. First, Alice faces the risk of B-Co becoming insolvent. Absent a property right in her digital assets, Alice would only have a contractual claim against the insolvent company B-Co, instead of a right to recover her digital file from among B-Co's assets. Admittedly, it is unlikely that an insolvency representative would attempt to sell Alice's digital file and distribute the proceeds amongst B-Co's creditors. (Unlike Bitcoin, digital files are not typically bought and sold. In practice, Doc.doc might contain information valuable only to Alice. Further, it might contain a copyright work or personal data protected under data protection law, which could restrict its sale to third parties.) Yet the insolvency representative might attempt to sell B-Co's data centres, including the servers on which Alice's file resides. In that case, a property right would enable Alice to recover her digital file before the servers are sold to a third-party who could wipe or over-write it.

Second, property law protects owners from interference with their things. Generally speaking, when a third party interferes with an owner's thing, the owner is entitled to redress. For example, in English law, under the tort of conversion, Alice can sue for damages or recovery of a thing in possession from Bob, if Bob intentionally and wrongfully interferes with the possession of that thing so as to exclude

Alice. Examples include taking, damage, or destruction. As with physical things, the ability to control digital files can give rise to disputes over who should rightfully enjoy control of a digital file. Consider the example of Alice's file stored on B-Co's cloud service above, where B-Co re-assigns control to Charles. In that case, will Alice only have a contractual right against B-Co? Or can she call upon a proprietary remedy against either B-Co or Charles directly? Alternatively, consider a scenario in which Charles hacked into Alice's account and deployed malware that encrypted Alice's file. At present, it is unclear whether parties to such disputes can call upon proprietary remedies to seek the return of their digital assets (or related damages). Instead, the parties are left to decide whether to pursue legal action based on uncertain grounds, or to settle such disputes with little clarity as to their respective legal positions. If, as UNIDROIT propopses, the notion of control is to assume "a role that is a functional equivalent to that of 'possession' of movables", that suggests Alice should have a remedy to seek the return of control of her digital file. In our view, applying proprietary remedies would provide digital files with a level of protection appropriate to their central role in 21st century commerce.

Finally, resolving the question of property rights in digital files under the Principles would be beneficial, since national jurisdictions have taken different approaches. For example, disputes over access to digital files led to court cases in the UK, the US, and New Zealand. (Your Response v. Business Media [2014] EWCA Civ 281; Thyroff v. Nationwide Mut. Ins. Co. 864 N.E.2d 1272, 1273 (N.Y. 2007); Henderson v. Walker [2019] NZHC 2184. For summaries of these cases, see J.D. Michels and C. Millard, "The New Things: Property Rights in Digital Files?" (2022) The Cambridge Law Journal, 81(2).) While courts in the US and New Zealand applied a proprietary remedy in the form of the tort of conversion, the UK court stated that the tort of conversion would not apply. These divergent approaches create legal uncertainty, since disputes involving digital files will often have international aspects. For instance, in our cloud storage example above, Alice might be in one country and B-Co in another, while the file itself could be stored on servers in a third country (or, as a result of data fragmentation, in multiple third countries). (See further J.D. Michels and C. Millard, "Digital Assets in Clouds" in: C. Millard, Cloud Computing Law (OUP, 2021).) As UNIDROIT points out: when "transactions frequently involve persons in different States, the greater the consistency among States, the greater the predictability in cross-border transactions".

- Recommendation 2: We recommend that UNIDROIT reconsiders whether there might be practical benefits from recognising property rights in digital files.

85. Comment 9

Alejandro Horacio Luppino
Embassy of Argentina in Italy
"The modifications made to the examples that complement the explanation of the Principles are evaluated positively, considering that in the current version of the draft they have a more general and neutral character from the technological point of view. Argentina considers that is convenient to maintain such a neutral approach, which can help prevent the principles and/or their interpretations from becoming obsolete in relation to new technologies. In this sense, the replacement of the reference to Facebook by social networks in illustration 3 and paragraph 14 of Principle 2 is considered appropriate, and we consider that the aforementioned criterion should be applied to the reference made to Word and Excel in illustration 4 and the paragraph 15 of Principle 2."

86. Comment 10

Clément Fontaine
Aix-Marseille University
Principle 2. The definition of digital asset should add its clause executor automaton / smartcontract which is substantial to the digital asset. The digital asset gives control to a clause executor automaton. The clause executor automaton, sometimes called smartcontract, algorithm or protocol by technics is the substance of the digital-asset. Clause executor automaton is at the origin of the control of the digital asset. Thanks to the clause executor automaton, the digital asset holder can transfer its exclusive right to use the executor automaton to someone else. The clause executor automaton is the reason why the digital asset can be controlled as described at Principle 6.

When the clause executor automaton is neither owned nor maintained by anyone but only by a non identifiable and inclusive community, such as public blockchain, there is no property right that can be claimed on it. Thus, the legal link between the digital asset holder and the clause executor automaton can only be real and direct between the holder and the clause executor automaton.
However, when the clause executor automaton is administered by an administrator, like in private blockchain, or administered smartcontract, then the legal link which exist between the digital asset holder and the digital asset depends on the administrator.
Moreover, taking into account the clause executor automaton as a part of the definition of digital asset helps to go beyond the problem targeted later regarding principle 6.

87. Comment 11

David Morán Bovio
University of Cádiz (Spain) / Unidroit correspondent
'Resulting digital asset' definition perhaps deserves to bring to Principle 2(6) the substance of Principle 6(2).
'Digital asset' along the text sometimes refers to asset and sometimes to a transaction

88. Comment 12

Gilberto Martins de Almeida and Ian Velásquez
Instituto de Direito e Tecnologia (IDTEC)
(1) 'Electronic record' means information which is (i) stored in an electronic medium and (ii) capable of being retrieved.

Suggestion:

(1) 'Electronic record' means information which is (i) stored in a determined electronic medium and (ii) capable of being retrieved.

Commentary:

One may assume that the scope of the Principles shall reflect a general purpose (which may spread extensively, for instance in Principle 2, Definitions), and that such purpose is to focus primarily on information (intellectual content) electronically stored, rather than primarily on electronic file (medium) which stores information. The Principles' goal to promote uniform interpretation and enforcement of rules across jurisdictions may be impacted by that option, which is not only philosophical, but also practical.

Therefore, being the concept of "control" a key axis of the Principles, it seems appropriate to more clearly attach stored information to individual storage medium, which can be solved by replacing "stored in an electronic medium" with "stored in a determined electronic medium" (specifying that the intent is to address the information stored in a determined electronic medium, and not in an aleatory electronic medium). That might benefit, for instance, the differentiation of the proprietary rights targeted by the Principles (which ultimately relate to circulation ("transfer") of assets) from other proprietary rights such as intellectual property rights (applicable to information per se, as from its creation).

89. Comment 13

Sumant Batra
Insolvency Law Academy
"The definition of digital assets as currently provided in the Draft UNIDROIT Principles on Digital Assets and Private Law ("Draft Principles") appears to be narrow. The definition of digital assets is very crucial and therefore, there is a need to broaden the definition in a manner that it covers all the relevant features and characteristics of digital assets. In this regard, we note that propriety rights and value of the digital assets are two important aspects of digital assets which are currently not covered in the definition of digital assets. Also, there is a need to provide a clarificatory language in the definition to the effect that recording of the entry of digital assets in the books of accounts of a company would not impact the classification of such digital assets. Such clarification is important so that a company who has proprietary rights in a digital asset should not be able to take advantage of non-inclusion of such digital in its books of accounts.

Accordingly, the following revised definition of digital assets has be proposed: "'Digital asset' means an electronic record which is capable of being subject to control and propriety rights, has inherent value and can be transferred or traded electronically, whether recorded in the books of accounts or not." "

90. Comment 14

Nicole Purin
Deputy General Counsel, OKX ME
Principle 2 - Definitions - Appear very detailed and comprehensive overall, whilst maintaining a certain level of simplicity. Part 3 - which is capable of "being subject of control", is a key element. I would ensure that the definition of insolvency proceeding also refers to administrator and would consider expanding this section to align it to common law principles as well.

91. Comment 15

Walter Arevalo (President) and Victor Bernal (Directive Council) on Behalf of ACCOLDI - Colombian Academy of International Law
ACCOLDI - Colombian Academy of International Law
In the commentary, there is plenty of examples and clarifications referring to the notion of "other law", but in definitions, the explanation of what "other law" is, results very confusing. It would be recommended to include this examples of clarifications in the PRINCIPLE2 body and not only in its comments: "(4) 'Other law' means a State's law to the extent that it is not Principles law."

92. Comment 16

Michele Graziadei and Marina Timoteo
University of Torino
"As to the relation between 'principle law' and 'other law', art. 2 (3)(4) see below our comments on principle 3. As a general remark, the proposition: "Except as displaced by these Principles, other law applies to all issues, including: (a) whether a person has a proprietary right in a digital asset etc…" is bound to create uncertainty, because it is not always clear when and whether the principles displace other law. For example, the principles do not expressly clarify who is the person that as a rule has proprietary rights over a digital assets, hence it is not clear where to draw the boundaries between the principles and other law on such delicate issue. On Illustration 3 (p. 11, nr 14): it is unclear why a social media page with a password for access is not digital asset under the definition of digital asset provided by Principle 2(2) ('Digital asset' means an electronic record which is capable of being subject to control). The Illustration states: "Generalisations about social media/social networking platforms are difficult. But social media platforms generally involve licensing arrangements with users that do not permit the users to acquire 'ownership' of 'pages' or the data stored on the platform. This is so even though, colloquially, users may refer to 'their' pages and information that 'belongs' to them. In general, these platforms do not allow users to acquire the exclusive abilities contemplated by the definition of 'control' in Principle 6. Consequently they do not constitute or involve digital assets within the scope of these Principles." The (assumed) fact that the social media users do not have control over their pages does not lead to the conclusion set out by the commentary, namely that those pages are not digital assets, given that the platforms exercise control over those pages, and the data in those pages are subject to 'control' by the platform (whether exclusive or not). As a consequence, those pages are digital assets under the Principles (or at least some additional clarifications are needed in our view to avoid this conclusion). The Illustration implicitly leads to the conclusion that under the draft the platform would enjoy proprietary rights over the users' data, whether this is the intention of the authors of the draft or not. It does not support the conclusion that social media pages are not digital assets."

93. Comment 17

Centre for Commercial Law at the University of Aberdeen

University of Aberdeen
"We note that the definition of control is not provided in Principle 2, but in Principle 6 instead. It would be useful to establish a link between Principles 2 and 6 in this regard, for example by adding to the end of Principle 2 'as defined by Principle 6'. Regarding Principle 2(2) concerning the term 'principles law', para 17 of the Commentary is not clear to us. Regarding Principle 2(5)(d) concerning the term 'transfer', further explanation in the Commentary would be helpful as to why the term transfer is used to include the creation of security rights as, in this context, there is technically not a transfer but a creation of a new right. One suggestion for the wording of the first part of the provision here could be that 'the term 'transfer' includes the grant of a security right in favour of a secured creditor, except where the context requires otherwise'. Please also see below for our comment on Principle 3(3)(d) and (e) which relates to the definition of the term transfer. Regarding Principle 2(8) concerning the term 'insolvency proceedings', it is not clear enough to us if the intention is that this applies to individuals as well as non-natural persons. If this is the intention, we suggest that UNIDROIT should consider whether to specify that the use of 'liquidation' in the provision covers both personal insolvency and corporate insolvency, or alternatively this aspect ought to be clarified in the Commentary. In a number of systems, 'liquidation' is a technical term relating to corporate insolvency specifically, whereas here it is presumably being used in a wider sense to include non-corporate insolvency proceedings. Also, as a minor suggestion, there seems to be a missing word of 'the' in the provision, which should read as '…at least one of the following…'. "

94. Comment 18

Finance, Competitiveness & Innovation Global Practice
World Bank Group
"See above in ""General Comments"" our suggestions in terms of placement of this Section and addition of new definitions. In regard to the statement provided in Paragraph 4 (comment.) of Principle 2, it is advisable to better explain the meaning of the term ""header"" as it is specified in the quotation in terms of bitcoin transaction, ""The UTXO might be associated with information, such as information included in a header, that is a part of the same electronic record as the UTXO but which is not capable of being subject to control. The header information would not necessarily be transferred as a result of spending the UTXO."" This concept should be fully understood for proper comprehension of the example given."

95. Comment 19

Cassandre Vassilopoulos & Mark Kepeneghian
Kriptown
"(1) Just because the definition was accepted in a previous case does not mean that its reuse is relevant to the current domain. (2) The definition of ""asset"" is not comprehensive enough. The notion of control should be defined here, or, at a minimum, reference should be made to Principle #6. The definition of ""digital asset"" is too general. It should be more related to the notion of blockchain, and not include assets that are already subject to a legal regime - such as financial instruments for example. The idea of retrieval is not stable enough: the possibilities of retrieval can evolve and they depend on the people. Moreover, to what price should retrieval be accepted? What about the absence of retrieval materials? (5) (a) (b) Why is a distinction made? (c) What if the transferor did not initiate it: if he was offered it and simply accepted? Does he still remain the transferor?"

96. Comment 20

Office for Financial Market Innovation and Digitalisation
Principality of Liechtenstein
In principle, we welcome the broad definition of digital assets. The definition encompasses information stored on an "electronic medium", including hard disks and other physical data storage devices.

However, this could present difficulties in distinguishing between property law in legal systems where physical data storage devices fall under such law. We propose to narrow the definition in order to exclude information stored on such physical data storage devices. An alternative approach could be to focus on the trustworthiness and reliability of the technology used and determine criteria for such technology.

97. Comment 21

Silvana Fortich, Anabel Riaño (Docentes investigadoras Departamento de Derecho Civil); Adriana Castro (Directora Departamento de Derecho de los Negocios); Valeria Facio-Lince, Juan Alejandro Solano y Juan Sebastián Ortiz, monitores Departamento de Derecho de los Negocios

Universidad Externado de Colombia

"Regarding principle 2, it is important to note that definitions in legal instruments are necessary. Considering these Draft Principles as a tool that will necessarily be used for the resolution of conflicts, the issue of legal certainty is fundamental. A set of definitions allows the legal operator not to deviate or change the interpretation for the resolution of different cases.

Regarding paragraph 1, it should be noted that the proposed definition of ""electronic record"" has a stricter scope than the UNCITRAL Model Law on Electronic Transferable Records. Although the Draft Principles acknowledge the Model Law as well as national regulations, parting form the definition in the Model Law may lead to difficulties in the coordination between international instruments aiming at the harmonization of international commercial law.

Regarding paragraphs 3 and 4, the distinction between ""principles law"" and ""other law"" is confusing. If the document is intended to serve as principles, there is no reason to differentiate it from state law. From the way this section is drafted it may seem that the document is intended to serve as model law rather than principles.

About paragraph 5 (definition of transfer of a digital asset), stands out the absence of a link with the concept of ""control"" set out in Principle 6, which among other things, delimits the scope of application of the principles.

Paragraph 7, as such, does not correspond to a definition but may correspond to an interpretation rule. In view of this, if UNIDROIT working group considers appropriate, it may be recommended to place it as a final paragraph.

We highlight the absence of a definition for ""control"". The comments on Principle 2 redirect to the provisions in Principle 6. If this concept dealt with the explanations of several of the principles, why not include a definition?

Finally, it should be noted that Colombian Parliament is discussing a draft bill on cripto assets (Draft bill 139/2021, Cámara de Representantes; 267/22, Senado), link: http://leyes.senado.gov.co/proyectos/index.php/proyectos-ley/cuatrenio-2022-2026/2022-2023/article/282-por-la-cual-se-regulan-los-servicios-de-intercambio-de-criptoactivos-ofrecidos-a-traves-de-las-plataformas-de-intercambio-de-criptoactivos

The draft bill aims to recognize Crypto asset Exchange Platforms (CIPs) that offer exchange services for these virtual assets, creates a regulatory framework and sets up other provisions. Draft Article 2 defines crypto assets as (unofficial translation): ""intangible or incorporeal assets susceptible of being valued, they are part of the patrimony and can lead to the obtaining of an income. Although it is not a recognized currency, and therefore does not have unlimited liberatory power, it is clear that crypto-assets are recognized as an asset. An asset which, by its nature, and for tax purposes, will be considered as an Intangible asset.
"Crypto assets is the generic term for cryptographically secure assets, whose use or ownership is often recorded in a blockchain known as a distributed ledger, whose main purpose is to carry out transactions quickly, securely and without any intermediary"".

With respect to the definition currently discussed by the Colombian Parliament, the fact that it has more elements than the definition provided by the Draft Principles restricts its application because a given asset must meet more characteristics to be considered a crypto asset according to the Colombian draft bill. "

98. Comment 22

Anonymous
Anonymous
Paragraphs 9-10, 14 of the Commentary: Does this mean that a private blockchain is a digital asset in and on itself and that no other digital assets may be created thereon for proprietary rights of third parties? Paragraph 12 of the Commentary: Can we really distinguish between the underlying information and the digital asset? Could a standard be created as to the type of disclosure required from the creator of the digital asset in terms of both (i) her rights in the underlying information, and (ii) the rights transferred through the digital asset? Paragraph 15 of the Commentary: This may be misleading,e.g., because there is no guarantee of exclusivity of rights based on the fact that the Word document can be easily copied prior to being transferred. This is materially different from the type of abilities of, e.g., a Bitcoin owner. Since there is a distinction between a public and private blockchain, based on the fact that no one person controls the protocl in the former, should there not be a similar distinction here? Also, if the only way of transferring a Word file as a digital asset is to transfer the digital medium on which it is recorded (and, presumably, the password) how can it be distinguished from the medium itself? Finally, if the file was on a database and what is transferred is the password (with the ability to change it) would not that be a transfer of a digital asset (save for the fact highlighted above that there would be no guarantee of the lack of any copy of the file).

99. Comment 23

Pedro Mendoza Montano
UNIDROIT´s Correspondent in Guatemala
"Electronic Record" is defined within Principle 2 (1). However, this term is not used within the black letter of the principles. Although this term is mentioned in Principle 2 (2), it is only used in the comments to the principles, and therefore, the need to establish a definition is questioned, considering that the comments are for illustrative purposes only.

100. Comment 24

Patricia Cochoni
Parfin Pagamentos Ltda.
Unidroit proposes the definition of digital assets as "an electronic record which is capable to being subject to control". Considering that one of goals for the principles brought by the Consultation is to harmonize regulation (wherever possible) allowing for a more consistent approach on cross-border transactions, we believe that the definition should be more in line with other jurisdictional approaches. The definitions being proposed currently in other States do not bring the aspect of control into play. As an example, the UK HM Treasury has proposed that cryptoasset should be defined as "any cryptographically secured digital representation of value or contractual rights that (a) can be transferred, stored or traded electronically, and (b) that uses technology supporting the recording or storage of data (which may include distributed ledger technology". Similarly, MiCA definition establishes that crypo-asset (sic) means "a digital representation of value or rights which may be transferred and stored electronically, using distributed ledger technology or similar technology". Finally, Emirate of Dubai defines digital assets broadly as "a digital representation of the value that can be digitally traded or transferred or used as an instrument for exchange, payment or investment purposes". We do believe that the market is yet to develop practices and processes that will enhance their ability to demonstrate control of digital assets (more on that below). Therefore, a definition of digital asset should steer away from concept of control and instead focus more on what digital assets represents in line with the approach taken by other States. On a separate note, we believe it is important that the Principles should draw a distinction between digital assets that are classified as securities and the ones that are not. Though this distinction is not easy to determine (and different approaches are being taken by different regulators) it is paramount

to distinguish these two as there are key regulatory implications on having that determination (i.e. registration requirements on issuance, different levels of protection). Therefore, we advise contemplating this aspect into the Principles.

101. Comment 25

Lukas Wagner / Melih Esmer

NYALA Digital Asset AG/ EBS Law School

We welcome the definition of 'digital asset' as an electronic record capable of being subject to control. Further clarification in relation to specific kinds of tokens and forms of holding tokens would however be useful.

I. Further Clarification in Relation to Specific Kinds of Tokens

This is the case for tokens that cannot be transferred, such as so-called soulbound tokens (which aim to serve as a form of permanent documentation on the blockchain in relation to an address that is subject to an user's control; see Weyl/Ohlhaver/Buterin, 'Decentralized Society: Finding Web3's Soul', https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4105763). In light of these tokens not being transferable and the definition of control in Principle 6(1)(a)(iii), one might make the case that they are not capable of being subject to control. And even if one were to apply these Principles, the scope for application of the Principles to these tokens would be limited anyway. In order to avoid confusion as to the scope of the Principles, it could however still be made clear explicitly that the Principles do not at all apply to these kinds of tokens.

II. Further Clarification in Relation to Forms of Holding Assets

Furthermore, there are also forms of holding tokens that might raise the question whether such tokens are, within the meaning of Principle 2(2), 'capable of being subject to control'.

1. Tokens Held On-Chain, But Not As The Blockchain's Native Asset

While it is the case that, ideally, no one person controls the underlying protocol that tracks transactions in the the network's 'native' asset, such as the Bitcoin network for bitcoin or Ethereum for ether, as explained in paras 9 et seq of the commentary, the situation might be different for assets issued on top of such protocol. On networks like Ethereum and other so-called EVM-compatible networks (that use the Ethereum Virtual Machine), assets are issued through the deployment of a smart contract that tracks the supply and holders of the respective asset. In terminology commonly used in the market, such assets are called tokens as opposed to a network's native coin. Unlike the network, a smart contract can have an owner, ie an address with (theoretically) full control over the supply and holding, and therefore the token itself. And even under established token standards such as ERC-20 and its variations (see https://ethereum.org/en/developers/docs/standards/tokens/), there is the possibility for the issuer to burn existing tokens held by other users (see https://ethereum.org/en/developers/tutorials/erc20-annotated-code/#the-_mint-and-_burn-functions-_mint-and-_burn). Such functions have also been used repeatedly in the past, inter alia by issuers of so-called stable coins in order to recover funds that were misappropriated or sent to the wrong address, or for regulatory reasons (see, eg, https://www.theblock.co/post/131258/tether-recovered-87-million-usdt-wrong-addresses-since-launch). In relation to tokens, the notions of control and its exclusivity are therefore not absolute but rather a spectrum of nuances.

Against this backdrop, and even if such case might already be contemplated under Principle 6(3)(a), we would suggest clarifying in the commentary what level of control by the holder is required in order for an electronic record to be considered capable of being subject to control (by the holder).

2. Records Held Off-Chain

Another aspect that should be clarified are records held off-chain, ie outside of the (public) blockchain environment, but that have some form of link to on-chain records (ie records/transactions on the (public) blockchain). One common use case is the concept of so-called layered solutions (Layer 2, Layer 3 etc) such as the Lightning network (as a network of payment channels in the case of Bitcoin, see Poon/Dryja, 'The Bitcoin Lightning Network: Scalable Off-Chain Instant Payments', https://lightning.network/lightning-network-paper.pdf) or side chains (such as Liquid for Bitcoin or Polygon for Ethereum, see https://coinmarketcap.com/alexandria/article/what-are-cryptocurrency-layer-2-scaling-solutions). In this case, assets are 'locked' on the lower layer in order to transact in an equivalent amount on the higher layer. Further use cases involve assets where at least part of the issuance takes place off-chain, such as the RGB and Taro protocols (in the case of Bitcoin, see Orlvosky et al, 'RGB Blackpaper', https://blackpaper.rgb.tech/, and Gentry, 'Announcing Taro: A New Protocol for Multi-Asset Bitcoin and Lightning', https://lightning.engineering/posts/2022-4-5-taro-launch/), or so-called Chaumian eCash systems (after Chaum, 'Blind Signatures for Untraceable

Payments', in Chaum/Rivest/Sherman (eds), Advances in Cryptology, 199, http://www.hit.bme.hu/~buttyan/courses/BMEVIHIM219/2009/Chaum.BlindSigForPayment.1982.PDF) such as Fedimint (https://fedimint.org/) and Cashu (https://cashu.space/), where eCash is issued to participants in exchange for payments on-chain or via the Lightning network. Many of these use cases fall somewhat in between the clear-cut case in Illustration 1 and Illustration 4 to Principle 2, with the difference that there appears to be a protocol that facilitates the acquisition and disposition of such assets (as mentioned in para 15 of the commentary). However, in some of these cases, the characterisation as proprietary is even more questionable as, from a functional point of view, the position of the holder vis-a-vis its counterparty is more akin to a claimant of a current account (as opposed to a claim in rem in relation to specific coins). We would therefore also suggest to at least clarify the minimum requirements for a protocol that facilitates the acquisition and disposition of such assets in the commentary, in particular in order to lead to an application of proprietary principles, or to even include these requirements in the definition of a digital asset.

Principle 3: General Principles

102. Comment 1

Spyridon V. Bazinas
Kozolchyk National Law Center
If Principle 1 referred directly to proprietary rights in digital assets, as already suggested, Principle 3(1) would not be necessary. In addition, if Principle 1 included the text currently included in Principle 3(3), Principle 3 could deal only with the relationship between Principles law and other law and state what is stated in Principle 3(2), that is, that "Principles law takes precedence over other law to the extent that they conflict".

103. Comment 2

David Gibbs-Kneller
University of East Anglia
Principle 3(2) and (3) should be deleted. I see no reason why Principles law should take priority in a conflict when competing imperatives may be more important in particular jurisdictions and to maintain the benefits of regulatory competition. Both (2) and (3) are also too vague in respect to what constitutes a conflict.

104. Comment 3

Dr. Gizem Alper
Academic & Attorney
Principle 3 Commentary N. 7 "For this purpose, Principle 3(3) lists several examples of issues of property law, but also of contract law, that may continue to be addressed by a State's other law, because these Principles do not cover those issues, nor do they intend to change or derogate from that other law. " Principle 3 Commentary [N. 2] "Whether digital assets can be the subject of proprietary rights (a legal consequence) must be distinguished from the classification of digital assets. As explained in the commentary to Principle 2(3), these Principles do not prescribe a specific classification of digital assets. That digital assets must be susceptible to proprietary rights as Principle 3(1) requires, may mean, in certain jurisdictions, that digital assets must be classified as 'property', 'good', 'thing', or similar concept, but this would depend on the applicable law in question and is left for the specific States to decide. If a State's law includes a classification of different categories of assets which can be subject to proprietary rights, and these different categories have different consequences, it is recommended that the State's law should specify which category or categories of assets digital assets are. This is so that digital assets can be subject to proprietary rights. This could mean the introduction of a new category of asset, but again, this is left for the specific States to decide." See my above comments and the suggestion for addition accordingly.

105. Comment 4

Martha Angélica Alvarez Rendón
Mexican Ministry of Foreign Affairs
Principle 3, subsection (2) specifies that the law which accepts the principles will be given preference over all other laws. However, subsection (3) specifies the exceptions. Insolvency is a very special and uncommon circumstance, hence the law governing insolvency must take precedence over the others, per our opinion. Consequently, we propose adding a subsection (h) "the legal consequences of being in insolvency proceedings."

106. Comment 5

Alejandro Horacio Luppino
Embassy of Argentina in Italy
In relation to paragraph 5 of the Comments on Principle 3 and the formulation of the "cascade" of Principle 5, we consider necessary to clearly state that national law prevails over the principles included in the document, without prejudging the format of its eventual internalization. In particular, we consider necessary to clarify the wording of paragraph 5 of the Comments to Principle 3 in the fragments that express that the Principles should take precedence over other laws of the State, be they more general or more specific laws. Although Argentina recognizes the importance of having rules that can eventually be considered soft law -such as the proposed principles, especially when dealing with a subject where traditional legal approaches are often not appropriate or require adaptations-, given that the cited principles do not have the nature of an international obligation, its hierarchy in relation to domestic legislation cannot be prejudged. In accordance with the prevailing international practice regarding the formulation of principles or legislative guidelines related to private law, it could be considered, if deemed necessary, to settle a commitment in the sense that the States consider the incorporation of the principles into domestic regulations to the extent and in a manner they consider appropriate.

107. Comment 6

Stéphanie Saint Pé
France Post Marché
As a matter of principle, Unidroit principles are not legally binding and shall constitute mere guidance. The general principle #2 contradicts it as long as it mentions "Principles law takes precedence over other law to the extent that they conflict." This is a major concern as it may have very important impacts (i) for jurisdictions where these principles are not replicable per se (probably a vast majority of countries) and (ii) for jurisdictions where national law is partially aligned with these principles as it could interfere with national legal order/hierarchy of norms. The entire mechanics proposed under Principle 3 are not aligned with the historical nature of Unidroit principles (i.e. not designed to create binding rules).

108. Comment 7

Clément Fontaine
Aix-Marseille University
"Principle 3 : It is important to clearly identify the digital asset in question. If it is purely decentralized electronic record, governed by a common, then the property relates to the electronic functionality allowed by the digital asset : exclusive transfer etc. But if the digital asset is centralized controllable electronic record, governed by one or more owners, then the property relates to the right that these owner gives to the digital asset holders : exclusive transfer etc. In the first hypothesis, the principle 3 is recognizing a proprietary right over a good owned by nobody except the digital asset holder

In the second hypothesis, the principle 3 is recognizing a proprietary right over a good owned by a human which allow the digital asset holder to use it. "

109. Comment 8

David Morán Bovio
University of Cádiz (Spain) / Unidroit correspondent
3(2) and 3(3) in order to offer additional clarity on relationship between Principles law and other law, it could be good to identify which aspects on digital assets ought to be ordered by each of them (perhaps an Annex).

110. Comment 9

Gilberto Martins de Almeida and Ian Velásquez
Instituto de Direito e Tecnologia (IDTEC)
Suggestion: To add new general principles (3) and (4): (3) In the interpretation of the Principles Law, regard is to be had to its international character, the need to promote uniformity in its application, and the observance of its technological neutrality and its functional equivalence approach. (4) Questions concerning matters governed by the Principles Law which are not expressly settled in it are to be settled in conformity with the general principles on which the Principles Law is based. Considering the addition of new general principles (3) and (4), former principle (3) should be altered to principle (5): (5) Except as displaced by these Principles, other law applies to all issues, including: Commentary: In paragraph 18 of the draft, the commentary to the Principles states that "Pursuant to its principles of functionality and neutrality, these Principles do not prescribe a specific classification of digital assets". However, said principles of functionality and neutrality are not expressly mentioned in the text of the Principles. The inclusion of the proposed principle (3) would solve this issue. Additionally, taking into consideration the Principles need to be "jurisdiction neutral", a reference to its international character and uniformity in application could be beneficial. Both additions proposed are aligned with other international normative instruments, such as the Unidroit Convention on Substantive Rules for Intermediated Securities, the United Nations Convention on the Use of Electronic Communications in International Contracts, the UNCITRAL Model Law on Electronic Commerce. The suggestion of principles (3) and (4) should, in our view, be added before the former principle (3), which deals with the exclusion of the application of the Principles (i.e., "Except as displaced by these Principles, other law applies to all issues, including:" […]). Following this rationale, the Principles should present general principles of interpretation before addressing what shall be regulated by other law. *** (2) Principles law takes precedence over other law to the extent that they conflict. Suggestion: Modification: (2) Principles law does not necessarily take precedence over other law to the extent that they conflict. Addition: (3) Other law is encouraged to establish clear and sound conflict of laws rules in relation to digital assets.

Commentary:

Considering States' sovereignty and prerogative in dealing with their internal legal system, it its recommendable to apply the Principles, given their intent to unify private law, in a more harmonized way with other law, so that they are not outright excluded from consideration from States that seek to regulate digital assets. Moreover, given the virtual borderless nature of the market for digital assets, it is not always possible to make a distinction between domestic and international transactions. Thus, in the same sense as the UNIDROIT Convention on Substantive Rules for Intermediated Securities, it would be preferable that the Principles serve as a guiding normative instrument rather than a conflicting law.

***

(3) Except as displaced by these Principles, other law applies to all issues, including:

Suggestion:

Addition of letter (h):
(h) specific matters related to electronic contracting and automated contracting.

Commentary:

The exclusion of the above types of contracting would be recommended so that the Unidroit Principles on Digital Assets and Private Law do not conflict with other existing international trade law instruments, such as (i) the United Nations Convention on the Use of Electronic Communications in International Contracts; and (ii) the UNCITRAL Model Law on Electronic Commerce (inclusively as UNCITRAL´s Working Group IV (Electronic Commerce) currently considers addressing automated contracting).

111. Comment 10

Nicole Purin
Deputy General Counsel, OKX ME
Principle (3) (1) A digital asset can be the subject of proprietary is an extremely important tenet and can easily be transposed in national legal systems. It may be recommended to expand/clarify part (2) and (3). As currently drafted part 2 may appear a bit vague.

112. Comment 11

Faruk Kerem Giray
Correspondent of Turkey
"- We recommend implementation for the Principle 3/3/c. So the provision will be as "whether a security right in a digital asset has been procedurally and substantively valid created." "

113. Comment 12

Michele Graziadei and Marina Timoteo
University of Torino
"Proprietary rights over digital assets This is a both a far fetched and undefined proposition, which is bound to create uncertainty and to raise litigation. The draft does not specify what is to be understood for 'proprietary right'. It sets out in clear terms that this is not a reference to any specific legal system, and therefore is based on a neutral approach to the matter, but then – much to the surprise of the reader - it does end up proposing a circular notion: proprietary rights are - literally - proprietary rights….:: (p. 15, nr 4)) "'Proprietary rights' in these Principles are used in a broad sense, in that 'proprietary rights' include both proprietary interests and rights with proprietary effects."

Contrary to the assertion of draft, by which "All rules provided in these Principles are built on this premise" (p. 14, nr. 1), the rules contained in the principles can exist without this circular proposition, except perhaps, for the rules on conflict of laws.
Many of the rules set out in the text could be drafted without reference to the proprietary notion, or at least without spelling out in very general terms that digital assets are capable of property for private law purposes.
The approach of draft to this matter is inching towards conceptualism, which contradicts the overall functional approach consistently defended elsewhere, and seems therefore oddly out of place. One is left to wonder--- what for ? Not for the sake of legal certainty, which is poorly served by such undefined general (and controversial) proposition. The draft implicitly recognise that this proposition may be not be easily accepted in many legal systems, as it may create frictions with the local law. Therefore they go on to defend it, by making clear that the national laws may still have their own approaches to this is issue (hence the following: "Except as displaced by these Principles, other law applies to all issues, including: (a) whether a person has a proprietary right in a digital asset…."). But the question remains: why then adopt such broad proposition in the first place, and indeed try to make it the cornerstone of the draft ? This is a question that is left unanswered by the draft, or addressed only obliquely. For example, with reference to Principle 5 on private international law rules the draft states at p. 22, nr 2: "Principle 5 addresses the applicable law for proprietary issues in general and is not limited to those issues that are covered by the Principles.". This, eventually, makes clear why a general statement on digital assets as subject of proprietary rights is the starting point of the draft, but it also contradicts the notion that principles law shall apply only to those issues that are covered by the draft.
If such is the intention of the drafter, namely the recognition of a whole undefined subset of (undefined) private law rules proprietary rules for digital assets this should be said in very clear terms in the commentary to principle 1, which as it stands does not really clarify the issue.
Nonetheless, in a field (property law) where the differentiation of taxonomies and regulatory frameworks across the different jurisdictions is still high, with respect to the category 'digital assets' that is a huge factual reality whose legal borders are yet to be defined, the most pressing need is to have a document which starts ordering and connecting facts and rules.

The Principles: a super law ?

(2) Principles law takes precedence over other law to the extent that they conflict.

The is no comment to this proposition, which is taken to be self explanatory. Legislation on a specific matter (in all the legal systems we are aware of) takes precedence over more general law. One could therefore argue that this is a rather innocent, harmless proposition. Nonetheless, it perhaps better not to adopt it, because it is bound to create legal uncertainty by creating the impression that the Principles advance some sort of super law that would take precedence over any other kind of law, at least when relating in one way or another to digital assets, given the definition of ' other law' in the Principles (Principles 2(4) 'Other law' means a State's law to the extent that it is not Principles law'), such as constitutional law, human rights law etc. European Union law , etc., etc. This is clearly not the case, but creating the contrary impression may lead interpreters in the wrong direction. Given the initial sweeping proposition that the Principles apply to 'private law' the boundaries between principles law and other law are bound to remain quite uncertain; a more focussed approach is definitely preferable, and less prone to foster legal uncertainty."

114. Comment 13

Centre for Commercial Law at the University of Aberdeen
University of Aberdeen

Regarding Principle 3(1), it states that a digital asset can be the 'subject' of proprietary rights. We wonder whether this should instead refer to the 'object' of proprietary rights. We do recognise that the term 'subject' is used in the principle in a broader non-technical sense, yet it would be advisable to at least explain the position more extensively in the Commentary and note that it might be preferable to formulate the provision with reference to 'object' instead of 'subject' in some systems. See also our comments at Principle 14 below.

Regarding Principle 3(3) concerning excluded matters, it is helpful to have such an indicative itemised list. However, this list may be better placed under Principle 1 dealing with the scope, as we noted above.

Regarding Principle 3(3)(e), we in principle agree to having such a provision for security rights. However, as the definition of the term transfer in Principle 2(5)(d) covers the creation of security rights (see above for our comments on the corresponding question on this), it seems that this makes, in the current draft, Principle 3(3)(e) superfluous given Principle 3(3)(d) serves that purpose. Furthermore, there is potential overlap between Principle 3(3)(b) and (c) given the current wording of Principle 2(5)(d). We, therefore, think that the re-consideration of the wording of Principle 2(5)(d) would be helpful from these perspectives as well.

115. Comment 14

Cassandre Vassilopoulos & Mark Kepeneghian
Kriptown
"What if the digital asset is not the subject of property rights? (3) Why is this list restrictive? Principle #7 says ""including (but not limited to)"". Why not use this wording?"

116. Comment 15

Office for Financial Market Innovation and Digitalisation
Principality of Liechtenstein
Principle 3 provides, that digital assets can be subject of proprietary rights and recommends that the State`s law should specify which category of assets digital assets are. National law applies to issues stated in Principle 3(3). The non-exhaustive list includes, whether a person has a proprietary right in a digital asset and the transfer, whether a security right in a digital asset has been validly created, the rights as between a transferor and transferee of a digital asset, the legal consequences of third-party effectiveness of a transfer of a digital asset. The Principles provide some specific rules regarding transfer and third-party effectiveness of a security right in a digital asset. The relationship between the exceptions, the primacy of the Principles (Principle 3(2)) and the specific rules (e.g. Principle 15(1)) is not entirely clear. For these important issues, guidelines should be provided for practice and national lawmakers. Otherwise, harmonization and legal certainty will not be achieved.

117. Comment 16

Silvana Fortich, Anabel Riaño (Docentes investigadoras Departamento de Derecho Civil); Adriana Castro (Directora Departamento de Derecho de los Negocios); Valeria Facio-Lince, Juan Alejandro Solano y Juan Sebastián Ortiz, monitores Departamento de Derecho de los Negocios
Universidad Externado de Colombia
"Regarding paragraph 1, we consider the proposal to be a premise of the regulation that digital assets are property rights is correct. The recommendation to States to increase certainty on these issues in their State legislation is also pertinent. We consider the delegation to the States of the classification of digital assets to be appropriate, always considering that they must be susceptible to property rights. Not all legal systems contemplate the same dogmatic categories, which is why not providing them in the Draft Principles may facilitate its application. While the attempt to unify and harmonize the law of states with regard to digital assets is understandable, the proposition that the law that is contrary to the principles should be repealed does not seem ideal (see paragraph 5). The better alternative would be the proposal to complement national law with the principles. Please consider including a new general principle on "good faith" in Principle 3. The Draft Principles recognize this general principle within the articles. "

118. Comment 17

Pedro Mendoza Montano
UNIDROIT´s Correspondent in Guatemala
Under the concept of "Principles Law", it is mentioned that it takes precedence over the rest of the state law. However, it is not clear whether this solution of conflict of laws by reason of specialty is prudent, in light of other mandatory rules on intellectual property and copyright. Above all,

particularly for digital assets in the field of art. On the other hand, the commentary to Article 2, paragraph 12, expressly mentions a certain priority of the Intellectual Property Law for protected or registrable rights and the possible juxtaposition of this law with the applicable domestic law on intellectual property. Within the related Principle, specifically in paragraph 3 (a), the differentiation between ownership rights over a digital asset and the ownership of a digital asset itself is intensified. This indicates that aspects related to the ownership of a person over a digital asset are excluded from the scope of application of these principles. However, they focus specifically on ownership rights over digital assets. While it is recognized that ownership and property rights are not the same thing, it is relevant to recognize that they are strictly related. Therefore, it may be confusing that the related Principle so radically states that it does not want to have any interference in a person's ownership of digital assets when one of the essential objectives of the Principle is to regulate two property rights over the same assets. From an eminently legal perspective, the differentiation is understandable but, at the moment of transferring it to legislative practice, obstacles may be difficult to overcome.

119. Comment 18

Lukas Wagner / Melih Esmer
NYALA Digital Asset AG/ EBS Law School
As already set out in our General Comments above, we are rather sceptical whether it is a feasible approach to require all jurisdictions, regardless of their functional concepts and understanding of property, to make digital assets subject of proprietary rights (albeit understood in a rather broad sense, as explained in para 4 of the commentary). While it is reiterated several times in the Principles that these do not prescribe a specific classification of digital assets (eg para 2 of the commentary), the requirement to make digital assets subject of proprietary rights will have this effect to some extent, in particular as all rules in the Principles are built on this premise (para 1 of the commentary). As already argued above, we would rather advocate for an even more functional approach that focuses on a particular outcome, regardless of the classification of digital assets (eg a requirement to acknowledge a claim of the customer against its custodian in the case of insolvency).

120. Comment 19

Lucas-Michael Beck
Bundesverband deutscher Banken e.V. / Association of German Banks
We welcome the approach of the UNIDROIT Principles on Digital Assets and Private Law to develop a legal framework along the lines of property law.

Principle 4: Linked Assets

121. Comment 1

ANDRES ALONSO QUINTERO RODRIGUEZ
Sugiero identificar si el principio 4 podría ser redactado en el sentido de exigir equivalencia entre la información contenida en el activo digital frente al otro activo relacionado (cuando corresponda). --- I suggest identifying whether principle 4 could be expressed in sense of requiring equivalence between the information contained in the digital asset against the other linked asset (when applicable).

122. Comment 2

Kelvin F.K. Low
National University of Singapore
Principle 4 is clear that the legal effect of a transfer of a digital asset and its underlying linked asset depends not upon any law passed to give effect to the Draft Principles but rather upon the State's relevant "other law" (presumably a reference to its property law) (see para 6). This must be correct and is related to the numerus clausus principle. It follows logically that not only do States limit the number of rights that its laws regard as property, the nature and extent of these rights and how they

are to be transferred is dictated by the State and not between a limited number of parties. Specifically, no legal system will permit autonomous individuals to dictate that certain property rights may only be transferred in accordance to a particular form they dictate. However, it is somewhat artificial to regard the ledger entry (whilst the Draft Principles are in principle neutral, it is obvious that they are drafted primarily with distributed ledger technology in mind) as a digital asset which is then linked to the underlying asset (para 1). It would be preferable and more straightforward to treat the ledger for what it is, not an asset per se but a non-authoritative (because private parties cannot confer authoritative status on private ledgers) record of rights to the underlying asset. After all, DLTs are fundamentally ledgers: see, eg, the discussion in Bridge, Gullifer, Low and McMeel, The Law of Personal Property (3rd edition, 2022), [8-051] to [8-053]. Such a characterisation of the ledger entries so recorded more realistically accords with the technical reality and avoids unnecessary confusion that follows from characterising a ledger entry as an independent asset which is then linked to another underlying asset. Doing so also assists lawmakers and judges in recognising that they may draw inspiration from other asset registry laws in fashioning outcomes for DLTs but always bearing in mind that DLTs may present different challenges (particularly public DLTs that are immutable since the most common remedy to correct erroneous ledger entries is rectification).

123. Comment 3

Eric de Romance
The existence of the formal and enforceable link between the digital asset and another asset is key for the value of the digital asset, and still more in the Web3. So any doubt about the solidity of the link could jeopardize quickly the market and in particular the investors. However, there are two main risks in letting the States to evaluate and structure the legal context of this link. The first risk is different approaches between the States which could lead to a confict of law and the second one is the time elapsed to reach a satisfactory situation whereby the rights of the holder of the digital asset on the other asset are confirmed and protected. Even if those Principles are not quite recognized as superseding the State Laws, it would have the merit to define a kind of framework quickly to allow the States to evolve on this. So I would recommend more this concept be included in the Principles here for efficiency purposes.

124. Comment 4

Spyridon V. Bazinas
Kozolchyk National Law Center
As already mentioned, Principle 4, Linked assets, addresses a scope issue. So, it should also be included in Principle 1.

125. Comment 5

Julien Chaisse
City University of Hong Kong
While the principle provides a useful framework for analyzing the relationship between linked digital assets, some experts have raised concerns about its limited scope and application. I think the principle 4 may not adequately address the complexity of digital assets and the various ways in which they can be linked or associated. Additionally, the principle may not provide adequate guidance for situations where linked assets have different owners or where ownership is disputed. So, it may be necessary to expand the principle or to complement it with additional provisions to ensure that it provides adequate protection for the rights of all parties involved and to ensure the effective functioning of the digital asset market.

126. Comment 6

Stéphanie Saint Pé
France Post Marché
As long as the notion of digital assets under these principles is not clear, it appears difficult to assess the position with respect to linked assets.

We understand that the principles defer to national law to determine the existence of a "link" between the assets. There is absolutely no certainty as to the possibility to ensure co-existence of that principle with national/regional laws.

127. Comment 7

Clément Fontaine
Aix-Marseille University

The question of the link between a digital-asset and another asset raises the double spending question. This is the case where the holder of a digital-asset linked to another asset decides to sell the digital-asset and the linked asset twice but the control of the digital asset only once.

The link made between a digital asset and another asset can be enforced by a clause executor automaton or not.

1. When it is enforced by a clause executor automaton, the execution of the link rely on it.

If a link between a digital asset and another digital asset is made with a clause executor automaton, then, the control (as stated in principle 6), or the proprietary right and transfer rules which apply to the digital asset can also apply to the linked digital asset.

(1) If the linked asset is a digital asset and the link made with this linked digital asset is made in such a way that the control over the digital asset gives the control over the linked digital asset, then the proprietary right which applies to digital asset should also applies to linked asset.

Illustration : 4 (1) : A user creates a liquidity pool of two based Ethereum digital assets inside an ethereum based DEX which, in return, gives a non fongible digital asset. The non fongible digital asset is linked to the two based ethereum digital asset because the only way to get back, to transfer or to obtain substantially all the benefits from this two digital asset is to send to the DEX the non fongible digital asset. Thus, the control of the non fongible Digital asset gives control to the two based digital asset.

2. When it is not, the execution of the link rely on the co-contractor.

A problem could occur in case of double spending. If the purpose of the link between digital assets and another asset is to grant rights over the other asset to the one holding the digital asset, then the Digital asset holder could transfer the right on the other asset without transferring the control on the digital asset.

(2) States should enact special legislation to ensure that the rights of a third party acquirer in relation to the digital asset and the linked asset remain in line with each other provided that the control of digital asset gives the control over the legal content creating the link between the digital asset and the linked asset.

In other words, in order to recognise a good faith acquisition rule in relation to the other asset linked to the digital asset which would have the effect that digital asset and the other asset would benefit from a good faith acquisition rule should be provided to this condition : the control of the digital asset gives the control over the content of the legal content creating the link between the digital asset and the linked asset.

Subject to this condition, digital asset linking other asset could pursue the same equivalent condition of representative title in paper. Representative title in paper gives to their owner an ownership over then paper and the right it represents. Representative title in paper pursue three objectives :
It describes the right the paper is supposed to represent
It gives to the paper holder an exclusive control over the paper and the content written over the paper
It is easily transferable

For instance, owning a bill of lading gives ownership over a tangible good. In the XX century, owning a bearer security gave ownership over securities of a company. Those instruments uses possession of the paper as a way to easily transfer ownership of the paper and the right it represents if the transferee is in good faith. Since digital asset can be controlled and that this control can give rise to

possession, the possession of digital asset can be used as a way to easily transfer the digital asset and the right it represent.

128. Comment 8

David Morán Bovio
University of Cádiz (Spain) / Unidroit correspondent
The pretesented option between "tangible or intangible" it seems to offer doubts. Some of the commentators didin't understand that distinction on the illustration 1 (paragraphs 11 and 12)

129. Comment 9

Gilberto Martins de Almeida and Ian Velásquez
Instituto de Direito e Tecnologia (IDTEC)
These Principles apply to a digital asset linked to another asset, whether the other asset is tangible or intangible. Other law applies to determine the existence of, requirements for, and legal effect of any link between the digital asset and the other asset. Suggestion: Modification: These Principles apply to a digital asset linked to another asset, whether the other asset is or not digital. Other law may apply to determine the existence of, requirements for, and legal effect of any link between the digital asset and the other asset. Commentary: Defining an asset as digital (or not) may avoid discussion as to the tangibility of assets in question, which can lead to the need of development of other law in order to ascertain if said asset is or not tangible, amplifying the complexity of that issue. Perhaps, in the event the matter of tangibility should be considered, it would better fit in the context of Principle 2 (1), within the definition of "electronic record", taking into account the proposed modification of Principle 2 above. Furthermore, there are certain types of digital assets in which the question of tangibility is not an easy answer, either in view of the material nature of optoelectronic energy or of its (physical, or logic, as one may qualify) capability of being retrieved. A digital object can be a text file, manifested by bitstream, or a video, composed of multiple elements (e.g., video track, audio track, container file etc.), all of which being capable of remaining in control of its proprietor, and possessing a close relation between information and medium. Thus, perhaps a more practical and encompassing definition would take into consideration the digital or electronic nature of the asset, instead of its tangibility. In addition, the second part of principle 4 assumes that other law would only regulate the asset linked to a digital asset. This could be the case in many situations, but not in all. For instance, Liechtenstein's Token and Trustworthy Technology Service Providers Act specifically regulates the token economy, enabling tokenization of all types of assets and rights. Said law governs the "digital asset" itself and not the "other asset". Therefore, it could be appropriate to be lest assertive in the Principles, in order to be better harmonized with other law.

130. Comment 10

Nicole Purin
Deputy General Counsel, OKX ME
Principle (4). This is a comprehensive definition but it might be beneficial to list the type of assets to provide greater granularity in the principle. How the "other law" fills in the gaps has also been set out clearly.

131. Comment 11

Centre for Commercial Law at the University of Aberdeen
University of Aberdeen
This Principle seems sensible to us.

132. Comment 12

Dr. Thomas Nägele, LL.M.
NAEGELE Attorneys at Law LLC
"Pinciple 4 sets out that a digital asset may be linked to another asset and therefore provides for the link between the digital world and the non-digital world. This could for instance be a link between a digital asset and a tangible asset (e.g. a car). Furthermore, a primacy of the "other law" is stated, which leads to the consequence that a transaction with a linked asset does not necessarily mean that the digital transaction has the same legal effect on the other asset linked to the digital asset. The transactions may therefore not always be synchronized. In light of this issue, we deem it necessary to include the below described possible solution in the Unidroit draft principles on digital assets and private law on how to provide for a link between digital asset and other asset to avoid that digital and non-digital world are not synchronized. A way to provide for a link between the digital asset and the other asset, in order to avoid that the digital transaction and the physical transaction are not synchronized is, that parties to a transaction decide to use a "tokenization clause". [This concept was first provided for in: Nägele, The Legal Nature of Tokens, 2022. We are delighted to provide Unidroit with a free download link to this book for further review.] For all digital assets linked to another asset, the parties may therefore agree that - depending on the other asset linked to the digital asset - the exercise of rights is linked to the right to dispose of the digital asset (legitimation function) and that a debtor may only make debt-discharging payments to the person authorized to dispose of the digital asset (discharging effect). The aim of this agreement is that digital asset and the other asset share the same fate. This solution ensures that the conditions of the "other law" (e.g. law of property) are fulfilled, because the acquisition in good faith of the other asset will be prevented (see below), which leads to a synchronization of the digital transaction and the transaction based on the "other law". No amendment of the existing other law is required, nor does this lead to a primacy of the law on digital assets. A tokenization clause is not limited to physical assets but it probably represents the most common use case today. Such tokenization clause may be used to label a physical object (e.g. a car) in order to create publicity in relation to the link between the digital asset and the other asset (the car). Such tokenization clause affixed to a physical asset (which fulfills the requirements for its content and the affixing) is intended to prevent the acquisition of an physical asset in good faith according to the principles of the acquisition in good faith (bona fide transaction), because this would lead to a disengagement between the digital asset and the other asset. In order to justify the resulting publicity effect, in addition to the content of the tokenization clause, special requirements must also be fulfilled for the affixing of the same to the physical asset linked to the digital asset. A tokenization clause is not limited to physical assets, but may also be agreed upon for immaterial assets. An appropriate tokenization clause should be such that everyone can see it clearly and easily (e.g., signs, plaques, engravings). In addition, it should be ensured that the tokenization clause is placed in a place and manner that it can be seen with due attention. E.g. a tiny sign which is placed inside a car is not sufficient. In addition, a tokenization clause may incorporate a link (QR Code) which (if scanned) leads to further information: - Information that the "other asset" is tokenized and linked to a digital asset; - Information which rights (e.g. usage rights, IP rights) in the other asset are tokenized; - Information which rights are to be assigned to which entity/person; - Additional Information about the other asset (e.g. pictures, model and serial nr., history of the other asset) In case the tokenization clause is removed or disappears otherwise, the legal effects of such tokenization clause lapse with immediate effect, but will revive if a corresponding tokenization clause is affixed to the other asset. In order to ensure that third parties do not remove the tokenization clause on purpose, a criminal law provision may be enacted by a state, which criminalizes the removal, destruction or other relevant behavior which has a detrimental effect on the legal effect of the tokenization clause. However only a third party (which is not the owner of the other asset) should be punishable for wilful intent to prevent the legal effect of the tokenization clause. We would encourage to include an example based on the description set out above for principle 4. "

133. Comment 13

Cassandre Vassilopoulos & Mark Kepeneghian
Kriptown
The principle is extremely broad, particularly because of the lack of definition in Principle #2.

134. Comment 14

Office for Financial Market Innovation and Digitalisation
Principality of Liechtenstein
Principle 4 provides that the Principles apply to digital assets linked to other assets, whether the other asset is tangible or intangible. Other law applies to determine the existence of, requirements for, and legal effect of any link between the digital asset and the other asset. The recommendations to national legislators are helpful (e.g. to enact special legislation to create digital equivalents to paper negotiable instruments or documents of title to goods), but it is not clear, as to what extent this Principle can foster harmonization of law. The legal effect of any link between the digital and the other asset is one of the cornerstones of so-called Tokenization of assets. If the existence of, requirements for, and legal effect of any link between the digital asset and the other asset depend on national law, there will be no legal certainty for market participants, as most national laws do not have explicit rules in this regard in place. The principles should provide guidelines and possible solutions for lawmakers regarding linked assets.

135. Comment 15

Silvana Fortich, Anabel Riaño (Docentes investigadoras Departamento de Derecho Civil); Adriana Castro (Directora Departamento de Derecho de los Negocios); Valeria Facio-Lince, Juan Alejandro Solano y Juan Sebastián Ortiz, monitores Departamento de Derecho de los Negocios
Universidad Externado de Colombia
We consider there might be an absence of the legal implications of the linkage. While there is an extensive explanation of the technical linkage, the legal linkage is conspicuously absent.

136. Comment 16

Pedro Mendoza Montano
UNIDROIT´s Correspondent in Guatemala
Although quite innovative, this article, in my opinion, falls outside the range of application of the principles. I consider that there are two possible situations in which this principle could be applied. The first is one in which the digital asset is itself tied to another digital asset. This situation would not be problematic in any way since even if this principle did not exist, the tied asset would still be subject to the range of application contained in the first principle. The second possibility, and the one that brings with it a problem, is when the linked asset is not a digital asset but a tangible or intangible asset outside the virtual world. The comments on the principles state that they do not regulate the legal effect of the link, so the following question arises If the existence of the link is regulated but it is not given any legal effect.

137. Comment 17

Lukas Wagner / Melih Esmer
NYALA Digital Asset AG/ EBS Law School
As already discussed in our General Comments above, we would advise against including linked assets in these Principles while leaving provisions in relation to such link as well as the respective requirements for other law. Such other law may set out detailed requirements for the transfer of linked assets in their entirety (ie both the digital and the other asset, as is the case under the German eWpG). In the case of a linked asset, the digital asset may be a mere digital representation of the underlying other asset, and therefore should not follow rules separate from such other law. A preferable approach might therefore be to limit the Principles in relation to linked assets to one Principle containing a definition of the link between the digital asset and the other asset as well as a broad description of the logic these linked assets should follow. A different rationale might however apply in the cases of digital assets linked between different layers or protocols as discussed under Principle 2 above (under II.2.), where both digital assets may be treated separately and be made subject to these Principles. This should then however at least be clarified in the commentary (as is currently indicated by para 3 of the commentary).

Principle 5: Conflict of laws

138. Comment 1

Dr Benjamin Hayward
Monash University

In my opinion, it would be useful for UNIDROIT to consider three issues (and my associated recommendations) concerning Principle 5: Conflict of Laws, and its commentary.

A Issue 1: Clarifying the Terminology Adopted in Principle 5: Conflict of Laws

Principle 5 is titled Conflict of Laws. It addresses the law applicable to digital assets via the exercise of party autonomy (Principle 5(1)(a)–(b); Introduction [15]; Principle 5 Commentary [4]). It also addresses, via a 'waterfall' system (Principle 5 Commentary [5]–[6]), the law to be applied to digital assets in the absence of the exercise of party autonomy.

The term conflict of laws is often used in a broad sense that encompasses applicable law issues in general (see, eg, Lord Lawrence Collins and Jonathan Harris (eds), Dicey, Morris and Collins on the Conflict of Laws (Sweet & Maxwell, 16th ed, 2022) 3 [1-001]: in the English context). However, the term conflict of laws is also liable to be understood as referring (more specifically) to the process of identifying the governing law in the absence of party choice. Here, the term conflict of laws is used in contrast to choice of law, which is understood as referring specifically to the exercise of party autonomy (see, eg, Benjamin Hayward, Conflict of Laws and Arbitral Discretion: The Closest Connection Test (Oxford University Press, 2017) 2–3 [1.04]: in the international commercial arbitration context). In the latter case, the term applicable law is a more appropriate umbrella term that can be used to describe both processes collectively (Benjamin Hayward, Conflict of Laws and Arbitral Discretion: The Closest Connection Test (Oxford University Press, 2017) 3 [1.04]).

Given the imprecise way in which these terms are applied across the literature (Benjamin Hayward, 'Paying Attention to Choice of Law in International Commercial Arbitration – or – Why the Conflict of Laws Always Matters' in Michael Douglas et al (eds), Commercial Issues in Private International Law: A Common Law Perspective (Hart Publishing, 2019) 151, 152), I recommend that Principle 5's title be amended from Conflict of Laws to Applicable Law. This amendment would secure the utmost clarity. This is especially important given that the Principles are intended to be applied in a jurisdictionally neutral manner (Introduction [6]). This recommendation also better aligns with the opening text of Principle 5(1), which states that 'proprietary issues in respect of a digital assets are governed by …' The broader term applicable law is better aligned with the broad concept of governing law referred to in this provision (which, as the remainder of Principle 5 implies, is intended to encompass situations involving both the exercise and the non-exercise of party autonomy).

B Issue 2: Clarifying the Applicability of Principle 5: Conflict of Laws to International Commercial Arbitrations Seated Within an Adopting State

In light of the Principles' stated intention to apply with organisational neutrality (Introduction [8]), and given the bifurcated structure typically encountered in State laws where applicable law rules for State court proceedings are separate to applicable law rules for international commercial arbitration, it would be useful to clarify – either in the text of the Principles, or in their commentary – whether they are intended to apply only in State court proceedings, or also in international commercial arbitrations seated within an adopting State.

This is a particularly important consideration in the context of Principle 5, specifically, given that the identification of the applicable law not only stands to affect the outcomes of disputes, but also the performance of party obligations outside of formal dispute resolution processes (Benjamin Hayward, Conflict of Laws and Arbitral Discretion: The Closest Connection Test (Oxford University Press, 2017) 25–35 [1.47]–[1.71]).

Establishing a single applicable law rule for digital assets via Principle 5, when the Principles are adopted by States, is apt to cause confusion as State arbitration laws typically set out their own applicable law rules for specific application in international commercial arbitration. For example, in Australia, a party autonomy rule and the closest connection test apply at common law in State court proceedings (Bonython v The Commonwealth (1950) 81 CLR 486, 498; Brooke Marshall, 'Australia' in Daniel Girsberger, Thomas Kadner Graziano and Jan Neels (eds), Choice of Law in International Commercial Contracts: Global Perspectives on the Hague Principles (Oxford University Press, 2021)

715, 715 [41.01]). In international commercial arbitration, however, a broader version of the party autonomy rule is applied alongside a more flexible conflict of laws rule for situations involving the absence of a choice of law (International Arbitration Act 1974 (Cth) s 16(1); Arts. 28(1)–(2) Model Law). Similarly, in Switzerland, applicable law issues in State court proceedings are subject to a party autonomy rule and a characteristic performance version of the closest connection test (Arts. 116–7 Swiss Private International Law Act). On the other hand, Swiss-seated international commercial arbitrations apply broader party autonomy and closest connection tests (Art. 187 Swiss Private International Law Act). The question therefore arises: is Principle 5 intended to displace these international-commercial-arbitration-specific applicable law rules too? Though these differences might appear technical on their face, they stand to matter in the resolution of real-life cases (see, eg, Benjamin Hayward, Conflict of Laws and Arbitral Discretion: The Closest Connection Test (Oxford University Press, 2017) 226–43 [6.06]–[6.45]).

Given this fact, and as the Principles' organisational neutrality means that they 'take no position as to in what part of a State's law [their] rules should be included' (Introduction [8]), I recommend that the text of the Principles, their commentary, or both clearly identify whether they are intended to apply only in State court proceedings, or also in international commercial arbitrations seated within an adopting State. The commentary accompanying Principle 5 appears to suggest that both fora are contemplated, via its use of the word 'tribunal' (Principle 5 Commentary [10]), though this is not explicit and is not entirely clear: indeed, the word 'arbitration' does not appear at all in the current Principles and commentary. State legislatures would thus benefit from clearer instruction in this regard.

C Issue 3: Clarifying the Ability to Apply Rules of Law via Principle 5: Conflict of Laws

Principle 5(1)(a)–(b), as currently drafted, provides for the application of 'the domestic law of [a] State'. This drafting, however, is inconsistent with the explanation of the Principle's intended operation in its current commentary.

That commentary provides (Principle 5 Commentary [4]):

'This reliance on party autonomy is consistent with Article 3 of the Hague Conference Principles on Choice of Law in International Commercial Contracts … It would also be possible for a digital asset, or a system or platform, to specify that the UNIDROIT Principles (supplemented where necessary by the law applicable by virtue of the rules of private international law of the forum) would be the law applicable to proprietary issues.'

It goes on to provide (Principle 5 Commentary [5]):

'Because these Principles are generally accepted on an international level as a neutral and balanced set of rules, their application at the bottom of the waterfall is appropriate (see Article 3 of the Hague Conference Principles that 'allows the parties to choose not only the law of a State but also "rules of law", emanating from non-State sources.')'

Principle 5's commentary envisages that the Principles themselves can be applied to digital assets as non-State law, and that other sources of non-State law – including the UNIDROIT Principles of International Commercial Contracts – can govern digital assets via the exercise of party autonomy. However, the text of Principle 5 as it is currently drafted does not support these conclusions. It refers to 'the domestic law of [a] State' (Principle 5(1)(a)–(b)) and, later, to 'the law applicable' (Principle 5(1)(c)(iii), Option A; Principle 5(1)(c)(ii), Option B). Even this more general latter reference to law is apt to be understood as referring to State law only, and not to non-State law, given the generally-accepted difference between the phrases law and rules of law in the private international law space (see, eg, Gary Born, International Commercial Arbitration (Kluwer, 3rd ed, 2021) 2870–1).

If Principle 5's commentary, as currently drafted, accurately reflects the intentions of the Working Group on Digital Assets and Private Law, I recommend that Principle 5's text be amended to avoid referring to State law and to law simpliciter. Instead, Principle 5 (with respect to both its party autonomy and absence of party autonomy limbs) should allow the application of rules of law. Implementing this recommendation would have the added benefit of aligning Principle 5 with the Hague Conference Principles on Choice of Law in International Commercial Contracts. Like the Principles currently under examination, that instrument is also intended to inform State law reform. Furthermore, this recommendation would align with the Principles' content with private international law rules commonly applied in international commercial arbitration, referred to above. Arbitration,

as opposed to State court proceedings, is particularly known for its facilitation of the application of non-national rules (Brooke Marshall, 'The Hague Choice of Law Principles, CISG, and PICC: A Hard Look at a Choice of Soft Law' (2018) 66(1) American Journal of Comparative Law 175, 175–7).

I also recommend, however, that Principle 5's reference to rules of law be qualified so as to avoid an incidental problem arising, whereby parties might choose to be bound (or a decision-maker might themselves apply) platform protocols or code as the rules governing a digital asset (Benjamin Hayward, Lisa Spagnolo and Drossos Stamboulakis, 'Submission to the Law Commission Call for Evidence on Smart Contracts' (29 March 2021) 10–11). This possibility appears to be contrary to the intentions of the Working Group on Digital Assets and Private Law given the current text of Principle 5(2)(a) and Principle 5 Commentary [10].

In order to allow Principle 5 to support the application of non-national rules, but at the same time exclude the possibility of a digital asset being governed only by code, I recommend that Principle 5's text reflect the qualification that is already present in Art. 3 Hague Conference Principles on Choice of Law in International Commercial Contracts: 'rules of law that are generally accepted on an international, supranational or regional level as a neutral and balanced set of rules'. The UNIDROIT Principles, referred to in Principle 5 Commentary [4], would fall within this qualified power, whilst code (intended to be excluded by Principle 5(2)(a)) would not.

139. Comment 2

ANDRES ALONSO QUINTERO RODRIGUEZ

En términos de seguridad jurídica, sugiero evaluar sí las disposiciones del principio 5 deberían guardar un nivel de armonización con los principios contenidos en las guías de la OECD en lo relacionado al lugar de imposición.

In terms of legal certainty, I suggest evaluating whether the provisions of principle 5 should be harmonized with the principles contained in the OECD guidelines in relation to the place of taxation.

140. Comment 3

Inho Kim
School of Law, Ewha Womans University

4. The Draft states "This approach is appropriate because Principle 5(2)(c) treats every person dealing with a digital asset, and who could be affected by a determination of a proprietary issue, as consenting to the choice of law rules in Principle 5(1)."
According to Principle 5(2)(c) the person is treated as consenting to the law applicable (not to the choice of law rules).
The Draft states "It would also be possible for a digital asset, or a system or platform, to specify that the UNIDROIT Principles (supplemented where necessary by the law applicable by virtue of the rules of private international law of the forum) would be the law applicable to proprietary issue."
A digital asset, or a system or platform specifies the domestic law of the State (not the UNIDROIT Principles).

141. Comment 4

Eric de Romance

The definition of the applicable law and therefor the recognition of the law applicable to the proprietary questions is key. As there is no physical link to any country, it is more difficult to define easily a rule for the applicable law. So I would agree on the fact that the Whitepapers should define the applicable law but the States should accept that there is no link potentially with the State between the digital asset and the applicable law. This is in contradiction with the principles used today to define the applicable law. The main interest being that there is continuity of the applicable law to the digital assets around the world, while having local laws applicable, the nature, quality and enforceability of proprietary rights or security rights would evolve which is not favorable to the stability of the price of

the asset (the investor would have access or not to the security for instance in function of its location, which changes radically the intrinsic value of the digital asset).

142. Comment 5

Spyridon V. Bazinas
Kozolchyk National Law Center
1. As already mentioned, Principle 5 should appear after all substantive law Principles (Principles 1-4 and 6-17). 2. Principle 5(2) does not change the law applicable under Principle 5(1). It simply explains how the law applicable would apply and it is enough if it follows paragraph 1. So, there is no need to start Principle 5 with the words "Subject to paragraph 2". 3. As Principle 5(1) refers to "proprietary issues in respect of a digital asset", in order to under what matters are referred to the applicable law, a reader would have to read the other Principles or other law of the State enacting the Principles. It would be better to have Principle 5(1) stand on its own without reference to other Principles. So, Principle 5(1) could state directly to the matters referred to the applicable law (e.g., proprietary rights of transferees, secured creditors and custodians of digital assets subject to control). This would include rights characterized as proprietary rights under the law of the forum State, as legal characterization is always subject to the lex fori. 4. It would be enough if Principle 5(1) referred to the law of a State. There is no need to refer to "the domestic law of a State". In any case, additional language or an explanatory comment would be needed for federal States. The same applies for the reference to renvoi, which may be permitted in some federal States. 5. Principle 5(1)(c)(i) and(ii) of Option A are substantive law rules, not conflict-of-laws rules. This creates not only organizational difficulties for the Principles but also difficulties in their application. Concretely, these Principles cannot apply where the forum State has not implemented the Principles, even if the State whose law would otherwise be applicable under the conflict-of-laws rules of the forum State has implemented the Principles. And Principle 5(1)(c)(iii) of Option A states what would happen in any case if Principle (1)(a) and(b) did not apply. The same applies to option B. In effect, Principle 5(1)(c) could be deleted. And these matters should be explained in the comments. 6. Principle 5(2)(c) should be revised to read along the following lines: "by transferring, acquiring, or otherwise dealing with a digital asset a person consents to the law applicable under paragraph (1)(a) and (b), provided that records attached to or associated with the digital asset, or the system or platform are readily available for review by persons dealing with the relevant digital asset". The reference to these records in Principle 5(2)(b) seems to serve a different purpose, that is, the determination whether the applicable law is specified in those records. Without this provision, Principle 5 would introduce a principle unknown in private law and certainly foreign to party autonomy, as two parties could dictate their will as to the applicable law on other parties, without even informing them. 7. Paragraph 1 of the comments on Principle 5 should provide that a conflict-of-laws rule may (not will always) be imperfect and include a cross-reference to paragraph 3, which justifies the applicable law by comparing it with other possible applicable laws (e.g. the law of the location of the transferor of a digital asset or a grantor of a security interest in a digital asset). 8. Paragraph 2 of the comments on Principle 5 is very useful in that it explains that legal characterization is always subject to the lex fori. 9. Paragraph 3 should explain that, under the current approach of Principle 5, the rights of third parties dealing with the digital asset are protected to the extent the records reflecting the choice of law, to which third parties are deemed to have consented, are readily available to those third parties.

143. Comment 6

David Gibbs-Kneller
University of East Anglia
I am not an expert in conflict of laws but I support a party autonomy approach. However, this may raise domestic concerns about whether parties should be free to determine how property/proprietary rights are regulated, for which intent is normally only one consideration.

144. Comment 7

Dr. Gizem Alper
Academic & Attorney

Commentary [N. 4] " … This reliance on party autonomy is consistent with Article 3 of the Hague Conference Principles on Choice of Law in International Commercial Contracts ('Hague Conference Principles'). It would also be possible for a digital asset, or a system or platform, to specify that the UNIDROIT Principles (supplemented where necessary by the law applicable by virtue of the rules of private international law of the forum) would be the law applicable to proprietary issues." My comments: In line with my general comments, I recommend that attention be drawn to "hybrid contracts" and encourage the states to apply the CISG to the sale of goods issues of a transaction, which of course, should be determined on a case-by-case basis.

145. Comment 8

Takahito Kawahara
Government of Japan (MOFA)
1. We would like to make a following question concerning the conflict-of-law rules as principle 5. It might be difficult to understand "expressly specified in the digital asset" as the principle 5(1)(a). For example, the character of the legal action of expressly specifying is not clear. Therefore, we are still considering if the principle might be conflict with the domestic law including Japanese law. Of course, we know the law of the forum determines what would qualify as 'proprietary issues'. However, we kindly ask the working group to explain what "expressly specified in the digital asset" means related with some examples. We believe the explanation in comments would be helpful for each states to understand the brand new principle. 2. Our suggestion is the following; The principles should explains in detail with some example about the principle 5(1)(a) the conflict of law. Especially, what legal character is "expressly specified in the digital assets"

146. Comment 9

Martha Angélica Alvarez Rendón
Mexican Ministry of Foreign Affairs
We recommend Option B as it is simpler to implement. In paragraphs 3 and 4, we argue that there is a lack of conceptual clarity: According to the principles, it is correct to assert that the applicable legislation governs the ownership of digital assets in respect to events that occurred before to the beginning of the insolvency proceedings. When, in paragraph (4), it is specified that the proceeding does not impact the application of substantive or procedural rules of law applicable to: the ranking of credits, the avoidance of debtor's fraud transactions, or the enforcement of rights by the insolvency representative, this provision shall not apply. These are circumstances that are specifically governed by the applicable insolvency law and should prevail.

147. Comment 10

Anonymous
Anonymous
Paragraph (1)(a) and (b) of the Principle; paragraph 4 of the Commentary: It may be unclear (i) in relation to letter (b), where the applicable law should be specified and by whom (e.g., for Bitcoin); and (ii) how can this information be readily available, and intelligible for the user, so as to form an actual consent on the applicable law when transacting.

148. Comment 11

Stéphanie Saint Pé
France Post Marché
Existing principles set forth in Rome 1 Regulation (and equivalent international convention) govern the conflict of law aspects in respect of commercial relationships in general with respect to contractual

obligations (Rome II governs non-contractual issues). Multilateral and bilateral conventions are also currently in force (the "Existing Rules").
To the extent we are in the context of a commercial and civil relationship, conflicts of law arising out of transactions over digital assets are not excluded from the scope of Existing Rules.
Providing for an additional set of conflict of law rules is likely to create confusion and to expose to inconsistencies with Existing Rules, as the principles foreseen are limited to certain aspects.
As a reminder, a draft Hague Convention has been proposed in December 2002 with respect to securities held with an intermediary. This has been rejected by the European Union as the convention was proved inconsistent with the collateral directive and the settlement finality directive. Systemic risks have been raised by the European Central Bank and the European Parliament also shared serious concerns in terms of impacts any such convention could have. It has been mentioned that it is crucial to ensure ex ante legal certainty as regards the law applicable to certain matters concerning the holding, enforceability and transfer of book-entry securities held with and guarantees on such securities, in an international context, and reduce systemic risks that could result from uncertainties in this regard.
Accordingly, point (1)(b) of principle 5 shall be avoided ((b) if sub-paragraph (a) does not apply, the domestic law of the State (excluding that State's conflict of laws rules) expressly specified in the system or platform on which the digital asset is recorded as the law applicable to such issues) without a clear connecting factor between the platform and the law of the State specified by the platform.
The approach is replicable for proprietary issues in respect of digital assets/their acquisition and disposition.

As long as Existing Rules allows addressing conflict of laws questions, the opportunity to develop a parallel regime exposes the industry to new risks. Conflict of law rules shall propose a high level of predictability. The suggestion contained in the principles does not attain that objective.

149. Comment 12

Alejandro Horacio Luppino
Embassy of Argentina in Italy
"In relation to Principle 5, Argentina agrees with what has been stated regarding the fact that a conflict of laws rule will always be imperfect. Therefore, the objective of these principles is to improve legal certainty around conflict of laws as much as possible. In relation to the ""cascade"" proposed in its paragraph 1, subparagraphs a) and b) are compatible with our domestic legislation. Regarding subparagraph c), we prefer to choose for OPTION A, thus leaving open the possibility for States to adopt specific legislation that is applicable to the ownership of digital assets. Paragraphs 2, 3 and 4 of Principle 4 are generally considered compatible with Argentine law."

150. Comment 13

David Morán Bovio
University of Cádiz (Spain) / Unidroit correspondent
"5(3) It was seen as an excess. 5(4) It was viewed as partly lack of sense (those aspects are pure national law. "

151. Comment 14

Sumant Batra
Insolvency Law Academy
Principle 5(3) provides that "notwithstanding the opening of an insolvency proceeding and subject to paragraph (4), the law applicable in accordance with this Principle governs all proprietary issues in respect of digital assets with regard to any event that has occurred before the opening of that insolvency proceeding". From the plain reading of the aforesaid provision, it appears that the aforesaid Principle 5(3) only applies in relation to the pre-insolvency commencement events and not during insolvency. However, para 11 of the commentary on Principle 5(3) provides as follows: "Principle 5(3) makes it clear that in an insolvency proceeding Principle 5 should be applied to proprietary questions in respect of a digital asset. Principle 5(4) provides the usual exceptions that refer to the applicable insolvency laws."

Therefore, the commentary as mentioned in para 11 is not consistent with the language provided in Principle 5(3). Also, the Principle law dealing with proprietary rights relating to digital assets should remain unaffected by the commencement of insolvency proceedings. Therefore, we recommend that the drafting of Principle 5(3) should be revised to state as follows: "Notwithstanding the opening of an insolvency proceeding and subject to paragraph (4), the law applicable in accordance with this Principle governs all proprietary issues in respect of digital assets.

152. Comment 15

Nicole Purin
Deputy General Counsel, OKX ME
Principle (4). This is a comprehensive definition but it might be beneficial to list the type of assets to provide greater granularity in the principle. How the "other law" fills in the gaps has also been set out clearly.

153. Comment 16

Faruk Kerem Giray
Correspondent of Turkey
"- In Principle article 5/1/a wording "the domestic law of the State" is used rather than "other law". In order to sustain conformity in wording in Principles "other law" can be used instead of state law due to the given definition of "other law" in article 2/4. Our explanation for 5/1/a will be the same for art. 5/1/b. - In Principle article 5/2/b " recorded" wording is used in the sentence. We recommend to use "recorded or registered" wording instead single use of "recorded". - Another recommendation will be for article 5/2/c. We believe that, a legal distinction must be made for the applicable law on transferring digital assets. If the transfer of the digital asset is unlawful, then art. 5/1/a will have to be applied. However if the transfer is lawful, then the law of the transferred state must be considered in order to sustain legal certainty. - Regarding to art. 5/5/a, we recommend to use renvoi even if it is explicitly excluded in art 5/1/a in order to preserve third party effectiveness. - According to the premise, validity issues will be handled by the same law that is used to protect property rights. This approach will improve legal predictability. "

154. Comment 17

Matthias Lehmann, Gilles Cuniberti and Antonio Leandro
European Association of Private International Law
Full comment found in Annexe 2

155. Comment 18

Walter Arevalo (President) and Victor Bernal (Directive Council) on Behalf of ACCOLDI - Colombian Academy of International Law
ACCOLDI - Colombian Academy of International Law
It might be relevant to include a general reference/guidance to the situations in which the forum State could invoke its own "Public order" rules to retain jurisdiction or to apply regulations beyonf the scope of digital assets to relations governed by the principles, mostly considering that starting from "OPTION A" is is expected that States will draft their own elements of the conflict of law rules.

156. Comment 19

Japan Virtual and Crypto assets Exchange Association
Japan Virtual and Crypto assets Exchange Association
"1 The Opinion We request that consideration be given to a direction that allows platform service providers on digital assets to flexibly stipulate rules for the application of the governing law in terms of use, etc. 2 The Reason Due to the nature of the services they provide, digital asset-related platform service providers are required to provide a wide variety of digital asset-related services to users in a cross-border manner,

or by intermediating transactions between users. As a result, platform service providers have a significant interest in determining the governing law.
The current Principles indicates that, in summary, the policy is that (1) the governing law expressly stated with respect to the digital asset itself shall apply, (2) in the absence of (1) above, the governing law expressly stated in the relevant systems and documents of the digital assets such as the protocol and white papers shall apply, and (3) in the absence of both (1) and (2) above, the Principle shall apply, which is considered a reasonable framework. However, it is the platform service providers of digital asset transactions, including custodians, who are involved in a large part of digital asset transactions, and they provide a wide variety of digital asset-related services to many users. Therefore, if the rules on the attribution of rights, etc. can differ individually depending on the governing laws specified for each asset, this could pose unexpected risks to the platform service providers and their users.
For the reasons stated above, in future discussions on the determination of the governing law for digital assets, we hope that consideration will be given to the direction that allows platform service providers to flexibly stipulate rules for the application of the governing law in terms of use, etc."

157. Comment 20

Centre for Commercial Law at the University of Aberdeen
University of Aberdeen

We understand, from para 2, that the scope of the conflict of laws principle is not limited to the issues covered by the Principles. It is an unusual approach to us that the scope of a provision has a wider scope of application than the instrument it is included in. This point also relates to the relationship between the application of the conflict of laws principle and the whole Principles as an instrument. If a proprietary issue in respect of a digital asset is brought before a court of a state which has adopted the UNIDROIT Principles, would the court first apply the conflict of laws rules in Principle 5 and determine the applicable law (which may or may not be a law that has the Principles as a part of it) or would the court first apply the substantive law rules in the Principles and refer to Principle 5 for only the matters not resolved by the substantive law rules?

As we noted above, it is not clear when this provision should apply since there is no clear indication of what counts as a cross-border situation and the test for internationality. Are all situations relating to proprietary issues in respect of a digital asset deemed cross-border under the UNIDROIT Principles and require the conflict of law analysis?

Characterisation seems to be left to national law (see paragraph 1 of the Commentary) and there may be divergent application and/or interpretation of what is proprietary among adopting states. In addition, as the transfer of title to a digital asset does not usually involve physical objects, this blurs the boundaries between proprietary and obligatory rights (see B Yüksel Ripley and F Heindler, 'The Law Applicable to Crypto Assets: What Policy Choices Are Ahead of Us?' in A Bonomi, M Lehmann and S Lalani (eds) Blockchain and Private International Law (Brill, forthcoming)).

We, in principle, see value in a waterfall of factors for the determination of the applicable law in this context. At the top of this waterfall, Principle 5(1)(a) and (b) accepts party autonomy. Although we agree that party autonomy should have a place in relation to digital assets as we will elaborate further below, we think that it will probably have no or very little application in public permissionless systems and they currently represent the majority of the systems available. We are not entirely convinced by the explanation in the Commentary regarding the reasons for the acceptance of party autonomy, which is that the usual connecting factors have no useful role to play in the context of the law applicable to proprietary issues relating to digital assets. The lex situs is predominant in international property law issues and we agree that there are difficulties around determining the situs of the digital assets. However, these difficulties are not peculiar to digital assets and they arise also in relation to other types of intangibles with no physical location, such as money debts, shares, rights of action, and intellectual property. Conflict of laws solutions have been developed for them by ascribing them to an artificial or fictional legal situs where they can be pursued or enforced. Therefore, solutions can be developed for digital assets (or types of digital assets) as well. Indeed, there is a growing body of cases from the court of England and Wales suggesting that the situs of digital assets (in given cases Bitcoin) is the place where the person or company who owns the assets is domiciled (see eg Ion Science Ltd v Persons Unknown Unreported, 21.12.2020, Fetch.AI Ltd v Persons Unknown [2021] EWHC 2254 (Comm), para 14). More recently, in Tulip Trading Ltd v Bitcoin Association For BSV & Ors ([2022] EWHC 667 (Ch), the English court suggested that the situs is the place of residence or business of the owner, not their domicile. Their analysis is based on Professor Andrew Dickinson's proposal (see A Dickinson, 'Cryptocurrencies and the Conflict of Laws' in D Fox and S Green (eds)

Cryptocurrencies in Public and Private Law (OUP, 2019) 118-137; C Proctor, 'Cryptocurrencies in International and Public Law Conceptions of Money' in D Fox and S Green (eds) Cryptocurrencies in Public and Private Law (OUP, 2019)). The 'owner' can be interpreted in the context of Principles 6 and 7 as the person who has control of the digital asset.

In addition, traditionally there is no or limited place for party autonomy in international property law and we therefore think that acceptance of freedom of choice would benefit from further justification in the Commentary. We also wonder about all sorts of other issues relating to freedom of choice and whether these have been considered by the UNIDROIT. This includes weaker party (eg consumer) protection and the effect of choice of law on third parties (eg in good faith acquisition). In support of party autonomy, the explanatory text to the Principles refers to the 2015 Hague Principles of Choice of Law in Commercial Contract. The 2015 Hague Principles, however, were tailor-made for commercial contracts, excluding consumer contracts and proprietary questions. We wonder whether these issues have been left to other law (including its private international rules).

Further explanation would also be helpful as to why the law specified in the asset prevails over the law specified in the system and whether considerations have been given to a scenario where these two laws are in conflict.

We also think that the bottom of the waterfall would benefit from further consideration. In Option A (i), is the reference to the substantive law rules of the forum and if so what is the justification for skipping the conflicts stage here and directly applying substantive rules? Would this give scope to forum shopping, which will continue to exist unless the Principles are adopted globally? In Option A (iii) and Option B (ii), the last resort is to the private international law of the forum. As the applicable law in public permissionless systems will probably almost always be determined according to objective choice of law rules due to the absence of choice of law, we think that, under the current proposal, uniformity may not be achieved to the extent that is desired compared to substantive law provision of the Principles.

Given that systems or platforms are self-contained and the distinction between contractual and proprietary issues are blurred in the systems, we think that all issues (contractual and proprietary) can be subject to the law that governs the system (for an analysis on the determination of this law, see Yüksel Ripley, Burcu, 'Cryptocurrency Transfers in Distributed Ledger Technology-Based Systems and Their Characterisation' in Conflict of Laws (July 31, 2022). Justin Borg-Barthet, Katarina Trimmings, Burcu Yüksel Ripley and Patricia Živković (eds), From Theory to Practice in Private International Law: Gedächtnisschrift for Professor Jonathan Fitchen (Hart, Forthcoming), Available at SSRN: https://ssrn.com/abstract=4336222 or http://dx.doi.org/10.2139/ssrn.4336222).

We welcome the proposal of the Hague Conference on Private International Law for Joint Work: HCCH-UNIDROIT Project on Law Applicable to Cross-Border Holdings and Transfers of Digital Assets and Tokens and consider that conflict of laws issues would benefit from further examination in the scope of that project.

158. Comment 21

The Centre for Robotics, Artificial Intelligence & Technology Law

SVKM's Pravin Gandhi College of Law; Student Committee

"Principle 5 of the Principles is on Conflict of Laws in International Commercial Contracts relating to proprietary issues in digital assets. The aim of these principles is to improve legal certainty around the issue of conflict-of-laws. Principle 5 deals with the applicable law for proprietary issues related to digital assets and recognizes that usual connecting factors for choice-of-law rules have no useful role to play in this context because digital assets are intangibles that have no physical sites. Instead, the approach of this principle is to provide an incentive for those who create new digital assets or govern existing systems for digital assets to specify the applicable law in or in association with the digital asset itself or the relevant system or platform.
This principle also provides a ""waterfall"" of factors for the determination of the applicable law, which includes the law of the state specified in the digital asset itself, the law specified in the system or platform in which the digital asset is recorded, and the law applicable in the forum state in which the proprietary issue arises. Additionally, the passage discusses the two options under Principle 5(1)(c) that allow the forum state to choose the appropriate rules for proprietary issues in relation to a digital asset.
According to my understanding, principle 5 refers to the appropriate legislation for proprietary concerns generally and does not only apply to those specified by the Principles. What would constitute

""proprietary issues"" would depend on the applicable law of the forum. This broad interpretation of Principle 5 is intended to prevent the concerns covered by these Principles, which have a limited scope, from being governed by laws other than those covering proprietary matters that are directly related to but outside the purview of these Principles. The application of the law to the relationship between a custodian and its client is not determined by Principle 5. Because it is appropriate for one law to apply to that relationship rather than different laws, as might be specified in various digital assets or various systems or platforms as contemplated by Principle 5, this question is decided by other law (in this case, the conflicts of law rules contained in other law). The Principle does not apply to proprietary situations where it must be decided if a client is an innocent purchaser of a digital asset, such as when a custodian acquires a digital asset. When a digital asset is linked to another asset, another body of law in this case, the conflicts of law provisions of another body of law determines the law that will apply to decide whether the digital asset and the other asset are linked, what is necessary to make that link, and how it will be governed by the law. Digital assets are any digital information that has monetary worth and can be owned or sold, such as cryptocurrency, digital art, domain names, and virtual real estate. Private law, on the other hand, deals with the regulation of relationships between persons and private entities, such as property rights and contracts. The concept of control in a law governing digital assets serves as a necessary (but not a sufficient) criterion for qualifying for protection as an innocent acquirer of a digital asset (other than as a client in a custodial relationship), and as a method of third-party effectiveness (perfection) and a basis of priority of security rights in a digital asset. In the context of digital assets, private law is critical in determining their legal status and ownership. To evaluate ownership, transferability, and responsibility, private law principles like as property rights, contract law, and tort law are applied to digital assets. The application of private law rules to digital assets, on the other hand, can be confounded by their particular properties. Digital assets, for example, are frequently intangible and can be reproduced or transferred without physical transfer, making determining ownership and transferability problematic. Furthermore, digital assets are frequently decentralised, which means they are not controlled by a single body, complicating the application of liability standards. To address these issues, legislators and legal scholars are investigating novel techniques to regulating digital assets within the framework of private law. Some advocate adopting new legal doctrines and principles to solve the issues posed by digital assets, while others recommend developing new legal categories that acknowledge their distinctive qualities. Control by a person of a digital asset as agent (for example, an employee may have control for their employer), is treated in these Principles as control by the principal, as an implementation of the law of agency. The concept of control also is relevant in the context of the custody of digital assets."

159. Comment 22

Office for Financial Market Innovation and Digitalisation
Principality of Liechtenstein
"We understand "proprietary issues" as existence and transfer of rights in rem (e.g. ownership). The Principle does not address linked assets or rights. As previously mentioned, Principle 4 states that the existence, requirements, and legal effect of any link between the digital asset and another asset are governed by domestic law. This means that market participants have to choose a domestic law, that recognizes the legal validity and intended legal effects. The dominance of party autonomy in the principle is welcomed. However, in practice most systems do not yet include a choice of law clause. If we understand Principle 5 correctly, Option B suggests that States should make the Principles directly applicable. We understand, that if a state does not choose Option B, domestic law will be applicable, regardless of the substantive rules of private international law and the connections of the specific case. It is questionable whether this approach will be useful for harmonisation and legal certainty. Further, a proposal for a default choice of law clause and guidelines on how states should adapt their private international law by UNIDROIT would be beneficial."

160. Comment 23

Silvana Fortich, Anabel Riaño (Docentes investigadoras Departamento de Derecho Civil); Adriana Castro (Directora Departamento de Derecho de los Negocios); Valeria Facio-Lince, Juan Alejandro Solano y Juan Sebastián Ortiz, monitores Departamento de Derecho de los Negocios
Universidad Externado de Colombia

"Regarding principle #5, the way in which it is drafted seems to be more a model law than a principle. There is no explanation on the elements considered for the waterfall options. The proposal is complex and may require a wider debate among International Private Law experts.

The title of Section II, which refers to private international law in general, only consists of a single principle concerning conflict of norms. In view of the above, it may be recommended to change the section's title accordingly or to include a principle regarding jurisdiction, for example whether the forum selection clauses may be valid. "

161. Comment 24

Bernadette Harkin

Ashurst LLP

The 'waterfall' structure of Principle 5

We consider the 'waterfall' structure of Principle 5 to be a sensible means of determining the applicable legal regime or rules governing proprietary issues when conflicts arise. However, in consideration of UNIDROIT's aim to increase certainty and consistency, we believe Principle 5 can be further simplified as follows:

- As currently drafted, the inclusion of option A and option B only serves to acknowledge that certain States will not have a developed body of national law to govern proprietary issues in respect of digital assets. However, we consider that option A(i) has sufficient flexibility to accommodate a scenario where a State does not have, or chooses not to rely on, its own law to govern proprietary issues. For this reason, we believe option B can be removed entirely and option A can be incorporated as additional sub-paragraphs following Principle 5(1)(b).

- To the extent that a State does not have, or chooses not to rely on, its own laws to govern proprietary issues, this should be expressly stated in the place of option A(i) to make it clear that no aspect of the State's law is relevant to proprietary issues in respect of digital assets.

Choice of law for digital assets, or relevant systems or platforms (Principles 5(1)(a) and 5(1)(b))

We welcome UNIDROIT's aim to incentivise parties to specify the applicable law for the digital asset itself, or the relevant system or platform on which the digital asset is recorded. We consider this approach to be suitable to accommodate the special characteristics of digital assets and related proprietary issues. However, we note that under the conflict rules of some jurisdictions, choice of law clauses, which are based on the idea of party autonomy (as acknowledged in paragraph 4 of the commentary to Principle 5) may be overridden by countervailing considerations, such as the protection of consumers.

For instance, in the case of Soleymani v Nifty Gateway LLC [2022] EWCA Civ 1297, the English Court of Appeal held that the English courts, rather than an arbitral tribunal in New York, were the appropriate forum to determine whether the governing law and arbitration clauses in a platform provider's online terms were invalid. The Court found it was arguable that there was a consumer contract with a close connection to the UK and that the claimant was a consumer for the purposes of the UK Consumer Protection Act 2015. This case did not concern proprietary rights of digital assets per se. But the Court adopted a general 'pro-consumer' approach in its reasoning, which indicates that under English law, choice of law clauses for digital assets, or related systems or platforms, may not always be upheld. Many civil law jurisdictions feature statutory provisions of similar effect. It would therefore increase legal certainty to recommend that States specifically identify any limitations on the general priority given to the parties' choice of law, if any.

Separately, UNIDROIT should consider paying particular attention to the gateway issues of jurisdiction and admissibility. A clear and consistent regulatory framework in this regard is imperative for the effectiveness of the provisions established pursuant to the Principles.

Adoption of the Principles in part (Principle 5 Option A(ii) and Option B(i))

We consider that the proposal in Option A(ii) and Option B(i), for States to adopt the Principles in whole or part, is contrary to the overall objective of Principle 5 to promote certainty and consistency. For this reason, we believe the adoption of the Principles by any State should be on a complete basis. This minimises the chance that States take divergent approaches to the implementation of the Principles, but does not compromise the autonomy of States to specify the relevant aspects of their own law (if any) in the first instance.

Specification of applicable law after the issue of a digital asset (Principle 5(2)(e))

We consider that the proposal that proprietary rights established prior to a specification of the applicable law are not affected by an express specification would create unnecessary complexity and confusion. We note that paragraph 10 of the commentary to Principle 5 clarifies that this only concerns

choice of law issues and "does not address the question of the jurisdiction of any tribunal over a party or the subject matter at issue". However, the proposal in Principle 5(2)(e) may lead to scenarios where the law specified after the issue of a digital asset contradicts the rules or law underpinning any previously established proprietary rights. This would directly infringe on issues like jurisdiction or how the subject matter of a dispute was resolved. With this in mind, we invite UNIDROIT to clarify the intention of Principle 5(2)(e).

162. Comment 25

Koji Takahashi
Doshisha University
"I broadly agree with (1)(a) and (b) as I think that party autonomy should be embraced where a uniform choice of law is made. In practice, however, it is doubtful that a choice of law made in a digital asset itself or for a public blockchain will be known to and actually consented by all the users of the asset of blockchain in question. In this regard, (2)(c) seems unrealistic and inappropriate. It would seem prudent to leave it to the courts to assess the effectiveness of consents on a case-by-case basis. (1)(a) and (b) use the expression ""domestic law of the State"" but it should be replaced with ""rules of law"" to clarify that the choice of the UNIDROIT Principles is possible. Where there is no effective choice of law, the resort to the lex fori should be avoided as it would invite forum shopping and call into question the very raison d'être of conflict of laws. Option A (i) of (1)(c) should, therefore, not to be favoured. I would rather apply, with respect to digital assets recorded on a private blockchain, the law of the place where the gatekeeper is established and, with respect to crypto-assets recorded on a public blockchain, the law of the place of control of the specific units of the digital asset which have given rise to the proprietary issue. For more, see my article, ""Law Applicable to Proprietary Issues of Crypto-Assets"" (2022) 18-3 Journal of Private International Law pp. 339-362."

163. Comment 26

Pedro Mendoza Montano
UNIDROIT´s Correspondent in Guatemala
The article is written in a way that is not very accessible to the reader. It is a somewhat complex wording that allows for different interpretations of the same article. Moreover, the article does not seem to propose a novel solution to the conflict of applicable law. Since it only supports the maxim of respecting the autonomy of the will, something that is already done by most domestic legislations in matters of private international law. However, the article creates an important distinction by distinguishing the applicable law agreement found in the digital asset and the applicable law agreement found in the platform or system. On the other hand, the article regulates a very specific scenario in which it could be that these agreements are different. However, it is not entirely clear whether reinforcing the autonomy of the will is the ideal solution to solve the problem of the applicable law. This is because many jurisdictions already regulate the issuance of digital assets with regulation that mimics the regulation of digital markets and such regulation is mandatory in some cases, so it is not clear why this industry, or this type of assets should have its own distinct regulation in terms of applicable law, different from the general domestic regulation applicable to conflicts of Private International Law. Likewise, the insolvency law, in this matter, to take precedence over what is regulated in these principles. This may also generate a conflict with the provisions of Principle 3, since it is another branch of law that prevails over "Principles Law".

164. Comment 27

Lukas Wagner / Melih Esmer
NYALA Digital Asset AG/ EBS Law School
While we do not have specific comments on the wording of the Principle, we note that a choice of law is in general rather uncommon in relation to proprietary rights.

165. Comment 28

Lucas-Michael Beck
Bundesverband deutscher Banken e.V. / Association of German Banks
However, there are reservations with regard to the conflict of laws rules (Principle 5). The basic rule under Principle 5(1): "proprietary issues in respect of a digital asset are governed by: (a) the domestic law of the State (excluding that State's conflict of laws rules) expressly specified in the digital asset as the law applicable to such issues); (b) if sub-paragraph (a) does not apply, the domestic law of the State (excluding that State's conflict of laws rules) expressly specified in the system or platform on which the digital asset is recorded as the law applicable to such issues;". is reminiscent of the failed attempt of the Hague Convention from 2006, which is linked to the choice of law between the custodian and the client to determine the applicable law for securities custody and securities transfers. Although the connecting factor of Principle 5(1) is different, it will still often apply a law that is different from the laws of the parties involved - even if both parties to the transfer are domiciled in the same jurisdiction. In this case, a court would have to apply a foreign substantive law. Such a concept is alien to many legal systems. It would also be completely wrong to apply the aforementioned rule to "proprietary issues" in the custody of crypto assets by a custodian. Principle 5(6) only excludes from the general rule of paragraph 1 the "law applicable to the relationship between a custodian and its client". According to the commentary, this should not apply to proprietary issues: "By excluding the custody relationship from the application of Principle 5(1), it is not suggested that this Principle does not apply to proprietary issues such as where a custodian acquires a digital asset or where the issue to be determined is whether the client is an innocent acquirer of a digital asset. The latter point in particular would be completely irrelevant and simply unacceptable.

Principle 6: Definition of control

166. Comment 1

Kelvin F.K. Low
National University of Singapore
Regarding control of digital assets to be the functional equivalent to possession because market participants regard such control as exclusive is highly problematic (para 1). Possession at its core is a rivalrous form of control. This means that if A is in possession of a tangible thing, then by definition, B and everyone else is not. Such control, however, is imperfect in that B (or anyone else) may dispossess A. But its rivalrous nature remains unchanged in that, upon doing so, B is in possession of said tangible thing and by definition, A and all others is not. It is the imperfection of possession that leads to States supplementing factual rivalrous control with legal rights. Although market participants regard private key control of a digital asset to be exclusive, such control only mimics one aspect of possession. Like possession, such control is imperfect. But because a private key is merely information, which is non-rivalrous, such control is necessarily likewise non-rivalrous. Control of such private keys can be shared (factually as opposed to legally) either consensually or non-consensually. Nor is hacking the only means to compromise exclusivity (see example in para 9). If a user generates his private/public key pair using a compromised key generator, then such user's control of the digital assets in his public address was always non-exclusive. The analogy drawn with theft of a tangible thing (para 9) is wrong because a theft immediately shifts rivalrous control in the form of possession from the true owner to the thief (though the legal right to control remains vested in the true owner). However, a hack or other consensual/non-consensual sharing of the private key does not do so until either the "owner" of the digital asset or the hacker or other person transfers said digital asset to a new public address that it exclusively controls. From the point of the hack/sharing of the private key until such outward transfer, there is no exclusive (or rivalrous) control of any digital assets recorded to this public address. Nor can there be exclusive control of any digital assets subsequently transferred to such a compromised address. In short, private key control of digital assets is (like possession) imperfect but (unlike possession) not necessarily rivalrous.

The traditional manner in which legal systems recognise intangible property is to recognise that they differ from tangible property in one important respect. Property rights in tangibles entail the recognition of legal rights to things (res) so that right is separate from thing. Intangible property, however, is pure rights. Particularly in States that adopt a looser definition of property, such rights may be in personam (contractual claims) or erga omnes (intellectual property rights) but unlike property rights in tangibles, the rights are the res rather than over a separate res. It is eminently possible to create rights over digital assets in a manner consistent with traditional intangible property rather than trying to devise an analogue to possession, which is an attribute of tangible property. Doing so will forego the need to pretend that control is exclusive (when sometimes it is not) because the exclusivity will be conferred by the law rather than factually (which does not always happen anyway). To the extent that digital assets are ideational, there is also too much focus on the form in which they are recorded. Principle 6(2) appears to contemplate that when A transfers 1 BTC from his wallet to B, B acquires a distinct derivative asset in the form of a different UTXO (para 7). But this overemphasizes the form of the BTC (recorded as a ledger entry). No layperson engaging in such a transfer believes that they are destroying and creating new assets by way of such transfer and the ledger system is simply a means to give effect to the idea of Bitcoin. Accordingly, there is no reason why such a transfer cannot be regarded as an outright transfer of the ideational object with the ledger serving no different purpose than any traditional ledger. For example, many developed countries operate electronic land registries and when land is sold from A to B, the ledger entry is changed. The new ledger entry will (like the UTXO in the Bitcoin blockchain) look different to the old ledger entry but we neither pretend that the land has been destroyed and reconstituted nor regard the land as existing in electronic form. Bitcoin and its endogenous ilk are ideas at heart and the ledger is simply a means of implementing the idea.

167. Comment 2

Eric de Romance
The question of control, even if it needs to be differentiated from the proprietary rights, is a key element on the demonstration (necessary but not sufficient as precised in the text) of holding the proprietary rights. My concern is about the case of hacking the private keys which happened and which will happen again in the future. The hacker has the possibility to resell the digital asset through multiple rebounds to reach the innocent acquirer qualification as precised later in the document. In that case, the original and initial owner will not be able to recover its own property. So there is something which needs to be done to give him the ability to recover the digital asset. As the digital asset should be on the blockchain, an analysis tool could be used to track the chain of ownership but I am not sure this will be sufficient to demonstrate legally that the ownership was with him at that time before the hacking. Is the demonstration of the existence of the hacking sufficient ?

168. Comment 3

Spyridon V. Bazinas
Kozolchyk National Law Center
As already mentioned, the definition of "control" should be included in Principle 2, Definitions, as it is so fundamental for the understanding of the scope of the Principles and the meaning of "digital asset".

169. Comment 4

David Gibbs-Kneller
I would raise a query about the word "exclusive" in (1)(a)(i) and (iii) and whether it will cause any issue in circumstances where there may be joint owners or controllers of a digital asset.

170. Comment 5

Stéphanie Saint Pé
France Post Marché
According to the proposed principles, the notion of control is to be understood as a "factual matter and a person cannot control a digital asset unless criteria of principle 6 are met." This principle refers to ability to benefit from the digital asset and the ability to prevent others from benefiting from the digital asset. It is also mentioned that the control of a digital asset is to be understood as a functional equivalent to possession. The situation is much more complex as the notion of control is fragmented among national laws, refers to different criteria and cannot be limited to possession aspects. The criteria laid down in principle 6 are therefore undoubtedly insufficient to promote a uniform definition of control over digital assets, and these criteria become a legal matter (and not only a factual one) as far as they participate to the qualification of the control ("… a person cannot control a Digital Asset unless the criteria of this Principle 6 are met") Accordingly, this principle and the concept of "control" enters in competition with national neighbouring concepts, like the possession (détention in civil laws). Differences also exist if we consider the point from a pure legal angle or if we analyse it from an accountancy perspective. The same goes with the differences between civil law and common law jurisdictions. Principle 6 does not take into account existing regimes and discrepancies.

171. Comment 6

Clément Fontaine
Aix-Marseille University
The control written in this article describes the effects produced by the clause executor automaton / the smartcontract. The power that can exercise a person over a digital asset depends indeed from the smartcontract functionalities. Considering the definition of control provided at Principle 6 (1), and considering the definition of digital asset provided at principle 2, the draft Principle on Digital Asset exclude from the scope all digital asset relying on private blockchain or on administered smartcontract. Since administered smartcontract or private blockchain are controlled, the digital assets linked to them are also controlled by the one who control the private blockchain or the administered smartcontract. In this case the digital asset holder does not have an exclusive control over the abilities written in Principle (1) (a) (I) (ii) (iii) but take this control from the private blockchain owners or from the administrator of the smartcontract. Indeed, digital asset owner does not has any exclusivity over the digital asset since it is created and administered by another person : either a private blockchain owner or a smartcontract administrator. Thus, electronic records issued by private blockchain owners or smartcontract administrators can't be considered as digital asset regarding the definition stated at principle 2.

172. Comment 7

David Morán Bovio
University of Cádiz (Spain) / Unidroit correspondent
"6(1)(a)(iii) opens doubt. A change of order between 6(1)(a)(ii) and 6(1)(a)(iii) was suggested. "

173. Comment 8

Gilberto Martins de Almeida and Ian Velásquez
Instituto de Direito e Tecnologia (IDTEC)
(1) A person has 'control' of a digital asset if: (a) subject to paragraphs (2) and (3), the digital asset, or the relevant protocol or system, confers on that person: (i) the exclusive ability to prevent others from obtaining substantially all of the benefit from the digital asset; (ii) the ability to obtain substantially all the benefit from the digital asset; and (iii) the exclusive ability to transfer the abilities in subparagraphs (a)(i), (a)(ii) and (a)(iii) to another person (a 'change of control').

Suggestion:

Modification of items (i), (ii) and (iii):
(i) the prerogative to prevent others from obtaining substantially all of the benefit from the digital asset;
(ii) the prerogative to obtain substantially all the benefit from the digital asset; and
(iii) the prerogative to transfer the abilities in subparagraphs (a)(i), (a)(ii) and (a)(iii) to another person (a 'change of control').

Commentary:

Given the Principles' need to preserve its intended outreach and observance of the principles of technological neutrality and of functional equivalence, it might be commendable to change the definition of control in such a way that it may encompass a greater range of digital assets. In the previous definition, Commons, which are a particular type of institutional arrangement for governing the use and disposition of resources, identifiable by characteristic that no single person has exclusive control over the use and disposition of any particular resource, would not be included. Moreover, the proposed definition would preserve the application of the Principles even in cases where controller of a digital asset is (i) sharing a network; or (ii) not able to guarantee protection against hacking.

If this modification is accepted, the expression "exclusive ability" should be altered to "prerogative" throughout the Principles and its commentary. It should be noted that, in some instances, the Principles not aways qualify ability as "exclusive", such as in principle 6 (1) (ii), i.e., "the ability to obtain substantially all the benefit from the digital asset; and". The proposed alteration from "exclusive ability" to "prerogative" makes the differentiation of exclusive or non-exclusive ability obsolete, harmonizing the text of the Principles.

174. Comment 9

Sumant Batra
Insolvency Law Academy

Principle 6(1)(a) provides that control refers to a digital asset where a person can establish that it has (i) the exclusive ability to change the control of the digital asset to another person, (ii) the exclusive ability to prevent others from obtaining substantially all of the benefit from the digital asset; and (iii) the ability to obtain substantially all the benefit from the digital asset.

Further, Principle 6(1)(b) provides that if a digital asset, or the relevant protocols or system, allows a person to identify itself as having the above abilities, then the person is said to be in control of that digital asset.

However, it is not clear if the elements provided in Principle 6(1)(a) and Principle 6(1)(b) are an 'OR' requirement or an 'AND' requirement.

It should be an 'AND' requirement so as to make transactions relating to digital assets more secure. Example: In our understanding Principle 6(1)(b) envisages a scenario where the systems allow for identification of the person who has control on a digital asset suppose by way of OTP verification mechanism which aims at making such transactions more secure.

Therefore, we have proposed following amendment to the existing draft of Principle 6(1)(a) and Principle 6(1)(b):
"A person has 'control' of a digital asset if:
(a) subject to paragraphs (2) and (3), the digital asset, or the relevant protocol or system, confers on that person:
(i) the exclusive ability to prevent others from obtaining substantially all of the benefit from the digital asset
(ii) the ability to obtain substantially all the benefit from the digital asset; and
(iii) the exclusive ability to transfer the abilities in subparagraphs (a)(i), (a)(ii) and (a)(iii) to another person (a 'change of control').
and
(b) the digital asset, or the relevant protocols or system, allows that person to identify itself as having the abilities set out in paragraph (1)(a)."

175. Comment 10

Nicole Purin
Deputy General Counsel, OKX ME
Principle (4). This is a comprehensive definition but it might be beneficial to list the type of assets to provide greater granularity in the principle. How the "other law" fills in the gaps has also been set out clearly.

176. Comment 11

Faruk Kerem Giray
Correspondent of Turkey
- We recommend an additional paragraph to the art. 6/1/a/ such as: "the ability to use of all the benefit from the digital asset" - As for the art. 6/2, we recommend to include "transposition" wording to the sentence.

177. Comment 12

Walter Arevalo (President) and Victor Bernal (Directive Council) on Behalf of ACCOLDI - Colombian Academy of International Law
ACCOLDI - Colombian Academy of International Law
"The control of a digital assets refers to the confidential access to the system which allows to adequate, modify or eliminate the protocols that define how the digital assets operates. Therefore, the control can be in head of someone different of the rightful owner of the digital asset. Nevertheless, the principles do not explore the possibility of multiple owners and multiple controllers, which could represent a highly reasonable outcome of the transference of the property of digital assets just as in any other kind of property. The exclusivity of control is not something that can be applied in every situation where digital assets are involved, since various owners can have control over the asset as well as multiple third parties who can specialize in the administration of the asset, cybersecurity or ciberdefense, then it shouldn't be stated that as a principle that he control is exclusive to an individual."

178. Comment 13

Michele Graziadei and Marina Timoteo
University of Torino
"This is one of the key articles of the draft. We recognise that is the fruit of carefully balanced considerations, and yet we doubt it can stand as it is. The point is that by assuming a purely factual notion of control, it creates once more huge uncertainty. The rule states that 'control' is the outcome of the "relevant protocol or system", providing certain abilities to the person who is in control. It nowhere states that this situation must be 'legal' or 'legitimate'. This implicitly raises the question of the relation of the notion of 'control' with the notion of 'proprietary rights', and of holder of proprietary rights under the draft. Who is the holder of proprietary rights under the draft ?Is it the person who has control over the digital assets ? if so, the factual element would render its position legitimate ? The subsequent rule on good faith acquisition of digital assets seem to deny this. But then it would be better to say that sheer control does not necessary imply full proprietary rights, but only limited proprietary rights (or no proprietary rights at all.). "

179. Comment 14

Centre for Commercial Law at the University of Aberdeen
University of Aberdeen
"We, in principle, agree with this Principle. The title of the Principle is definition of control, however it seems that the provisions set out herein are broader than definitions. Perhaps the title could be amended given this. In addition, as we suggested above in our comments on Principle 2, it would be helpful to link these two principles. Our understanding is that the conditions set out in Principle 6(1)(a) and (b) are cumulative in nature. It would be helpful to make this clear in the Principle, such as by adding 'and' between them. "

180. Comment 15

Gerard GARDELLA
HAUT COMITE JURIDIQUE DE LA PLACE FINANCIERE DE PARIS
The HCJP notes that the definition of Control under Principle 6 is directly inspired by that which is used in Article 12 of the United States Uniform Commercial Code for "controllable electronic records" (Section 12-105). It is also inspired by the CNUDCI Model Law on Electronic Transferable Records. The comments of both projects specify that "control" is "the functional equivalent of possession" (§106, CNUDCI comment; §2. Comment under Principle 6, Unidroit project). However, while CNUDCI concludes that a definition is not necessary since the notion of "possession" may vary from one country to another, the Unidroit Project gives it a substantive content. This equivalence is not far from that which is used in Directive 2002/47 on financial collateral agreements, transposed to Article L. 211-38 of the Monetary and Financial Code. Within this Directive, the terms "possession" and "control", always used together, appear to be considered equivalent in their purpose with regard to the creation of a security right. The decision of the CJEU on 10 November 2016 (paragraphs 43 and 44) reinforces this interpretation: "43 – Furthermore, the text of Article 2 (2) second sentence of Directive 2022/47 provides that the right of substitution or withdrawal of the excess cash collateral provided for the benefit of the collateral provider does not affect the collateral constituted in favor of the person that takes the collateral. However, this right would be devoid of meaning if the collateral taken on a guarantee on funds deposited in a bank account were considered to have acquired 'possession or control' of these funds even in cases where the account holder can dispose of them freely. 44 – It follows that the collateral taker of a guarantee, such as the one in question here, covering funds deposited in an ordinary bank account, cannot be considered to have acquired 'possession or control' of these funds, unless the collateral provider is prevented from disposing of them'." The Court has ruled that, in this case, control is not established, as the collateral provider is not prevented from disposing of the funds. This highlights one of the constitutive elements of control, so-called, "(i) the exclusive ability to change the control of the digital asset to another person (a 'change of control').". Under digital asset law, and in particular when drafting the rules under French law applicable to digital asset service providers that provide the service custody of digital assets on behalf of third parties, the notion of "control" has not been used, but rather that of "control over the means of access to digital assets ". In contrast, the MiCA Project, in its latest version dated October 5, 2022, refers to the concept of control provided by the holder over the asset or by the provider when such control would have been entrusted to it by the previously mentioned holder . In addition, Section 67.3 provides that "Crypto-asset service providers that are authorised for the custody and administration of crypto-assets on behalf of third parties shall establish a custody policy with internal rules and procedures to ensure the safekeeping or the control of such crypto-assets, or the means of access to the crypto-assets, such as cryptographic keys". However, the notion of "control" is not defined. The Project indicates that the concept of control would be intended (i) to protect the good faith purchaser of a digital asset (without control being the exclusive element to provide such protection), and (ii) to ensure the opposability of a security right, and to organize the priority of its beneficiaries in the ranking of creditors . French law recognizes these effects for the possession of tangible assets. Furthermore, the European Directive 2002/47 of the European Parliament and of the Council of 6 June 2002 on financial collateral agreements ("Collateral Directive") provides that control given to the beneficiary (or a person designated by the beneficiary) is a technique for creating and enforcing a financial collateral without transferring ownership of the assets (securities, claims for payment, precious metals, ...). Article 2(2) of this Directive specifies that control is acquired, in particular, through delivery, transfer, holding or recording of the encumbered asset, provided that the assets concerned are clearly identified as being part of the collateral (Article 1(5) of the Collateral Directive). In principle, integrating the notion of control applied to digital assets into the French legal system would not pose any insurmountable difficulties. As for the concept, while the formulation of Principle 6 may not have the concision of French legal definitions, it is not substantively foreign to our recent legal tradition. Principle 6 indeed relates to the dual aspect of control. The "positive" aspect designates the ability to use an asset (e.g. by exercising a voting right attached to it), or to dispose of it (e.g. by initiating its transfer on the blockchain); while the "negative" aspect refers to the power to restrain such use. As for settling disputes between successive acquirers of the same asset, the first sense appears to be more appropriate, but when it comes to ensuring the enforceability of a collateral, the second sense is more relevant.

This duality is already to some extent present in the classical notion of "possession" in French law, mentioned in two different articles of the French Civil Code (Article 2276 of the French Civil Code does not have the same content as Article 2337, without posing any major difficulty). In a blockchain, possession could result from an electronic message signed with the private key allowing for the transfer of the asset. A person may have the power to block the asset without being able to sign a message in this way (e.g. in a security right constituted in the hands of a trustee, whose object can only be unblocked with the keys of two of the parties involved). In any case, the concept of possession (and by assimilation, of control) necessarily implies exclusivity: only one and the same person has possession to the exclusion of any other party. This effect naturally manifests itself when possession relates to a tangible asset. This idea of exclusivity is more difficult to grasp with regard to incorporeal movable property that is not recorded in an official register (for example, certain intellectual property rights) or by an entry in a single account, as is the case with financial instruments (the "relevant" account, according to the Collateral Directive). As for the function, French law gives possession (or an equivalent for incorporeal property) the same effects as those provided for in the Project. However, would it be imperative to include the notion of control within the framework of patrimonial law, as applicable to digital assets? French law has preferred referring to (i) more functional and practical terms such as "control", or (ii) a circumstantial substitution of the notion of possession by an analogous situation (Article L. 211-16 of the French Monetary and Financial Code) resulting from an entry in the relevant account, as mentioned above. The HCJP considers that, while the notion of control is not a traditional notion of French law for qualifying ownership, with regard to fungible incorporeal assets such as digital assets (as restricted according to the above commentary), this notion of control effectively captures the specificity of these digital assets. Indeed, in the context of these assets, unlike in the case of financial instruments, there is no hierarchy in the entries made in the nodes of the blockchain, so that it is not possible to identify the equivalent of a relevant account to make one entry prevail over another. A case-by-case analysis of situations where the notion of possession would be used if the digital asset were a tangible asset would be preferable in order to adapt it. Another solution would be to substitute a functionally comparable concept, rather than inserting the notion of control. This seems all the more necessary since we are dealing here with concepts of property law that go far beyond financial law alone. This study is at least necessary to ensure a regime applicable to the owner of digital assets acquired in good faith, failing the application of articles 2276 of the French Civil Code or L. 211-16 of the French Monetary and Financial Code. In conclusion, and subject to more precise later examinations, the HCJP considers that the notion of control is not a traditional notion of French law. Although not opposed to the notion of control, a deeper analysis under civil law would be needed.

181. Comment 16

Finance, Competitiveness & Innovation Global Practice
World Bank Group
See in General Comments our interpretation of this definition vis-à-vis the definition of Digital Asset.

182. Comment 17

Cassandre Vassilopoulos & Mark Kepeneghian
Kriptown
"(a) What if there is a contradiction? (ii) ""substantially all"" is too imprecise, what is the point of specifying this? Why put (1)(a)(i) before (1)(a)(ii)? It should be the other way around because it makes more sense to get before blocking. In French law, the general law of property applies to all intangible things as soon as possessory control is possible. Possession and control are the de facto power exercised over the intangible thing to keep it secret or controlled. In French law, possession is the legal recognition of a de facto situation which ensures that the possessor has control over an object. The concepts in these principles are far removed from those of civil law. "

183. Comment 18

Office for Financial Market Innovation and Digitalisation
Principality of Liechtenstein

The definition of control as the functional equivalent of possession of movables is welcomed, as well as the relaxation of the exclusivity requirements imposed by Principle 6(1)(b). This is important to ensure the feasibility of multi-signature arrangements.

184. Comment 19

Silvana Fortich, Anabel Riaño (Docentes investigadoras Departamento de Derecho Civil); Adriana Castro (Directora Departamento de Derecho de los Negocios); Valeria Facio-Lince, Juan Alejandro Solano y Juan Sebastián Ortiz, monitores Departamento de Derecho de los Negocios
Universidad Externado de Colombia
"Regarding the location of this principle within the document, as indicated in the comments to principle 2 (definitions), we consider it should be found as a numeral of principle #2 and Section III may be used for supplementary issues. Overall, the principle is well explained from a technical point of view. The relationship made with respect to possession makes it possible to identify the determining elements for considering that a person is in control of a digital asset. "

185. Comment 20

Bernadette Harkin
Ashurst LLP
Control and changes of control of digital assets We broadly agree with the proposed definition of "control" for digital assets and, in particular, the commentary likening the concept to that of "possession". We also note, and appreciate, that UNIDROIT seems to be seeking to avoid defining "control" by reference to the technological aspects of a digital asset. As a result, the definition seems adaptable to variations and evolutions in the technology ecosystem in which digital assets may exist, which we consider important. Our further specific comments on the definition are as follows. Principle 6(1)(a) We are unsure that a digital asset, protocol and/or system can necessarily confer an (exclusive) ability to obtain or exclude others from obtaining the benefit from that digital asset. This raises the question of, firstly, what the benefit of the digital asset is and, secondly, whether exploitation of that benefit is conferred solely via the digital asset, protocol and/or system or whether exploitation of the benefit is, in certain circumstances, conferred (partly or fully) by mechanisms which are external to the digital asset, protocol and/or system. Our uncertainty may be illustrated by the following examples: 1. For a digital asset like bitcoin, the benefit is its market value and purchasing power. This benefit is fully unified with and indivisible from the asset itself and entitlement to this benefit is managed through the Bitcoin network protocol. To have control of a bitcoin is to be able to prevent others from spending that bitcoin, to be able to spend it oneself and to transfer the ability to spend (and prevent spending by others of) that bitcoin. Bitcoin is therefore an example of a digital asset which neatly fits within the definition of control included in Principle 6(1)(a). 2. However, for a digital asset that is a representation of an underlying security, we question whether the definition of control included in Principle 6(1)(a) would be applicable. In this scenario, the benefit is likely convenience—the securityholder has a digital representation that may be used for purposes such as evidence of ownership or to transact digitally. However, the digital asset is not the security and, therefore, the benefits of the security are separate (and/or separate-able) from the benefits of the digital asset. So, in the case of an equity security the benefits of ownership of the security are conferred by an underlying legal instrument and/or corporate law. Depending on what the relevant legal instrument and law says, the digital representation of an equity security might, for example, act as a proxy for ownership evidence but may not be the definitive record of ownership. In this scenario, having control of the digital representation of the underlying security would not preclude others from claiming ownership of the security or from transacting in that security, meaning that the definition of control included in Principle 6(1)(a) would not capture such arrangements. 3. In the middle of these two extremes might be a digital asset that constitutes a security. The benefits of a digital security asset are the economic and other rights as may be conferred by an underlying legal instrument and/or relevant law. It would be expected that these rights are also codified in the digital asset itself and/or the protocol and system in which the digital security asset

exists. However, there may be some benefits which are not so codified (such as the divisibility of beneficial and legal ownership) and, therefore, notwithstanding a person has control of the digital security asset, control may not confer all of the benefits of the security. Therefore, the definition of control included in Principle 6(1)(a) would not capture this example.

We appreciate the above point is nuanced, but feel this is a potential gap in the definition. Our recommendation would be to reflect on the application of the definition against a broad range of use cases (beyond cryptocurrencies), especially to better support the scalability of the definition over time.
However, we would like to emphasise that we do believe that the digital asset, protocol and/or the system within which the digital asset exists and is usable should establish technological mechanisms to help protect and enforce the right of control.
Principle 6(1)(b)
We note that Principle 6 and the commentary to Principle 6 do not elaborate on what it means to be identifiable for purposes of demonstrating control. Given that some protocols and systems support anonymous or pseudonymous participation, we believe the definition would benefit from elaboration and/or commentary on this point (or, as a minimum, that Principle 6(1)(b) should cross-refer to Principle 7(2)).
Principle 6(2)
We believe the definition of "change of control" would benefit from simplification along the lines of the following: A change of control occurs when control of the digital asset becomes subject to the control of a different person. Some consideration of the relevance of the distinguishment between direct and indirect control may also be appropriate.
While we understand why UNIDROIT has included references to replacement, modification and resulting digital assets, as these are illustrative and non-exhaustive we feel that their inclusion in the definition is, firstly, unnecessary, and secondly, has the potential to confuse and conflate the concept of "change of control" with the technological functioning of the digital asset and the relevant protocol or system. The examples would be better elaborated on via the commentary to Principle 6 rather than being part of the definition of "change of control".
However, we do agree with and appreciate the commentary that a change of control can be distinguished from a transfer of rights.

Principle 6(3)
We find this clarification to the definition to be helpful and necessary, to ensure that the intention of the relevant parties/participants is upheld.

186. Comment 21

Pedro Mendoza Montano
UNIDROIT´s Correspondent in Guatemala
In line with what was indicated above in the Introduction section, it is considered relevant that in paragraph 1 (b), instead of establishing means, in an exhaustive manner, of registering a person's ownership rights over a particular digital asset, it might be beneficial to require only an "Electronic Record" in order not to limit the scope of application of the principles.

187. Comment 22

Patricia Cochoni
Parfin Pagamentos Ltda.
It represents a challenge for custodians to determine control of a digital asset, particularly in the case of digital assets securities, as the mechanisms used within traditional market are different than the ones in the cryptoasset space. Traditional securities transactions are generally processed and settled through clearing agencies, depositories etc, which makes it easier to confirm who is in fact in control of those assets. On the other hand, the clearance and settlement of digital asset securities generally rely on few or no intermediaries. In this sense it is challenging to extend this notion of control in the traditional custody relationship into the digital asset space. As an example, in the United States, SEC Customer Protection Rules , requires broker-dealers to obtain and maintain the physical possession or control of fully paid and excess margin customer securities. "Possession" of securities means the securities are physically located at the broker-dealers; "Control" of securities means the securities are located at one of the

approved control locations (which include clearing corporation or depositary). In this scenario control locations are always rendered by licensed/registered parties, which is not replicable to the digital asset space due to the lack of intermediaries in the chain.

Additionally, it can be assumed across industry that control over a private key would be synonymous with control for the purposes of a Custody relationship, which is not always the case. For example, depending on the type of technological arrangement chosen by the client to store private keys it can be difficult to establish exclusive and unquestionable control.

As an illustration, if a client uses MPC (multi-party computation) there are multiple shards to create a protocol that would allow for signature of a transaction. It could be a design choice of some providers in relation to the MPC technology, that the client will keep one of the shards and the digital asset service providers will keep the remaining ones. It could also be that a third part will keep one of those shards as a backup of disaster & recovery. In these instances, the client would be considered as having "control" in line with Principle 6 (1) but could be challenging to easily verify this assertion (as digital asset service provider, client and third part responsible for backup will all have a shard of the private key that will combined allow control of the assets).

Therefore, relying heavily on control without a proper framework to determine unquestionably who has it could expose digital assets service providers (and especially custodians) to increased risk of fraud or theft, as well as situations where the private keys might have been lost of replaced. It is paramount for the industry to establish procedures to verify who is the unquestionable controller of those assets.

This consideration was also shared on the joint staff statement on broker-dealer Custody of Digital Asset Securities : If, for example, the broker-dealer holds a private key, it may be able to transfer such securities reflected on the blockchain or distributed ledger. However, the fact that a broker-dealer (or its third party custodian) maintains the private key may not be sufficient evidence by itself that the broker-dealer has exclusive control of the digital asset security (e.g., it may not be able to demonstrate that no other party has a copy of the private key and could transfer the digital asset security without the broker-dealer's consent).

Finally, we would like to highlight that there are industry best practices that could be imposed on custodians and sub-custodians that could mitigate the risks of safekeeping of private keys. To illustrate that, we would like to point out the considerations raised on the white paper on digital asset custody published by KPMG, Cracking Crypto Custody (2020) which makes recommendations to digital asset custodians: (1) attestation through System and Organization Controls (SOC) examinations; (2) integration of industry-standard controls and processes for cybersecurity and cryptographic key management - including NIST 800-53 and NIST 800-57; and (3) comprehensive compliance with financial services (including AML standards).

188. Comment 23

Lukas Wagner / Melih Esmer

NYALA Digital Asset AG/ EBS Law School

In our view, the 'control' of a digital asset cannot assume the role of a functional equivalent to that of 'possession' of movables (as argued in para 1 of the commentary). While possession relates to a physical good that can be observably controlled, and from which others can observably be excluded, the degree to which the control of digital assets is exclusive is not observable by the market, and will depend upon the concrete set-up (see in particular our comments in relation to burn functions and different variations of off-chain assets under Principle 2, II., above) as well as the level of security applied to the underlying private keys. We therefore would not consider blockchain systems currently in use to reliably establish the abilities set out in Principle 6(1)(a) and their exclusivity (as required by para 9 of the commentary). In that context, we also would not agree that a private key to a digital asset being compromised can be compared to the improper taking of physical possession of a tangible object. While the former cannot be observed by the market (or, in most cases, even the original holder themselves), the latter is normally clearly visible, or at least clear due to market conventions, and normally ends the possession/control of the holder, whereas both actors might be in control in parallel in relation to digital assets. The assumption that a hack would likely also result in a prompt change of control by the wrongdoer (para 9 of the commentary) appears to be disproven by recent major exploits:
1. In the case of the Iota seed generator scam that was recently tried before the Oxford Crown Court, the defendant had set up a fake website distributing pre-generated private keys in August of 2017,

while the wallets were only emptied in January of 2018 (see https://iotaseed.io/iota-seed-generator-scam/).
2. The access to the systems of Luke Dashjr, one of the Bitcoin Core developers, which supposedly led to the misappropriation of around 200 BTC, also spanned over more than a month, with the initial access to the server happening on 17 November 2022, and the transfer of the bitcoins following on 1 January 2023, when Luke Dashjr and his family were reportedly coping with a covid infection (see https://lordx64.medium.com/multiple-linux-backdoors-discovered-targeting-bitcoin-core-developer-technical-analysis-793f8491f561).
3. Similarly, it appears that there was also some time between the private keys being leaked from Slope Wallet and the respective wallets being drained in the case of the attack on certain Solana wallets in August 2022 (see https://www.avanawallet.com/blog/overview-of-the-slope-solana-wallet-hack-in-august-2022-a6071bf7).
Such delay between obtaining control and transferring the assets might also be rational for an attacker in order to maximise the balance being drained from wallets that fluctuate in the amount of their holdings.
Finally, the characterisation of multi-sig arrangements or other forms of joint control of a digital asset might not always be as straightforward as in Illustration 1. Instead of using multiple signatures through different private keys, a common approach in the industry is also to 'shard', ie split, a single private key into multiple pieces (including backup copies) such that a certain subset of these pieces can be recombined to recover one key used to control a digital asset. While such approach works across multiple protocols as it is independent of the respective multi-sig standard of the protocol, it has also certain drawbacks, in particular the lack of a possibility to invalidate certain shards (as opposed to the replacement of individual keys in a multi-sig arrangement), or the lack of auditability in relation to the shards used (see https://docs.keys.casa/wealth-security-protocol/rejected-key-schemes/key-sharding-shamirs-secret-sharing). These properties also limit the observability of the arrangement on-chain, as ultimately only one single key (recovered from several shards) is used for the transaction. But even where a multi-sig arrangement is used, the entitlement to the digital assets amongst the different keys is not always clear-cut. One prominent and very recent example of this is the reappropriation of 120k ETH transferred during the 2022 Wormhole exploit through a vulnerability in Oasis' multi-sig wallet, where Oasis used a vulnerability in its own multi-sig set-up to reclaim these funds (see https://blockworks.co/news/jump-crypto-wormhole-hack-recovery).
In our view, these concerns reiterate the question whether there can be a functional equivalent to proprietary concepts in relation to digital assets which can be burned by the issuer or secretly controlled by an attacker in parallel (as opposed to direct and absolute control over a tangible object), or whether the Principles should at least limit themselves to an even more functional approach that does not require every jurisdiction to make digital assets subject to proprietary rights.

Principle 7: Identification of a person in control of a digital asset

189. Comment 1

Spyridon V. Bazinas
Kozolchyk National Law Center
Principle 7 deals with a procedural matter (identification in a proceeding of a person in control and rebuttable presumption on that matter). So, it should be included in Principle 18, which should exclude this matter from the procedural matters referred to other law.

190. Comment 2

Martha Angélica Alvarez Rendón
Mexican Ministry of Foreign Affairs
The seventh principle specifies how to identify the individual who exerts control over a digital asset. We suggest adding, here or possibly in principle 19, that in the event of the insolvency of the person exercising control over the digital asset, such control will be exercised by the insolvency representative for the duration of the insolvency proceedings and will be assigned at the conclusion of said procedure.

191. Comment 3

Clément Fontaine
Aix-Marseille University

"It should be added a principle recognizing that digital assets can be subject of possession. The principle of functional equivalence allow the lawyer to make a comparison between physical possession and digital asset possession. Except the fact that digital asset does not involve physical situs dimension, it involve a factual power which can constitue the corpus of possession. Then, principle could take into account digital proof of intention to constitute the animus such as exercising the abilities given by the digital asset. Once the possession is acted it helps to recognize property right to someone. In France, article 2276 consider possession is equivalent to ownership title regarding all the goods which are not real estate."

192. Comment 4

David Morán Bovio
University of Cádiz (Spain) / Unidroit correspondent
7(1)(a) and 7(1)(b) cross references could be alleviated by installing in them the 6(1)(a) and 6(1)(b) substance

193. Comment 5

Nicole Purin
Deputy General Counsel, OKX ME
This Principle is well construed/links to Principle 6 and aligns to the technology.

194. Comment 6

Michele Graziadei and Marina Timoteo
University of Torino
What is the legal position of the person who is in control, apart from the fact that such person has control ? Does this person enjoy proprietary rights ? this is not clarifuied by the draft.

195. Comment 7

Centre for Commercial Law at the University of Aberdeen
University of Aberdeen
We, in principle, agree with this Principle. However, we are not sure about the use the word of 'reasonable' in the context of 7(2). We suggest that that word can either be deleted from the Principle, which would simply mean that a non-exhaustive list of possible means of identification is provided, or its inclusion and significance can be explained in the Commentary. If there is a desire to include a reference to "reasonable means" in the Principle itself, it would be better to include it at the end of Principle 8(2), so that a list of potential means of identification is given, followed by e.g. "or other reasonable means".

196. Comment 8

Cassandre Vassilopoulos & Mark Kepeneghian
Kriptown
"The references to the other Principles are unclear: the concepts should be repeated so that there are fewer problems of erroneous interpretation."

197. Comment 9

Silvana Fortich, Anabel Riaño (Docentes investigadoras Departamento de Derecho Civil); Adriana Castro (Directora Departamento de Derecho de los Negocios); Valeria Facio-Lince, Juan Alejandro Solano y Juan Sebastián Ortiz, monitores Departamento de Derecho de los Negocios
Universidad Externado de Colombia
"The Draft Principles do not consider the reality of domain disputes over digital assets and in relation to the identification, ignores the existence of tokenization of digital assets. This may raise a problem about the sufficiency of the identification of the person who is in ""control"" of a digital asset.

Identification (as proposed in Principle 6) does not really seem to be enough to resolve real rights disputes over digital assets. Figures such as tokenization can be presented, but also because sufficient national identification of the person in ""control"" of the digital asset can generate difficulties in relation to transnational domain disputes of digital assets and this lack of uniformity may contribute to the international money laundering schemes. "

198. Comment 10

Pedro Mendoza Montano
UNIDROIT´s Correspondent in Guatemala
The definitions of "control" are limited to speaking of benefits. Exclusive" skills or powers or the person who substantially has these powers or skills. However, these concepts of control may not be appropriate for all modes of control of digital assets that are developing in the industry. Particularly when the "nodes", omnibus accounts, or hosting platforms on which the assets are dependent. In many cases, they may also exercise control over the digital asset. It might be appropriate to exclude that type of control and clarify that the control referred to in this principle is what this idea of "possession" of the digital asset is intended to be. This is for the purpose of properly differentiating the concepts of "custody" and "control".

199. Comment 11

Lukas Wagner / Melih Esmer
NYALA Digital Asset AG/ EBS Law School
It appears circular to presume the exclusivity of the abilities specified in Principle 6(1)(a)(i) and (iii) when they are demonstrated, as the exclusivity seems to be a constitutive element of the abilities themselves already. Furthermore, Principle 7(2) which does not require a clear link to an identity for the identification under Principle 6(1)(b), seems to enable changes of control of on-chain digital assets off-chain, eg by handing over a paper or hardware wallet (which seems to be the example of Illustration 3 to Principle 6). This would again hinder the public observability of changes of control, and is in contrast to dedicated digital securities regimes such as the German eWpG, which requires an (observable) on-chain registration for a transfer to be effective (see Sec 24 et seq eWpG – 'Verfügungstransparenz'). Finally, as regards the relevance of these provisions, we would rather anticipate issues raised by a previous (supposedly) rightful owner after a chain of several transactions, as opposed to a 'wrongful' holder such as a hacker. In the case of a previous 'rightful' owner, such litigation could lead to considerable uncertainty, which would limit the marketability of the digital asset, thereby limiting its value for all participants. Such litigation might prove particularly challenging in more complex multi-sig (and similar) arrangements as discussed above under Principle 6.

Principle 8: Innocent acquisition

200. Comment 1

Kelvin F.K. Low
National University of Singapore
The implications of an innocent acquisition rule must be made clear to all States so that they legislate with full appreciation of the effect of such a rule. Innocent acquisition rules facilitate transactions by enhancing dynamic security at the expense of static security. This means that they necessarily facilitate theft by making it easier to traffic in stolen property since a purchaser who feels protected by such a rule would consider it less necessary to trace the origins of the property being purchased. Such a trade off may be desirable in relation to certain types of property (eg securities) but the balance will not be the same for digital assets recorded on immutable distributed ledgers. In most cases where a similar rule applies, to the extent that such intangible property is recorded in some form of ledger, such ledger entries may be temporarily frozen and/or are rectifiable, which protects the owner of such property from the consequences of innocent acquisition rule by preventing onward transfer by a thief. For most digital assets recorded on immutable distributed ledgers, this is not possible so that the innocent acquisition rule, while perhaps not intended as such, effectively becomes

a charter for thieves, especially as most such systems operate on a pseudonymous basis and it is costly and time-consuming to identify the persons behind pseudonymous addresses.

See further https://asia.nikkei.com/Opinion/Bitcoin-users-should-not-overlook-cryptocurrency-s-fundamental-flaw

201. Comment 2

Eric de Romance

Principle 2 and 3 which states that the innocent acquirer takes the digital asset free of conflicting proprietary rights. This comment goes along with my previous one. The state of being free of conflicting proprietary rights needs to be demonstrated by the seller before the transfer is actually executed. This is key for the protection of the initial investors.
In that same logic, Principle 4 does not work. If the seller does not have the proprietary right. It needs to be deal with for the custodian who will be in that case but I think it is preferable to inverse the logic for the protection of the investors: if the seller is a wrongdoer or not holding the proprietary rights, the transfer cannot be executed and is invalid in case of execution. In case of the custodian, this needs to be demonstrated through the mandate that the custodian must have signed with the investor allowing it to sell the digital assets.
In that same logic, principle 6 b shoudl be complemented by a (c) the acquisition of the proprietary rights on the digital asset has not being fully demonstratred.

202. Comment 3

Spyridon V. Bazinas
Kozolchyk National Law Center

Principle 8 deals with a special case where there is a transfer of a digital asset. So, it should remain in these section. But the section should be entitled "Transfers" and Principle 8 should appear after Principle 9, which deals with the general issue of the rights of transferees.

203. Comment 4

David Gibbs-Kneller
University of East Anglia

The principle should be deleted and left to states to decide. The justification for it in commentary point 2 takes a one-side approach to the matter.

For example, it sees it as a negative that without an innocent acquisition rule a prudent buyer will factor in the costs of the risk of conflicting proprietary claims and reduce the cost they are willing to pay accordingly. Such a risk is one most transferees would take for the benefit of reduced costs. It also benefits debtors because creditors can lend at a lower rate by factoring in the increased certainty that their security is less at risk. There is also a developed insurance market that makes it easier for the transferee to account for the risk without expending significant costs in trying to ascertain whether the asset has conflicting proprietary claims.

Also, the innocent acquisition rule might be certain but it is not as certain as the alternative that protects the original owner, since it avoids factual questions about good faith and notice.

The principle also disregards the fundamental need to protect property rights in favour of a broad appeal to 'market fluidity'. While ascertaining who the owner of a digital asset is may be difficult, it does not appear to be a rational reason for distinguishing digital assets from other goods or things. Many markets for things can be difficult to ascertain any conflicting proprietary claims. Yet, purchasers continue to purchase with confidence. The emphasis should be on the market to create structures and systems that give transferees confidence that their purchase will transfer to them the necessary proprietary rights. A system that gives transferees the protection for free may encourage specific wrongs by throwing the burden on the original owner to prove, factually, the acquirer did not act in good faith without notice.

I really do not see the market being greatly harmed in any way by leaving the question open to states as to whether they prefer an innocent acquisition rule or original owner rule.

204. Comment 5

Stéphanie Saint Pé
France Post Marché
This notion is to be dealt with under national law -> good faith acquisition and enforceability of proprietary rights.

205. Comment 6

Clément Fontaine
Aix-Marseille University
"Since it is possible to be the owner of a digital asset without being a transferee, Principle 8 should add the hypothesis of innocent possession. An innocent possessor would be : a person who control the digital asset (corpus) ; a person willing to be the owner of the digital asset (animus) and; - [a State should specify requirements equivalent to those found in its relevant good faith acquisition, finality, and take-free rules.]"

206. Comment 7

David Morán Bovio
University of Cádiz (Spain) / Unidroit correspondent
To increase good faith presence?

207. Comment 8

Nicole Purin
Deputy General Counsel, OKX ME
Principle 8 is comprehensive and also aligned to the common law Bone Fide's purchaser. No comments on 6(a). In relation to 6(b) it might be beneficial to clarify what is intended by "no general duty of inquiry or investigation and perhaps reference to the relevant authorities undergoing such investigations.

208. Comment 9

Japan Virtual and Crypto assets Exchange Association
Japan Virtual and Crypto assets Exchange Association
"With respect to digital assets such as crypto assets, various tokens (NFT, etc.), and stablecoins, the treatment of these assets under private law is not necessarily clear at present, and in practice, transactions of digital assets are being conducted by each business entity according to its thoughts and ideas. In this regard, if a basic legal framework regarding the treatment of digital assets under private law is presented, it will provide a basis for consideration by each business entity, which is expected to enhance the stability of legal considerations in practice. Furthermore, from the viewpoint of execution of transactions for digital assets, the business community welcomes (1) the fact that digital assets are subject to ownership and other property rights, and (2) the fact that the security of transactions will be improved by the establishment of a system of bona fide acquisition."

209. Comment 10

Michele Graziadei and Marina Timoteo
University of Torino
"The rule "No rights based on a proprietary claim relating to a digital asset can be successfully asserted against an innocent acquirer of that digital asset." conflicts with the Unidroit Convention on the rules applicable to the return of stolen cultural property. Therefore we suggest to carve an exception for that. "

210. Comment 11

Centre for Commercial Law at the University of Aberdeen
University of Aberdeen
"We, in principle, agree with this Principle. However, we wonder whether the flexibility provided to states in 8(1)(b) can hinder the level of uniformity on this matter among states. We also wonder whether there is a real need for 8(7) given Principles 3(3) and 9. Confusingly, Principle 9 is expressly subject to Principle 8, which includes 8(7) and its statement that if a transferee is not an innocent acquirer other law applies to determine the rights and liabilities of the transferee. Presumably Principle 9 is not subject to the application of other law in the way indicated by Principle 8(7)."

211. Comment 12

Finance, Competitiveness & Innovation Global Practice
World Bank Group
In par. 6(d) of Principle 8, we would like to highlight that several crypto-providers (such as Exchanges) and even payment services providers that also trade or offer crypto services often offer crypto-assets / Digital Assets to clients, prospective clients, partners, etc. While normally such offers are of low value and even native tokens, we do not see why such would not be considered for purposes of innocent acquisition.

212. Comment 13

Cassandre Vassilopoulos & Mark Kepeneghian
Kriptown
"To be linked with Principle 6 (1) (b)."

213. Comment 14

Office for Financial Market Innovation and Digitalisation
Principality of Liechtenstein
Rules for the innocent acquisition of digital assets are essential for legal clarity, which is why we welcome the clarification in Principle 8.

214. Comment 15

Silvana Fortich, Anabel Riaño (Docentes investigadoras Departamento de Derecho Civil); Adriana Castro (Directora Departamento de Derecho de los Negocios); Valeria Facio-Lince, Juan Alejandro Solano y Juan Sebastián Ortiz, monitores Departamento de Derecho de los Negocios
Universidad Externado de Colombia
"When establishing that the acquirer is in good faith unless he ""knows"" or ""must know"" the existence of a better right holder over the digital asset he is acquiring, it does not seem so clear whether it is an objective or subjective criteria. Nor is it clear why the gratuitously acquirer is not considered a bona fide acquirer. It is one thing to say that, in these cases, because of the gratuitous nature of the transfer, the rights of the acquirer are not made to prevail free of charge, another thing, is to say that by the mere fact of acquiring free of charge is bad faith. This principle could arise various issues in the financial and commercial sector. If, as provided in paragraph (4), a bona fide acquirer of a digital asset may acquire property rights against it even if the transferor is acting wrongfully and has no ownership rights over the asset. The real objective of the duty of due-diligence would become null, since there is no reliable transnational registration of digital assets to - diligently - investigate the owner of good rights and levies that could have the asset (for all types of digital assets). It would be an impossible task, and no one can be forced to do the impossible. "

215. Comment 16

Pedro Mendoza Montano
UNIDROIT´s Correspondent in Guatemala
Principle 8 regulates who is considered to be a bona fide holder or owner of digital assets and the effect of such classification. Regarding the first point, i.e. who are bona fide owners or holders, there is in my opinion a contradiction with principle number six, which establishes as a requirement for an asset to be considered as a "digital asset" that it must have the name or identification of its owner registered in some electronic way. To be a bona fide possessor or owner requires not knowing or not having been able to know that the digital property being acquired was already owned by someone else. Such knowledge should never be avoidable since article six requires that all assets must have some record of who owns them. The only exception to this would be if the system or protocol to which the digital asset is registered is not publicly accessible. The second point concerns the effects of being a bona fide owner or holder of a digital asset. It is on this point where I consider that there is a major clash with the continental law system. Several countries, Latin American countries, among which I include Guatemala, have the use of the reivindicatory action which allows the recovery of the property owned by a person regardless of who has such property. The principles establish that the new owner or bona fide possessor cannot be affected in his ownership of the property. Clearly there would be a different treatment with respect to these bona fide possessors of digital assets which I do not consider as reconcilable.

216. Comment 17

Lukas Wagner / Melih Esmer
NYALA Digital Asset AG/ EBS Law School
With Principle 8, the Principles acknowledge the uncertainty created by the additional layer of legal attribution in relation to digital assets (as discussed above in our General Comments and under Principle 7), and attempt to mitigate the effects of this separation of the actual de facto attribution of the digital asset from its 'rightful' 'ownership' in order to restore a certain degree of marketability. In our view, this raises the question whether the whole legal construct of this additional layer as well as the connected legal uncertainty and potential litigation costs for the parties involved is justified, which would need to be substantiated through concrete examples which warrant such a framework. At the same time, we would like to reiterate that a previous holder whose digital assets have been misappropriated shall not be left unprotected. Rather, we consider non-proprietary remedies, such as restitutionary claims based on unjust enrichment and torts, to be sufficient (as also suggested by Lehmann, 'Who owns Bitcoin' (2019) 21 Minn. JL Sci & Tech 95, 123 et seq). We have not yet seen a case that could not be solved satisfactorily under these remedies.

Principle 9: Rights of transferee

217. Comment 1

David Gibbs-Kneller
University of East Anglia
Principle 9 is not needed. It is redundant. It has the rule and the exception mixed up. If, as commentary point 1 to principle 8 is correct, that digital assets are similar to negotiable things, then the general rule is that a person can transfer more than they have provided the transferee acts in good faith without notice. Only if they did not acquire the asset under those conditions will their proprietary claim be defeated. At best, principles 8 and 9 should be merged or only principle 8 retained (subject to my point that principle 8 should also be deleted). I do not see what a separate principle 9 adds to the overall scheme. If nemo dat is a familiar rule, then only principle 8 is needed to reflect it is subordinated to the innocent acquisition rule.

218. Comment 2

Julien Chaisse
City University of Hong Kong
My concern is Principle 9 may potentially limit the rights of transferees in certain circumstances. I believe this principle should be more specific and provide more concrete guidance on the rights and obligations of transferees in different scenarios, such as when the transfer of digital assets is made under duress or in violation of a legal prohibition.

219. Comment 3

Stéphanie Saint Pé
France Post Marché
Same as above. (This notion is to be dealt with under national law -> good faith acquisition and enforceability of proprietary rights.)

220. Comment 4

Nicole Purin
Deputy General Counsel, OKX ME
Principle 9 is a core principle a fundamental tenet of property law. It is clear and comprehensive.

221. Comment 5

Centre for Commercial Law at the University of Aberdeen
University of Aberdeen
"We, in principle, agree with this Principle. However, as we understand from para 3 of the Commentary, the party who acquires a digital asset from an innocent acquirer can get the benefit of innocent acquisition even though they are not innocent themself. We wonder about the reasoning for this and its appropriateness in policy terms. A different formulation could be helpful to address this policy concern, eg a person who acquires a digital asset from an innocent acquirer is merely presumed to be in good faith themselves. "

222. Comment 6

Cassandre Vassilopoulos & Mark Kepeneghian
Kriptown
Why talk about property rights when it is control that is highlighted? The concepts of property rights and control should be more closely linked, taking into account both common law and civil law.

223. Comment 7

Silvana Fortich, Anabel Riaño (Docentes investigadoras Departamento de Derecho Civil); Adriana Castro (Directora Departamento de Derecho de los Negocios); Valeria Facio-Lince, Juan Alejandro Solano y Juan Sebastián Ortiz, monitores Departamento de Derecho de los Negocios
Universidad Externado de Colombia
"We consider this proposal to be timely and adjusted to the basic principles regarding the transfer of domain rights. However, the provision provided in Principle 9(2) in accordance with the explanation on commentary paragraph 3 could be questionable to the extent that it would seem to move away from essence of the consolidation of the rights of an innocent acquirer. Here we would be facing an acquirer in bad faith who is protected by the law. We consider there are not enough arguments to support this approach. It might be desirable to establish whether the partial transfer of the property right would imply a dismemberment of the property right. Also, it might be of interest to consider the effect of transferring of other rights. Principle 9(2) should explain whether this partial transfer of the digital asset refers to the transfer of use and enjoyment by reserving ownership – bare title – or what rights could be partially derived from the domain right. "

224. Comment 8

Pedro Mendoza Montano
UNIDROIT´s Correspondent in Guatemala
While it is true that the Principle does not itself regulate the rights between the parties subject to a digital asset transfer, the Principle's paragraph may seem contradictory to the exclusion contained in Principle 3 (3). (d) therefore, it may be pertinent to establish a new title.

Principle 10: Custody

225. Comment 1

Stéphanie Saint Pé
France Post Marché
Principle 10 raises several issues. In this principle, notions of control and ability to maintain digital assets appear to be the most important elements/notions to determine whether or not there is a custody service. This is clearly inconsistent with the currently applicable notions as the concept of control and maintenance are not sole pre-requisites to be licensed as a custodian and to be authorised to provide services. How would that work? Would that imply that authorisation requirements are adjusted? In addition, it is worth highlighting that the notion of crypto-asset service provider (with all governance/applicable regime/…) is covered in MiCA regulation and in MiFID (as long as we deal with security tokens qualifying as financial instruments). Principle 10 makes total abstraction of the current regime. The notion of custody has to be maintained according to current criteria used under EU law. Creating an additional regime for digital assets (bearing in mind that certain digital assets under these principles are likely to fall in the scope of MiCA and others in the scope of MiFID) will create confusion, uncertainty and expose the industry to systemic risks. Adopting/following this principle will result in the creation of an additional regime -> harmonisation objective sought is likely to be annihilated.

226. Comment 2

Johan David Michels and Professor Christopher Millard
The Cloud Legal Project, Queen Mary University of London
UNIDROIT defines a custodian as "'a person who provides services to a client pursuant to a custody agreement". Under Principle 10(3), an agreement for services is a custody agreement if: a) "the service is provided in the ordinary course of the service provider's business; b) the service provider is obliged to obtain (if that is not yet the case) and to maintain the digital asset for the client; and c) the client does not have the exclusive ability to change the control of the digital asset […]". A service provider maintains a digital asset if it "controls the digital asset", either directly or by engaging the services of a sub-custodian. As noted above, control is defined as the exclusive ability to "obtain substantially all the benefit from the digital asset"; to "prevent others from obtaining" that benefit; and, to "transfer" these abilities "to another person". Control thus appears twice in this definition. First, under Principle 10(3)(b): to maintain the asset, the service provider must control it. Second, under Principle 10(3)(c): the customer cannot have the exclusive ability to change control of the asset. This raises a question as to what level of control the provider and customer must have in order for the service to qualify as a custody service. Logically, if the service provider controls the asset under 10(3)(b), then, by definition, the customer cannot have the exclusive ability to change control under 10(3)(c). To illustrate the concept of custody services, UNIDROIT further discusses three different types of crypto-currency services. 1. In Type 1, the customer does not share their private key with the service provider. As a result, the provider cannot transfer the customer's tokens. Examples include self-custody wallet software and non-custodial wallets. This is not a custody service, because the provider cannot control the customer's assets. Although the customer is "exposed to the risk of the wallet malfunctioning", the

relationship between customer and provider is "purely contractual" and so "governed by the terms of the agreement between them".
2. In Type 2, the customer shares their private key with the service provider for safeguarding. The customer retains control of the asset. The provider might also be able to access the customer's private key and thereby "take control of the client's digital assets". However, UNIDROIT observes that "this is not the purpose" of the service, and the provider will typically "be prohibited from using the client's private keys" for its own purposes. This is not a custody service.
3. In contrast, in Type 3, the customer transfers tokens to the provider's address. As a result, the provider has the relevant private key and so controls the tokens. Examples include a hosted or custodial wallet or a trading account on a trading platform. This is a custody arrangement.

In our view, the difficulty lies in distinguishing between Types 2 and 3. One difference appears to be that in a Type 2 service, the provider can change control of the asset, but should not as part of the service. In contrast, in Type 3, the provider both can and should. A second difference might be that in a Type 2 service, both provider and customer can change control of the asset. In Type 3, only the provider can change control. Yet this might be complicated in practice. For example, consider a Type 3 service, meaning the customer has transferred a crypto-token to an address managed by the provider, who holds the relevant private key. The customer can issue instructions to the service provider to transfer the asset to other addresses, with which the custodian is duty-bound to comply under Principle 11. This gives the customer a level of control over the token. Nonetheless, you might say that the customer still cannot control the asset directly, only by instructing the service provider. Yet suppose the provider operates an automatic system for processing customer instructions. The customer can issue trading instructions through a software or web-based user interface. Such self-service, automated instructions would give the customer a more direct level of control over the assets. Yet the service would presumably still qualify as a custody service. Given these complications, we recommend that UNIDROIT clarifies this question of control in relation to custody services.

Finally, we tried to apply these criteria to services for types of digital assets other than crypto-currencies. For example, a cloud customer might upload a digital file to the servers of a cloud storage service provider. In that case, both the customer and the provider share a level of control over the digital file (as discussed above in Section 2: The case for property rights in digital files). As with a Type 2 service described above, the cloud provider can but should not change control of the digital file. Further, both the provider and the customer can change control of the digital file. This suggests that a cloud service should not be considered a custody service. We recommend that UNIDROIT clarifies how the concept of custody services applies to other types of digital assets.

- Recommendation: We recommend that UNIDROIT clarifies (i) the levels of customer and provider control required for custody services and (ii) how the concept of custody service applies to other types of digital assets.

227. Comment 3

David Morán Bovio
University of Cádiz (Spain) / Unidroit correspondent
We are not within the area of public law of plattforms for stock exchange or securities?

228. Comment 4

Gilberto Martins de Almeida and Ian Velásquez
Instituto de Direito e Tecnologia (IDTEC)
(1) In these Principles: (a) 'custodian' means a person who provides services to a client pursuant to a custody agreement as defined in paragraphs (3) and (4), and includes a subcustodian, in which case 'client' refers to the custodian who is the client of the subcustodian; […] (3) Subject to paragraph (4), an agreement for services to a client in relation to a digital asset is a custody agreement if: (a) the service is provided in the ordinary course of the service provider's business; (b) the service provider is obliged to obtain (if this is not yet the case) and to maintain the digital asset for the client; and (c) the client does not have the exclusive ability to change the control of the digital asset within the meaning of Principle 6(1)(a)(iii).

(4) An agreement to which paragraphs (3)(a), (3)(b) and (3)(c) apply is not a custody agreement if it is clear from the agreement that the digital asset is part of the service provider's insolvency estate.

Suggestion:
To make the following modifications:
(a) 'custodian' means a person or an organization in charge of providing services to one or more clients pursuant to a custody agreement as defined in paragraphs (3) and (4), and may include a sub-custodian, in which case 'client' refers to the custodian who is the client of the sub-custodian;
(3) Subject to paragraph (4), an agreement for services in relation to a digital asset is a custody agreement if:
(a) the service is provided in the ordinary course of the custodian or of the sub-custodian´s business;
(b) the service provider is obliged to obtain (if this is not yet the case) and to keep the digital asset for the client(s); and

Commentary:

The Principles might benefit from a clarification, most likely in the Commentary, that the definition of "custodian" also encompasses other kinds of players and agreements that are not exclusively "custodians" or "custody agreements" stricto sensu, such as escrow agents and escrow agreements, which are increasingly relevant in the digital economy, inasmuch as trust services are concerned.

Although Principle 2 (7) says that "Words in the singular number include the plural and those in the plural include the singular", the expressions "a person" or "a client" may not give room in the text with enough clarity to the interpretation that escrow agents and escrow agreements are also included. In many cases, escrow services congregate two or more clients simultaneously, in multiparty agreements.

The extraordinary circumstance of escrow services contracting (which is still not the rule, although increasingly important) and of its contents (which may affect, for instance, "control") may not properly fit under "ordinary course of the service provider's business", as the escrow agent may be a sub-custodian, not included within the ordinary course of the custodian´s business.

Lastly, in the jargon of digital communities, "maintain" may mean, inclusively, procedures which go beyond the keeping of digital assets, such as for instance producing an extra copy for security reasons or adopting special safety cautions, which may go beyond the common ground intent of such provision, which seems to be the simple holding of a digital file in deposit

229. Comment 5

Nicole Purin

Deputy General Counsel, OKX ME

Principle 10 - Custody. Digital custodians are emerging globally and this principle is very important for the purposes of commercially expanding digital assets. (1) (a) - this clause should refer to entity as well as a person, specifically from a common law perspective. Overall, the principles listed in this section are comprehensive and the reference of "control" is key. In clause 2(i) might be beneficial to cross refer to the definition of control in the principles.

230. Comment 6

Japan Virtual and Crypto assets Exchange Association

Japan Virtual and Crypto assets Exchange Association

1 The Opinion
We agree with the clarification of the legal framework for custody, as long as the existing practices of custody services in the crypto asset exchange business are taken into consideration.
Furthermore, we request that careful examination be carried out based on an understanding of actual business conditions with regard to cases requiring legal clearance, such as how to respond to unauthorized outflow of digital assets, whether customer accounts fall under the category of custody services, and how to handle digital assets that have been air-dropped.

2 The Reason

In the domestic crypto asset exchange industry, practical operations related to custody services have been accumulated from the dawn of the spread of crypto assets to the present, and such practices have a track record of stable operations. These operations and achievements are expected to lead to the appropriate dissemination of digital assets, including crypto assets. Specifically, for example, stable practices for the crypto asset exchange business have been formed, including the fact that it is permitted to take a method of segregation of customer assets in the form of treating them as integral assets and supplementing them with substitutes. Furthermore, the clarification of the legal framework under private law will also lead to the clarification of the rules of conduct for trustees, etc. in bankruptcy proceedings. For this reason, we welcome the clarification of the legal framework for custody based on the Principles, assuming that consideration will be given to these and other existing practices of custody services. Furthermore, with respect to digital assets, some cases require legal considerations that are unprecedented in existing assets. Specifically, with regard to cases that require legal clearance, such as the unauthorized outflow of digital assets, handling of customer accounts, and air-dropping of digital assets, it is desirable to carefully consider the legal relationship between the custodian and the customer at the time of unauthorized outflow, whether customer accounts fall under the category of custody services (whether bankruptcy remoteness is admitted or not), and the appropriateness of the attribution of air-dropped digital assets with respect to customer assets, based on existing practice, rather than applying the Principles in a rigid manner.

231. Comment 7

Centre for Commercial Law at the University of Aberdeen
University of Aberdeen
"The term 'maintain' in this context is new to us, but we understand from the Commentary that this is a concept that the UNIDROIT aims to introduce under the Principles. It would also be useful to have more explanation for the inclusion of the term 'in the ordinary course of the service provider's business' in Principle 10(3)(a) and detail as to what the term is intended to encompass (and some examples of what would be excluded from its scope)."

232. Comment 8

Gerard GARDELLA
HAUT COMITE JURIDIQUE DE LA PLACE FINANCIERE DE PARIS
The UNIDROIT Principles provides a very accurate definition of custody. Regarding that, while the Principles should be limited to substantive issues, the issue of custody seems more to be a regulatory subject. The MiCA Project defines custody as the activity of, on behalf third parties, safeguarding or controlling crypto-assets or means of accessing such crypto-assets, where applicable in the form of cryptographic keys. Thus understood, the two definitions seem close. However, to the extent that the definition of custody refers to the definition of control, which must be understood as "exclusive control", the question arises as to the extent of the qualifications posed by Article (3). In accordance with this article, the ability may not be exclusive, to the extent that the person with control accepts, consents, or "acquiesces" to the sharing of the capacity they have with respect to digital assets, with one or more persons. The contours of this qualification may appear uncertain. It will be necessary to specify the situations in which control over the assets may not be deemed exclusive. For example, a digital asset may be "staked", and therefore subject to delegation, in whole or in part (for instance, the voting right attached to the asset may alone be delegated), to a validator for the validation of transactions on a proof-of-stake blockchain. The digital asset is then locked on a validator for the time necessary for the validation of transaction(s). In this case, the asset could be delegated to an operator that would have control over the validation keys, which would allow the delegation of the asset for staking purposes. Consequently, control of the asset may not be deemed exclusive, to the extent that the abusus related to the asset is delegated to a third party.

Furthermore, technological solutions enabling the implementation of governance solutions are not limited to multi-signature, as stated in point 10 of Principle 6. For instance, Multi-Party Computation (MPC) mechanisms allow for the division of a cryptographic key into several encrypted shards, which only the combination of all encrypted shards can enable executing transaction and movements on the assets. Thus, each participant follows this protocol by dividing the incoming data into several encoded parts called secret shards, which are then independently mechanically computed before being recombined to form the final cryptographic key. Thus, incoming data can be computed secretly and independently. The notion of custody could also be approached with regard to the ancillaries services, the custodian would offer, notably the information that may be owed (in relation to the digital asset being held) by the custodian to their clients when they are unable to easily access it.

233. Comment 9

Finance, Competitiveness & Innovation Global Practice
World Bank Group
With regards to Principle 10, Paragraph 15 (commentaries), an example of a cold wallet storage is provided and a specific wallet, referred to as the "Z Wallet," is mentioned in this example. However, in one instance, the wallet is referred to as the "Nano Wallet." It is likely that the reference to the "Nano Wallet" should be understood as the "Z Wallet" in this case. As per Paragraph 16 (commentaries) of Principle 10, it is stated that "If the account provider becomes bankrupt, the claim for delivery of a digital asset is likely to be converted into a (fiat) money claim and will rank pari passu with the claims of all other unsecured creditors." However, it is worth noting that in the event of bankruptcy, the option of distribution of a digital asset itself should be permitted, provided it is supported by the legislation of the relevant country. Para. 17 (commentaries) of Principle 10 stipulates the following: "A State may consider whether regulatory law should provide protection to some or all types of clients who enter into the type of agreements described in paragraph 15". However, the reference should have been made to paragraph 16, not paragraph 15. Para. 17 (commentaries) of Principle 10 provides a few examples of possible regulations that countries may consider to protect some or all types of clients of companies referred to in para 16. of Principle 10. As part of these examples, consideration can be given to adding the requirement of a transparent corporate governance regulation where a CEO or company officer of such referred companies are required not to have exclusive access to the company's crypto funds. As a minor comment, par. in this Principle 10 appears sub-divided in roman numerals (i. ii, iii) while the numeration for sub-paragraphs is made using letters along the document (a, b, c) and roman numerals are used for sub-sub-paragraphs (third level).

234. Comment 10

Cassandre Vassilopoulos & Mark Kepeneghian
Kriptown
"Why bring digital assets into the custodian's property pool? (1) (a) Is it necessarily professional? (c) What if there are more levels? What about client consent? (2) What about the notion of ownership? (3) What is custody? What about special rights such as consumer law? (a) What is the interest? What if it is not the normal framework? (b) Why not put it in Principle #11? What form should the delivery take? The main obligation is not highlighted enough. (c) Why? (5) What distinction is made between the insolvency of the provider and the termination of services?"

235. Comment 11

Office for Financial Market Innovation and Digitalisation
Principality of Liechtenstein

"We welcome the rules regarding Custody and Sub-Custody, as it is a widely occurring phenomena in practice. We welcome the description of the regulatory measures that a state should provide in Recital 17. This includes the requirement for specific disclosure of relevant risks in the agreement and for providers to be regulated entities that meet standards (this is already the case under Liechtenstein law). However, the recommendation to limit the type of investors is contrary to the fundamental principles of the digital economy, which should remain accessible to all investors.
In recital 18, Digital Autonomous Organisations (DAO) are discussed and it is stated that a "voting or consensus mechanism can hardly qualify as joint control of the assets by all persons entitled to participate". Does this mean that such assets are not subject to control and therefore outside the scope of the principles? Clarification on this issue would be highly appreciated."

236. Comment 12

Silvana Fortich, Anabel Riaño (Docentes investigadoras Departamento de Derecho Civil); Adriana Castro (Directora Departamento de Derecho de los Negocios); Valeria Facio-Lince, Juan Alejandro Solano y Juan Sebastián Ortiz, monitores Departamento de Derecho de los Negocios

Universidad Externado de Colombia

"Interesting figure it would be opportune to deepen if the title to which the custodian responds is accommodated to the traditional figures of civil law, such as the role of the depositary. Or if it would be, without an agreement, a different type of responsibility.

Also, within this principle it is noted similarities with an agency contract, understanding that Hosted Wallet where the custodian facilitates the digital operations of his clients -controlled digital assets- with other people is a clear example of Custody of Digital Assets. "

237. Comment 13

Bernadette Harkin

Ashurst LLP

We agree with Principles 10 – 12 relating to the custody of digital assets. They reflect the generally accepted understanding of the role of custodians in traditional financial markets. We consider this an appropriate reference or starting point for the Principles since the laws, principles and regulations around traditional custody relationships go a long way to achieving the client protections the Principles seek to achieve.
We do not wish to call out every aspect of Principles 10 – 12 with which we agree as we agree with them in general. We do, however, highlight some particular aspects of the Principles and the associated commentary that we consider particularly important to endorse.
We agree there is a distinction between providing a custody service vs providing the software, hardware and/or infrastructure to enable clients to self-custody their digital assets. This is an important distinction that must be maintained in State laws in our view. The Principles also rightly acknowledge that a custodian (as defined in Principle 10) may obtain control of a digital asset for a client, but will typically not acquire 'ownership' (as defined under the applicable State law) of that digital asset. State law may obviously provide for certain title transfer collateral arrangements, but these would not be hindered by Principles 10-12.
We also agree there is often a chain of custodians and that each sub-custodian should be under the same obligations. There are sometimes nuances of certain States' laws that may mean the exact treatment cannot be ensured, but this is not new to digital assets and we would expect the other laws of particular States to address this – as well as any similar but novel issues regarding how States may choose to implement the Principles – in a similar way to how they do today.
Principle 10(4) is an important factor and one we endorse. We agree with the commentary in paragraph 7 to Principle 10 that an agreement under which the client does not have control is presumed to be a custody agreement (pursuant to which the clients' assets are segregated from the custodian's own assets in the event of the custodian's insolvency) unless the agreement between the client and the service provider makes it clear this is not intended to be the case. It would be unsatisfactory to leave the courts to determine the nature of this relationship (segregated vs part of the service provider's general estate) in some cases, but not in others. A custody service that wishes to deny users anything more than merely personal, unsecured rights to the delivery of their digital assets should have to meet specific requirements to be effective in law. Absent the presumption built into Principle 10(4), market participants would be left with not just the freedom to characterise their relationships as they wish (or as the one with the greater bargaining power wishes), but also the burden of trying to determine how an insolvency officeholder and/or court would recognise them in a

hypothetical custodian insolvency. The presumption in Principle 10(4) would better incentivise custodians to draft clear and transparent terms of use and service requirements. We do, however, believe there is a typographical mistake in paragraph 7 of the commentary to Principle 10. It states in relation to an agreement under which assets are held by the service provider as part of that service provider's insolvency estate (which we will refer to as a "non-Custody Agreement") that: "For this reason, an agreement under which the client does not have control is presumed to be a custody agreement unless it is made clear in the agreement that assets held by the service provider form part of that party's [the service provider's] assets available for distribution to its creditors, that is, is not part of the service provider's insolvency estate (see Principle 13(1))." We consider this last part of the sentence - "is not part of the service provider's insolvency estate" – to be incorrect. In the case of a non-Custody Agreement, the client's digital asset(s) would form part of the service provider's insolvency estate so we believe this should read "is part of the service provider's insolvency estate". We also note that there is incorrect paragraph numbering in the commentary to Principle 10. The current paragraph 15 appears to be intended to be part of paragraph 14 (rather than a separate paragraph) which means that the cross-reference to paragraph 15 in the first sentence of paragraph 7 of the commentary to Principle 10 is referring to the wrong content. We note that this issue (i.e. a cross-reference to paragraph 15) repeats at paragraph 17 and also at paragraph 2 of the commentary to Principle 13.

238. Comment 14

Pedro Mendoza Montano
UNIDROIT´s Correspondent in Guatemala
It is not clear what the purpose of Article 10 is. The commentary is quite illustrative of what scenarios are considered to be digital asset custody scenarios. Particularly, paragraph 2 of this principle is crucial to determine the obligations of the custodian. Because even if there is no custody or deposit agreement as such, if there is control of the asset, the regulation and the custody obligations regime of Article 11 are applicable.

239. Comment 15

Patricia Cochoni
Parfin Pagamentos Ltda.
Principle 10 and Principle 11 propositions in relation to custody should include the obligation for custodians and sub-custodians to maintain a mandatory AML framework in place. Considering the increase in volume of illicit transactions in the cryptocurrency space, it is paramount that custodians and sub-custodians are actively responsible for having procedures and controls to avoid illicit activity in relation to the assets that are maintained by them. Different jurisdictions are coming forth with registration requirements on the AML space (i.e. Portugal and UK) while they wait for more broad regulations related to crypto-assets that would make this mandatory for players who are acting in those particular jurisdictions. Nonetheless, even within regulatory environments that do not have those AML requirements yet, we believe custodians and sub-custodians should use market practices and industry accepted standards (i.e. FATF Guidance for Virtual Assets and Virtual Asset Service Providers).

240. Comment 16

Lukas Wagner / Melih Esmer
NYALA Digital Asset AG/ EBS Law School
We welcome the clear definition of custody and the differentiation from a mere safeguarding of the keys (para 14 of the commentary). However, in line with our criticism above (passim), we do not consider proprietary rights necessary to sufficiently protect customers of a custodian, including in the case of the latter's insolvency. The definition of a custody agreement (or the commentary in para 6) could further clarify the application in the case of a security agent holding digital assets. Such security agent might hold digital assets for both the collateral provider and creditor as clients.

Finally, the lines appear to be blurred between a deposit account (para 16 of the commentary; see already the criticism under Principle 2, II.2., above) and a trading account (para 21), in particular as agreements with cryptocurrency exchanges might often suggest to provide custody without expressly providing that 'title' to the digital assets remains with the customer. In the interest of customer protection, it could be clarified that, as a general rule, customers retain or obtain such title also in what is called a deposit account in the commentary (ie where there is no express provision that title remains with the customer), unless otherwise expressly provided for.

241. Comment 17

Lucas-Michael Beck
Bundesverband deutscher Banken e.V. / Association of German Banks
In particular, the detailed regulations on custody and sub-custody show that the custody of securities and crypto securities are organisationally and also legally equivalent and similar services. Therefore, in our opinion, it would only make sense to structure the civil law rules for crypto securities in accordance with the new rules for crypto securities (cf. Principle 10 et seq.).

Principle 11: Duties owed by a custodian to its client

242. Comment 1

David Morán Bovio
University Professor / University of Cádiz (Spain) / Unidroit Correspondent
It is a typo or an indication: Principle 11, Marginal 8, uses the acronym BTC twice. But this acronym it is not clarifyed within the text

243. Comment 2

David Gibbs-Kneller
University of East Anglia
Principle 11(1)(b) may wish to add the words 'except as restricted by other law' or words to that effect. The word 'any' reads as an absolute right to demand a transfer, which should not be the position taken and is incompatible with 11(1)(c). Fraud, avoidance of existing obligations or liabilities, rules on agency law (i.e. reasonable to check validity of instructions), restrictions on transfers to minors and so on should validly restrict compliance with "any instruction" given by a client. For example, see The Houda [1994] 2 Lloyd's Rep 541, 554 'there is no rule of law that an agent is forbidden to question the authenticity of his instructions or acts at his peril if he does so. He is to act reasonably, no more and no less'. The wording alters that common law position and may require the custodian to transfer assets under an instruction to do so "immediately" despite the custodian's reasonable doubt as to the validity of the instruction. That may put them in the intolerable dilemma that was also described in The Houda, 558. If they do not follow the instruction, they are potentially liable under the duty imposed by the model law, if they do follow it, there is a risk the instruction was a bad one, i.e. fraud, and are liable to the original owner for an unlawful transfer in failing to safeguard the digital asset in (1)(c). I do not think 11(1)(a) adds any clarity on this. That is referring to situations when the custodian is permitted to transfer the digital asset, which may cover situations when digital assets are transferred by operation of law. It does not concern situations when other law may restrict an instruction from the client to transfer.

244. Comment 3

Omran Abdulkarim Mahmood Al Mulla
Bahrain
I would suggest adding the following duty for the custodian:

(Unless prohibited by a security agreement or by any other law, a custodian is obliged to present, without delay, assets to any client who has issued a formal withdrawal request) and as a commentary, I will write the following: (Unless specifically prohibited by a security agreement or by other applicable law, a custodian must always allow the client to withdraw their assets whenever they choose to do so. This is an important responsibility of a custodian and should be upheld at all times. In order to ensure that the custodian is meeting this commitment, they should be transparent and provide their client with all the necessary information regarding their assets and the procedures required to withdrawal them. Additionally, they should also be willing to provide guidance and support to the client when needed. Being able to withdraw assets from the custodian is an essential part of the client's financial security, and it is the custodian's responsibility to ensure that the process is as smooth and stress-free as possible so that both parties can benefit from the arrangement. All custody agreements shall specify the manner in which the client may withdraw their assets. In the event that no such arrangement is included in the Contract, the Client may withdraw all of their assets at once.)

245. Comment 4

Stéphanie Saint Pé
France Post Marché
This principle contains a list of duties owed by a custodian to its client. The provision of safekeeping service (as it is the case for financial instruments and for other assets under verification of ownership and record keeping) and the obligation to support any loss of financial instrument are essential duties of a custodian. However, the level of services to be provided by the custodian depends on the (i) clients' needs and expectations, (ii) the ability/capabilities of the service provider and (iii) internal policies/business model as well (reference is hereby made to the provision of security and the list contained in paragraph 3). Therefore, mentioning in paragraph 2 that the provisions of the contractual agreement between a client and the custodian would be derogative to the principles laid down in these principles is not appropriate. Mentioning that the custodian is under the obligation to comply with any instruction given by the client is also not appropriate as controls are in place.

246. Comment 5

Nicole Purin
Deputy General Counsel, OKX ME
Principle 11 - The Principle is highly detailed and sets out the relevant obligations/duties clearly. It might be beneficial to provide an expanded definition of "undivided pool". Also, some digital custodians offer to maintain assets for clients in segregated vaults and it might be beneficial to align the principle accordingly - to accomodate for different methodologies of custodian structures.

247. Comment 6

Centre for Commercial Law at the University of Aberdeen
University of Aberdeen
Regarding Principle 11(1), para 1 of the Commentary indicates that the duties set out in there are basic duties and that States should not permit them to be excluded by the terms of the custody agreement. We understand that the aim here is to provide the client with protection that cannot be derogated from by agreement. Based on this, we wonder whether these are then intended to be mandatory rules and, if so, whether they apply in cross-border situations as mandatory rules in the private international law sense. It would be helpful if the Commentary clarifies this or States, adopting the provision, make it clear that these rules constitute mandatory rules.

248. Comment 7

Finance, Competitiveness & Innovation Global Practice
World Bank Group
"Fungible" as we already stated above lacks definition; furthermore (see our comments in General Comments) we are unsure how to frame fungible assets within the definition of control.

249. Comment 8

Cassandre Vassilopoulos & Mark Kepeneghian
Kriptown
"(1) Why would this be a mandatory rule? (b) What if the claim is illegal? (c) Is it an obligation of result or of means? (2) Should it be specified that he must always be able to return them to the client? What control procedures should be put in place? (3) Why is this restrictive? (a) Is the on-chain register sufficient? Or should some of it be off-chain? (b) ""obligation"": not only, it must be in accordance with the contract he has with his clients. (c) It should be specified that it is fungible digital assets because there is no interest otherwise. (5) (c) This is not an obligation of the custodian, it does not belong there."

250. Comment 9

Silvana Fortich, Anabel Riaño (Docentes investigadoras Departamento de Derecho Civil); Adriana Castro (Directora Departamento de Derecho de los Negocios); Valeria Facio-Lince, Juan Alejandro Solano y Juan Sebastián Ortiz, monitores Departamento de Derecho de los Negocios
Universidad Externado de Colombia
Indispensable mentions the custodian's responsibility. Nevertheless it would be pertinent to clarify the limitations or uses that the custodian could have by virtue of the law and the express referral of the client or if on the contrary he has absolute capacity in terms of use and enjoyment.

251. Comment 10

Pedro Mendoza Montano
UNIDROIT´s Correspondent in Guatemala
These obligations apply in scenarios where there is necessarily a custody or deposit agreement. As long as there is de facto control between the custodian and the client's digital assets. The issue of suggesting that these obligations are minimums that should not admit a contrary agreement is complicated, as the concept of "Digital Asset" in these principles is too broad. Particularly, the obligations derived from the custody of satoshis (digital assets that resemble money or securities) and the custody of an NFT of art, are not necessarily the same. Particularly, in Guatemala. The Civil Code distinguishes the obligations of custodians when the asset given in deposit is fungible and when the asset is non-fungible. Regarding that it is sufficient to return the good in the same species, quantity and quality. This principle has an impact on the operations of companies operating in this market. Because in general terms it obliges to have a 100% "Encaje". However, due to recent events in the market, we understand why it has been decided to follow the most conservative model, which offers more protection to the client.

Principle 12: Innocent client

252. Comment 1

David Morán Bovio
University of Cádiz (Spain) / Unidroit correspondent
Could it be a collision with national Law public order?

253. Comment 2

Nicole Purin
Deputy General Counsel, OKX ME
As per my comment in 11, it might be beneficial to consider vaults as well as undivided pools.

254. Comment 3

Centre for Commercial Law at the University of Aberdeen
University of Aberdeen
We understand that this Principle is an adaptation of the innocent acquisition rule for custody and this seems logical to us. However, we would find it helpful if further explanation is provided in the Commentary regarding the reason for the choice of the innocent client over the third party who potentially has rights, and may also be "innocent".

255. Comment 4

Cassandre Vassilopoulos & Mark Kepeneghian
Kriptown
" (1) what about security interests?"

256. Comment 5

Silvana Fortich, Anabel Riaño (Docentes investigadoras Departamento de Derecho Civil); Adriana Castro (Directora Departamento de Derecho de los Negocios); Valeria Facio-Lince, Juan Alejandro Solano y Juan Sebastián Ortiz, monitores Departamento de Derecho de los Negocios
Universidad Externado de Colombia
Regarding paragraph 2 of principle 12 it may be desirable to specify in which cases the client should know that another person has an interest in the asset – even a better right – and whether due diligence and good faith on the part of the client would be suffice.

257. Comment 6

Pedro Mendoza Montano
UNIDROIT´s Correspondent in Guatemala
The Principle in question refers to the factual situation established in Principle 8 regarding the effects of good faith in the transfer of digital assets. However, an adaptation is made to the custody relationships that tend to be configured in this type of transactions.

Principle 13: Insolvency of custodian

258. Comment 1

Stéphanie Saint Pé
France Post Marché
General rules applicable to the insolvency and the treatment of the assets held and role of the bankruptcy receiver are contained in well-established regulations at regional level (BRRD notably) and national level (civil code/commercial code/…). These principles could therefore generate inconsistencies as it is clearly mentioned that applicable insolvency law governs all other issues. Essential notions such as the definition of insolvency proceedings or all consequences set out in principles 13 may be inconsistent with the existing rules and generate difficulties (lack of completeness and partial/limited understanding of the subject). In terms of assets (for funds as an example), protection is also foreseen at the level of AIFMD and UCITS V directive where segregation principles and delegation consequences are also directly embedded.

259. Comment 2

David Morán Bovio
University of Cádiz (Spain) / Unidroit correspondent
13(1) It was said that it speaks the language of Law (but not the Principles language)

260. Comment 3

Nicole Purin
Deputy General Counsel, OKX ME
Principle 13: Overall this principle is comprehensive and covers multiple practical scenarios. It might be beneficial to consider vaults as well as undivided pools.

261. Comment 4

Centre for Commercial Law at the University of Aberdeen
University of Aberdeen
We are generally supportive of the policies behind Principle 13 and the wording and structure of the principle. However, we note in relation to 13(3) and the accompanying Commentary (at para 5) that there is no explanation as to what happens to the rights which a custodian has against a sub-custodian if the former enters an insolvency proceeding. The principle merely states that the rights in respect of the relevant digital asset 'do not form part of the custodian's estate' and this is essentially repeated in the Commentary. Is the intention for the rights to remain exercisable by the custodian itself, despite the insolvency proceeding? Instead, perhaps the intention is for the rights not to be exercisable by the custodian, as well as not being distributable as part of its estate. A further possibility is that the rights could be transferred to the client, so that there is a more direct relationship between the client and the sub-custodian, in the event of the custodian's insolvency. Specific provision could be made for this, or there could be a provision similar to Principle 13(2), which states that an insolvency representative 'must take reasonable steps for the control of the digital assets… to be changed to the control of [the] client or of a custodian nominated by that client' but instead applied to the rights against the sub-custodian, rather than the digital assets. At least there should be some further explanation in the Commentary as to what is the intended effect of the principle in its current form. A similar point could also be made about the commentary in relation to Principle 13(1) – see para 2. A further, minor point about the Commentary is that in para 1, the final sentence is unclear and confusing. It states 'if the consequences set out in Principle 13 special regime would not be possible under the special regime, Principle 13 will need to be modified accordingly'. Is it simply the case that the first inclusion of 'special regime' should be omitted, or does the sentence require more substantial amendment for clarity purposes?

262. Comment 5

Gerard GARDELLA
HAUT COMITE JURIDIQUE DE LA PLACE FINANCIERE DE PARIS
The provisions provided for by the Principles should allow for effective protection of investors in the event of the custodian's bankruptcy. However, such protection is related to the legal qualification of digital assets. The regime of this protection depends on the legal nature recognized for digital assets. Primarily, Principle 3 provides for the recognition of a right of ownership as a mere possibility left to national legislation, but not as an assertion. The explanatory note explains this situation due to certain doctrinal and jurisprudential discussions. However, it is regrettable, given that the Principles do not have binding force, that the ownership of digital assets is not elevated to a standard in order to provide maximum protection to digital asset holders. Such a right should be the corollary of the recognition of a form of exclusivity recognized to the owner as regards the prerogatives exercisable over the digital asset, which seems to be covered by the term "proprietary" used by UNIDROIT. In the second place, and in the event of the custodian's bankruptcy, the rights of digital asset holders may not be effectively protected if substantive laws do not expressly recognize a property right over digital asset. In this regard, recognition of such a real right (right in rem) would allow to take inspiration from the protection and claim regimes of dematerialized financial instruments. However, it seems that the notion of possession or control is inseparably linked to that of ownership, and that it is not a mere right of claim against the custodian. Indeed, one should not confuse the right conferred by the digital asset itself, which may consist of a personal right against their issuer (which should generally be the case for stablecoins), with the property right attached to the ownership of this right whose custody is ensured by a third party. As with financial instruments, the fungibility of assets does not necessarily lead to a transfer of ownership to the custodian (depository under the French Civil Code).

263. Comment 6

Cassandre Vassilopoulos & Mark Kepeneghian
Kriptown
"Does this mean that a digital asset necessarily always has value? (1) Beware of the imperative rules of the law of companies in difficulty. (2) Time limit ? computer ? (5) Is it always custody?"

264. Comment 7

Silvana Fortich, Anabel Riaño (Docentes investigadoras Departamento de Derecho Civil); Adriana Castro (Directora Departamento de Derecho de los Negocios); Valeria Facio-Lince, Juan Alejandro Solano y Juan Sebastián Ortiz, monitores Departamento de Derecho de los Negocios
Universidad Externado de Colombia
"Timely and detailed proposal, from the custodian's responsibility point of view. It is one of the most comprehensive principles of the Draft. The measure of excluding the digital asset that the custodian possesses, if he or she becomes involved in insolvency proceedings, is appropriate. This is because the digital asset is not the custodian's, but the client's, with whom it entered a custody agreement. In addition, it is quite relevant that when the custodian is called into insolvency proceedings, the client is sought to regain control of the asset himself or through a sub-custodian. All of this protects the good faith of the client. "

265. Comment 8

Anonymous
Anonymous
"Paragraph (1) of the Principle seems subject to the separation of the assets maintained for a client from those maintained for its own account by the custodian. However, since Principle 11(3)(d) is only hypotethical (""may""), it is not granted that this would be the case. If there was no separation of assets, it would be difficult to exclude the assets held on custody from the custodian's insolvency estate. Paragraph (5) of the Principle seems subject to pari passu rights of the other creditors of the custodian."

266. Comment 9

Bernadette Harkin
Ashurst LLP
"We agree with Principles 13(1) and 13(3), in both cases consistent with it being possible for digital assets to be the subject of proprietary rights. We agree with Principle 13(2), subject to there being sufficient funding (or funding mechanisms) available to the insolvency representative to allow it to incur the reasonable costs of taking any such reasonable steps. We note that the proposed treatment of shortfall claims (Principles 13(5) and 13(6)) creates significant complexity for insolvency representatives if operating with incomplete or imperfect records of the insolvent custodian, but is otherwise desirable."

267. Comment 10

Pedro Mendoza Montano
UNIDROIT´s Correspondent in Guatemala
Principle 13 deals with the insolvency of the custodian or sub-custodian. Beyond the considerable difficulty that would be involved in changing the regime. In order to allow the transfer by the custodians of the assets held in custody back to their clients, there is no further commentary on this principle.

268. Comment 11

Lukas Wagner / Melih Esmer
NYALA Digital Asset AG/ EBS Law School
We welcome the clarification that digital assets held under a custody agreement do not form part of a custodian's insolvency estate. This outcome could however be achieved without making digital assets subject to proprietary rights as we understand is also currently contemplated on a non-proprietary basis in Germany (which does not currently recognise such proprietary rights in relation to digital assets) under the upcoming draft Future Financing Act (Zukunftsfinanzierungsgesetz).

269. Comment 12

Lucas-Michael Beck
Bundesverband deutscher Banken e.V. / Association of German Banks
We would like to positively emphasise Principle 13, according to which the assets held in custody by a crypto custodian should not fall into the insolvency estate. From a practical point of view, this rule is of enormous importance.

Principle 14: Secured transactions: general

270. Comment 1

Spyridon V. Bazinas
Kozolchyk National Law Center
Principle 14(1) should be modified to provide that a security right may be created in a digital asset in the same way as a security right in any other asset. Accordingly, its heading should be modified to read "Creation of a security right in a digital asset".

271. Comment 2

Bernadette Harkin
Ashurst LLP
Digital assets as the subject of security rights We agree with Principle 14(1) that digital assets should be capable of being the subject of security rights. This is a natural consequence of it being possible for digital assets to be the subject of proprietary rights. Secured transactions - terminology We note the discussion in paragraph 3 of the commentary to Principle 14 relating to "secured transactions" potentially covering outright transfers, depending on the relevant domestic law. While we agree with the general analysis, if the purpose of Section V is to cover both security interests and title transfer arrangements, we suggest that the terminology in Section V is amended so that "secured transactions" (and equivalent terms) are confined to arrangements involving security interests such as a pledge, mortgage or charge, and "collateralised transactions" is used to refer generically to either security interests or title transfer arrangements. This would enable States to more effectively implement the Principles in a manner that is consistent with the different ways in which collateralised transactions may be effected in those States. Linked digital assets We recognise the need to address the complexities arising when a digital asset is linked to another asset. We note, and agree with, the discussion in paragraphs 4 and 5 of the commentary to Principle 14, relating to those complexities, in particular the possibility that the asset to which a digital asset is linked may (or, in our view, is likely to) already fall within a specific category of property and therefore already be subject to principles regarding how to effect a security interest over that linked asset. We consider that, just because a digital asset is linked to another asset, the property regime applicable to that asset should not cease to apply.

To this extent, we therefore agree with the statement in Principles 14(2) and 14(3) that the effect, if any, on the linked asset of a security right over the digital asset is a question of other law (i.e. a State's law) relating to that linked asset. However, the implication of this, when combined with the remainder of the Principles in Section V, is that there may be a separate personal property regime applicable to the digital asset and to the other asset to which it is linked. Such an outcome is, in our view, likely to result in complexity, of the type which UNIDROIT suggests should be avoided in paragraph 5 of the commentary to Principle 14. We consider that a more nuanced position might be required, depending on the nature of the link between the digital asset and the other asset. For example, a digital asset might itself constitute an equity security (that is, the share and the digital asset are indistinguishable from each other) 1 already subject to well-established regulation and market practice concerning the taking of security over it. Having a regime to determine how to take security over digital assets, while having a different regime to determine whether that security is also effective over the share, will potentially cause uncertainty or ineffective security arrangements. Similarly, a linked digital asset may take the form of the creation of a proprietary interest in an underlying asset (for example, by the then-holder declaring a trust over it) and tokenising that interest, such that a token represents an interest in (but is not necessarily the same as) the underlying asset. A person may seek to transfer or create security over the tokenised interest as a means of providing the underlying asset as collateral. A separate regime applicable to the digital asset and to the underlying asset would potentially cause uncertainty, particularly if the underlying asset is eligible for a specific legal or regulatory regime (such as a financial collateral regime) and it is therefore important to demonstrate that an effective security interest has been created over that underlying asset. We note the comment in paragraph 4 of the commentary to Principle 14 that "in these [i.e. linked digital assets] situations, the secured transactions rules specific to that type of asset will apply to the other asset or to the digital asset itself as appropriate" (our emphasis). It is important that any legal framework for the creation and transfer of proprietary interests in digital assets seeks to avoid, as far as possible, requiring parties to comply with more than one regime where that digital asset is linked to another asset. We submit that, for these types of use case, it would be preferable to have a single regime which is based on the existing regime applicable to the other asset but which is adapted to cater for the asset being represented in digital form. 1 We note that the digital asset being the same asset as the other asset might not, on a natural interpretation, be considered to be "linked". However, it is common for this type of arrangement to be included within the scope of "linked" digital assets.

272. Comment 3

Stéphanie Saint Pé
France Post Marché
At EU level, adopting this principle would imply interferences with established rules contained in the collateral directive and transposed in EU Member States. Numbers of countries have already adopted a position allowing the creation of security interest over digital assets in their transposition law, rendering this principle useless or at least irrelevant.

273. Comment 4

Nicole Purin
Deputy General Counsel, OKX ME
Principle 14 - Agreed on this approach and in line with the proprietary nature of digital assets.

274. Comment 5

Faruk Kerem Giray
Correspondent of Turkey

"- It is very good to see that secured transactions are covered in the Principles. We strongly encourage a neutral approach to different canons of law families. In our opinion literal expression of the principle art.14/1 can be changed by rephrasing like: " "Digital assets can be the subject of security rights regardless of applicable law's security law types" "."

275. Comment 6

Japan Virtual and Crypto assets Exchange Association
Japan Virtual and Crypto assets Exchange Association
"Given the domestic and international market conditions in which digital assets are beginning to be recognized as one of the asset classes, it is expected that digital assets will be acquired and used as collateral in the course of business transactions between companies. Therefore, we welcome the clarification of the legal framework for the collateralization of digital assets through the Principals. In Japan, various discussions on digital assets are underway in the context of NFT and Web3, as well as their use in securities and payment instruments such as security tokens and stablecoins. As the legal framework for these digital assets under private law is not necessarily clear at present, there are cases where business entity feels some hesitation when acquiring digital assets as collateral. For this reason, we welcome the clarification of the legal framework for collateralization through the Principles as we intend to promote digital asset transactions, including collateralization, and thereby ensure the appropriate development of services related to digital assets."

276. Comment 7

Centre for Commercial Law at the University of Aberdeen
University of Aberdeen
We agree with the overall content of the principle. However, it is worthwhile to note that in Principle 14(1) the reference to digital assets being the 'subject' of security rights may be misleading, as we stated in our comment on Principle 3 above. In technical terms, in some systems (principally Civilian systems), subjects in relation to property are persons (whether natural or legal) who may hold rights in relation to objects, which are things (including potentially digital assets). We do recognise that the term 'subject' is used in a broader sense in the current formulation, yet it would be advisable to at least explain the position more extensively in the Commentary and note that it might be preferable to formulate the provision with reference to 'object' instead of 'subject' in some systems. We note that 14(2) and (3) respectively specify that other law applies to determine, firstly, the legal effect of creation and, secondly, the third-party effectiveness of a digital asset, in relation to linked assets. In many systems creation will correspond directly with third-party effectiveness, which means that the inclusion of (3) might not be necessary, or could even create confusion. However, we accept that there are many systems in which there is a distinction between creation and third-party effectiveness, and so, on balance, we agree with its inclusion. Perhaps though it could be noted more expressly in the commentary that in some systems there may not be such an obvious distinction.

277. Comment 8

Silvana Fortich, Anabel Riaño (Docentes investigadoras Departamento de Derecho Civil); Adriana Castro (Directora Departamento de Derecho de los Negocios); Valeria Facio-Lince, Juan Alejandro Solano y Juan Sebastián Ortiz, monitores Departamento de Derecho de los Negocios
Universidad Externado de Colombia
Security in transactions understands a need in the legal field and as a theoretical framework it is very well defined in this article.

278. Comment 9

Pedro Mendoza Montano
UNIDROIT´s Correspondent in Guatemala
Principle number 14 establishes that digital assets can be used as collateral. Such an analysis is a natural outgrowth of the conception of digital assets as property subject to appropriation. The only

question that would arise is whether the registry systems contemplated in principle 6 should also contemplate security interests in digital assets.

279. Comment 10

Lukas Wagner / Melih Esmer
NYALA Digital Asset AG/ EBS Law School
In addition to our general criticism of the proprietary approach of the Principles, which also puts in question the suitability of digital assets themselves to be subject of security rights (as opposed to claims on such assets, eg against a custodian, which is one set-up currently contemplated in Germany), it might prove challenging to evidence security rights on digital assets, as most token standards do not appear to account for such possibility at the moment. This would again create circumstances that cannot be observed by the market (similar to cases of off-chain change of control, see our criticism under Principles 6 et seq above).

Principle 15: Control as a method of achieving third party effectiveness

280. Comment 1

Eric de Romance
The question of the hacking and its ability to take into consideration the de facto control it exercises on the digital assets needs to be clarified in some way or another. To define the third party effectiveness through the control in particular could be problematic if at the same time the control is not validly and lawfully acquired and this being fully demonstrated. The solution of the global register could be a solution as the hacker will not publicize the acquisition of the control but this is not fitting with the overall logic existing in the digital assets market today. If the multi sig could be seen as a good technical answer to the lack of precision of the laws, it remains that the laws could need to reprecise the concept of "acquiring validly the control and the proprietary rights of a digital asset" and how it is enforceable.

281. Comment 2

Spyridon V. Bazinas
Kozolchyk National Law Center
Principle 15 should be modified to provide that a security right in an intangible asset may be made effective against third parties in the same way as a security right in any other intangible asset may be made effective against third parties. Then Principle 15 should provide that a security right in a digital asset may also be made effective against third parties by control. The current wording of Principle 15 could be retained with appropriate slight drafting changes. Accordingly, its heading should be modified to read "Third-party effectiveness of a security right in a digital asset".

282. Comment 3

Clément Fontaine
Aix-Marseille University
Control as a method of achieving third-party effectiveness is not enough since control just take into consideration the material element and not the intention. Principle 6 defining control has been made to distinguish change of control of digital asset from transfer of digital asset (Â§4 under Principle 6). But Principle 15 has been made to achieve third-party effectiveness of a security right in a digital asset in order to allow secured creditors to ensure their security right transfer is effective against third parties. Commentary 6. Definition of control as provided in principle 6 helps to define the corpus that someone can have over a digital asset. In France and other civil law state, the corpus is not enough to define the possession which is composed of the corpus and the animus.

283. Comment 4

Stéphanie Saint Pé
France Post Marché
Same as above. Perfection of security interest is detailed in existing rules. As long as countries have already recognised the possibility to grant security over digital assets, any such principle on the method to have a valid and perfected security interest is not appropriate, redundant and could create inconsistencies. States may have already adopted/adapted internal rules to allow the creation and enforcement of security interests over digital assets.

284. Comment 5

Nicole Purin
Deputy General Counsel, OKX ME
Principle 15: Agreed on this approach.

285. Comment 6

Centre for Commercial Law at the University of Aberdeen
University of Aberdeen
We agree that control should be a method of achieving third-party effectiveness of a security right in a digital asset. We also note and agree that there can be other methods of obtaining a security right in such an asset, depending on the system in question (e.g. through certain types of agreement, by way of registration or some other form of notification or publicity). In para 3, it is stated that, under some laws, a transfer to a wallet held by the secured creditor or its agent would 'be sufficient to protect the security right against third-party claims, including in insolvency'. It may be worthwhile pointing out that, depending on the system and the circumstances, the digital asset may either not fall within the insolvency estate of the debtor at all (as there is deemed to have been a transfer) or that it does fall within the estate of the debtor but is encumbered by a security right. As a point of clarity, in para 9, it is stated that if the secured creditor 'cannot exercise the abilities without the consent, or participation of the grantor, then it should not be in control for the purpose of achieving third-party effectiveness'. This may need more explanation with reference to multi-signature arrangements. Such an explanation may also assist with the illustrations at paras 11 and 12 (incorrectly labelled as 13), the first of which does refer to a multi-signature arrangement (and could be referred to in a prior explanation). The position is clarified to some extent by para 9 of the Commentary to Principle 17, but not entirely and further discussion at this earlier point would be beneficial.

286. Comment 7

Finance, Competitiveness & Innovation Global Practice
World Bank Group
Paragraph 3 in commentary of Principle 15 clarifies that transferring a digital asset to a wallet held by the secured creditor or its agent can safeguard the security interest against third-party claims, including in the event of the debtor's insolvency. However, it would be beneficial to further review the scenario where the secured creditor, rather than the debtor, enters into insolvency proceedings. The issue of handling collateral in case of a crypto lending company's insolvency is crucial in the wake of recent events, such as BlockFi's insolvency. These companies offer loans in fiat currency to clients using cryptocurrencies as collateral, which are stored in the lender's controlled wallet. The overcollateralisation of these loans raises the question of proper collateral management in the event of the lender's failure. This scenario can be potentially demonstrated through an illustration, such as "Illustration 3," within Principle 15.

287. Comment 8

Bernadette Harkin
Ashurst LLP

We agree with the general proposition that a security right in a digital asset can be made effective against third parties by control of the digital asset.

Please see our response to Principle 6 for a discussion of the issues associated with control over a digital asset. In this section of our response, we only consider questions of "control" insofar as they relate to secured transactions.

The definition of "control" in Principle 6 requires the secured creditor to have both negative control (that is, the ability to prevent others from obtaining the benefit of the digital asset) and positive control (that is, the ability to obtain the benefit of the digital asset). We note that, in the discussion relating to Principle 6, "control" is described as being equivalent to "possession" in the case of tangible property. In the context of secured transactions, we suggest that it may be appropriate to accept a lesser form of "control" to achieve a security interest over a digital asset which is effective against third parties. This appears to be acknowledged in paragraphs 8 and 9 of the commentary to Principle 15, in which we note the reference to control potentially being shared between the secured creditor and the debtor. We consider that the concept of "joint control" as between secured creditor and the debtor, in the context of secured transactions, may lead to significant uncertainty (particularly in the context of existing legal frameworks which rely on control). Instead, we suggest that Principle 15 should be phrased in terms of accepting a lesser form of control (as compared to the equivalent of possession).

We also note the suggestion that each State may make a policy choice as to what constitutes sufficient control to achieve a security interest that is effective against third parties. While we agree with this suggestion, we suggest that Principle 15 establishes clear minimum standards which, if satisfied, would constitute sufficient control for these purposes. We suggest that a security arrangement in which the secured creditor has negative control should be sufficient to ensure that the security interest is effective against third parties from a policy perspective. The policy behind requiring certain steps to be taken before a security interest is considered to be effective as against third parties is primarily to protect third parties acquiring the digital asset (or a proprietary interest in it) from the risk that they are acquiring an asset which is already encumbered (and which encumbrance takes priority). We consider that this policy objective would be satisfied with the requirement for negative control, without a requirement for positive control.

In the examples in paragraph 9 of the commentary to Principle 15, in which it is suggested that there would not be control, the focus appears to be on whether the secured creditor can exercise control without the consent of the debtor (that is, whether the secured creditor has positive control). For the reasons given above, we do not consider that positive control is a necessary requirement to protect the interests of third parties.

In the context of the financial markets (and, in particular, the implementation in the European Union and in the United Kingdom of the European Financial Collateral Directive), there remains some discussion as to whether the requirement for "control" is satisfied by reference to the rights and obligations of the parties (so-called "legal control"), or whether the secured party also requires the practical ability to prevent the debtor from exercising rights in respect of the collateral in breach of those contractual rights and obligations (so-called "practical control"). We suggest that it would assist legal certainty if the Principles were to identify whether both legal control and factual control are required, or whether the security should be effective against third parties if only one of these criteria

were satisfied. Similarly, we suggest that it would assist legal certainty if the Principles were to identify whether the ability of the debtor to exercise voting rights in respect of the digital asset, or to receive income, would adversely affect the secured creditor's control.

288. Comment 9

Pedro Mendoza Montano
UNIDROIT´s Correspondent in Guatemala
It is optimal that a particular and different regime has been created for security interests in digital assets. The commentary makes particular references to crypto-assets. However, it is optimal that a regime has been adopted that allows the creation of security interests that are effective against third parties, which are control-dependent and not registry-dependent. This is a particular trend that benefits commercial transactions.

Principle 16: Priority of security rights in digital assets

289. Comment 1

Spyridon V. Bazinas
Kozolchyk National Law Center
Having covered creation in Principle 14 and third-party effectiveness in Principle 15, the Principles may address priority of a security right in a digital asset in Principle 16. Also, with the suggested changes to Principles 14 and 15, Principle 15, as currently drafted, flows better.

290. Comment 2

David Gibbs-Kneller
University of East Anglia
This is another matter that should be left to domestic law.

291. Comment 3

Stéphanie Saint Pé
France Post Marché
Same as above

292. Comment 4

David Morán Bovio
University of Cádiz (Spain) / Unidroit correspondent
"That Principle received the severest critics in the different meetings. BBVA legal experts team saw that Principle as something that opens a two side world: the real one and the digitalized one. When that Principle is seen within the context of (for instance) bills of lading other difficulties appear."

293. Comment 5

Nicole Purin
Deputy General Counsel, OKX ME
Principle 16: The fundamentals of this principle is correct. It might be beneficial to expand it further, by clarifying what is intended for a method other than control.

294. Comment 6

Centre for Commercial Law at the University of Aberdeen
University of Aberdeen
We note the justifications given for a security right made effective against third parties by control having priority over a security right made so effective by another method. On balance, we are minded to agree. We note that control in this context may be considered equivalent to the possession of tangible/corporeal assets, which in a number of systems can give priority to a security holder ahead of such a creditor who has obtained a security over the assets by another means. In para 3 of the Commentary, it is stated that while, under Principle 8, a secured creditor may be an innocent acquirer only if they act without knowledge of a competing interest, the effect of Principle 16 is that the secured creditor that takes control would have priority 'over one that registers irrespective of knowledge'. While we accept that this is the direct result of principle 16, we wonder whether the contrast with Principle 8 should be more expressly and strongly justified here. Of course, the whole concept of security rights involves parties trying to obtain priority over other creditors and this competition between compatible but ranked interests differs from ownership. It could be noted that if there is a legitimate means, such as control, which enables one secured creditor to have priority

over others, they should be able to use that to gain an advantage, due to the nature of security rights, even if they are not in good faith.

295. Comment 7

Bernadette Harkin
Ashurst LLP
Principle 16 suggests that a security right that is made effective against third parties by control has priority over a security right that is made effective by a different method. This principle is similar to the position under English law where, as a general matter, a fixed charge over an asset takes priority over a floating charge, despite the floating charge having been entered into previously. While we agree with this general principle, we believe that there are some nuances: • We suggest that an exception to the rule applies if the secured creditor which acquires control had actual knowledge of the prior security interest. • We believe that the assumption underlying Principle 16 is that the secured creditor obtains exclusive control (that is, the level of control described in Principle 6, and which requires both positive and legal control). If a lesser form of control (or "shared" control as described in Principle 15) is accepted as a means of ensuring effectiveness of the security against third parties, it may not be appropriate for the secured creditor to have priority over other security interests (and a more complex system of priorities may be required to address competing security interests, each of which achieves a lesser form of control).

296. Comment 8

Pedro Mendoza Montano
UNIDROIT´s Correspondent in Guatemala
The related Principle indicates that security rights that are exercised by means of control take precedence over security rights that are constituted by means of registration. The person who controls the digital asset has an advantage over any other means by which a guarantee may be exercised. While it is true that the comments indicate the reasons for which it was decided to adopt this criterion, it is important to emphasize that it may lead to a lack of legal certainty. The reason for this is based on the fact that the purpose of the security interest registry is precisely to generate third-party effectiveness through publicity of the security interest, verifying which person has the best right over the asset subject to the security interest based on the time at which the security interest was generated. However, the criterion adopted violates this principle, since persons that create a security interest over an asset that is already subject to a prior security interest may have a preferential right over the asset. This would generate that the person that first constituted the guarantee would make decisions based on a false projection of what may happen with the asset. It is for this very reason that, in different legal systems, temporality takes precedence over the form in which the security is exercised. The foregoing may generate a real legislative challenge to adopt the regulations proposed by means of the principles.

Principle 17: Enforcement of security rights in digital assets

297. Comment 1

Spyridon V. Bazinas
Kozolchyk National Law Center
It may need to be clarified whether the good faith and reasonable commercial standards are also left to other law or these are standards that the Principles introduce, leaving other enforcement-related issues to other law.

298. Comment 2

Stéphanie Saint Pé

France Post Marché
Same as above

299. Comment 3

Nicole Purin
Deputy General Counsel, OKX ME
Principle 17: 17 (i) and 17 (ii) These sections appear comprehensive and the rationale in the commentary provides a detailed explanation of the operability of this principle.

300. Comment 4

Centre for Commercial Law at the University of Aberdeen
University of Aberdeen
"We generally agree with this principle on the enforcement of security rights in digital assets; however, it may be worthwhile to further justify its inclusion in light of the existence of Principle 18, which provides that in respect of procedural matters, including enforcement, other law applies. In addition, Principle 17(1) specifies that the relevant other law includes 'any requirement to proceed in good faith and in a commercially reasonable manner'. While we understand the desire to include this statement, the use of 'and' between the possibilities should be replaced with 'or' or 'and/or' to undeniably include other law which requires e.g. parties to proceed in good faith but where there is no specific requirement for acting in a commercially reasonable manner, or vice versa."

301. Comment 5

The Centre for Robotics, Artificial Intelligence & Technology Law
SVKM's Pravin Gandhi College of Law; Student Committee
"Principle 17 does not prescribe particular enforcement methods for security rights in digital assets. Generally available methods provided under other law would apply, including judicial enforcement. As far as my understanding goes principle 17 illustration means to say If someone borrows money and uses digital assets as collateral, they can give the lender control over the assets through a multi-signature arrangement. This means that the lender and another party both have to agree for any changes to be made to the assets. If the borrower defaults on the loan, the lender can take full control of the assets and either use them to pay off the loan or sell them to recoup the money. However, any other legal requirements for accepting the assets as payment would still apply. This seems a little too empowering for the secured creditor and puts them in a difficult position when terms like "commercially reasonable manner" is open to interpretation. When taking back collateral, the lender must follow certain rules like acting fairly, letting the borrower know, and distributing any money in the right order. If they don't, they could get in trouble and have to pay damages. How a security right is established can affect how easy it is to take back the asset if the borrower doesn't pay back the loan. If the lender has control over the digital asset, it's usually easy to take it back without needing the borrower's help. But if the lender only has a registration of the asset, it's harder because the borrower still has control. The lender might need to go to court to get control of the asset if the borrower won't give it up, which is like trying to get a physical asset from someone who won't give it back. There might also be another lender who has priority, which can complicate things. The rules for taking back assets in these situations are determined by the law. In terms of digital assets it is very complicated to establish who should have control of the asset because such assets are under the obligation of the owner such as the use of passwords or other such methods now if such methods are misused could transfer the ownership to anyone and court is often fair in liquidation process and ensure most creditors get their fair due in accordance with the legal principles Under principle 16 it would be unfair to give control to the creditor and ensuring registering the security right instead of taking control of the assets would be in the equal interest of both the parties. The secured creditor would have control over the digital assets and would not need to register its security interest. In this case, the secured creditor would still have its security interest even if the borrower files for insolvency which is secure but unfair to the debtor, and the creditor can register it and get back his dues from the court order the secured creditor would have used the control method to make the security interest effective against third parties. This means that the secured creditor would have control over the digital assets and would not need to register its security interest. In this case, the secured creditor would still have its security interest even if the borrower files for insolvency. But the registration process exists for a reason.

Under principle 16 it would be unfair to give control to the creditor and ensuring registering the security right instead of taking control of the assets would be in the equal interest of both the parties. The secured creditor would have control over the digital assets and would not need to register its security interest. In this case, the secured creditor would still have its security interest even if the borrower files for insolvency which is secure but unfair to the debtor, and the creditor can register it and get back his dues from the court order."

302. Comment 6

Bernadette Harkin

Ashurst LLP

We agree with the statement, in paragraph 4 of the commentary to Principle 17, that control is a facilitator of enforcement upon default, so that if a security right is made effective against third parties by control, enforcement by the secured creditor is likely to be reasonably straightforward.

Similar to the position in Principle 16, we believe that the assumption underlying Principle 17 is that exclusive control is achieved. Further consideration would be required if a lesser form of control is acceptable.

We also note that Principle 17 does not currently lay down any minimum requirements of the enforcement rights that should be available for secured creditors, instead deferring to the existing legal framework of a State's law (as the relevant State may choose to amend to cater for digital assets). Principle 18 takes a similar approach in relation to procedural law.

We note that obtaining maximum harmonisation of legal regimes is not the intended effect of the Principles. However, we consider that there is a strong case for the Principles to establish minimum standards for enforcement rights and procedural steps in respect of digital assets, consistent with the approach taken in other Principles. For example, it may be possible to identify certain categories of digital asset which, if certain conditions (such as control) were satisfied, the secured creditor should have the power to either sell or appropriate the digital asset without the requirement to obtain a court order or other procedural steps. This would be similar to the approach taken by the European Union and the United Kingdom in relation to the European Financial Collateral Directive.

If obtaining this level of harmonisation is not desirable or possible, we suggest that the Principles give clear guidance that States ensure that their existing laws are amended such that the fact that an asset

is represented in digital form does not preclude the application of those existing laws insofar as they apply to questions of security enforcement or procedure.

303. Comment 7

Pedro Mendoza Montano

UNIDROIT´s Correspondent in Guatemala

Paragraph 2 speaks exclusively of court or public authority orders. But it does not mention anything relating to orders of arbitral tribunals, or analogous private enforcement methods. For example, Guatemala's law on chattel collateral allows for private methods of enforcement of chattel collateral. In such a scenario an arbitral tribunal, if expressly empowered, could have the power to carry out the private enforcement process mutually agreed upon by the parties. Thus, an order, issued in the context of a private enforcement, should be taken into account by the custodian for purposes of enforcing the obligation.

However, it is necessary to consider whether it is prudent for the purposes of Article 2 to provide arbitral tribunals with this power, or whether it is necessary to resort to judicial assistance to give these orders to the trustees.

Principle 18: Procedural law including enforcement

304. Comment 1

Dr Benjamin Hayward
Monash University
Principle 18 provides, in unqualified language, that '[i]n respect of procedural matters … relating to digital assets, other law applies'. The concept of other law is defined as meaning 'a State's law to the extent that it is not Principles law' (Principle 2(4)), whilst principles law 'means any part of a State's law which falls within the scope of these Principles' (Principle 2(3)). Principle 18's current unqualified drafting is problematic given that the applicable law rules contained in Principle 5 are themselves likely to constitute procedural rules. It is generally accepted that private international law is procedural law. Thus, Principle 18's current text is inconsistent with the inclusion of Principle 5 in the instrument currently under examination. For this reason, I recommend including a qualification to the current text of Principle 18 so that it provides that other law applies 'unless otherwise provided for in these Principles'. This would ensure the consistency and the non-problematic co-existence of Principle 5 and Principle 18, without causing any other unintended consequences for the operation of other provisions contained in the Principles.

305. Comment 2

Spyridon V. Bazinas
Kozolchyk National Law Center
As already mentioned, the issue of the identification of a person in control in a proceeding and the presumption established in Principle 7 should be included here and excluded from the other procedural law matters left to other law.

306. Comment 3

Nicole Purin
Deputy General Counsel, OKX ME
Principle 18: The position on procedural law/enforcement is clear - other law applies and this approach appears to the be most efficient one.

307. Comment 4

Centre for Commercial Law at the University of Aberdeen
University of Aberdeen
We note that there may be some dispute about what constitutes procedural matters and what constitutes substantive law in different systems. One potential solution might be to include a provision on the distinction between procedure and substance, similar to e.g. Article 5 of the Proposal for a Regulation of the European Parliament and of the Council on the law applicable to the third-party effects of assignments of claims, harmonising a non-exhaustive list of procedural issues. Although the Commentary provides some guidance on this, the Commentary does not have the same legal value (or force) as the Principles, as we noted above in our general comments. Further, the weight given to the Commentary might differ from one country to another. Therefore, providing such a provision under the Principles would be helpful although we recognise that it is probably not possible to entirely avoid divergent interpretations in the present context. In any event, the approach of the Principles means that anything not dealt with by them is covered by other law. As such, it could be queried whether Principle 18 is actually required. However, on balance, we think it is helpful to have an express statement on procedural law, to avoid ambiguity or uncertainty.

308. Comment 5

The Centre for Robotics, Artificial Intelligence & Technology Law
SVKM's Pravin Gandhi College of Law; Student Committee

"In Section VI it is made clear that the court proceedings should be carried out under the procedural law of the state. The Proceedings are divided into categories, first includes proceedings which are not enforcement proceedings through which a person can prove that they have a control over digital assets. The second category includes Execution. The Commentary also states that in order to enforce a order of the court, a person appointed by the court should take over those assets. It also states that digital assets have, it also explains why it is difficult to trace a digital asset for a claim as owners might be in different jurisdiction. Effect of insolvency on proprietary rights in digital assets.
This section 19 deals with the proprietary rights of the assets and a person who has a proprietary right in a digital asset can assert that right against third parties. The commentary also explains about various situations where an individual can assert his proprietary rights. it also explains how a state's law may prescribe that fiscal authorities have priority over secured and unsecured creditors in relation to certain assets of the insolvent person, or that the costs of the insolvency proceedings have preferential status over other secured and unsecured creditors' claims on the insolvent estate. The principle out in 19(2) b concerns the fraudulent transfers of digital assets. The third example explains about insolvency. The principal has been explained by giving three situations,
1. The insolvency of a person who 'owns' a digital asset
2. Insolvency of a person, who, as a debtor, has granted to its creditor a security right in a digital asset as collateral.
3. Insolvency of a custodian, who controls a digital asset for a client. The client will wish to retrieve its digital asset.
In the recent times as more and more people are investing in digital assets and the trading is increasing for the government in order to trace the assets they will have to work in close proximity with the platforms on which the digital assets are being traded. The Government can also make sure that each individual has a digital assets trading id, an equivalent to a Pan Card that ca be used to trace the trading history of an individual and which can help the enforcement agencies to trace the source and the past as well as the current ownership of the asset. This will be beneficial for the agencies but also it should be kept in mind that the records of the individual are safeguarded and a court order should be mandatory for the agencies to access these records."

309. Comment 6

Bernadette Harkin
Ashurst LLP
Please see our response to Principle 17 which explains our view that there is a strong case for the Principles to establish minimum standards for enforcement rights and procedural steps in respect of digital assets, consistent with the approach taken in other Principles. Our concern is that if States are allowed to adopt their own procedural law without any minimum standards/requirements, any benefits that have been achieved by the earlier Principles might be undone as a result of those procedural requirements. For example, there may be a difference in view as to whether a perfection requirement (such as giving notice or registering security) constitutes a way of achieving effectiveness as against third parties (and is therefore addressed by Principle 15, which says that "control" should be sufficient) or whether it is a procedural matter (such that, even if Principle 15 were adopted and "control" over the digital asset were obtained, an additional "procedural" requirement (such as giving notice and/or registering the security) is adopted by the State so that "control" of itself is no longer sufficient. Particular challenges to enforcement also exist because - as noted in paragraph 7 of the commentary to Principle 18 - it is a feature of digital assets and the systems or platforms on which they are recorded that the people who control them may be located in different jurisdictions, and that the relevant situs can easily be changed. Unfortunately, judgments of national courts are often extremely difficult to enforce internationally. However, the situation is better for arbitral awards. The New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards of 10 June 1958 facilitates international enforcement in more than 160 States. We therefore believe that consideration should be given to specifically identifying the benefits of arbitration for efficient enforcement.

310. Comment 7

Pedro Mendoza Montano
UNIDROIT´s Correspondent in Guatemala
Principle 18 establishes that the principles shall not apply to procedural matters and therefore no comment is necessary.

Principle 19: Effect of insolvency on proprietary rights in digital assets

311. Comment 1

Eric de Romance
I have difficulties to imagine how the ranking could be working on digital assets. As the control on the digital asset is one of the main ways to make the security effective, how could a second ranked creditor could take control when the control is already with the first ranked creditor ? The multi sig solution cannot manage more than one ranking unless the control is automatically switched through a smart contract to each rank when the higher level is fully repaid ?

312. Comment 2

Spyridon V. Bazinas
Kozolchyk National Law Center
Principle 19 is fine in dealing with third-party effectiveness of security rights in digital assets in insolvency proceedings (see recommendation 238 of the UNCITRAL Legislative Guide on Insolvency Law and article 35 of the UNCITRAL Model Law on Secured Transactions). But, to be complete, it should also provide that, subject to other provisions of insolvency law, a security right retains even after commencement of insolvency the priority it had before commencement of insolvency (see recommendation 239 of the UNCITRAL Legislative Guide on Insolvency Law and article 35 of the UNCITRAL Model Law on Secured Transactions.

313. Comment 3

Martha Angélica Alvarez Rendón
Mexican Ministry of Foreign Affairs
Principle 19 governs concerns pertaining to the insolvency of a digital asset's owner. Even though there are elaborate explanations in the commentary, subparagraph (1) of this principle appears to state that a property right over a digital asset can be enforced against the insolvency representative, creditors, and any other third party involved in the insolvency proceeding. Any right (property or guarantee or derived from a different contract) that a debtor subject to an insolvency proceeding has over a digital asset must be included in the estate and will be exercised by the insolvency representative against whoever turns out to be the obligee.

314. Comment 4

Stéphanie Saint Pé
France Post Marché
Please see above. Making the proprietary right under these principles being bankruptcy remote raises concerns. Debtors are under the obligations to act in good faith and to facilitate the bankruptcy receiver progression in the procedure. This imply that access to crypto-keys or to the assets should not be different that granting access to other type of assets. Proprietary rights shall not be considered as a retention right (droit de retention) enforceable against the bankruptcy receiver and more generally against the creditors. In addition, as regards to security interests under the collateral directive as transposed in certain EU Member States' national law, secured creditors under a financial collateral arrangement may benefit from preference (ranking) so as to have a bankruptcy remote right over the assets, including in the context of insolvency proceedings. These possibilities are already foreseen in certain national law transposing the collateral directive in Europe.

315. Comment 5

David Morán Bovio
University of Cádiz (Spain) / Unidroit correspondent
The collision between this Principle and National Law was judged as quite difficult by different experts.

316. Comment 6

Nicole Purin
Deputy General Counsel, OKX ME
Principle 19: 19 (1) and 19(2) This principle is clear and appears to be the right conclusion/legal outcome. No further material comments on this section. The commentary is well illustrated and the 3 typical situations analysed (Commentary para 4-6) provide clarity of interpretation.

317. Comment 7

Faruk Kerem Giray
Correspondent of Turkey
"We recommend a new paragraph for art 19 in Principles. Our new paragraph will be " the costs of insolvency proceedings" "

318. Comment 8

Centre for Commercial Law at the University of Aberdeen
University of Aberdeen
We agree with the content of this principle, but attention should be given to whether Principle 19(1) should also include the subject of the insolvency proceeding (the debtor) in the list of parties against whom a proprietary right is effective in an insolvency proceeding. We acknowledge that the debtor is not a 'third party', but the wording could easily be adjusted to include the debtor. It is noted in the Commentary at para 1 that the debtor may be the person with the proprietary right or it might be another party. Particularly if another party has the proprietary right, it is important that such a right is (or remains) effective against the debtor in an insolvency proceeding. Any doubt cast on this by the provision in its current form should be addressed. In reality, the issue may not matter so much in proceedings where the debtor no longer has control over their assets, but for debtor-in-possession proceedings, in particular, it may be of great significance. At the very least, the commentary should more clearly specify why the debtor is not included on the list and state that the proprietary rights will be effective against the debtor in an insolvency proceeding too.

319. Comment 9

Finance, Competitiveness & Innovation Global Practice
World Bank Group
Paragraph 3 in commentary of Principle 19 outlines three common situations in which Principle 19 applies: (1) The insolvency of a person who 'owns' a digital asset; (2) insolvency of a person, who, as a debtor, has granted to its creditor a security right in a digital asset as collateral; and (3) insolvency of a custodian, who controls a digital asset for a client. Due to the recent insolvency of crypto lending companies and the related issue of handling collateral by such secured creditors, it is recommended to outline a separate category specifically addressing this problem. This was previously discussed in a previous comment in relation to Principle 15.

320. Comment 10

Cassandre Vassilopoulos & Mark Kepeneghian
Kriptown
"Why specify?"

321. Comment 11

Bernadette Harkin
Ashurst LLP

"We agree with the general principle that where a person has a proprietary right in a digital asset (and where that right has been made effective against third parties) its status should not be altered simply because of the intervention of an insolvency proceeding. What should, or at least may, alter as a result of an insolvency is the effectiveness of that proprietary right and the relative ability of the person holding it to have others (in particular insolvency custodians) act upon it. As such, we agree that the pre-insolvency effectiveness as a matter of law should continue in insolvency, as per Principle 19(1). We note that Principle 19(2) does not include an exhaustive list of substantive or procedural rules of law applicable by virtue of insolvency proceedings. In particular, Principle 19(2)(c) covers a wide range of different rights, powers, and duties that may apply in a given insolvency proceeding (noting that bespoke insolvency/resolution regimes exist for regulated financial services companies which expand or amend the application of these powers, rights and duties)."

322. Comment 12

Pedro Mendoza Montano
UNIDROIT´s Correspondent in Guatemala
Principle 19 is a natural evolution of the control characteristics defined in Principle 6, so that enforcing a right of control over a digital asset also implies an erga omnes effect against any other person holding a right over this digital asset.

Any other comments?

323. Comment 1

David Morán Bovio
University Professor / University of Cádiz (Spain) / Unidroit Correspondent
I suggest to revise the use of capital letters for State/state along the document. I read "state" at pag. 39, marginal 2. But in pag. 40, marginal 7, "State". Again "state" or "State" in different instances (it seems there is not a rule). No General Comment. It is a typo or a lack of unity on the use of the word "principle" to refer to Draft Unidroit Principles on Digital Assets, within the text: Page 42, Principle 12, Marginal 2, writes: "This principle...". But Principle 17, Marginal 1 says: "This Principle" as well as Marginal 5 (at page 55).

324. Comment 2

ANDRES ALONSO QUINTERO RODRIGUEZ
Personal data approach is necessary.

325. Comment 3

David Gibbs-Kneller
University of East Anglia
If the innocent acquirer is going to take priority, specific principles should be put in place regarding the original owner's rights against the custodian for wrongful transfers, similar to those in the UK's Uncertificated Securities Regulations 2001.

326. Comment 4

Spyridon V. Bazinas
Kozolchyk National Law Center

Thank you for the opportunity to submit comments. We are at your disposal for any clarification that may be needed or any drafting suggestion.

327. Comment 5

Takahito Kawahara
Government of Japan (MOFA)
We thank you for this opportunity to comment and look forward to the final draft of the Principle.

328. Comment 6

Stéphanie Saint Pé
France Post Marché
We reiterate our position and strong concern around the absence of certain contributors. The adoption of these principles could have major consequences under private law and a global consultation involving all contributors is mandatory in this context. For the same reason and based on the few elements listed above, we reiterate our position concerning the merits of the principles (please refer to comments on Section 2). If Unidroit maintains these principles and pushes for an enforcement of these principles without engaging in appropriate discussions with signatory members, these principles would solely be considered as mere non-binding/high-level guidelines. We understand that HCCH PIL and UNIDROIT started to work on a joint-work initiative on law applicable to cross-border holdings and transfers of digital assets and tokens with a focus on Principle 5. We are not favourable to that initiative which should be aborted for obvious reasons.

329. Comment 7

Johan David Michels and Professor Christopher Millard
The Cloud Legal Project, Queen Mary University of London
Helpfully, the Principles clarify that digital assets would form part of an insolvent person's estate. As UNIDROIT explains regarding the owner of a digital asset: "When this person becomes insolvent, the digital asset forms part of that person's estate, since the person's proprietary right remains effective on insolvency […]. Under typical insolvency law, the insolvency representative can infringe upon an insolvent person's proprietary rights in that she can exercise an insolvent person's proprietary rights for the benefit of that insolvent person's creditors. Thus, the insolvency representative may assume control over the insolvent person's digital assets, sell those assets and distribute the proceeds amongst the creditors." UNIDROIT also explains what happens when a person's digital asset "is maintained for him by a custodian": "the insolvency representative, as above, will want to retrieve and sell the digital asset. […] if the applicable insolvency law allows her to take control of the insolvent person's assets, she will be able to instruct the custodian to transfer the asset to her control or to a third party to whom she has agreed to sell the asset." However, UNIDROIT does not address whether digital assets would also form part of a deceased person's estate. The Principles implicitly suggest that they would. If digital assets are property, then they should fall within a deceased's person's estate. It would be better if UNIDROIT spelled this out explicitly, since practitioners, legal representatives, and heirs currently face legal uncertainty under succession law. In September 2021, working with the Society for Trust and Estate Practitioners ('STEP'), we surveyed 500 trust and estate practitioners about their experiences with clients' digital assets. (STEP is a global professional body for advisers who specialise in inheritance and succession planning. The survey had 507 respondents. Around half of the respondents were legal professionals;

the remainder were mainly trustees, tax advisors, and wealth/investment managers. 40% of respondents were from the UK and Ireland; the remainder were from around the world, including Canada, Continental Europe, Asia, the US, and Australasia.)

Our survey findings illustrate the legal uncertainty around post-mortem access to digital assets, including data stored in the cloud. We set out our full findings and methodology in the survey, which is available online. (J.D. Michels, S. Hartung, and C. Millard, "Digital Assets: A Call To Action", (2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3925439.) We found that advising on digital assets had become a common feature of modern estate practice. Nearly 60% of respondents had dealt with questions from clients about digital assets. 20% dealt with digital assets on at least a monthly basis. More than 90% of respondents thought that client questions about digital assets would increase in future, with over 60% predicting a large increase. Trust and estate practitioners reported that the four types of digital assets clients asked about most were: social media accounts (54%); email accounts (48%), crypto-currencies (45%), and cloud storage services (44%).

Digital assets can give rise to serious challenges under succession law. Nearly a quarter of respondents stated that their clients had faced difficulties when trying to obtain access to the digital assets of a deceased person. Such problems seemed to stem, at least in part, from the fact that digital assets are often stored and managed by a third party, such as a social media, email, or cloud service provider. 67% of respondents cited a lack of clarity regarding property rights in digital assets as one of the major obstacles to obtaining access to digital assets stored in the cloud. Finally, we asked respondents for their views on what needs to change in the future to ensure effective estate planning and estate administration for digital assets. More than 220 respondents provided qualitative feedback. The most common theme in their responses was the need for legal reform (raised by 30% of responses), including clear rules in relation to property rights and rights of access by personal representatives. Taken together, these findings show that the question of digital assets under succession law merits serious attention. They also highlight the concerns we have raised above about how the Principles apply to other types of digital assets, such as emails.

Admittedly, the question of digital assets under succession law is not solely determined by property rights, since the use of a cloud service is also covered by a contract. This was reflected in our survey, with just over 40% of respondents pointing to restrictive standard contracts and terms of service as an obstacle. That said, clarity in terms of property rights may still be beneficial for two reasons. First, the existence of property rights can be fundamental, since it can determine whether succession law applies to digital assets at all. Recognising digital assets as property would make them subject to the same rules on succession as other items of property. This does not mean that heirs would always have an automatic right of access to a deceased person's digital assets. Instead, service providers could still use contracts to depart from the default rules of succession law. For example, service providers might use their contracts to ensure that a customer's digital assets are destroyed after their death, instead of passing to the customer's heirs. Providers might do so to assure customers that their privacy will be protected post-mortem. In sum, property rights would ensure that digital assets are subject to the default rules of succession law, albeit subject to any contracts agreed between customers and service providers. Second, clarity in terms of property rights might encourage cloud providers to develop better legal and technical solutions to facilitate post-mortem access. For instance, in 2019 we found that the contracts for 85% of cloud services commonly used by UK consumers did not specifically address what happens to customer accounts or customer data after the customer dies. (J.D. Michels, C. Millard, and S. Joshi, "Beyond the Clouds, Part 1: What Cloud Contracts Say About Who Owns and Can Access Your Content" (2019), https://ssrn.com/abstract=3386609.) This suggests that many cloud providers have not engaged fully with their role as intermediaries of digital assets under succession law. (See further J.D. Michels and C. Millard, "Digital Assets in Clouds" in: C. Millard, Cloud Computing Law (OUP, 2021).)

- Recommendation: We recommend that UNIDROIT clarifies how the Principles apply to digital assets under succession law.

330. Comment 8

David Morán Bovio
University of Cádiz (Spain) / Unidroit correspondent
The written words are focused only on critical aspects.

331. Comment 9

Sumant Batra
Insolvency Law Academy
"Principle 19(1) provides as follows: "(1) A proprietary right in a digital asset that has become effective against third parties under Principles law or other law is effective against the insolvency representative, creditors, and any other third party in an insolvency proceeding." From the reading of Principle 19 and the commentary, it appears that the intention of Principle 19 is that the proprietary rights in a digital asset should remain unaffected by insolvency. Therefore, the ambiguous drafting of Principle 19 may be simplified to reflect the said intention. The text of Principle 19(1) may be amended as follows: "A proprietary right in a digital asset that has become effective against third parties under Principles law or other law is effective shall remain unaffected on the commencement of insolvency proceedings and will remain effective against the insolvency representative, creditors, and any other third party in an insolvency proceeding." "

332. Comment 10

Nicole Purin
Deputy General Counsel, OKX ME
Overall, the Principles are well structured/comprehensive and concise. It would be beneficial to expand a number of sections and widen the definitions. A great effort by the working group. We look to receiving a further draft for additional inputs.

333. Comment 11

Faruk Kerem Giray
Correspondent of Turkey
"Kind regards Prof.Dr. Faruk Kerem Giray (Istanbul University Law Faculty) Res.Assist. Ahmet Kaan Yılseli (Istanbul University Law Faculty)"

334. Comment 12

Gilles Cuniberti
European Association of Private International Law
The google form has rejected the comments on Principle 5 for being too long. The comments will be forwarded directly to the Secretary General of UNIDROIT

335. Comment 13

Centre for Commercial Law at the University of Aberdeen
University of Aberdeen
"This response is provided by a working group of the Centre for Commercial Law at the University of Aberdeen (Scotland, UK). The working group consists of Dr Burcu Yüksel Ripley, Dr Alisdair MacPherson, Dr Michiel Poesen, Ms Alanoud Albargan and Mr Le Xuan Tung, with Dr Onyoja Momoh as an observer. The CCL brings together researchers across the broad groups of corporate and commercial law, international trade law, intellectual property and technology law, and dispute resolution. The law relating to digital assets is one of the research areas of the CCL. Working groups and members of the CCL have responded to various calls for evidence and consultations in relation to digital assets and electronic trade documents (see https://www.abdn.ac.uk/law/research/centre-for-commercial-law/public-policy-stakeholder-engagement-1109.php) and published widely in the area to help raise awareness of the issues and contribute to the development of solutions."

336. Comment 14

Gerard GARDELLA
HAUT COMITE JURIDIQUE DE LA PLACE FINANCIERE DE PARIS
Created at the initiative of the French Financial Markets Authority (AMF) and the Bank of France, the High Committee for Financial Market Legal Studies (HCJP) conducts independent legal analyses and makes them public. Its members include lawyers, academics, and other qualified individuals. Its mission includes: (i) recommending proposals for reforms to enhance the legal competitiveness of the Paris financial market; (ii) assisting and supporting French public authorities in negotiating European and international legislation and regulation; and (iii) strengthening legal certainty by providing answers to questions of interest to both public and private financial sectors. The HCJP has contacted the UNIDROIT secretariat on November 18, 2021 to request that two of its members be accepted as observers in ongoing work on digital assets, given the lack of French experts on the subject.

337. Comment 15

Cassandre Vassilopoulos & Mark Kepeneghian
Kriptown
It is unfortunate that these Principles are not adapted to the diversity of the laws of different countries. It is regrettable that common law countries are favoured over civil law countries. Furthermore, the concept of DLT is not mentioned sufficiently. Consequently, there is a risk that these Principles may be extended to inappropriate matters.

338. Comment 16

Silvana Fortich, Anabel Riaño (Docentes investigadoras Departamento de Derecho Civil); Adriana Castro (Directora Departamento de Derecho de los Negocios); Valeria Facio-Lince, Juan Alejandro Solano y Juan Sebastián Ortiz, monitores Departamento de Derecho de los Negocios
Universidad Externado de Colombia
"Comments were prepared with the contribution of Silvana Fortich, Anabel Riaño (research professors Civil law Department); Adriana Castro (Director Business Law Department); Valeria Facio-Lince, Juan Alejandro Solano y Juan Sebastián Ortiz (Law students, student assistants at Business Law Department), Universidad Externado de Colombia. Some additional comments regarding the final draft principles may require further discussion with insolvency and secure transaction experts."

339. Comment 17

Pedro Mendoza Montano
UNIDROIT´s Correspondent in Guatemala
As stated before, and to serve as a conclusion, I can state that the principles cover a fairly broad concept of "digital asset". So the illustrations, comments or interpretations of each of the principles may vary depending on the digital asset in question. Also, these principles have a dense technical content and that is intended for some technologies in particular (DLT and Blockchain), although the scope of application is broader. The implementation of this law, at a domestic level, can be complex, since it implies reviewing possible conflicts with other regulations (Intellectual Property, Insolvency, Private International Law). It seems that these principles seek to create their own legal regime, isolated from domestic law, to regulate digital assets, which will have long-term consequences for their possible application.

340. Comment 18

Patricia Cochoni

Parfin Pagamentos Ltda.
We are very appreciative of Unidroit for engaging and fomenting discussions on these key topics related to digital assets and we hope our feedback will assist in developing a secure and transparent framework for the digital asset space.We welcome the opportunity to discuss this further with you whenever convenient. Please do not hesitate to reach out to us if you need any further assistance.

341. Comment 19

Lukas Wagner / Melih Esmer
NYALA Digital Asset AG/ EBS Law School
We thank you again for the opportunity to provide these comments and remain available for clarifications.

Annexe 2 – EAPIL Paper

(The following pages contain a position paper submitted by the European Association of Private International Law (EAPIL) in response to the public consultation)

WORKING GROUP ON THE LAW
APPLICABLE TO DIGITAL ASSETS

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EAPIL
The European Association of Private International Law

POSITION PAPER

In response to the public consultation on

THE UNIDROIT DRAFT PRINCIPLES AND COMMENTARY ON DIGITAL ASSETS AND PRIVATE LAW

Preliminary Draft subject to the approval of EAPIL
February 19th, 2023

The European Association of Private International Law (EAPIL) is an independent and non-partisan organisation established in 2019 as a non-profit association under the law of Luxembourg with the aim of promoting the study and development of private international law. It does so by fostering the cooperation of academics and practitioners in European countries and the exchange of information on the sources of the discipline, its scholarship and practice. EAPIL has currently more than 400 members, mostly academics and practitioners, based in more than 60 countries.

For the purpose of taking part in the discussion launched by the UNIDROIT's public consultation on its draft principles on digital assets and private law, EAPIL has established a Working Group to issue this position paper, which focuses on the private international law aspects of the draft principles..

The paper was primarily drafted by Matthias Lehmann, Gilles Cuniberti and Antonio Leandro, with the contribution of Francesca Villata, Pedro de Miguel Asensio, Teemu Juutilainen, Poomintr Sooksripaisarnkit, Kirsten Henckel, Burcu Yüksel Ripley, Johannes Ungerer, Vassiliki Marazopoulou, Konstantinos Rokas, Ioannis Revolidis, Gustavo Moser, Jorge Erazo and Frederick Rielaender. The UK Law Commission participated as an observer.

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Contents

A. Introduction

1. The purpose of this Position Paper is to comment on the private international law aspects of the UNIDROIT Draft Principles on Digital Assets and Private Law published in January 2023 (hereafter 'the Draft Principles' or 'the Principles').

B. Nature of Instrument

2. The Draft Principles do not contain any provision and comment clarifying their nature. This is remarkable, as many similar instruments such as the UNIDROIT Principles of International Commercial Contracts ('UPICC') and the Hague Principles on Choice of Law in International Contracts ('Hague Principles') include each a preamble and comments addressing the issue.

3. The Commentary of the Draft Principles do include certain statements which indirectly address the issue, but they are not fully consistent. The Introduction to the Commentary recommends "*to States to adopt legislation consistent with these Principles*" (para. 4) and explains that the Principles should be "*included*" and "*implemented*" in the laws of States (para. 8). Principle 5(2)(a) provides that "proprietary issues in respect of digital assets, and in particular their acquisition and disposition, are always a matter of law". This suggests that the nature of the Principles is that of a Model for legislators, which

will be applied as national law once implemented in domestic legislation. This is one of the functions identified by both the UPICC and the Hague Principles.

4. However, Principle 5(1)(c) provides that, in both Option A5(ii) and Option B(i), in the absence of any choice of the applicable law, the Principles apply, in whole or in part. The Commentary clarifies that the goal of these provisions is not to provide for the application of a national law implementing the Principles, but the Principles as such, i.e. as 'rules of law' or non state law (Commentary to Principle 5, para. 5). This is "*[b]ecause these Principles are generally accepted on an international level as a neutral and balanced set of rules*" (idem).

5. The proposition that the Draft Principles could be applied autonomously, as non state law, raises three major issues. The first is that, at the present time, there is no general acceptance of the power of *courts* to apply non state law as the rules governing a given legal issue. In the European Union, introducing such power was proposed, but ultimately rejected, in the legislative process leading to the adoption of the Rome I Regulation.[1] While the Hague Principles propose to innovate in this respect, the innovation was only endorsed, to the knowledge of the authors, by one State at the present time, Paraguay.[2] In contrast, such power has long been recognised in the context of international *arbitration*.[3]

6. The second issue is that even in the context of arbitration, the power of arbitrators to apply non state law is only widely recognised where the parties have actually chosen 'rules of law'. In contrast, the power of arbitrators to apply non state law *in the absence of choice by the parties* is not as widely recognised.[4] The Hague Principles only contemplate the possibility of choice of 'rules of law' by the parties, for the simple reason that their scope does not extend to the determination of the applicable law in the absence of choice by the parties.

7. Yet, the current proposal of the Draft Principles is to resort to the Principles as non state law precisely in the absence of any choice to that effect by the parties. It is submitted that this would be a far reaching innovation, and that it would unwise to use this instrument to promote it. In contrast, it would be much less controversial to allow a direct choice of the Principles by the parties or the system/platform (Principle 5(1)(a) and (b)), with the caveat that the competent adjudicator should have the power to decide disputes on the basis of 'rules of law' (non state law), which in practice would point to arbitral tribunals.

[1] The Proposal of the European Commission expressly allowed for the choice of non state law (with certain qualifications). This provision was ultimately rejected, and Recital 13 of the Preamble to the Rome I Regulation only recognizes that non state law can be incorporated by reference in contracts, but not govern them.
[2] Paraguay Law on the Applicable Law to International Contracts (2015), art. 5.
[3] See, in particular, Article 28 of the Model Law on International Commercial Arbitration, which provides that the applicable rules on substance can be 'rules of law', as opposed to (national) 'law'.
[4] Article 28(2) of the UNCITRAL Model Law on International Commercial Arbitration only recognizes the power of arbitrators to apply a law designated by a choice of law rule.

8. A third issue is that the subject matter of the Draft Principles concerns *proprietary issues*. Unlike contractual issues, the power of the parties to provide for the applicable law is not widely accepted in the field of property law (see below, Section C). The power of the parties to provide for the application of non state rules would be even more controversial. Whilst the Commentary on Principles 5(1)(a) and (b) mention that the "reliance on party autonomy is consistent with Article 3 of the Hague Conference Principles on Choice of Law in International Commercial Contracts" (para 4), it is important to note that Article 1(3) of the Hague Principles provides that "*These Principles do not address the law governing (...)* e) *the proprietary effects of contracts*". The Hague Principles are thus not suitable examples supporting subjective connecting factors (i.e. freedom of choice) for proprietary issues. This being said, arbitration laws recognise the power of arbitrators to apply rules of law chosen by the parties without distinguishing between property and contractual issues.

9. The members of the Working Group debated and were ultimately divided as to whether the Draft Principles should allow for the choice of non state law. Some members thought the Draft Principles should not address the issue. Others thought that the Draft Principles should clarify that non State law could be chosen either expressly by the parties or, failing agreement or choice by the parties, by the arbitral tribunal subject to the provisions of the applicable arbitration rules and the mandatory provisions of any applicable law.

10. If the goal of the drafters was not to allow the application of non state rules (including code), as Principle 5(2)(a) and the associated commentary strongly suggest, then the reference to 'these Principles ... or the relevant Principles or aspects of these Principles' in Principle 5(1)(c) should be deleted.

11. In contrast, if the goal of the drafters is to allow the application of non state rules (including code), then the reference in Principle 5(1)(c) to 'these Principles (…)' should instead appear in Principle 5(1)(a) and (b), which could be amended along the following lines:

    (1) Subject to paragraph (2), proprietary issues in respect of a digital asset are governed by:

        (a) the domestic law of the State (excluding that State's conflict of laws rules) expressly specified in the digital asset as the law applicable to such issues or, where the law of the competent adjudicator allows the rules applicable to the merits of a dispute to be rules of law, these Principles, or the relevant Principles or aspect of these Principles, expressly specified in the digital asset as the rules of law applicable to such issues;

        (b) if sub-paragraph (a) does not apply, the domestic law of the State (excluding that State's conflict of laws rules) expressly specified in the

system or platform on which the digital asset is recorded as the law applicable to such issues or, where the law of the competent adjudicator allows the rules applicable to the merits of a dispute to be rules of law, these Principles, or the relevant Principles or aspect of these Principles, expressly specified in the system or platform on which the digital asset is recorded as the rules of law applicable to such issues;

12. A preamble clarifying the functions or nature of the instrument could also be added for the sake of clarity, along the lines of the preamble to the UPICC and to the Hague Principles.

13. The applicable law in the absence of choice should be determined by uniform choice of law rules relying in predictable connecting factors.

C. Scope of Principle 5

14. Principle 5 is concerned with "proprietary issues in respect of a digital asset". Its scope is thus broader than the scope of the substantive rules laid down by the Draft Principles which exclude a number of issues listed in Principle 3(3). It is submitted that this difference of scope should be mentioned expressly in the text of Principle 5, for instance by adding a caveat in Principle 5(1), first paragraph: "Subject to paragraph 2 *and notwithstanding Principle 3(3)*, …"

15. Principle 5 is silent on whether it applies only in international situations. The issue is of particular significance for choice of law rules granting power to choose the applicable law, as parties to domestic transactions are typically not recognised any power to provide for the application of a foreign law, except for the limited purpose of incorporating by reference foreign law into the contract of the parties.[5] It is submitted that it would be hard to justify allowing unlimited choice of law for domestic transactions, but that the Draft Principles could address the issue by establishing a presumption of internationality for transactions in digital assets, which could be rebutted in exceptional cases, e.g. a permissioned network limited to participants established in the same country.

D. Freedom of Choice of the Applicable Law

16. Principle 5(1)(a) and (b) grants the power to choose the law governing proprietary issues related to digital assets. As already underscored, while the power of the parties to choose the applicable law is widely recognised in contractual matters, it is not in proprietary matters. The fundamental reason is that proprietary matters affect third parties. Third parties should thus be able to ascertain the law governing the proprietary aspects of assets. This is for the rationale for the application of the *lex situs* in the field of property law.

[5] See, e.g., Article 3(3) of the Rome I Regulation.

17. It is difficult, however, to locate geographically digital assets. Resorting to the *lex situs* does not seem, therefore, to serve any meaningful function. It thus seems appropriate to grant freedom of choice to the parties to the relevant transaction or to the participants in a platform or a system to increase legal certainty.

18. The issue of the protection of third parties nevertheless remains. It is therefore submitted that the choice of the applicable law should only be effective with respect to third parties if the latter are able to know that such a choice was made. The choice of the law governing a particular digital asset or a system should be visible. It should thus be attached to the relevant asset in a format accessible to any third party willing to investigate the status of the asset, or for choices made in systems or platform, be accessible to all participants to the system or the platform. Principle 5(2)(b) already provides that "*in determining whether the applicable law is specified*" in a digital asset or in a platform, "*consideration should be given to records attached to or associated with*" the digital asset, the platform or the system. It is submitted that a choice of law should only be effective towards third parties if appearing in such records.

19. The members of the Working Group debated, but were ultimately divided on whether it would be desirable to limit the freedom of choice to certain laws connected to the relevant assets, in particular if a number of objective connecting factors were identified for the purpose of determining the applicable law in the absence of choice.

20. In a number of jurisdictions, freedom of choice is only fully recognised as between professionals, but may be limited when consumers are involved. It is submitted that the Draft Principles should clarify whether they reserve the application of special choice of law rules protecting consumers, or whether the issue need not be addressed and why.

21. The issue was raised of whether problems might occur where the law chosen for the asset pursuant to Principle 5(1)(a) contradicts the law of the platform. For instance where the platform's rules specify law X to be applicable but law Y is chosen for the asset, then applying law Y might not be feasible in practice contrary to the 'framework' law X. It might therefore be recommendable to clarify that, insofar as the choice of law under Principle 5(1)(a) contradicts the law of the platform, the platform law takes priority: either on the basis of an 'issue by issue' analysis (similar to the preferential law approach under Art 6(2) 2 of the Rome I Regulation for consumer contracts) or simply by displacing the contradicting law completely for all issues. The former approach would be more gentle and considerate, respecting the choices made, but it would be very difficult in practice; the latter approach would be significantly easier to handle but very blunt.

22. The form of the choice of the applicable law should also be clarified. Principle 5(1) provides that it should be expressly specified. However, Principle 5(2)(c) seems to contemplate implicit consent to the choice of law when providing that any form of dealing with a digital asset is consent in the meaning of Principle 5(1). It is submitted that, while it is not necessary that choice of law be express in the relations between the

parties to a particular transaction on a digital asset,[6] a choice of law governing proprietary aspects should be express and publicly available to be effective towards third parties. The requirement that the choice be express should thus be addressed in the context of the rule requiring that such choice appears on the public record attached to or associated with the relevant asset, system or platform.

23. Finally, the Draft Principles or the Commentary should clarify whether the parties may change the applicable law to a digital asset or system or platform,[7] and how such change would interact with Principle 5(2)(d) and (e).

E. Applicable Law in the Absence of Choice

1) The Reference to the Private International Law Rules of the Forum

24. Both options A and B contain as a fallback-rule a reference to the "law applicable by virtue of the rules of private international law of the forum" (see Principle 5(1)(c) Option A (iii) and Option B (ii)).

25. This blanket referral has no apparent purpose: it is clear that the applicable law is identified by the law of the forum, and it is equally clear that it will use conflicts rules to this effect.

26. More problematic than the emptiness of the rule is that it does not give a single recommendation how states should fashion their private international law. Quite to the contrary, it leaves to each state how to identify the applicable law. Differences between national laws are not overcome, but set in stone.

27. This runs counter the very idea of private international law, which aims at the determination of the applicable law *in the same way*. It is also incompatible with the mission of UNIDROIT as an institution charged with *legal harmonisation*. And it will disappoint states who will expect at least some guidance as to how they should determine the applicable law in the absence of a choice and a rule in the Principles.

28. Such guidance is all the more necessary as the prior levels of Principle 5(1) – which basically consist in a reference to the chosen law as well as to the Principles themselves – only seldomly provide a solution. First, the vast majority of digital assets, systems or platforms today do not contain any choice of law. Even if this would change any time soon – which is highly unlikely –, it would not solve the wave of disputes over digital assets that is already reaching the courts.

29. Second, the Principles themselves leave gaping holes. They do not provide any solution to most legal questions, from the conditions of the validity to the effects of digital asset

[6] In EU private international law, Art. 3 of the Rome I Regulation provides that the choice of law governing a contract can be express or result from the circumstances.
[7] As expressly allowed in certain jurisdictions: see e.g. Art. 3 of the Rome I Regulation.

transfers, but are limited to some high level recommendations that need to be implemented by more precise national rules. Again, choice of law rules are necessary to designate the national rules implementing the Principles that courts should apply.

30. Principle 5 as it stands does not indicate which law should be applied to the many disputes that already have arisen or are likely to arise in the coming years in the wake of bankruptcies such as those of FTX or Genesis. It would be particularly harmful if courts in various countries would submit these disputes to diverging laws even where the facts are identical or similar. This creates opportunities for forum shopping as well as the danger of differing judgments and judicial conflicts.

31. The commentary to Principle 5 justifies its silence on this issue with three arguments: 1. the "considerable degree of freedom" it would afford to states, 2. the fact that in many cases the digital asset may not have a connection with any state and 3. the impossibility of a definitive "one size fits all" approach for all digital assets.

32. None of these arguments convinces. First, states anyway have a considerable degree of freedom to fashion their private international law and do not need the UNIDROIT Principles to remind them of it. In reality, the problem is that conflicts will ensue by their use of this freedom in different ways. The purpose of legal harmonisation precisely is to avoid these conflicts, and it is somewhat ironical that UNIDROIT as an institution charged with this task underlines the advantages of states having the freedom to adopt different approaches.

33. Second, the fact that there are many cases in which digital assets have no connection with any state does not mean that one must abstain from any recommendation at all. As will be shown below, in many cases – indeed in most –, a strong connection to a legal system can be shown. There is no reason to ignore those cases for the sole "reason" that one cannot solve some others.

34. Third, it is unnecessary to adopt a "one size fits all" approach. Modern conflict of laws has various techniques that allow for a differentiated determination of the applicable law, for instance, a waterfall of connecting factors, a principle with exceptions, or escape clauses.

2) Possible Connecting Factors

35. In the following, several connecting factors will be suggested that could be chosen, without any intention to create a hierarchy between them.

36. First, one could have referred to the custodian or the custody agreement. The vast majority of digital assets today are held with a custodian. The custodian plays a significant role in regulation because it is supervised by national authorities. Its outstanding role is also highlighted by the Principles themselves, which dedicate many provisions to it. It is all the more surprising that they abstain from providing guidance on

the law applicable to this relationship. Principle 5(6) merely states that "other law" would govern the law applicable to the relationship between the custodian and the client, without giving any guidance. One could instead have clarified that digital assets held by a custodian are subject to the law chosen in the custody agreement. As a matter of fact, most custody agreements specify such a law, and the industry seems to assume their effectiveness also for proprietary issues. In the exceptional cases in which a choice of law in the custody agreement is lacking, one could refer to the law at the place of principal establishment or the place of incorporation of the custodian. This would provide a safe and uniform anchor to determine the applicable law.

37. A large number of token have an issuer that can be identified and whose address is specified in the white paper. This location could equally be used as a connecting factor to determine the applicable law.

38. Networks called "permissioned" or "private" have a central authority. Following a proposal by the UK Financial Markets Law Committee, one could refer to the law at the place of principal establishment or the place of incorporation of this central authority to determine the law applicable to the assets recorded on the network.

39. Some networks are supervised by a state. For example, Germany and France provide for networks that are regulated and supervised. In line with existing conflict-of-laws rules, e.g. in Germany, one could in this case have opted for the law of the state of supervision.

40. These are just some examples that illustrate that 1. it is not impossible to provide connecting factors 2. this does not result in a "one size fits all approach" and 3. even though not all digital assets are covered, such a rule could have a significant harmonising effect.

41. Even for the remaining digital assets, which are recorded on an open, permissionless and not supervised network, not held in custody, and have no known issuer, one could find a solution, by referring e.g. to the law at the habitual residence of the person currently in control of the digital asset. We do, however, not want to enter into this debate. The connecting factors mentioned above would cover more than 90% of all current digital assets and would therefore significantly enhance the legal situation, even where the rest were not covered by them.

42. It is to be hoped that UNIDROIT will rethink its approach to conflict-of-laws issues. We believe the recently announced joint project between UNIDROIT and the Hague Conference on Private International Law (HCC) will provide an opportunity for providing more detailed rules on this crucial problem.

F. Impact on Insolvency Proceedings

1) Insolvency Proceedings in the Draft Principles

43. Principle 2 (8) defines 'Insolvency proceeding' as a 'collective judicial or administrative proceeding, including an interim proceeding, in which, for the purpose of reorganisation or liquidation, at least one of following applies to the assets and affairs of the debtor: (a) they are subject to control or supervision by a court or other competent authority;[8] (b) the debtor's ability to administer or dispose of them is limited by law; (c) the debtor's creditors' ability to enforce on them is limited by law'. This definition can include in-court, hybrid, and out-of-court proceedings.

44. Principle 5 (3) states that 'notwithstanding the opening of an insolvency proceeding and subject to paragraph (4), the law applicable in accordance with this Principle governs all proprietary issues in respect of digital assets with regard to any event that has occurred before the opening of that insolvency proceeding'.

45. Principle 5 (4) establishes that para 3 'does not affect the application of any substantive or procedural rule of law applicable by virtue of an insolvency proceeding, such as any rule relating to: (a) the ranking of categories of claims; (b) the avoidance of a transaction as a preference or a transfer in fraud of creditors; (c) the enforcement of rights to an asset that is under the control or supervision of the insolvency representative.'

46. Principle 5 (3, 4) should be read in conjunction with:
    i. Principle 19, according to which '(1) A proprietary right in a digital asset that has become effective against third parties under Principles law or other law is effective against the insolvency representative, creditors, and any other third party in an insolvency proceeding. (2) Paragraph (1) does not affect the application of any substantive or procedural rule of law applicable by virtue of an insolvency proceeding, such as any rule relating to: (a) the ranking of categories of claims; (b) the avoidance of a transaction as a preference or a transfer in fraud of creditors; or (c) the enforcement of rights to an asset that is under the control or supervision of the insolvency representative'.
    ii. Principle 10 'Custody' and Principle 13 'Insolvency of custodian'. These Principles bear importance as they exclude from the insolvent estate those digital assets that are maintained by insolvent custodians for clients pursuant to a custody agreement.

[8] The word 'control' is to be understood here in its ordinary meaning rather than in the special meaning related to digital assets (Principle 2, Commentary, para 28).

2) General Policy. Protecting legal certainty and legitimate expectations.

47. The Draft Principles assume that digital assets trading, secured rights, avoidance transactions, and any other profiles usually fall under special private international law rules when digital assets are handled in cross-border insolvency proceedings (no matter whether the proceedings have been opened with respect to the custodian, the holder, the transferee, and so on).

48. The Draft Principles also assume that many systems provide for some exceptions to the rule whereby the insolvency proceedings and the effects thereof are governed by the *lex concursus* (i.e. the law of the State in which the proceedings are opened). See, for instance, Regulation (EU) 2015/848 and the regime established for rights *in rem* (Article 8), reservation of title (Article 10), and detrimental acts (Article 16).

49. Principle 5 (1) provides a 'waterfall' of connecting factors for the law applicable to proprietary issues on digital assets. Principle 5 (3) makes sure that this 'law' keeps applying in relation to 'any event that has occurred before the opening of the insolvency proceedings'.

50. Principle 19 somehow echoes this framework as it takes into account both the specificities of insolvency proceedings and the demand to protect rights that have been validly and previously constituted under law A from the effects of the following insolvency proceedings governed by law B.

51. In the light of the foregoing, the Draft Principles are to be welcomed in striking a balance between interests underlying the competence of *lex concursus* and interests underlying special treatment for rights and obligations validly and effectively constituted under a different law before the opening of the insolvency proceedings.

52. Needless to say, insolvency rules referred to in Principle 5 (4) may provide for a different treatment (e.g. fiscal authority privileges over secured persons) or for the avoidance of the security agreement that is perfected under law/Principles applicable according to Principle 5 (1).

3) Allocation of insolvency rules.

53. Principle 5 (4) ensures the application of substantive and procedural rules of law that should apply *by virtue of an insolvency proceeding.*

54. Convincingly, Principle 5 (4) does not specify if these rules belong to the *lex concursus*. The fact that rules apply as *lex concursus* or as insolvency rules of other laws will depend on the private international law system before which the issues listed in Principle (4) (a)-(c)

arise (ranking of categories of claims; the avoidance of a transaction as a preference or a transfer in fraud of creditors; the enforcement of rights to an asset that is under the control or supervision of the insolvency representative). Notably, this list is not exhaustive.

55. The implementation of the Principle among the enacting States will differ as States are divided as to the exceptions to the application of the *lex concursus* on the mentioned issues. For instance, while avoidance transactions usually fall under the *lex concursus*, exceptions like that established in Article 16 of Regulation (EU) 2015/848 are not commonplace. The same is true for the enforcement of rights in *rem* according to Article 8.

56. The general reference to 'rules of law applicable by virtue of an insolvency proceeding' seems to encompass the case of rules governing systems or platforms in respect of which special provisions apply in the case of insolvency of one participant. Notwithstanding the differences between platforms of digital assets and financial systems or markets, it would be necessary to strongly safeguard the legal certainty of platform-exchanged digital assets when it comes to the insolvency of one participant.

57. This outcome depends on putting the avoidance of such transactions or, generally speaking, the issue of finality and stability thereof under the law governing the system/platform. [9] Accordingly, Principle 5 (4) could be amended as including the following item:

    d. the effects of the proceedings on rights and obligations resulting from systems or platforms on which digital assets are recorded or exchanged.

58. Actually, 'rules of law applicable by virtue of an insolvency proceeding' ends up including also certain Draft Principles as a sort of sub-category of Insolvency Principles.

59. The first stems from Principle 13, which keeps digital assets separate from the custodian insolvency estate. The second Insolvency Principle is embodied in Principle 19, which provides for the effectiveness of a proprietary right in a digital asset against the insolvency representative, creditors, and any other third party in an insolvency proceeding if the right has become effective against third parties under the 'Principles law' or other law.

60. Such a rule whereby 'pre-insolvency effectiveness continues in insolvency proceedings' [10] may be applicable also in cross-border cases. It would have a major impact where the *lex concursus* does not provide the same as the law governing the effectiveness of rights on digital assets.

[9] *Mutatis mutandis* see Article 12 of Regulation (EU) 2015/848.
[10] Principle 19, Commentary, para 2.

61. Other Insolvency Principles stem from the rules governing 'situations of shortfall' in relation to fungible digital assets controlled in a pooled account (Principle 13 (4-6). Even a first glance, they set up a sort of creditors class – those having assets in the pooled account – and, consequently, impinge on the ranking of claims and the creditors' satisfaction.

G. Third-party effectiveness

1) General Policy

62. Principle 5 (5) applies to cross-border transactions in which security rights are constituted in digital assets (by means of digitalized records, platform-based trading, and alike).

63. Clarity and predictability about the law that determines priority among conflicting titles on digital assets are of the utmost importance for the sake of efficiency in trading digital assets or in trading claims that are secured by collaterals on digital assets.

64. On the other hand, Principle 5 (6) makes it clear that the relationship between the custodian and its client (i.e. the relationships derived from the custody agreement) is different and, consequently, is governed by other laws than that governing the effectiveness of rights *on* digital assets and priority issues.

2) 'Control', or 'not control', that is the question

65. The Draft Principles emphasize the role of 'control' over digital assets as a functional equivalent of 'possession' of movables.[11] The concept works as a criterion to protect an innocent acquirer, to determine third-party effectiveness (perfection), and to assess the priority of security rights on digital assets.[12] The concept is different from ownership; accordingly, a change of control does not necessarily convey a transfer of the proprietary right.[13]

66. Since 'control' basically means 'exclusive ability' to benefit from the digital asset, the question arises as to which law governs this ability in an objectively ascertainable way. The question arises against a backdrop of a lack of tangible/physical location.

67. The question becomes more complicated in the case of digital assets 'linked' to another asset, as holding/transfer of digital assets is 'legally neutral in relation to the other asset'.[14] The Draft Principles do not address the contractual or proprietary effects of the link and,

[11] Principle 6, Commentary, para 1.
[12] Principle 6, Commentary, para 3. See also Principle 15.
[13] Principle 2, Commentary, para 23.
[14] Principle 4, Commentary, para 7.

consequently, leave the question to national law (Principle 4), including its private international law. Actually, the national law's competence starts with the characterization of the 'link' for the purposes of private international law.

68. The fact that Principle 5 (5) deals only with issues of effectiveness and priority of 'security rights made effective against third parties by a *method other than control*' – e.g. by notification or registration – means that it is for the law governing the 'proprietary issues' under Principle 5 (1)[15] to determine the effectiveness and priority of rights perfected by *control*.[16]

69. Lacking control, Principle 5 (5) does not suggest such connecting factors as might be consistent with the Draft Principles. It only clarifies that 'other law' applies, which means that the issue is referred to the private international law provisions other than those that States would adopt when enacting the Draft Principles. Besides, the commentary to Principle 5 (5) recognizes that a rule rooted in the concept of 'control' is not appropriate when it comes to secured rights whose ownership is recorded in a registry.[17]

70. However, the caveat that 'other law applies' conveys *per se* a 'principle' which serves to keep separate the private international law profiles of secured rights in transactions involving digital assets. Particularly, interpreters should bear in mind at least four different relationships and the related private international law treatment: i) that stemming from digital assets custody (the law governing the custody agreement applies); ii) that arising out of secured transactions by means of digital assets (the law governing the security agreement applies); iii) that arising out of rights on assets that are recorded as digital assets (the law governing such rights applies, e.g. intellectual property law); iv) that arising out of transfer of rights on assets that are recorded as digital assets (the law governing the transfer applies). The Draft Principles do not address such issues.[18]

71. The Draft Principles are instead much concerned with the impact of insolvency proceedings. As noted above, Principle 19 establishes that proprietary rights in a digital asset that has become effective against third parties under the Principles law or other law are also effective against the insolvency representative, creditors, and any other third party in an insolvency proceeding. On the other hand, consistently with Principle 5 (4), Principle 19 (2) safeguards the application of any substantive or procedural rule of law applicable by virtue of an insolvency proceeding, such as 'any rule relating to: (a) the ranking of categories of claims; (b) the avoidance of a transaction as a preference or a transfer in fraud of creditors; or (c) the enforcement of rights to an asset that is under the control or supervision of the insolvency representative'.

[15] Including the criteria of interpretation provided for in Principle 5 (2).
[16] See also Principle 15.
[17] Principle 5, Commentary, para 12.
[18] Commentary, Introduction, para. 10. See also Principle 3 (3).

72. It remains to assess which law should govern the priority and third-party effectiveness in the case of competing rights perfected by means other than control, or in the case of competing rights among which not all are perfected by control, or in the case of competing rights on digital assets controlled or maintained in a chain of sub-custodians.[19]

73. Despite not being concerned with secured rights *perfected by means other than control*, the Principles or the Commentary thereto should at least consider that such rights might conflict with secured rights *perfected by means of 'control'*.

The WG suggests two alternative ways to address third-party effectiveness and priority in such cases.

[Option A]

It may be stated that priority is given to the right that becomes first effective against third parties according to the law that applies to its proprietary aspects.[20]

[Option B]

Principle 16 provides for the priority of security rights made effective by means of control over rights made effective by other methods. This Principle might also work as a substantive priority rule in the case of third-party effectiveness governed by different laws. Evidently, a temporal order would apply if more than one creditor obtained 'control' over the same digital assets.

[19] See Principle 10, Commentary, para 4.
[20] This priority rule somehow draws on Article 4 (4) of the Proposal for a Regulation of the European Parliament and of the Council on the law applicable to the third-party effects of assignments of claims COM(2018) 96 final, as amended by the General Approach (doc. no 9050/21, 28 May 2021).