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From Tangible to Digital: How Will Digital Assets Integrate with Investment Treaties

KEVIN J. HUBER[1]

Investment treaties – BITs – Protected investment – Territoriality – Digital assets – Cryptocurrency – Crypto mining – Crypto exchange – Regulation

Summary

As we approach the first quarter mark of the twenty-first century, we have seen the expansion of the definition of a protected investment in investment treaties. While many investment treaties were signed at a time when only physical investments were contemplated, as our modern technological industrialists continue to rapidly push innovation forward and write the code for new digital assets, our understanding of what a protected investment is may also be innovated. Yet, the definition of a digital asset and whether it can be considered a protected investment under an investment treaty remain difficult questions. This article seeks to contribute to an ongoing debate about the meaning and scope of protected investments under investment treaties and in particular whether an entirely intangible digital asset can exist within the territory of a host State.

1 Introduction

For much of the second half of the twentieth century, a foreign investment tended to mean a large piece of infrastructure or equipment; a tangible entity which produced value in some manner. However, as we approach the first quarter mark of the twenty-first century, we have seen the definition of a foreign investment expand. Investment tribunals have begun grappling with whether certain intangible interests are in fact investments.

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Some tribunals have concluded that certain intangible interests, from loans and financial instruments to certain digital assets, are in fact investments. As our modern technological industrialists continue to rapidly push innovation forward and write the code for new digital assets, our understanding of what is a protected investment may also be innovated.

But what are digital assets? Can they be considered protected investments under investment treaties which entered into force long before their code was written, and which require investments to exist within the territory of a host State?

This article seeks to contribute to an ongoing debate about the meaning and scope of protected investments under investment treaties and in particular whether an entirely intangible digital asset can exist within the territory of a host State. The analyses of whether a specific digital asset is an investment, and whether it exists in a host State, will turn on the structure of the potential investment, the language of the applicable investment treaty, as well as how the host State chooses to regulate the novel digital asset, if at all. However, the outcome of these questions will also, inevitably, depend on investment treaty jurisprudence and how it begins to resolve these questions.

2 Digital Assets, Cryptocurrencies, and Their Regulation

Before addressing whether certain types of "digital assets" will meet the definition of protected investment in a particular investment treaty or whether those protected investments will meet the territorial requirements of the treaty, it is best if we start by defining the potential investments we are discussing, and then explore how, if at all, those potential investments are regulated.

2.1 What is a "digital asset"?

A digital asset is a rather comprehensive term which does not have an agreed upon definition. Complicating matters, the term digital asset often describes two separate categories: (i) an intangible interest which exists only in digital form; or (ii) a physical entity which is a component of a digital enterprise. We will try to define both categories, as whether the asset will be considered an investment under the applicable investment treaty may differ depending on the category of digital asset we are discussing.

First, the intangible interest which exists only in digital form. This category of digital asset is broader, and more difficult to define. As such, definitions for it vary greatly. For instance, the Law Commission of England & Wales defines a digital asset broadly as "[a]ny asset that is represented

digitally or electronically."[2] Whereas, the United States Internal Revenue Service defines digital asset more narrowly as a "digital representation of value recorded on a cryptographically secured distributed ledger (blockchain) or similar technology".[3] Other definitions go further and include an element of control. For example, the Draft UNIDROIT Principles on Digital Assets and Private Law define a digital asset as "an electronic record which is capable of being subject to control."[4] This element of control is also present in other definitions of the term, when it is described as any intangible interest, which is stored digitally and subject to contracts which determine whether an owner can use, sell, transfer, exclude, donate, or dispose of it.[5] Similarly, the French Monetary and Financial Code defines a digital asset as either a token, which is "any intangible property representing, in digital form, one or more rights that may be issued, registered, retained or transferred through a shared electronic recording device that makes it possible to directly or indirectly identify the owner of that property" or "any digital representation of a value that is not issued or guaranteed by a central bank or a public authority […] but which is accepted by natural or legal persons as a means of exchange and can be transferred, stored or exchanged electronically."[6]

Perhaps more simply, others have defined a digital asset as "a collection of binary data which is self-contained, uniquely identifiable and has a value."[7] For the category of intangible digital assets, this could be considered the most comprehensive definition. The existence of binary data (*i.e.*, a composition of numerical values which are either zero or one) means the interest is by definition digital. Having a unique identification ensures the interest can be subject to a transaction. While having a value ensures that the interest is indeed

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2 The Law Commission (England and Wales), Digital Assets: Final Report (2023) Law Com No 412, p. ix.

3 United States Internal Revenue Service, Digital Assets (accessed 12/06/2024 at: https://www.irs.gov/businesses/small-businesses-self-employed/digital-assets).

4 Draft UNIDROIT Principles on Digital Assets and Private Law (2023), Section I, Principle 2(2).

5 Banta, Natalie M, *Property Interests in Digital Assets: The Rise of Digital Feudalism*, 38 Cardozo L. Rev. 1099 (2016); Polanco, Rodrigo, *The Impact of Digitalization on International Investment Law: Are Investment Treaties Analogue or Digital?* German Law Journal (2023), 24, p. 576.

6 Code monétaire et financier, Arts. L54-10-1 and L552-2.

7 Windsor, Ralph, *Defining Digital Assets*, Digital Asset News (accessed 12/06/2024 at: https://digitalassetmanagementnews.org/features/defining-digital-assets/). See also, Chaisse, Julien and Bauer, Cristen, *Cybersecurity and the Protection of Digital Assets: Assessing the Role of International Investment Law and Arbitration*, 21 Vanderbilt Journal of Entertainment and Technology Law, 549, 558 (2020).

an asset.[8] Of course, how much value and how that value will be expressed are separate considerations.

Considering the various definitions above, an intangible digital asset can be, *inter alia*, anything from emails to customer data, websites, social media accounts, search engines, an online marketplace, cryptocurrencies, or non-fungible tokens.

Second, the physical entity which is involved in a digital enterprise. This digital asset is easier to define as it more closely resembles a traditional asset in an investment context. This would be a physical item, such as a series of computer servers, involved in a primarily digital business, say mining for cryptocurrencies. As such, this category of digital assets could be anything from brick-and-motor retailers or physical machines that allow users to purchase or sell cryptocurrencies, physical hardware wallets that securely store a user's private cryptographic keys offline, or cryptocurrency mining computer systems.[9]

2.2 What are cryptocurrencies?

Now that we better understand the broader term, digital asset, we can focus on perhaps the most famous of digital assets: cryptocurrencies. What is a cryptocurrency?

A cryptocurrency is any form of currency that only exists digitally, that has no central issuing or regulating authority, but instead uses a decentralized system to record transactions and manage the issuance of new units, and that relies on cryptography to prevent counterfeiting and fraudulent transactions.[10] The decentralized system used to record transactions and manage the issuance of new units of the cryptocurrency is called blockchain technology. Blockchains are shared databases that store and verify information in a

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8 Windsor, Ralph, *Defining Digital Assets*, Digital Asset News (accessed 12/06/2024 at: https://digitalassetmanagementnews.org/features/defining-digital-assets/).

9 Guillard Sazhko, Anna, Crypto assets as a protected investment covered by investment protection agreements, 21 March 2023, Lexis Nexus Research & Legal Analysis (accessed on 12/06/2024 at: https://www.lexisnexis.co.uk/blog/research-legal-analysis/crypto-assets-as-a-protected-investment-covered-by-investment-protection-agreements).

10 "Cryptocurrency" Merriam-Webster.com Dictionary, Merriam-Webster, (accessed 12/06/2024 at: https://www.merriam-webster.com/dictionary/cryptocurrency); PwC, *Making sense of bitcoin, cryptocurrency and blockchain*, (accessed 12/06/2024 at: https://www.pwc.com/us/en/industries/financial-services/fintech/bitcoin-blockchain-cryptocurrency.html). There are digital currencies that are similar in some respects to cryptocurrencies, but which are issued by states or other centralized authorities. These digital currencies go beyond the scope of this article.

cryptographically secure way.[11] In practice, a blockchain is a peer-to-peer network system used to make a secured digital record of all the occasions a cryptocurrency is bought or sold, and which constantly grows as more blocks are added.[12] An easy way to understand this network is to think of it as an excel spreadsheet, but not one that is hosted on your firm's server, but instead is maintained by a network of computers all over the world. These computers store their own copies of the database, add, and verify new entries (or blocks) to it, and secure the database against hackers.[13] These computer systems are in turn rewarded by the blockchain algorithm when they successfully verify that a new entry is valid by being issued new units of the cryptocurrency. In other words, these systems verify that the person transferring the cryptocurrency has the correct amount of cryptocurrency and that they have transferred that amount to the recipient. This verification requires that the computer system be high-powered and capable of completing complex cryptographic math problems.[14] This is the cryptocurrency mining process. While the above explanation is a simplification of that process, this is how Bitcoin and other popular cryptocurrencies come into existence and how the transactions using them are recorded.

Cryptocurrencies have exploded in popularity over the last ten years, and currently the combined value of all cryptocurrencies is around USD 2.7 trillion, or about 20% more than the market capitalization of Google.[15] As a result, investment in mining for cryptocurrencies and companies operating cryptocurrency exchanges have increased over the past decade.[16]

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11 Roose, Kevin, *The Latecomer's Guide to Crypto*, The New York Times, 18 March 2022.

12 "Blockchain" Cambridge Dictionary, (accessed 12/06/2024 at: https://dictionary.cambridge.org/dictionary/english/blockchain); PwC, *Making sense of bitcoin, cryptocurrency and blockchain*, (accessed 12/06/2024 at: https://www.pwc.com/us/en/industries/financial-services/fintech/bitcoin-blockchain-cryptocurrency.html).

13 Roose, Kevin, *The Latecomer's Guide to Crypto*, The New York Times, 18 March 2022.

14 Rubinina, Evgeniya, *Are Cryptocurrency Assets a Protected Investment Under Investment Treaties?* Arbitration: The Int'l J. of Arb., Med. & Dispute Mgmt 89, no. 1 (2023) 3, p. 5.

15 Forbes Digital Assets - Cryptocurrency Prices, Market Cap and Charts (accessed 12/06/2024 at: https://www.forbes.com/digital-assets/crypto-prices/?sh=7a75c0842478).

16 Sommer, Jeff, *Crypto Funds Have Arrived. But Who Needs Them?* The New York Times, 19 January 2024; Rubinina, Evgeniya, *Are Cryptocurrency Assets a Protected Investment Under Investment Treaties?* Arbitration: The Int'l J. of Arb., Med. & Dispute Mgmt 89, no. 1 (2023) 3, p. 5.

2.3 How are digital assets and cryptocurrencies regulated, if at all?

There are a myriad of potential investments which could be considered digital assets, however, with investment increasing across the digital sphere, governments have stepped in to begin regulating these digital assets. Often these regulations are new and developing, and as such the regulations could be more vulnerable to being changed quickly depending on domestic politics. Below we explore three digital assets, and how they have been increasingly regulated by States.

First, certain digital assets which have a physical element, such as crypto mining systems, have been increasingly regulated or banned. A crypto mining system typically consists of large-scale purpose-built servers and mining computers held in an airconditioned warehouse which compete against other mining systems to verify cryptocurrency transactions and earn cryptocurrencies for their trouble. However, the systems require a great deal of energy to operate. Indeed, all the Bitcoin mining operations around the world use an estimated 200 terawatt-hours of energy per year, which is comparable to the annual energy consumption of Thailand.[17]

As such, governments have stepped in to regulate these systems. For instance, in 2021, China banned crypto mining, along with all cryptocurrency transactions.[18] Other countries followed, with the likes of Kosovo and Iran banning crypto mining out of concerns that it required too much energy.[19] More recently, other States, while not banning crypto mining, have sought to regulate the practice such that crypto miners would consider moving their infrastructure elsewhere. For instance, Sweden eliminated tax incentives for data centres used for crypto mining,[20] and Norway is introducing a law that will regulate the data centre industry, making it the first country in Europe to do so. Norway's Digitisation Minister explained that "[t]he government does not want such cryptocentres" because they are associated with large emissions of greenhouse gas and bring little social benefit, as such, the minister explained that the purpose of the new law "is to regulate the industry in such a way that

17 Roose, Kevin, *The Latecomer's Guide to Crypto*, The New York Times, 18 March 2022.

18 Shin, Francis, *What's behind China's cryptocurrency ban?*, World Economic Forum, 31 January 2022 (accessed on 12/06/2024 at: https://www.weforum.org/agenda/2022/01/what-s-behind-china-s-cryptocurrency-ban/).

19 *Kosovo bans cryptocurrency mining after blackouts*, BBC News, 5 January 2022 (accessed on 12/06/2024 at: https://www.bbc.co.uk/news/world-europe-59879760).

20 Gkritsi, Eliza, *Sweden Drives Final Nail Into Its Bitcoin Mining Industry With Tax Hike*, CoinDesk, 14 April 2023.

we can close the door on the projects we do not want".[21] Apart from environmental concerns, laws aimed at regulating crypto mining have been introduced in the United States over national security concerns,[22] and in Russia over tax concerns.[23] On the other side of the regulatory spectrum, El Salvador has been incentivizing crypto mining operations to operate in the State and even has its own government-run crypto mining system.[24]

Second, there are also examples of the intangible category of digital assets facing increased regulation. For instance, the gathering and use of customer data has been increasingly regulated in recent years, as data privacy laws have either been implemented or tightened in many States. Whereas in the past companies were free to collect and use personal data, provided they did not misuse it, with the introduction of the EU's General Data Protection Regulation (or GDRP), both the EU and other states have instead implemented a broad "rights-based" approach to data. Under the EU GDPR, for example, individuals own their personal information and thus presumptively have the legal right to control it, and as such can decided who can use that data.[25] Similar laws have now been implemented in, *inter alia*, several states in the United States,[26] as well as in Canada and Brazil.[27] However, the legal status of customer data still varies greatly across States.[28]

Third, the regulation of the most ubiquitous example of the intangible category of digital assets, cryptocurrencies, has also tightened over time. As

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21 Turner, Ann, *Government plans to stop cryptocurrency mining in Norway*, Mobile Europe, 9 May 2024 (accessed on 12/06/2024 at: https://www.mobileeurope.co.uk/government-plans-to-stop-cryptocurrency-mining-in-norway/).

22 Forsythe, Michael and Dance, Gabriel J.X., *Biden Bans Chinese Bitcoin Mine Near U.S. Nuclear Missile Base*, The New York Times, 13 May 2024.

23 Kozlov, Vladimir, *Russia prepares a crackdown on crypto*, bne IntelliNews, 14 May 2024 (accessed on 12/06/2024 at: https://www.intellinews.com/russia-prepares-a-crackdown-on-crypto-325063/).

24 *El Salvador partnership to build $1 billion bitcoin mining farm*, Reuters, 5 January 2023; Renteria, Nelson, *El Salvador mined nearly 474 bitcoins, adding to state crypto holding, in last three years*, Reuters, 15 May 2024.

25 See, *e.g.*, Stepanov, Ivan, *Introducing a Property Right Over Data in the EU: The Data Producer's Right – An Evaluation*, 34 Int'l Rev. Lae, Computs. & Tech. 65, 70 (2020); see also, Bellamy, Fredric, *U.S. data privacy laws to enter new era in 2023*, Reuters, 12 January 2023.

26 Bellamy, Fredric, *U.S. data privacy laws to enter new era in 2023*, Reuters, 12 January 2023 (including California, Colorado, Connecticut, Utah, and Virginia).

27 Government of Canada, Personal Information Protection and Electronic Documents Act; Brazilian General Data Protection Law (LGPD), Federal Law no. 13,709/2018.

28 See, *e.g.*, Pentsov, Dmitry A., *The Concept of 'Investment' at the Dawn of the Digital Era*, 16 February 2022, Georgia Journal of International and Comparative Law, Vol. 51, No. 1, 2022, p. 183.

noted above, as with crypto mining, several States have outright banned the possession or exchange of cryptocurrencies.[29] Indeed, bans on cryptocurrencies have only increased overtime. In 2018, 24 States were considered to have implicitly or completely banned cryptocurrencies.[30] By the end of 2021, that figure had increased to 51 States.[31] In other States, including Switzerland, where cryptocurrencies are still legal, tax and money laundering concerns have resulted in additional regulation.[32] Nevertheless, many States still do not regulate cryptocurrencies at all.

Considering the examples above, banned crypto mining or cryptocurrency exchange operations, or restrictions on the gathering or use of customer data, one could imagine the potential for claims brought by foreign investors under investment treaties. Moreover, considering the lack of regulation in many States, one could also imagine brand new regulations causing unforeseen consequences and further investment treaty claims. However, before any such claim could be brought, some standard jurisdictional hurdles would need to be met. Is the digital asset in question an investment, and if so, is that investment in the territory of the host State?

3 A Protected Investment

3.1 What is required for an investment to be protected under an investment treaty?

The definition of protected investment varies depending on the investment treaty in question. However, most definitions are purposefully broad, encompassing "any" or "all" categories of assets. Investment treaties

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29 Shin, Francis, *What's behind China's cryptocurrency ban?* World Economic Forum, 31 January 2022.

30 The Law Library of Congress, *Regulation of Cryptocurrency Around the World*, June 2018.

31 The Law Library of Congress, *Regulation of Cryptocurrency Around the World: November 2021 Update*, November 2021.

32 *Swiss DLT law: New regulations bring new opportunities*, PwC, (accessed on 12/06/2024 at: https://www.pwc.ch/en/insights/regulation/swiss-dlt-new-regulations.html); Kozlov, Vladimir, *Russia prepares a crackdown on crypto*, bne IntelliNews, 14 May 2024 (accessed on 12/06/2024 at: https://www.intellinews.com/russia-prepares-a-crackdown-on-crypto-325063/); Greenwald, Lewis, *Significant civil and criminal tax penalties for non-reporting of cryptocurrency transactions*, Reuters, 16 May 2024; Financial Conduct Authority, *Cryptoassets: AML / CTF regime - Registering with the FCA*, Updated 31 January 2024. See also, Rubinina, Evgeniya, *Are Cryptocurrency Assets a Protected Investment Under Investment Treaties?* Arbitration: The Int'l J. of Arb., Med. & Dispute Mgmt 89, no. 1 (2023) 3, pp. 7-8.

with this type of broad definition also typically provide a non-exclusive list of potential investments which are covered. Indeed, more than 90% of investment treaties define investment in this broad fashion, and their non-exhaustive list of protected assets typically includes, *inter alia*, movable and immovable property, shares, intellectual property rights, and claims to money.[33]

For example, the Switzerland-Saudi Arabia BIT (2006) contains the following broad definition of "investment":

"The term 'investment' refers to any kind of asset and any rights connected thereto pursuant to applicable law, and includes in particular, though not exclusively: (a) movable and immovable property as well as any other rights in rem, such as mortgages, liens, pledges, usufructs and similar rights; (b) shares, stocks and debentures of companies and any other rights or interests in companies as well as public securities issued by a Contracting Party or any of its entities; (c) claims to money such as loans or to any performance having an economic value associated with an investment; (d) intellectual property rights including but not limited to copyrights, patents, industrial designs, know-how, trademarks, trade and business secrets, trade names and good-will; (e) any right conferred by law or under public contract or any licenses, permits or concessions issued according to the law."[34]

However, other investment treaties define protected investment more narrowly. These treaties limit the scope of protected investments either by excluding specific assets which fail to meet broad criteria,[35] excluding assets of less than a minimum value,[36] or excluding specific types of assets entirely.[37]

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33 See, *e.g.*, Switzerland-China BIT (2009), Art. 1(1); Netherlands-Macao BIT (2008), Art. 1(a); United States of American-Rwanda BIT (2008), Art. 1; Switzerland-Saudi Arabia BIT (2006), Art. 1(1); United Kingdom-Serbia BIT (2002), Art. 1(a); Ukraine-Russia BIT (1998), Art. 1.

34 Switzerland-Saudi Arabia BIT (2006), Art. 1(1).

35 See, *e.g.*, Ukraine-Denmark BIT (1992), Art. 1(1) ("The term 'investment' shall mean every kind of asset connected with economic activities acquired for the purpose of establishing lasting economic relations between an investor and an enterprise […]").

36 See, *e.g.*, Framework Agreement on the ASEAN Investment Area (1998), Art. 1 ("'ASEAN investor' means - (i) a national of a Member State; or (ii) any juridical person of a Member State, making an investment in another Member State, the effective ASEAN equity of which taken cumulatively with all other ASEAN equities fulfills at least the minimum percentage required to meet the national equity requirement and other equity requirements of domestic laws and published national policies, if any, of the host country in respect of that investment.") (no longer in force).

37 See, *e.g.*, USMCA (2018), Art. 14.1 (i)-(j) ("but investment does not mean: (i) an order or judgment entered in a judicial or administrative action; (j) claims to money that arise solely from: (i) commercial contracts for the sale of goods or services by a natural person or enterprise in the territory of a Party to an enterprise in the territory of another Party, or (ii)

Among the investment treaties which narrowly define investment, the most common curtailment involves excluding a specific type of asset; typically, excluding claims to money. For instance, in the Canada-Moldova BIT (2018), after defining investment, the treaty then states that:

"'investment' does not mean: (k) a claim to money that arises solely from: (i) a commercial contract for the sale of a good or service by a national or enterprise in the territory of a Party to an enterprise in the territory of the other Party; or (ii) an extension of credit in connection with a commercial transaction, such as trade financing; or (l) any other claim to money, that does not involve the kinds of interests set out in subparagraphs (a) to (j)".[38]

Moreover, if the potential investment treaty calls for arbitration subject to the Convention on the Settlement of Investment Disputes between States and Nationals of Other States (the ICSID Convention), the potential investment may have to meet additional hurdles. Under Article 25 of the ICSID Convention, the jurisdiction of ICSID tribunals "extend to any legal dispute arising directly out of an investment".[39] The term investment, however, is not defined in the ICSID Convention.

In practice, some ICSID tribunals have concluded that the term investment under the ICSID Convention has as an independent meaning as compared to the definition for investment under the applicable treaty, and as such, the putative investment must be an investment under the investment treaty and meet additional requirements in order to be considered an investment under the ICSID Convention. These additional requirements are often referred to as the *Salini* test, after the decision in the *Salini v Morocco* case, and require that an "investment infers: contributions, a certain duration of performance of the contract and a participation in the risks of the transaction […] [and] contribution to the economic development of the host State of the investment".[40] While some elements of the *Salini* test remain controversial,[41]

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the extension of credit in connection with a commercial contract referred to in subparagraph (j)(i)); Canada-Moldova BIT (2018), Art. 1 ("'investment' does not mean: (k) a claim to money that arises solely from: (i) a commercial contract for the sale of a good or service by a national or enterprise in the territory of a Party to an enterprise in the territory of the other Party; or (ii) an extension of credit in connection with a commercial transaction, such as trade financing; or (l) any other claim to money, that does not involve the kinds of interests set out in subparagraphs (a) to (j)"); United Kingdom-Columbia BIT (2010), Art. 1(2).

38 Canada-Moldova BIT (2018), Art. 1.

39 ICSID Convention, Art. 25(1).

40 *Salini Costruttori S.p.A. and Italstrade S.p.A. v Kingdom of Morocco*, ICSID Case No. ARB/00/4, Decision on Jurisdiction, 23 July 2001, para. 52.

41 See, *e.g.*, *Deutsche Bank AG v Democratic Socialist Republic of Sri Lanka*, ICSID Case No. ARB/09/2, Award, 31 October 2012, p. 59 *et seq*. (paras. 294-295) ("These criteria are not

and while some tribunals have suggested the test should not be followed,[42] other elements of the test have been directly added to the definition of investment in some investment treaties, perhaps in recognition of the ubiquity of certain *Salini* test criteria.[43]

Separate to meeting the definition of a protected investment, some investment-treaty tribunals have held that the purpose of an investment treaty is to protect legal and bona fide investments,[44] and this is the case regardless of whether the treaty specifically says that the investment must be made in accordance with the host State's law.[45] However, whether an investment will

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fixed or mandatory as a matter of law. They do not appear in the ICSID Convention […] The development of ICSID case law suggests that only three of the above criteria, namely contribution, risk and duration should be used as the benchmarks of investment, without a separate criterion of contribution to the economic development of the host State and without reference to a regularity of profit and return"). See also, *Orazul International España Holdings S.L. v. Argentine Republic*, ICSID Case No. ARB/19/25, Award, 14 December 2023, p. 91 (para. 446); *Rand Investments Ltd., et al v Republic of Serbia*, ICSID Case No. ARB/18/8, Award, 29 June 2023, p. 48 (para. 228); *Saba Fakes v Republic of Turkey*, ICSID Case No. ARB/07/20, Award, 14 July 2010, p. 35 (paras. 108-110).

42 See, *e.g.*, *Biwater Gauff (Tanzania) Limited v. United Republic of Tanzania*, ICSID Case No. ARB/05/22, Award, 24 July 2008, p. 86 *et seq*. (paras. 312-315) ("In the Tribunal's view, there is no basis for a rote, or overly strict, application of the five *Salini* criteria in every case […] Further, the Salini Test itself is problematic if, as some tribunals have found, the 'typical characteristics' of an investment as identified in that decision are elevated into a fixed and inflexible test, and if transactions are to be presumed excluded from the ICSID Convention unless each of the five criteria are satisfied. This risks the arbitrary exclusion of certain types of transaction from the scope of the Convention.").

43 See, *e.g.*, China-Nicaragua FTA (2023) (Art. 11.28) ("investment means every asset that an investor owns or controls, directly or indirectly, that has the characteristics of an investment, including such characteristics as the commitment of capital or other resources, the expectation of gain or profit, or the assumption of risk."); Switzerland-Georgia BIT (2014), Art. 1(2) ("In order to qualify as an investment for the purposes of this Agreement, an asset must have the characteristics of an investment, including such characteristics as the commitment of capital or other resources, the expectation of gain or profit, and the assumption of risk"); United States of American Model BIT (2012), Art. 1. See also, Pentsov, Dmitry A., *The Concept of 'Investment' at the Dawn of the Digital Era*, 16 February 2022, Georgia Journal of International and Comparative Law, Vol. 51, No. 1, 2022, p. 168.

44 See, *e.g.*, *Phoenix Action, Ltd v. Czech Republic*, ICSID Case No. ARB/06/5, Award, 15 April 2009, p. 39 (para. 100) ("The purpose of the international mechanism of protection of investment through ICSID arbitration cannot be to protect investments made in violation of the laws of the host state or investments not made in good faith, obtained for example through misrepresentations, concealments or corruption […] the purpose of international protection is to protect legal and *bona fide* investments.").

45 See, *e.g.*, *Plama Consortium Limited v. Republic of Bulgaria*, ICSID Case No. ARB/03/24, Award, 27 August 2008, p. 39 *et seq*. (para. 138); *David Minnotte and Robert Lewis v. Republic of Poland*, ICSID Case No. ARB(AF)/10/1, Award date 16 May 2014, p. 45 *et seq*. (para. 131); *Hamester v. Ghana*, ICSID Case No. ARB/07/24, Award, p. 39 (paras. 123-

ultimately be denied protection due to its illegality will be addressed on a case-by-case basis and often depends on the severity of the investor's violation.[46] Nevertheless, this adds an additional hurdle for any potential claimant.

3.2 Could a crypto mining operation, a cryptocurrency exchange, or customer data be considered a protected investment?

Taking the examples of digital assets from Section 2.3 above, *i.e.*, a crypto mining operation, a cryptocurrency exchange operation, or a compilation of customer data,[47] would any of these digital assets be considered a protected investment? For each digital asset, the answer will chiefly depend on the applicable investment treaty.

First, if the applicable treaty has the typical broad definition of investment, it may be more likely that a tribunal would conclude that any of the digital assets described above would be considered a protected investment. A crypto mining operation may contain movable and immovable property as well as other rights in rem. Moreover, if the State in question was actively pursuing its own crypto mining operations, as with El Salvador, an investor who joined the State's efforts may argue that their potential investment is rights granted under public law, including rights to prospect, explore, extract and win natural resources (although whether the resources are indeed natural would involve a separate analysis). Separately, a unit of cryptocurrency itself or a crypto exchange operation could be considered a claim to money, to other assets, or to a performance having an economic value. Finally, a compilation of customer data may be considered rights in the field of intellectual property or technical processes.

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124); *Yukos Universal Limited (Isle of Man) v. Russian Federation*, PCA Case No. AA 227, Final Award dated 18 July 2014, p. 429 (para. 1349).

46 Schreuer, Christoph, *The Unity of an Investment, ICSID Reports*, Volume 19, p. 19 ("Tribunals have found that, even in the absence of a treaty clause to this effect, investments that are contrary to host State law will not enjoy protection. Whether this sanction applies in a particular case depends on the severity of the violation. Tribunals have held in numerous cases that the legality requirement refers to the making of the investment but not to its conduct and management.").

47 For an analysis on whether a digital reseller, a digital marketplace operator, a search engine operator, or a social network operator have a protected investment as defined in an investment treaty, see Pentsov, Dmitry A., *The Concept of 'Investment' at the Dawn of the Digital Era*, 16 February 2022, Georgia Journal of International and Comparative Law, Vol. 51, No. 1, 2022.

While these potential investments are all quite novel creations, they may still be considered covered investments even if the treaty was negotiated decades earlier. Indeed, it has been suggested that broad definitions for protected investments were envisaged, in part, because "the concept of investment has evolved over time and because many investment agreements are intended to last for many years," as such "those who draft them appear to seek […] to utilize language that can extend an agreement to new forms of investment as they emerge, without renegotiation of the agreement."[48] As such, one may be able to argue that the parties to the investment treaty contemplated covering such novel investments.

Second, if the applicable treaty contains a narrow definition of investment, the conclusion may be different. While the crypto mining operation may still be considered movable and immovable property or other rights in rem, and the compilation of customer data may still be considered rights in the field of intellectual property or technical processes, if the treaty excludes claims to money, a unit of cryptocurrency or a crypto exchange operation might be excluded from the definition of protected investment.

Third, if the treaty calls for ICSID arbitration, each potential investment may also need to meet the criteria for an investment under the ICSID Convention, *i.e.*, the *Salini* test.[49] Would a crypto mining operation, crypto exchange, or compilation of customer data be an investment with: (i) a substantial commitment of capital; (ii) a certain duration; (iii) a potential risk to both parties; and (iv) a contribution to the economic development of the host State?

Even putting aside the last criterion, which as discussed above is not always applied by ICSID tribunals, it is uncertain whether any of the potential investments would meet the requirements of the *Salini* test. However, one could envisage circumstances where any of the potential investments above meet the criteria of a substantial commitment of capital made for a certain duration. Whether there is a potential risk, will be more fact-specific and depend on the structure of the investment. While the controversial requirement of contribution to the economic development of the host State may be, unsurprisingly, the most difficult requirement to meet.[50]

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48 UNCTAD/ITE/IIT/18, *International Investment Agreements: Flexibility for Development*, (2000), p. 70.

49 *Salini Costruttori S.p.A. and Italstrade S.p.A. v Kingdom of Morocco*, ICSID Case No. ARB/00/4, Decision on Jurisdiction, 23 July 2001, para. 52.

50 For an analysis on whether units of cryptocurrency could meet the *Salini* test, see Rubinina, Evgeniya, *Are Cryptocurrency Assets a Protected Investment Under Investment Treaties?* Arbitration: The Int'l J. of Arb., Med. & Dispute Mgmt 89, no. 1 (2023) 3. For an analysis

Fourth, as noted above, beyond the definition of protected investment, some investment-treaty tribunals have held that the purpose of an investment treaty is to protect legal and bona fide investments.[51] As such, if cryptocurrencies, and by extension crypto exchanges or mining operations, are banned in the host State, it may be a non-starter for the potential claimant to argue that it has a protected investment. Moreover, as noted above with respect to customer data, because the legal status of this data varies greatly, the question of whether it will be recognised as a protected investment will require an in-depth case-by-case analysis of the relevant national law and its application.[52] That said whether any potential investment will ultimately be denied protection on this basis will involve a case-by-case analysis and will depend on the severity of the potential claimant's violation.[53]

4 Made In the Territory of a Contracting Party

4.1 What does it mean for an investment to be made in the "territory" of a contracting party?

Even if the digital asset in question fell within the definition of investment under the applicable investment treaty, the potential claimant would also need to meet the territorial requirement of the investment treaty. Typically, an investment treaty will only apply to "investments in the territory of one Contracting Party that are owned or controlled by investors of the other Contracting Party."[54] This requirement may be easy to meet if the investment

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of whether "data" could meet the *Salini* test, see Pentsov, Dmitry A., *The Concept of 'Investment' at the Dawn of the Digital Era*, 16 February 2022, Georgia Journal of International and Comparative Law, Vol. 51, No. 1, 2022, p. 187 *et seq*.

51 See, *e.g.*, *Phoenix Action, Ltd v. Czech Republic*, ICSID Case No. ARB/06/5, Award, 15 April 2009, p. 39 (para. 100); *Plama Consortium Limited v. Republic of Bulgaria*, ICSID Case No. ARB/03/24, Award, 27 August 2008, p. 39 *et seq*. (para. 138); *David Minnotte and Robert Lewis v. Republic of Poland*, ICSID Case No. ARB(AF)/10/1, Award date 16 May 2014, p. 45 *et seq*. (para. 131); *Hamester v. Ghana*, ICSID Case No. ARB/07/24, Award, p. 39 (paras. 123-124); *Yukos Universal Limited (Isle of Man) v. Russian Federation*, PCA Case No. AA 227, Final Award dated 18 July 2014, p. 429 (para. 1349).

52 Pentsov, Dmitry A., *The Concept of 'Investment' at the Dawn of the Digital Era*, 16 February 2022, Georgia Journal of International and Comparative Law, Vol. 51, No. 1, 2022, p. 183.

53 Schreuer, Christoph, *The Unity of an Investment, ICSID Reports*, Volume 19, p. 19.

54 Switzerland-Saudi Arabia BIT (2006), Art. 2. See also, similar language in the Ukraine-Russia BIT (1998), Art. 1(1) ("'Investments' shall denote all kinds of property and intellectual values, which are put in by the investor of one Contracting Party on the territory of the other Contracting Party"); Switzerland- Philippines BIT (1997), Art. 3(1) ("Each Contracting Party shall in its territory promote as far as possible investments by investors of

in question is a "brick and mortar" physical entity.[55] However, while the intention of many investment treaties may have been to be forward looking and to utilize "language that can extend an agreement to new forms of investment as they emerge, without renegotiation of the agreement",[56] determining whether an intangible asset meets the territorial requirement may be a more difficult exercise. Nevertheless, tribunals have extended the territorial requirement to some intangible assets.

As a preliminary matter, even with tangible investments, tribunals have found that the entire investment need not be physically present in the host State for it to meet the territorial requirement. For example, some tribunals have concluded that nothing "prevents investments from being committed, in part at least, from the contractor's home country, as long as they are allocated to the project to be carried out abroad", and that these investments could "consist of loans, materials, works, or services, provided they have an economic value."[57]

Moreover, with regard to intangible investments, tribunals have extended the territorial requirement to include, *inter alia*, financial instruments and contractual rights, and have found that there is no requirement for a

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the other Contracting Party"); ECT (1994), Art. 26(1) ("Disputes between a Contracting Party and an Investor of another Contracting Party relating to an Investment of the latter in the Area of the former").

55 Pentsov, Dmitry A., *The Concept of 'Investment' at the Dawn of the Digital Era*, 16 February 2022, Georgia Journal of International and Comparative Law, Vol. 51, No. 1, 2022, p. 157 ("Because the existing concept of 'investment' was defined in investment treaties as well as interpreted in judicial and arbitration practice before the advent of the digital economy era, when the interpreters were predominantly facing tangible brick and mortar investments, a question naturally arises as to how it meets the changing ways of doing business and allows to effectively protect the rights of foreign investors in this new era.").

56 UNCTAD/ITE/IIT/18, *International Investment Agreements: Flexibility for Development*, (2000), p. 70.

57 *Consortium Groupement L.E.S.I. - DIPENTA v. People's Democratic Republic of Algeria*, ICSID Case No. ARB/03/8, Award, 10 January 2005 p. 21 (Sec. II, para. 14). See also, *SGS Société Générale de Surveillance S.A. v. Republic of Paraguay*, ICSID Case No. ARB/07/29, Decision on Jurisdiction, 12 February 2010, p. 36 (para. 117) ("We note that our conclusion is consistent with that of all three tribunals to have examined similar contractual arrangements in disputes brought under investment treaties. In *SGS v. Pakistan*, the tribunal held that an investment resting on comparable pre-inspection services was 'in the territory of the host State' because there had been an 'injection of funds into the territory of Pakistan for the carrying out of SGS's engagements under the PSI Agreement.' As noted, the *SGS v. Philippines* tribunal likewise insisted that SGS's activities were to be considered as an integrated undertaking, a sufficient portion of which took place in the host state. And in *BIVAC v. Paraguay*, the tribunal likewise had 'little difficulty' in concluding, with respect to a contract virtually identical to the one before the Tribunal here, that BIVAC had made an investment in the territory of Paraguay for purposes of the Netherlands-Paraguay BIT's comparable 'in the territory' requirement.").

"physical transfer of funds" into the host State,[58] nor for any physical presence in the host State.[59] For instance, with respect to whether a bond could be considered an investment in the territory of the host State, the tribunal in *Abaclat v Argentina* found that with respect to investments "of a purely financial nature, the relevant criteria cannot be the same as those applying to an investment consisting of business operations and/or involving manpower and property […] the relevant criteria should be where and/or for the benefit of whom the funds are ultimately used, and not the place where the funds were paid out or transferred."[60]

Similarly, in considering whether a hedging agreement could be considered an investment, the tribunal in *Deutsche Bank AG v Sri Lanka* found that while the agreement was not connected to a specific project in the host State, it nevertheless was connected to activity in the host State which helped to finance the host State's economy.[61] The tribunal maintained that the hedging agreement was located in the host State even though the agreement was governed by a foreign forum selection and governing law clause.[62]

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58 *Ceskoslovenska Obchodni Banka, a.s. v. The Slovak Republic*, ICSID Case No. ARB/97/4, Decision of the Tribunal on Objections to Jurisdiction, 24 May 1999, para. 78 ("The Tribunal notes, in this connection, that while it is undisputed that CSOB's loan did not cause any funds to be moved or transferred from CSOB to the Slovak Collection Company in the territory of the Slovak Republic, a transaction can qualify as an investment even in the absence of a physical transfer of funds."). See also, *A11Y LTD. v. Czech Republic*, ICSID Case No. UNCT/15/1, Award, 29 June 2018, p. 46 (para. 137) ("the Treaty does not require, for instance, that the assets be transferred for consideration, that there be a flow of funds from the United Kingdom into the Czech Republic or that there be an underlying transaction.").

59 *Nova Scotia Power Incorporated v. Bolivarian Republic of Venezuela (II)*, ICSID Case No. ARB(AF)/11/1, Award, 30 April 2014, p. 24 (para. 130) ("However, a lack of physical presence is not per se fatal to meeting the territoriality requirement; intangible assets, with no accompanying physical in-country activities, have been accepted as investments for the purposes of bilateral investment treaties by many tribunals.").

60 *Abaclat and others v. Argentine Republic*, ICSID Case No. ARB/07/5, Decision on Jurisdiction and Admissibility, 4 August 2011, p. 144 *et seq*. (para. 374). See also, *FEDAX N.V. v. The Republic of Venezuela*, ICSID Case No. ARB/96/3, Decision on Objections to Jurisdiction, 11 July 1997, para. 41.

61 *Deutsche Bank AG v. Democratic Socialist Republic of Sri Lanka*, ICSID Case No. ARB/09/2, Award, 31 October 2012, p. 58 *et seq*. (paras. 291-292). See also, Rubinina, Evgeniya, *Are Cryptocurrency Assets a Protected Investment Under Investment Treaties?*, Arbitration: The Int'l J. of Arb., Med. & Dispute Mgmt 89, no. 1 (2023) 3, p. 18.

62 *Deutsche Bank AG v. Democratic Socialist Republic of Sri Lanka*, ICSID Case No. ARB/09/2, Award, 31 October 2012, p. 58 (para. 291) ("The reality of today's banking business is that major banks operate all over the world. The fact that one particular subsidiary or branch does the paperwork does not mean that the financial instrument is located in the country concerned. Here, the preliminary engagement took place in Sri Lanka and it is there

In a more recent decision, involving what could be described as a digital asset, the tribunal in *Hope Services LLC v. Cameroon* held that an IT platform, which was developed in France and hosted on servers in Europe, Israel, and the United States was an investment in the territory of the host State, Cameroon,[63] as the IT platform was at least partly deployed in the host State and the benefit of the IT platform was located in the host State.[64]

In the examples above, tribunals have determined that intangible investments are located within the territory of a host State, when the benefit of the investment is located within the host State or is used by the host State. As such, while each potential investment must be viewed on a case-by-case basis, it may be possible for intangible digital assets to meet this "benefit" requirement as well.

4.2 Could a crypto mining operation, a cryptocurrency exchange, or customer data be an investment made in the territory of a contracting party?

Again, taking the examples of potential investments from Section 2.3 above, *i.e.*, a crypto mining operation, a cryptocurrency exchange operation, or a compilation of customer data, could any of these potential investments be considered to be made in the territory of a host State?

As discussed above, the crypto mining operation is a physical digital asset and, depending on how the asset is structured, it may be more straight forward for a tribunal to determine that it is indeed located within a host State.

However, with respect to the cryptocurrency exchange operation and compilation of customer data, these intangible digital assets present more difficult questions for a potential tribunal. If these investments are located on servers outside of the host State but serving users within the host State, it may be difficult to determine whether the benefit of the investment is located within the host State or whether the benefit is used by the host State. Depending on the structure of the investment, it may be more straight forward to determine

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too that the investment had its impact. The fact that various Deutsche Bank branches all over the world, including Singapore, participated in the preparation and finalization of the investment, does not alter this conclusion. Nor does the fact that the parties selected English law and English jurisdictions in their agreement."). See also, *Abaclat and others v. Argentine Republic*, ICSID Case No. ARB/07/5, Decision on Jurisdiction and Admissibility, 4 August 2011, p. 144 *et seq*. (para. 374).

63 *Hope Services LLC v. Republic of Cameroon*, ICSID Case No. ARB/20/2, Award, 23 December 2021, p. 68 *et seq*. (paras. 210-222).

64 *Hope Services LLC v. Republic of Cameroon*, ICSID Case No. ARB/20/2, Award, 23 December 2021, p. 72 *et seq*. (paras. 218 and 222).

the latter question, *i.e.*, whether the benefit is used by the host State. In other words, is the host State itself using the cryptocurrency exchange as part of its financial policy? However, if the host State is not directly involved, the question of where the benefit of the investment is located will certainly require a thorough fact specific analysis.

Nevertheless, the tribunal in *Hope Services LLC* determined, that regardless of whether the investment (there an IT platform) was developed and hosted outside the host State, it still could have a benefit within the host State. It is, therefore, possible, again depending on the structure of the cryptocurrency exchange or compilation of customer data, that the investments could be considered an investment located in a host State. This could occur for instance if the cryptocurrency exchange or compilation of customer data is promoted to users within the host State or is regulated by the host State.

5 Conclusion

Digital assets come in many different shapes and sizes, and determining whether any digital asset is a protected investment within the meaning of an investment treaty will require a thorough fact specific analysis. This analysis will turn on whether the definition of investment within the applicable investment treaty is broad or narrow, and, if applicable, how the tribunal analyzes the criteria for an investment under the ICSID Convention. Moreover, the host State's regulation of some digital assets, for example, cryptocurrencies, will also determine whether the asset can be considered an investment at all.

Separately, determining whether an intangible digital asset exists within the territory of a host State requires a separate fact specific analysis. While investment tribunals in recent years have extended the territorial requirement of investment treaties to intangible investments, including, contracts, financial instruments, and some digital assets, no tribunal has dealt with the digital assets at issue in this article. It remains to be seen how such assets will be analyzed by tribunals as they present a series of unique questions which may have been difficult to anticipate when the investment treaties were drafted.

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