

Cryptocurrencies in Estate Planning and Administration*

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Table of contents

Ι.	Technical Information on Cryptocurrencies			2
	Α.	Distributed Ledg	ger Technology and Blockchain	2
	В.	Address, PIK &	PUK and Wallet	3
	C.	Blockchain Transaction Process		
II.	Defin	Definition and Purpose of Cryptocurrencies		
III.	Legal Classification of Cryptocurrencies			5
	Α.	Initial Situation		
	В.	Cryptocurrencies as "Items" within the Meaning of the Swiss Civil Code		6
	C. Inheritability of Cryptocurrencies		8	
IV.	Selected Legal and Practical Issues			8
	Α.	Ensuring the Access of the Heirs		
		1. Custodial	Wallet of the Testator	9
		2. Non-Cust	odial Wallet of the Testator	9
	В.	Passive Legal Standing in the Reduction of Gratuitous Lifetime Gift		11
		1. Initial Situ	ation	11
		2. Informatio	on Claims of the Heirs	12
		Conclusio	n	17
	C. Relevant Market Value of Cryptocurrencies (Art. 617 CC)			17
V.	Concluding Remarks			18

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^{*} This is a translation of the German article published in the magazine successio 3/21, September 2021.

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- 1 The advancing digitalisation also has an impact on inheritance law. Whereas in the past, bank assets, securities and real estate were bequeathed, today digital assets are also part of the testator's estate. Cryptographic assets, i.e., cryptocurrencies such as Bitcoin or Ethereum, also qualify as such digital assets. For the estate practitioner various new legal and practical questions arise in this context: How should cryptocurrencies be legally classified and what does this mean for their inheritability? How can the testator ensure his heirs' access to cryptocurrencies? Do the heirs have a person with property standing against whom they can direct their claim for information and reduction based on gratuitous lifetime gifts by the testator? Which market value of the cryptocurrencies is decisive for the calculation of the statutory entitlement?
- ² This article shows how cryptocurrencies are to be legally classified and why they are to be qualified as (inheritable) property within the meaning of the Swiss Civil Code. The focus is then on selected legal and practical issues in connection with the treatment of cryptocurrencies in estate planning and settlement.

I. Technical Information on Cryptocurrencies¹

A. Distributed Ledger Technology and Blockchain

³ The basis of cryptocurrencies is the technology of distributed (decentralised) account management ("Distributed Ledger Technology" or "DLT"). A distributed ledger is a public transaction ledger that is maintained in multiple locations simultaneously.

The purpose of the distributed ledger is to record transactions of assets in digital payment and business transactions without the need for a central processing centre that coordinates the money transfers and account management.² The distributed ledger thus consists of a data structure in which all relevant data about the transactions of the assets in question are recorded and summarised in so-called blocks ("blockchain").³ In addition to cryptocurrencies, assets can also be shares or other financial assets that are based on a blockchain ("blockchain assets") and are transferred between the blockchain users.⁴ The individual transactions are not only stored on one device, but on an entire network of devices that communicate with each other continuously. This simultaneous storage of information and parameters on multiple devices prevents manipulation.⁵

¹ This is a simplified presentation for this article. The authors would like to thank MLaw MICHAEL KUNZ, LL.M., Senior Legal Associate at MME | Legal | Tax | Compliance AG, Zurich, for his cooperation.

² MARC STEINER, Bitcoins verwahren und vererben, Ein praktischer Ratgeber, 36.

³ HANS CASPAR VON DER CRONE/FRANZ J. KESSLER/LUCA ANGSTMANN, Token in der Blockchain privatrechtliche Aspekte der Distributed Ledger Technologie, SJZ 2018, 337; CORDULA LÖTSCHER, Der digitale Nachlass, Zürich 2021, n 298 et seq.; LUZIUS MEISSER, Kryptowährungen: Geschichte, Funktionsweise, Potential, in: Weber/ Thouvenin (eds.), Rechtliche Herausforderungen durch webbasierte und mobile Zahlungssysteme, Zürich 2015, 82 et seq.

⁴ VON DER CRONE/KESSLER/ANGSTMANN, op. cit., 337.

⁵ Cf. STEINER, op. cit., 35; if one wanted to manipulate data on the block, one would also have to change all subsequent cryptographically secured blocks. This is not technically possible in the foreseeable future.

⁴ Blockchains exist in various forms and are usually divided into private and public blockchains. Private blockchains set rules for determining who can see and write to the blockchain.⁶ In public blockchains such as Bitcoin or Ethereum, on the other hand, participation is open to anyone. Public blockchains are characterised in particular by the fact that the transactions and the distribution of blockchain assets within the blockchain can be publicly viewed via a so-called Block-Explorer (e.g., Blockstream⁷ or Etherscan⁸). Thus, any interested person can see which and how many blockchain assets are transferred or have been transferred between the individual addresses. However, it is not clear who the individual address belongs to or who the user of the respective address is. In this context, one also speaks of the pseudonymity of the public blockchain.⁹

B. Address, PIK & PUK and Wallet

- ⁵ In order to participate in a public blockchain, the user requires a public address ("address"), which is equivalent to the traditional IBAN account number. The address is not the same as the "public key" or "PUK". Technically, the address is generated from the public key and is a compressed version of the PUK; the address is therefore sufficient to participate in the blockchain. On the other hand, the user needs an associated private key ("Private Key" or "PIK"). This key allows the user to access the address and to control and transfer the blockchain assets held on it. Consequently, whoever has the PIK can dispose of the blockchain assets.¹⁰
- ⁶ The address as well as the PIK and the PUK (together "key pair") and not the cryptocurrencies themselves are usually managed via a digital wallet.¹¹ The wallet itself can be an online, desktop, mobile, paper or hardware wallet that can be accessed by means of a PIN (hardware wallet) or password (software wallet) and is secured with a seed phrase (random binary password consisting of 12 to 24 words) in the sense of a backup.¹² If the wallet can no longer be found or the data stored on it has been deleted, access to the blockchain assets can only be restored with the seed phrase. On the one hand, this means that no one can access these cryptocurrencies if the user loses the PIK and seed phrase. On the other hand, a stranger with knowledge of the seed phrase can set up the wallet again, take possession of the address and the key and consequently access the blockchain assets.

⁶ This type of blockchain is not the subject of this article. A distinction is also made between "permissioned" and "permissionless" blockchains, cf. Federal Council Report of 14 December 2018: Rechtliche Grundlagen für Distributed Ledger-Technologie und Blockchain in der Schweiz, 24.

⁷ https://blockstream.com/ (last visited 19.04.2021).

⁸ https://etherscan.io/ (last visited 19.04.2021).

⁹ See also MARTINA BOSSHARDT/LORENA BUR, Nachlassplanung und Nachlassabwicklung, in: Hrubesch-Millauer/Wolf/Eggel (eds.), Digitales Erbrecht - Perspektiven aus der Schweiz, Bern 2021, n 25.

¹⁰ Cf. LÖTSCHER, op. cit., n 301.

¹¹ Cf. on the whole LUKAS MÜLLER/MALIK ONG, Aktuelles zum Recht der Kryptowährungen, AJP 2020/2, 200.

¹² Cf. Bosshardt/Bur, loc. cit., n 21 et seq.; Lötscher, loc. cit., n 303.

Once the cryptocurrencies have been transferred to another address and the transaction is recorded in the blockchain, it is basically irreversible. The cryptocurrencies in question can no longer be retrieved.¹³

7 The user can either manage the wallet himself, so that only he has access to it (so-called "Non-Custodial Wallet"). Or it can be managed by a third party such as a crypto bank (e.g., Sygnum AG and SEBA Crypto AG), which has sole access to the cryptocurrencies (socalled "custodial wallet").¹⁴

C. Blockchain Transaction Process

- 8 In order to initiate a transaction, the user must first enter the recipient's address and the blockchain assets he wants to transfer. In a second step, he must sign the transaction with his private key. In this way, the user provides mathematical proof that he is authorised to carry out the transaction. After signing with the private key, the transaction is inserted into a new block and thus communicated to the other blockchain users (protection against subsequent manipulation).¹⁵
- In order to ensure that the blockchain assets contained in the transaction have not already been spent elsewhere (so-called "double spending"), the transaction must then be validated in a consensus procedure.¹⁶ The best-known consensus procedure, which is used by Bitcoin, for example, is called "proof of work". In this procedure, the computers that provide the blockchain with computing power check whether the new transaction contradicts the previous transaction history ("protocol"). To do this, the computers compare the block to be verified with their version of the transaction history.¹⁷

If the transaction is confirmed to be free of contradictions it is validated. The person with the fastest calculator receives remuneration in return for his efforts. The consensus procedure "proof of work" is also referred to as "mining" because of the remuneration to be obtained.¹⁸

In summary, it can be said that the transactions of blockchain assets are based on four central characteristics: (i) immutability: the integrity of the database is cryptographically secured; (ii) unstoppability: third parties cannot stop the transactions; (iii) non-reversibility: the transaction entries cannot be reversed; and (iv) decentralisation: the transactions are decentralised.

¹³ LÖTSCHER, op. cit., n 299.

¹⁴ Cf. LÖTSCHER, loc.cit., n 304 et seq.

¹⁵ Cf. fn. 5.

¹⁶ MÜLLER/ONG, op. cit., 200.

¹⁷ The exact procedure depends on the respective blockchain.

¹⁸ Cf. on the whole STEINER, loc. cit. 38 et seq.

II. Definition and Purpose of Cryptocurrencies

- ¹¹ According to the Federal Council, a cryptocurrency is a "digital representation of a value that is tradable on the internet" and "assumes the functions of money" ("digital assets").¹⁹ Cryptocurrencies are virtual currencies that are secured by encryption technology and organised in a distributed manner.²⁰
- ¹² Cryptocurrencies belong to the category of "payment tokens".²¹ Payment tokens are tokens that are either actually or according to the intention of the issuer accepted within a certain user group as a means of payment for the purchase of goods and services or are intended to serve the transfer of money and value.²² Cryptocurrencies are purely factual, intangible assets that do not convey any claims against the issuer and for which no value is guaranteed.²³ The prototype of payment tokens is Bitcoin (BTC). Other well-known payment tokens include Ethereum (ETH) and Litecoin (LTC).
- ¹³ The purpose of cryptocurrencies is therefore to enable cashless payment transactions without the need for banks and other financial intermediaries. However, there is currently no cryptocurrency that has the status of legal tender.²⁴

III. Legal Classification of Cryptocurrencies

A. Initial Situation

- ¹⁴ Cryptocurrencies are intangible items with a corresponding commercial value, i.e., immaterial assets.²⁵ Today, they are already the subject of contracts such as a purchase contract, an exchange contract, a donation, or a licence agreement.²⁶ They are created, stored, transferred, and traded.
- ¹⁵ However, it must be examined how cryptocurrencies are to be qualified under civil law. This depends in particular on whether cryptocurrencies are objects in which (absolute or

¹⁹ Federal Council report on virtual currencies in response to the postulates Schwaab (13.3687) and Weibel (13.4070) of 25 June 2014, 7 et seq.

²⁰ MEISSER, op. cit., 83; Müller/Ong, op. cit., 199.

²¹ Other categories are usage tokens and investment tokens; see FINMA Guidelines for enquiries regarding the regulatory framework for initial coin offerings (ICOs) of 16 February 2018, para. 3.1.

FINMA Guidelines for enquiries regarding the regulatory framework for initial coin offerings (ICOs) of 16 February 2018, section 3.1.

²³ MEISSER, op. cit., 90.

²⁴ RENÉ KRÜGEL, Die Behandlung von Bitcoin nach OR- Rechnungslegungsrecht, Expert Focus 2018, 6.

²⁵ Report of the Federal Council of 14 December 2018: Rechtliche Grundlagen für Distributed Ledger-Techno- logie und Blockchain in der Schweiz, 54; MARTIN ECKERT, Digitale Daten als Wirtschaftsgut: digitale Daten als Sache, SJZ 112 (2016) No. 10, 246; MIRJAM EGGEN, Was ist ein Token? AJP 2018/5, 562 f.; LUKAS MÜLLER/MILENA REUTLINGER/PHILIPPE J.A. KAISER, Entwicklungen in der Regulierung von virtuellen Währungen in der Schweiz und der Europäischen Union, EuZ 2018, 86 et seq.; cf. also para. 12 above.

²⁶ ECKERT, op. cit., 246; THOMAS LINDER/STEPHAN D. MEYER, Die steuerliche Behandlung von Bitcoin und anderen Kryptowährungen, in: Anlegen mit Weitsicht, Zürcher Steuerpraxis ZStP 3/2017, 196 et seq.

relative) rights and obligations can be established. To date, there is neither a legal regulation ²⁷ nor - as far as can be seen - case law.

B. Cryptocurrencies as "Items" within the Meaning of the Swiss Civil Code

- ¹⁶ The term "item" is not defined in the Swiss Civil Code ("CC"). Within a legal meaning, the term "item" is to be understood as a physical object that is delimited from others and is subject to actual and legal control.²⁸ The notion of an item can therefore be divided into the following four characteristics: impersonality, demarcation, controllability and physicality.²⁹ The term "item" is then a functional term that is open to a dynamic conception subject to the social value aspect.³⁰ The concept of "item" within the meaning of the CC is thus decisively shaped by doctrine and case law.³¹
- 17 The predominant doctrine assumes that digital data, tokens, or cryptocurrencies are not accessible to the concept of property within the meaning of the CC for lack of corporeality, due to questionable implementation of the evaluation principles inherent in property law (e.g., the principles of publicity, tradition, and speciality) *de lege lata* or precisely due to a lack of statutory regulation.³²
- ¹⁸ In addition, however, there is an increasing number of voices in literature that understand cryptocurrencies as property within the meaning of the CC by applying the terms of

²⁷ Reference should be made to the DLT framework legislation, with which various legal provisions, particularly in securities, bankruptcy, and financial market law, are being adapted to DLT technology, cf. the Federal Act on the Adaptation of Federal Law to Developments in Distributed Ledger Technology (AS 2021 33). The Federal Council has put into force those elements of the DLT bill as of 1 February 2021 that enable the introduction of register book-entry securities. The other provisions of the DLT bill, namely in the area of financial market infrastructure law, will enter into force on 1 August 2021. However, the DLT framework legislation also does not create a property-like right in cryptocurrencies, and it only affects the investment rights and not the pure rights. payment token, cf. LÖTSCHER, loc.cit., n 309 et seq.

See, however, fn 33 regarding the right to segregate cryptocurrencies in the event of bankruptcy.

²⁸ CHK ZGB-ARNET, art. 641 n 6; BK-MEIER-HAYOZ, Syst. part n 115; BSK ZGB II-WOLF/WIEGAND, before art. 641 et seq. n 6; ZK-HAAB, introduction n 21 et seq.

²⁹ JÖRG SCHMID/BETTINA HÜRLIMANN-KAUP, Sachenrecht, 5th ed., Zurich 2017, n 5 et seq.

³⁰ Cf. the general remarks on the functional orientation of the concept of property in BSK ZGB II-WOLF/WIEGAND, before art. 641 et seq. n 6 et seq.

³¹ ECKERT, op. cit., 247.

³² For digital data in general, see HARALD BÄRTSCHI/CHRISTIAN MEISSER, Virtuelle Währungen aus finanzmarkt- und zivilrechtlicher Sicht, in: Weber/ Thouvenin (eds.), Rechtliche Herausforderungen durch webbasierte und mobile Zahlungssysteme, Zurich 2015, 141; GIANNI FRÖHLICH-BLEUER, Eigentum an Daten? Jusletter, 6 March 2017, n 10; DANIEL HÜRLIMANN/HERBERT ZECH, Rechte an Daten, in: sui-generis 2016, n 8; LÖTSCHER, loc. cit., n 28; ROLF H. WEBER/FLORENT THOUVENIN, Dateneigentum und Datenzugangsrechte - Bausteine der Informationsgesellschaft, ZSR 2018, 49; BSK ZGB II-WOLF/WIEGAND, before art. 641 et. seq. For cryptocurrencies, see Sébastien Gobat, Les monnaies virtuelles à l'épreuve de la LP, AJP 2016, 1098; MARTIN HESS/STEPHANIE LIENHARD, Übertragung von Vermögenswerten auf der Blockchain, Jusletter 4 December 2017, n 39 and 77; LÖTSCHER, loc. cit., n 308 and 314; BENEDIKT MAURENBRECHER/URS MEIER, Insolvenzrechtlicher Schutz der Nutzer virtueller Währungen, Jusletter 4 December 2017, n 20; MÜLLER/ONG, op. cit. 206; FRANÇOIS PILLER, Virtuelle Währungen - Reale Rechtsprobleme?, AJP 2017, 1429. For tokens, see VON DER CRONE/KESSLER/ANGSTMANN, op. cit. 339 et seq.; EGGEN, op. cit. 562.

functionality.³³ The cantonal tax offices have also qualified cryptocurrencies as valuable movable property for tax purposes, the possession of which is economically comparable to the possession of cash or precious metals and is therefore subject to wealth or income tax.³⁴ Moreover, cryptocurrencies represent a realisable value and, as such, can be seized and pledged.³⁵

- ¹⁹ The view that cryptocurrencies are classified as a notion and thus as an absolute right is to be agreed with according to the authors. They are indisputably impersonal. Moreover, each cryptocurrency and its units can be individually determined, tracked and distinguished from other units of currency.³⁶ Each transaction inserted into the blockchain is unique and cannot be manipulated.³⁷ The concept of controllability is also fulfilled: The holder of the PIK has exclusive and actual control over his cryptocurrencies, and he can also only transfer them to another person through his active participation (signing by means of the PIK).³⁸ Simultaneous use of the cryptocurrencies by different persons is therefore ruled out.³⁹ The consensus procedure also validates each transaction individually, thus preventing "double spending" (and thus copies).⁴⁰
- ²⁰ Art. 713 CC then places "forces of nature" on an equal footing with items in legal terms, even though they lack corporeality. It is also possible to establish rights and obligations in other incorporeal assets such as intellectual property rights.⁴¹ In the opinion of the authors, it is therefore not clear why the lack of corporeality of cryptocurrencies should speak against compatibility with the concept of property. Applying the concept of function and based on the principle of the power of the factual, cryptocurrencies must be regarded as items,

³³ ECKERT, Ioc. cit., 249 and 273 f.; BARBARA GRAHAM-SIEGENTHALER/ANDREAS FURRER, The Position of Blockchain Technology and Bitcoin in Swiss Law, Jusletter of 8 May 2017, n 58 ff; LINDER/MEYER, Ioc. cit, 196 ff; STEPHAN D. MEYER/BENEDIKT SCHUPPLI, "Smart Contracts" und deren Einordnung in das schweizerische Vertragsrecht, recht 2017, 219 f.; MÜLLER/REUTLINGER/KAISER, op. cit, 87; FLORIAN SCHÖNKNECHT, Der Einlagebegriff nach Bankengesetz, GesKR 2016, 310 fn. 90; BENEDIKT SEILER/DANIEL SEILER, Sind Kryptowährungen wie Bitcoin (BTC), Ethereum (ETH), Ripple (XRP) und Co. als Sachen im Sinne des ZGB zu behandeln?, sui-generis 2018, n 37.

³⁴ Federal Tax Administration (FTA) working paper of 27 August 2019 on cryptocurrencies and initial coin/token Offerings (ICO/ITO) as subject to wealth, income and profit tax, withholding tax and stamp duties, <https://www.estv.admin.ch/dam/estv/de/dokumente/bundes steuer/cryptowaehrungen/Arbeitspapier-Kryptowaeh rungen.pdf.download.pdf/Arbeitspapier-Kryptowaeh rungen_en.pdf> (last visited 19.04.2021), 4. Cf. also for the Canton of Zurich https://www.zh.ch/de/ steuern-finanzen/steuern/treuhaender/steuerbuch/steuerbuch-definition/zstb-16-5.html and for the Canton of Zug https://www.zg.ch/behoerden/finanzdirektion/steuerverwaltung/kryptowaehrungen; cf. also LINDER/MEYER, loc. cit, 199 ff.

³⁵ MATTHIAS KUSTER, Pfändung und Verarrestierung von digitalen Token, Jusletter 17 September 2018, n 20; cf. also the new right of exemption for cryptocurrencies in bankruptcy (Art. 242a SchKG) to be introduced with the DLT framework legislation (but not yet in force). 242a SchKG) and the general right of access to data in the bankruptcy estate's power of disposal (Art. 242b SchKG) pursuant to the Federal Act on the Adaptation of Federal Law to Developments in the Distributed Ledger Technology (AS 2021 33).

³⁶ SEILER/SEILER, loc. cit., n 23.

³⁷ Cf. fn. 5 above.

³⁸ Cf. para. 8 above.

³⁹ SEILER/SEILER, op. cit., n 29.

⁴⁰ Cf. para. 9 above.

⁴¹ ECKERT, op. cit., 247.

otherwise they would not be valid from a legal point of view. This qualification not only corresponds to today's economic and social approach but is also in line with the views of tax law and enforcement law.⁴² In our opinion, cryptocurrencies are therefore to be equated (*de lege feranda*) with items within the meaning of the CC.

C. Inheritability of Cryptocurrencies

- ²¹ Pursuant to the authors, the ownership of cryptocurrencies is transferable to other persons as property of digital information units. Consequently, they are inherited by the heirs pursuant to Art. 560 CC.
- ²² Even if the qualification of cryptocurrencies as items were to be denied,⁴³ the contractual claims of the testator in the case of a custodial wallet are inheritable as subjective rights of the testator.⁴⁴ In the case of a non-custodial wallet, on the other hand, only the wallet, together with the data stored on it, would be inheritable as property not, however, the factual access possibilities.⁴⁵ In order to justify the inheritability of cryptocurrencies as an alternative, in the opinion of the authors, a contemporary teleological interpretation would also have to be applied to Art. 560 CC similar to the concept of property⁴⁶ in order to allow cryptocurrencies to pass to the heirs as purely factual assets by applying a broad concept of property.⁴⁷

IV. Selected Legal and Practical Issues

A. Ensuring the Access of the Heirs

As with conventional estate items, the heirs also have an essential interest to know whether and to what extent the deceased owned cryptocurrencies and how they can be accessed. In this sense, the future decedent must ensure that the heirs learn of the existence of the cryptocurrencies after his or her death. In contrast to a bank vault, for example, which can be broken into, the difficulty with cryptocurrencies is that knowledge of their existence alone is not sufficient; the heirs must also learn how they can access the cryptocurrencies. It must be remembered that the person who has the PIK or the seed phrase can in fact dispose of the cryptocurrencies.⁴⁸ It must therefore be ensured during planning that the access information reaches the (correct) heirs in a secure manner, without unauthorised persons being able to misuse this information to their advantage and transfer the cryptocurrencies to their own or another's address.⁴⁹ For estate planning and settlement the relevant factor

⁴² Cf. para. 18 above and fn. 35 above.

⁴³ Cf. para. 17 above.

⁴⁴ Cf. LÖTSCHER, op. cit., n 327.

⁴⁵ Cf. LÖTSCHER, op. cit., n 330.

⁴⁶ Cf. para. 20 above.

⁴⁷ Cf. on the various dogmatic approaches LÖTSCHER, loc. cit.

⁴⁸ Cf. para. 5 f. above.

⁴⁹ Cf. para. 6 above.

is whether the (future) decedent holds or held his cryptocurrencies in a custodial or noncustodial wallet.

1. Custodial Wallet of the Testator

- If the custodial wallet is managed by a crypto bank, only the financial intermediary has access to the cryptocurrencies of the future decedent. Similar to a contract with a regular bank, the testator only authorises the transactions via the crypto currencies. However, as in the case of a conventional bank, the underlying contractual relationship usually corresponds to a mandate or a contract with strong elements of a mandate.⁵⁰ In such cases, it must be assumed that although the mandate ends with the death of the testator (Art. 405 Swiss Code of Obligations, "CO"), the heirs succeed to the legal position of the testator by virtue of universal succession pursuant to Art. 560 CC, and consequently the contractual rights to information and disclosure also pass to the heirs.⁵¹
- In this sense, the diligent estate planner must ensure that the heirs are aware of the contractual relationship with the crypto bank. As in the case of conventional bank accounts, this information should at least in the case of domestic matters regularly be obtained from the tax return, because the cryptocurrencies, as a monetary right to an asset, are part of the net assets of the Swiss taxpayer pursuant to Art. 13 para. 1 Tax Harmonisation Act. Accordingly, they must be declared.⁵²
- Regarding ensuring access, the future decedent does not have to take any crypto-specific particularities into account when planning the estate. In principle, the heirs can turn to the crypto bank with any enquiries. The known problems that may arise for the heirs in connection with their inherited contractual and statutory inheritance law information claims pursuant to Art. 607 para. 3 CC and Art. 610 para. 2 CC are dealt with in para. 37 et seq. below.

2. Non-Custodial Wallet of the Testator

If, on the other hand, the key pair and the address are kept in a non-custodial wallet to which only the testator had access, there is a greater need for planning. The heirs are also likely to learn about the existence of the cryptocurrencies from the deceased's tax return - at least in the case of a domestic estate.⁵³ However, this does not yet indicate how they can access the cryptocurrencies. On the one hand, in practice the access data itself is usually unknown, and on the other hand the heirs may not know how to use the existing access data. The heirs have neither a crypto bank nor a private body or public authority at their disposal to which they can turn to obtain the necessary information. The risk that the

⁵⁰ PETER BREITSCHMID/ISABEL MATT, Informationsansprüche der Erben und ihre Durchsetzung, successio 2010, 91; HANS RAINER KÜNZLE, Auskunftspflichten gegen- über Erben, successio 2012, 256, with further references.

⁵¹ BREITSCHMID/MATT, op. cit., 92; KÜNZLE, op. cit., 256.

⁵² Cf. para. 18 above.

⁵³ Cf. para. 18 and 25 above.

cryptocurrencies are lost forever is therefore very high,⁵⁴ especially since the key pair contained in some wallets is deleted if the PIN is repeatedly entered incorrectly.⁵⁵

- The future decedent must therefore ensure that the heirs have access to the non-custodial wallet (including PIN or password) or to the seed phrase. In practice, there are various ways to do this. First and foremost, the testator is advised to draw up a crypto access plan which, in addition to a list of the existing cryptocurrencies and the wallets ("crypto assets inventory"), also contains the location of the wallet PIN or password and the seed phrase. Regularly, estate planning with hardware wallets is the simplest and safest for technical reasons; at best, the testator only owns one wallet. Because possession of the wallet and PIN or the PIK or seed phrase alone is sufficient⁵⁶ to access the cryptocurrencies. The crypto access plan must be kept separately from the wallet and the seed phrase. In this way, unauthorised access can usually be avoided.
- In the last will and testament, only the location of the crypto access plan should be indicated, but under no circumstances the access data, such as the PIK or seed phrase. The risk is too high that a well-versed heir, the executor, a legatee or even a third party will seize the cryptocurrencies after the opening of the testamentary dispositions (Art. 557 CC) and transfer them to an address of his own or of a third party whose user will not be identifiable for the heirs. Because there is no financial intermediary, the access to the wallet can neither be controlled nor reversed by the (co-)heirs.⁵⁷
- In order to counteract the risk of abuse by an unauthorised person, the testator has various technical and estate planning options. One of these is multisignature ("multisig"),⁵⁸ which requires several PIK to sign and execute a transaction. In this way, the future decedent can ensure that not a single member of the community of heirs can access the cryptocurrencies, but only all of them jointly. Similarly, the principle of unanimity pursuant to Art. 602 para. 2 CC can be ensured with the Shamir's Secret Sharing Scheme⁵⁹ method. According to this method, the seed phrase, for example, is cut into at least three parts, which are then distributed to all heirs or to two heirs and the executor during their lifetime. The heirs must therefore all act together (possibly with the assistance of the executor) to restore the wallet by means of the seed phrase and to be able to access the cryptocurrencies.
- The crypto-savvy heir forfeits his right of disclaimer (Art. 571 para. 2 CC) through unauthorised access to the cryptocurrencies and must fear an action for recovery of inheritance or right to division by the other heirs (Art. 598 and 604 CC), but only to the extent that the co-heirs become aware that cryptocurrencies were in the testator's estate. The legatee, on the other hand, who becomes aware of the PIK or the seed phrase, has

⁵⁴ Cf. para. 6 above.

⁵⁵ Cf. STEINER, op. cit., 57, but this is not the case with all wallet software.

⁵⁶ Cf. para. 5 et seq. above.

⁵⁷ Cf. para. 6 above.

⁵⁸ At present, this signature is only used by a few crypto currencies and wallets, cf. STEINER, loc. cit. 108 f.; cf. also Federal Council Report of 14 December 2018: Rechtliche Grundlagen für Distributed Ledger-Technologie und Blockchain in der Schweiz, 70.

⁵⁹ STEINER, op. cit., 110 et seq.

direct *de facto* power of disposal of the cryptocurrencies. It should therefore not be up to the legatee to assert his obligatory claim to payment of the legacy against the obligor of the legacy, if necessary, by means of a legacy claim pursuant to Art. 601 CC, but rather the heirs, in the case of an infringement of their statutory entitlement, should have to demand the reduction and restitution of the cryptocurrencies (or a part of them) already transferred to the address of the legatee based on Art. 486 para. 1 in conjunction with Art. 565 CC from the legatee.⁶⁰

- ³² Ultimately, it is always advisable for the future decedent to appoint a crypto-savvy executor, if necessary, with a limited mandate, to support the heirs in connection with the cryptocurrencies in the estate and their access.
- ³³ From the point of view of the heirs, it follows that they are dependent on the testator's forward-looking and reliable planning. The information regarding access to the cryptocurrencies can at best be obtained directly from the crypto access plan in cooperation with the executor. If access is not ensured, the testator will take his cryptocurrencies with him to the grave.

B. Passive Legal Standing in the Reduction of Gratuitous Lifetime Gift

1. Initial Situation

In practice, it is common for a future decedent to transfer his cryptocurrencies during his lifetime to the address of a beneficiary known to him without receiving anything in return. For the purposes of a case study, let us assume the following for illustration purposes:

The community of heirs of the testator Emilie consists of her husband Eric and her son Sébastien, who is entitled to his forced heirship share by will. Shortly before her death, Emilie gives her 20 bitcoins (each worth approximately CHF 50,000⁶¹) to her husband Eric. As a case alternative, Emilie gives her 20 bitcoins to her friend Frédéric shortly before her death. The blockchain address of the respective beneficiary is known. In both cases, Sébastien's forced heirship is violated and is not covered by the net estate alone.

³⁵ In both alternatives, there is a gratuitous lifetime gift from the testator Emilie, which - if the other requirements are met - would have to be reduced in favour of the son and compulsory heir Sébastien pursuant to Art. 527 CC. While Sébastien can view the respective transactions on the block explorer and is aware of the recipient's address,⁶² the question for him, particularly in the case alternative, is how he can find out who the recipient of the bitcoins is and, consequently, who the person with passive legal standing is in the reduction and recovery process.

⁶⁰ PRAXKOMM ERBRECHT-BURKART, art. 486 n 8.

⁶¹ Cf. https://coinmarketcap.com/de/currencies/bitcoin/ (last visited on 06.04.2021).

⁶² Cf. para. 4 above.

³⁶ However, the case in which the future decedent transfers the key pair to a third person (be it a person close to him or the executor of his will) during his lifetime is rare in practice. The risk for the blockchain user is too great that the third party will transfer the cryptocurrencies to their own address during their lifetime and they will disappear never to be seen again. Should this nevertheless be the case and the future decedent transfers the key pair to the executor, this would likely be a deposit agreement pursuant to Art. 482 et seq. CO and not a gratuitous lifetime bequest within the meaning of Art. 626 CC or Art. 527 CC. Such a transfer would neither be compensated nor reduced.

2. Information Claims of the Heirs

2.1 Current Status of Case Law

- ³⁷ It is well known that heirs have a great need for comprehensive information on the testator's lifetime gifts in order to enforce their inheritance rights. Every heir has the right to information under statutory inheritance law pursuant to Art. 607 para. 3, and Art. 610 para. 2 CC, as well as, if applicable, an inherited contractual right to information as auxiliary claims in the process of abatement.⁶³ According to the Federal Supreme Court, these two information claims may be asserted by the heirs side by side.⁶⁴ The heirs' need for information is countered by the protection of legitimate interests of the testator or third parties concerning the secrecy of certain events.⁶⁵
- Based on Art. 607 para. 3 CC and 610 para. 2 CC, the heirs must disclose to each other on a voluntary basis all facts and events that are objectively capable of influencing the division of the estate in any way.⁶⁶ While the Federal Supreme Court also considers gifts *inter vivos* to be covered by the duty of disclosure,⁶⁷ some doctrine also extends this to knowledge of secret bank accounts.⁶⁸ This duty of the heirs to provide information also applies by analogy to third parties who are obliged to provide information regarding assets in their possession that are potentially connected with the estate (e.g. deductible gratuitous lifetime gifts).⁶⁹ According to the Federal Supreme Court, banks are not only obliged to

⁶³ CHRISTIAN BRÜCKNER/THOMAS WEIBEL, Die erbrechtlichen Klagen, 3rd edition, Zurich/Basel/Geneva 2012, n 39; PRAXKOMM ERBRECHT-WEIBEL, Preliminary remarks on art. 607 et. seq. n 18a and n 20.

⁶⁴ BGer 4A_522/2018 of 18.07.2019. E. 4.5.1.

⁶⁵ See the list of recent literature on the controversies in doctrine and case law in ANDREA DORJEE-GOOD/DANIELA DARDEL, Neue (Un-)Klarheiten zur Auskunftspflicht der Banken gegenüber Erben, successio 2020, 170 et seq., fn. 3 as well as THOMAS WEIBEL/ALINE MATA, Informationsrechte und -pflichten der Erben, iusnet ErbR 21.12.2020.

⁶⁶ BGE 4A_ 522/2018 E. 4.3; KUKO ZGB-BÜRGI, n 7 on art. 610; TARKAN GÖKSU, Informationsrechte der Erben, AJP 2012, 961; PRAXKOMM ERBRECHT-WEIBEL, Preliminary remarks on art. 607 et. seq. N 33, and art. 607 n 17.

⁶⁷ BGE 127 III 396 E. 3 with further references.

⁶⁸ Cf. esp. ANDREAS SCHRÖDER, Informationspflichten im Erbrecht, Basel 2000, 58; ANDREAS SCHRÖDER, Erbrechtliche Informationsansprüche oder: Die Geister, die ich rief ..., successio 2011, 190; Göksu, loc. cit., 960 et seq.; PRAXKOMM ERBRECHT-WEIBEL, Preliminary remarks on art. 607 et. seq. n 33; BREITSCHMID/MATT, loc.cit., 91.

⁶⁹ PRAXKOMM ERBRECHT-WEIBEL, Preliminary remarks on art. 607 et. seq. n 30 with further references.

provide information regarding such assets held by them, but also the identity of third parties who have received these assets.⁷⁰

- ³⁹ If there was also a contract between the testator and the bank, according to Art. 400 para. 1 CO every heir⁷¹ can in principle demand information from the bank with proof of the bank contract and his or her status as heir. This also includes information as to whether the testator (at least) carried out legal transactions and transfers in the last ten years before his or her death that may be subject to reduction⁷², as well as information on the identity of the beneficiaries of the transfer.⁷³ However, according to the new case law of the Federal Supreme Court (which creates legal uncertainty and has been criticised in the doctrine), the right to information is no longer restricted only by the testator's protected private sphere, but also by his or her property-related instructions during life - irrespective of his or her confidentiality instructions.⁷⁴ In addition, a (predominant) interest of the heir under inheritance law is now required for an inherited contractual claim.⁷⁵ This interest exists as long as the heir can claim a (non-forfeited) abatement or compensation and division claim. In addition, a (predominant) interest of the heir under inheritance law is now also required for an inherited contractual claim.⁷⁶ Then the bank must disclose the name of the beneficiary to the heirs, especially since the heirs cannot assert an abatement or compensation claim against the beneficiary without this information.⁷⁷
- In this context, it is generally to be hoped that the case law of the supreme courts under Art. 601a para. 1 new-CC, according to which heirs are granted an explicit and comprehensive right to information vis-à-vis third parties for the purpose of asserting their rights⁷⁸ will bring clarity.
- ⁴¹ Ultimately, the heirs have a comprehensive right to information within the framework of the public inventory based on Art. 581 para. 2 and 3 CC⁷⁹, which also includes the merely attributable values insofar as they are noted in the inventory.⁸⁰

⁷⁰ Cf. the more recent BGer 4A_522/2018 of 18.07.2019, E. 4.3, with further references and BGE 132 III 677 E. 4.2.4.

⁷¹ BGE 133 III 664, E. 2.5 and BGer 4A_522/2018 of 18.07.2019. E. 4.2.1; BREITSCHMID/MATT, loc.cit., 96.

⁷² BGE 133 6664, E. 2.6; BREITSCHMID/MATT, loc.cit., 94.

⁷³ BGer 4A_522/2018 of 18.07.2019, E. 4.3.

⁷⁴ 7BGer 4A_522/2018 of 18.07.2019, E. 4.2.3. and E. 4.5.2.

⁷⁵ BGer 4A_522/2018 of 18.07.2019, E. 4.2.3. and 4.5.2; criticised by DORJEE-GOOD/DARDEL, loc. cit., 179 and SABINE HERZOG, Einschränkung des vertraglichen Auskunftsanspruchs der Erben, AJP/PJA 2019, 1348; CÉLIAN HIRSCH, Le secret bancaire s'oppose-t-il à l'information des héritiers?, LawInside of 19.10.2019; STEPHAN WOLF/CÉDRIC BERGER, Die privatrechtliche Rechtsprechung des Bundesgerichts im Jahr 2019: Erbrecht, ZBJV 156/2020, 270.

Doubting this interest: PETER BREITSCHMID/ANNINA VÖGELI, Entwicklungen im Erbrecht, SJZ 116/2020, fn.
34.

⁷⁷ BGer 4A_522/2018 of 18.07.2019, E. 4.5.2.

⁷⁸ Cf. preliminary draft and explanatory report on the amendment of the Civil Code (law of succession) of the Federal Office of Justice, 40 et seq.

⁷⁹ SCHRÖDER, Informationspflichten im Erbrecht, loc. cit., 84 ff; SCHRÖDER, Geister, loc. cit., 191

⁸⁰ PRAXKOMM ERBRECHT-NONN, n 13 to art. 581.

2.2 Custodial Wallet of the Testator

- If the testator Emilie owned a custodial wallet, a regular banking contract shall have existed between her and the crypto bank.⁸¹ The heir to the statutory entitlement, Sébastien, is therefore entitled not only to the statutory inheritance law claim to information pursuant to Art. 607 para. 3 CC and Art. 610 para. 2 CC⁸² but also to an inherited contractual information claim⁸³ against the bank.
- In both cases, Sébastien, the heir to the compulsory portion, can assert his right to information under statutory inheritance law pursuant to Art. 607 para. 3 and Art. 610 para. 2 CC: against Eric as co-heir and beneficiary and against Frédéric as third party (by analogous application⁸⁴). While Eric must disclose the gift he received from the testator Emilie in accordance with the case law of the Federal Supreme Court,⁸⁵ Sébastien will only (and only then) be able to plausibly demonstrate that Frédéric was the beneficiary of the lifetime gift,⁸⁶ if he can assign the address that is known to him to which the bitcoins were transferred to Frédéric. Consequently, he is compelled to obtain the information under statutory inheritance law pursuant to Art. 607 para. 3 CC and Art. 610 para. 2 CC by analogy and his inherited contractual right to information pursuant to Art. 400 CO.
- ⁴⁴ The Swiss crypto bank is generally obliged to provide information.⁸⁷ On 21 June 2019, the international, intergovernmental Financial Action Task Force (FATF)⁸⁸ issued recommendations on financial services in the blockchain sector: information on the client and the beneficiary must be transmitted for transfers of cryptocurrencies to and from custodial wallets,.⁸⁹ FINMA strictly applies this so-called "travel rule" to blockchain financial services.⁹⁰ It follows that institutions supervised by FINMA (currently Sygnum AG and SEBA Crypto AG, among others, as well as other Virtual Asset Service Providers [VASPs] affiliated to a self-regulatory organisation under private law [SRO]) may only send cryptocurrencies to external wallets of their own, already identified clients and may only accept cryptocurrencies from such clients. They may also not receive cryptocurrencies from customers of other institutions or send them to customers of other institutions. This applies if no information on the sender or recipient can be reliably transmitted in the corresponding payment system (cf. e.g., art. 14 of the VQF regulations on self-regulatory organisations

⁸¹ Cf. marg. no. 24 above.

⁸² Cf. marg. no. 38 above.

⁸³ Cf. marg. no. 39 above.

⁸⁴ BGE 132 III 677 E. 4.2.5; BREITSCHMID/MATT, loc. cit., 84, SCHRÖDER, Informationspflichten im Erbrecht, loc. cit., 153 et seq.

⁸⁵ Cf. marg. no. 38 above.

⁸⁶ Cf. KUKO ZGB-BÜRGI, N 10 on Art. 610; BREITSCHMID/MATT, loc. cit., 91; SCHRÖDER, Geister, loc. cit., 190; PRAXKOMM ERBRECHT-WEIBEL, preliminary remarks on art. 607 et. seq. n 30.

⁸⁷ Cf. marg. no. 39 above.

⁸⁸ Cf. http://www.fatf-gafi.org/ (last visited on 06.04. 2021).

⁸⁹ Cf. http://www.fatf-gafi.org/publications/fatfrecommen dations/documents/guidance-rba-virtualassets.html (last visited on 06.04.2021).

⁹⁰ Cf. Supervisory Notice of 26 August 2019, https:// www.finma.ch/de/news/2019/08/20190826-mm-krypto gwg/ (last visited on 06.04.2021).

under the Money Laundering Act).⁹¹ This established Swiss practice is one of the strictest in the world.⁹²

- ⁴⁵ Thus, if an institution supervised by FINMA or affiliated to an SRO managed the deceased's cryptocurrencies and the transaction took place after the travel rule came into force, the institution will know which person was the recipient of the transfer. It will inform Sébastien, the heir of the compulsory portion requesting information, about the execution of the individual orders placed, i.e., the transactions to Frédéric (as well as to Eric);⁹³ this applies even if the respective beneficiary has a custodial wallet at the same crypto bank.⁹⁴
- ⁴⁶ Irrespective of which of the two information claims he asserts, Sébastien must, according to the case law of the Federal Supreme Court⁹⁵ always show that the information is potentially relevant for the enforcement of his statutory entitlement. Whether the banks will follow the cautious approach suggested by Hirsch⁹⁶ and black out the names of third parties in the bank records until then, and to what extent the banks are able and willing to examine the inheritance claims at all,⁹⁷ will become apparent in practice. In any case, in line with DORJEE-GOOD and DARDEL⁹⁸ it can be assumed that Sébastien will have to obtain a court ruling in his favour so that the carefully acting bank will provide information on lifetime transactions.
- ⁴⁷ However, if the transaction from Emilie to Frédéric (and also to Eric) took place before 2020, Sébastien will not know the name of the beneficiary from the crypto-bank and consequently will not be able to plausibly show that the beneficiary address belongs to Frédéric.
- ⁴⁸ The only ray of hope for the heir is that he can identify the user of the recipient's address via a company specialised in cybercrime and investigations⁹⁹. However, such an investigation will only be successful if the recipient of the lifetime gift is an active blockchain user with many transactions attributable to him, which makes it possible to identify the person behind the address in the first place. The more such potential transactions by the user in question exist and the more networks can be associated with the user, the sooner identification can take place. However, if the recipient only uses his address and PIK to receive the bitcoins from the testator and to liquidate the bitcoins - without the existence of further identifiable "traces" on the blockchain - it is not yet technically possible to identify the user in question. It becomes impossible to trace the bitcoins, so that the person with

⁹¹ Available at https://www.vqf.ch/de/vqf-downloads (last visited on 06.04.2021).

⁹² https://www.finma.ch/de/news/2019/08/20190826-mm- cryptogwg/ (last visited on 06.04.2021).

⁹³ BREITSCHMID/MATT, op. cit., 98.

⁹⁴ BREITSCHMID/MATT, op. cit., 101; SCHRÖDER, Geister, op. cit., 195

⁹⁵ Cf. marg. no. 39 above.

⁹⁶ HIRSCH, op. cit.

⁹⁷ NICOLAS BRACHER/MICHAEL HUBER/FLORIAN WEGMANN, Die Bank als Richterin? Erhöhte Anforderungen an- Auskunftsbegehren von Erben, Spotlight/September 2019, Internet: https://www.wengervieli.ch/dech/publikationen/ spotlights/die-bank-als-richterin-erhohte-anforderungenan-aus-auskunftsbegehren-von-erben (last visited on 06.04.2021).

⁹⁸ DORJEE-GOOD/DARDEL, op. cit., 181.

⁹⁹ Like, for example, the US company Chainalysis Inc.

passive legal standing remains unknown to the heirs in the reduction process. As a result, Sébastien will not be able to assert his abatement claim due to the lack of knowledge of the person with passive legal standing.

⁴⁹ Against this background, it is recommended that the future decedent also review the existing contractual relationships with the crypto bank during his or her lifetime regarding possible amendments in the event of death. In particular, he/she must declare to the bank whether he/she wishes to maintain secrecy regarding individual asset-related lifetime instructions and whether the bank may not provide the heirs with any information about lifetime transactions. Whether the new case law will lead to a standardised procedure on the part of the banks and whether they will clarify the issue with the bank client during his or her lifetime or obtain the decedent's consent to the disclosure of all information owed to the heirs based on the contractual right to information, as HERZOG suggests¹⁰⁰ remains to be seen in practice.

2.3 Non-Custodial Wallet of the Testator

- ⁵⁰ The situation is similarly difficult for Sébastien, the statutory entitlement heir, if Emilie, the testator, managed her bitcoins via a non-custodial wallet. In this case, there is no crypto bank that can be asked for information regarding the beneficiaries. The only option is to make a claim under statutory inheritance law pursuant to Art. 607 para. 3 and Art. 610 para. 2 CC against Eric and Frédéric respectively (by analogy).
- 51 It is well known that the duty to provide information under inheritance law can be enforced against Eric with a threat of a criminal penalty under Art. 292 Swiss Penal Code ("PC") or a fine. The compulsory enforcement of the deed edition by means of a search (Art. 343 para. 2 Swiss Civil Procedure Code) can only be considered if the whereabouts of the access data to the cryptocurrencies received are known or can be assumed,¹⁰¹ which is likely almost never the case. In the same sense, no damages are awarded for breach of the duty to provide information pursuant to Art. 41 et seq. CO¹⁰² or - assuming a contractual or quasi-contractual liability according to Art. 97 et seq. CO¹⁰³ - because the claim for damages cannot be proven due to the lack of information regarding the recipient of the benefit as well as the amount and type of the benefits. Ultimately, a refusal to provide information would only (but still) be considered in the assessment of evidence to the detriment of the co-heir. Whether this would be successful in individual cases and the court would believe the information provided by the heir with the burden of proof,¹⁰⁴ is questionable, especially since in most cases the heir requesting information - without other reliable information - would not be able to credibly prove that the recipient's address belongs to the beneficiary. In the case of intent, the only remaining option is to take criminal

¹⁰⁰ HERZOG, op. cit., 1348.

¹⁰¹ Göкsu, op. cit., 962.

¹⁰² PRAXKOMM-ERBRECHT-WEIBEL, preliminary remarks on art. 607 et. seq. n 36.

¹⁰³ STEPHAN WOLF/STEPHANIE HRUBESCH-MILLAUER, Grundriss des Schweizerischen Erbrechts, n 1676; STEPHAN WOLF/GIAN SANDRO GENNA, SPR IV/2, 242.

¹⁰⁴ GÖKSU, loc. cit., 962; BK ZGB-WOLF, n 36 to art. 607.

action (fraud within the meaning of Art. 146 PC or false statement of evidence pursuant to Art. 306 PC).¹⁰⁵

⁵² With regard to Frédéric as the beneficiary, the practical difficulty is again that Sébastien even if he knows the address of Frédéric's wallet - cannot assign the address to him. There is no third party he can ask for information because the other blockchain users cannot be personalised due to the pseudonymity of the public blockchain¹⁰⁶. If he cannot identify Frédéric with the help of a company specialising in cybercrime and investigations¹⁰⁷, he does not have a passive legatee in the process in this case either.

3. Conclusion

⁵³ Practice will show whether a deliberate transfer of assets through transactions using cryptocurrencies is used as an instrument of asset protection in estate planning. Particularly in an international context with jurisdictions that do not have a travel rule, such planning is likely to make it even more difficult for heirs to enforce their claims for information and reduction. However, it should not be neglected that the use of such regulatory loopholes complicates the use of cryptocurrencies in an increasingly regulated digital asset environment. The mere possession of cryptocurrencies does not constitute possession of the corresponding monetary value in a regulated currency. This first requires a corresponding conversion at a financial intermediary, which in turn must comply with more and more regulatory requirements. The success of such (questionable) estate planning will therefore depend on how the technical and regulatory environment surrounding cryptocurrencies will develop in the future in Switzerland and worldwide.

C. Relevant Market Value of Cryptocurrencies (Art. 617 CC)

- ⁵⁴ Like all other inheritance matters and rights, cryptocurrencies are to be valued as of the date of death (date of death principle, Art. 474 CC) and as of the date of division (date of division principle, Art. 617 CC). The market value is decisive, i.e., the market value or the value that could be obtained as proceeds in the event of a sale of the relevant estate property to an independent third party.¹⁰⁸ In the case of property with a market or stock exchange price, this value may be used as a basis.¹⁰⁹
- ⁵⁵ Cryptocurrencies have no market value due to decentralised trading. However, in an unpublished recommendation dated 22 March 2016, the Swiss Tax Conference stated that cryptocurrencies are to be treated like foreign currencies. Since 31 December 2015, the Federal Tax Administration ("FTA") has been calculating a value for wealth tax purposes by

¹⁰⁵ KUKO ZGB-BÜRGI, n 13 to art. 610; BSK ZGB II-SCHAUFELBERGER/KELLER-LÜSCHER, n 11b to art. 607; PRAXKOMM-ERBRECHT-WEIBEL, preliminary remarks on art. 607 et. seq. n 37.

¹⁰⁶ Cf. para. 4 above.

¹⁰⁷ Cf. marg. no. 48 above.

¹⁰⁸ ZK ZGB-Escher/Escher, n 5 to Art. 617; BSK ZGB II-Schaufelberger/Keller Lüscher, n 3 to art. 617; BK ZGB-Tuor/Picenoni, n 25 to art. 617; BGE 125 III 1, E. 5b.

¹⁰⁹ PRAXKOMM ERBRECHT-WEIBEL, N 12 to art. 617, BK ZKB-WOLF/EGGEL, n 19 to art. 617.

averaging various exchanges, including Kraken¹¹⁰ and BitStamp¹¹¹ at the end of each year.¹¹² In order to take account of the well-known fragmented trading and the sometimesconsiderable daily exchange rate differences, the highest and lowest exchange rates are eliminated in each case. However, the data sources are not identical for all cryptocurrencies, and both the selection and the number of exchanges seem random. The fact that in some cases the price is in fact based on one or two randomly selected exchanges and that the daily price differences can nevertheless be enormous despite the elimination of the highest and lowest price does not seem appropriate to the authors for the determination of a generally valid market value.

⁵⁶ On the assumption that courts in inheritance disputes would base their decisions on the market value determined by the FTA, the authors already postulate that the valuation should either be based on the average (death or division) daily prices as they are obtained on as many of the most common stock exchanges as possible,¹¹³ or on the daily price of the trading platform through which the deceased usually carried out his transactions.¹¹⁴

V. Concluding Remarks

- ⁵⁷ Increasing digitalisation poses new challenges for estate practitioners, whether in advising the future decedent and testator or the heirs. According to the authors, cryptocurrencies are inherited as an absolute right *qua* universal succession pursuant to Art. 560 CC, so that the future decedent must be primarily concerned that his digital assets are not lost upon his death. Early, prudent estate planning tailored to the type of wallet and securing the heirs' access to the cryptocurrencies is required in any case. This is the only way to ensure that the heirs or other parties involved do not have to deal with (possibly) insurmountable problems in connection with the lack of access to the cryptocurrencies or the assertion of rights to information after the deceased's death.
- ⁵⁸ It remains to be seen how the problem of the lack of an individual with passive legal standing will develop in the abatement process in connection with gratuitous lifetime gifts of cryptocurrencies. The development in this regard will depend in particular on the Swiss and international technical and regulatory changes and the fact as to whether an "asset protection" in the absence of a more difficult exchange into money is worthwhile.
- ⁵⁹ It is also interesting to see how the courts will determine the relevant market value of cryptocurrencies when calculating the statutory entitlement or dividing the estate.

¹¹⁰ https://www.kraken.com/ (last visited on 19.04.).2021).

¹¹¹ https://www.bitstamp.net/ (last visited on 19.04.).2021).

¹¹² FTA rate list, available at https://www.ictax.admin.ch/external/en.html#/ratelist/2020 (last visited on 06.04.2021).

¹¹³ Cf. e.g. http://coinmarketcap.com/currencies/ bitcoin/#markets (last visited on 06.04.2021).

¹¹⁴ LINDER/MEYER, op. cit., 202.