

SBF Circular Decentralized Finance (DeFi)

Framework for the legal classification of DeFi and related activities under Swiss financial market law

Initiative of the Digital Assets Working Group (DeFi sub-group) of the Swiss Blockchain Federation

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Authors:

Christian Meisser and Florian Prantl, LEXR Law Switzerland AG

Fabio Andreotti, Bitcoin Suisse AG

Rolf H. Weber, Bratschi AG

1 Introduction

1.1 Concept and objectives

Decentralized Finance ('DeFi') involves the provision of financial services and infrastructures through software - primarily public blockchains and smart contracts – without a central operator or intermediary. DeFi aims to establish an open, efficient and secure addition and alternative to the traditional finance industry. It has seen significant growth in recent years, expanding across all financial sectors, including payments, trading, lending and asset management. However, to date DeFi varies in form and lacks a uniform understanding of what 'decentralization' means.

This circular is structured as follows:

- 1. In a first section, we provide an overview of the current legal discourse on DeFi with reference to more detailed literature (section 1.2).
- In the following sections, we explore the criteria necessary to legally distinguish 'genuine DeFi' from de facto centralised, blockchain-based financial market infrastructures and services (hereinafter referred to as 'on-chain CeFi'):
 - a. *Step 1*: As a prerequisite, we summarize an existing framework by SCHULER/CLOOTS/SCHÄR for the assessment of technical decentralization (section 2).

- b. *Step 2*: We distinguish between legal and technical decentralization (section 3.1) and reexamine the regulatory concept of financial groups (*aufsichtsrechtlicher Gruppenbegriff*) (section 3.2).
- c. *Step 3*: We develop an actionable legal framework to classify DeFi within the personal scope (*persönlicher Anwendungsbereich*) of Swiss financial market law (section 4).
- d. *Step 4*:We differentiate between the 'operation' a DeFi application or protocol and conducting DeFi-related activities (section 5)
- 3. Finally, we provide a summary of our findings (section 6).

It is important to note that numerous legal issues surrounding DeFi are not addressed in this circular. For instance, the regulatory requirements for both regulated and unregulated market participants wishing to provide clients with access to DeFi applications remain largely vague and unclear. Also, given the increasing adoption of DeFi, establishing a more comprehensive regulatory framework that balances its unique risks and potential benefits will become crucial for any jurisdiction intending to foster innovation in this sector.

1.2 Overview of the legal discourse on DeFi

In Switzerland, the Swiss legislator and Federal Council, the Swiss regulator FINMA, as well as legal scholars have previously recognised and specifically addressed decentralization in the financial industry. Likewise, DeFi has been the topic of various discussions and reports in other jurisdictions as well as by international organizations and standard-setting bodies in recent years.

1.2.1 Swiss legislator and Swiss Federal Council

In its efforts towards the Swiss DLT legislation, the Swiss Federal Council initially noted in the 2018 Swiss DLT Report that the applicability of anti-money laundering legislation to decentralized platforms depends whether *"platforms have the option of influencing clients' transactions"*.¹ This practice was intended to be incorporated as such in the Swiss DLT legislation (at ordinance level).² While subsequently the revision of the Swiss Anti-Money Laundering Ordinance introduced the criterion of an *'ongoing business relationship*', the corresponding explanatory report to AML ordinance re-confirmed,

¹ Federal Council, Legal basis for distributed ledger technology and blockchain in Switzerland, An overview with a focus on the financial sector,14 December 2018, section 7.4.1.2.

² Federal Department of Finance FDF, Explanatory report on the consultation draft on the Federal Act on the Adaptation of Federal Law to Developments in Distributed Ledger Technology, 22 March 2019 para. 1.1.4 and 3.7.2.2 (cited "DLT Dispatch, para. ...").

with specific respect to decentralized trading platforms, that smart contracts which process transaction without "*access possibility for the trading platform*" are not subject to the AMLA.³

The Swiss DLT legislation also explicitly clarified that "*fully decentralised «financial market infrastructures», i.e., financial market infrastructures without a direct operator*" remain excluded from the scope of application of financial market infrastructure legislation.⁴ This regulatory position is being maintained in the ongoing revision of the FMIA.⁵

1.2.2 International organizations and the European Union

At the international level, several supranational organizations, policy makers and certain regulators and legislators have taken initial positions on DeFi, including the Financial Action Task Force (FATF), the European legislator in Recital 22 on MiCAR ("*Where crypto-asset services are provided in a fully decentralised manner without any intermediary, they should not fall within the scope of this Regulation*"), the International Organisation of Securities Commissions (IOSCO)⁶, the Financial Stability Board (FSB), the Bank for International Settlements (BIS), or the Organisation for Economic Co-operation and Development (OECD).⁷

1.2.3 FINMA

The Swiss regulator FINMA has repeatedly addressed DeFi in its annual reports for 2021, 2022, and 2023,⁸ as well as in industry roundtables and similar events. FINMA emphasises a case-by-case analysis against the backdrop of the principles of technology neutrality and an economic (*substance over form*) and risk-based approach (*same risks, same rules*).⁹ According to the 2021 annual report, the aim is to distinguish projects "*without identifiable operators*" from those that "*describe themselves as DeFi but are actually organised and controlled centrally and therefore similar to traditional financial*

³ Federal Department of Finance FDF, Explanatory report on the opening of the consultation procedure on the Federal Council ordinance on the Adaptation of Federal Law to Developments in Distributed Ledger Technology, 19 October 2020, para. 4.5

⁴ DLT Dispatch, para. 3.8.

⁵ The DLT Dispatch also stated that the Federal Council "*will continue to closely monitor technological and international regulatory developments in this area [decentralised financial infrastructures] and, if necessary, propose a separate regulation*", see DLT Dispatch, para. 3.8. No such separate regulation was proposed in the FDF's current draft for the revision of the FMIA, see Federal Department of Finance FDF, Explanatory report on the opening of the consultation procedure of the FDF on the amendment of the Financial Infrastructure Act, 19 June 2024, *passim*, and Statement of the Swiss Blockchain Federation on the amendment of the Financial Market Infrastructure Act (FMIA), 10 October 2024, p. 6.

⁶ See IOSCO, Final Report with Policy Recommendations for Decentralized Finance (DeFi), December 2023.

⁷ For an overview, see KATRIN SCHULER/ANN SOFIE CLOOTS/FABIAN SCHÄR, On Defi and On-Chain CeFi: How (Not) to Regulate Decentralized Finance, Journal of Financial Regulation 2024, 10, 213-242 (cited: SCHULER/CLOOTS/SCHÄR, On DeFi and On-Chain CeFi, ...), p. 215 et seq.

⁸ Swiss Financial Market Supervisory Authority (FINMA), Annual Report 2021, p. 20, Annual Report 2022, p. 21, Annual Report 2023, p. 34.

⁹ Ibid.

market intermediaries. Such projects fall within the scope of financial market law.^{"10} Possible regulatory anchors mentioned by FINMA's 2023 annual report include, without further explanation, (i) the management of application development via admin keys or via the majority of governance tokens (see section 4.2.2), (ii) the dependency of the application on data entered by a specific person via e.g., a blockchain oracle (see section 5 point 4), (iii) the business relationships with end users (insofar as this refers to the licensing of the DeFi application, see section 5 point 5), and (iv) the income flows from the application to a specific person (see section 5 point 6).¹¹

1.2.4 Legal doctrine

Finally, Swiss legal scholars have increasingly published on the topic of DeFi in recent years and have highlighted the importance of distinguishing between centralized and decentralized financial services and infrastructures. For additional details, please refer to the literature cited in the footnote.¹²

1.2.5 Summary

While the discussion on DeFi covers a broad range of topics, two main findings emerge:

- 1. The term 'DeFi' is repeatedly misused for de facto centralised structures or on-chain CeFi.
- 'Truly decentralised' DeFi is not covered by existing financial market laws and to capture its unique risks and challenges, it requires a regulatory approach distinct from existing financial market infrastructures and services regulations.

2 Technical framework

In 'On DeFi and On-Chain CeFi: How (Not) to Regulate Decentralised Finance'¹³, SCHULER/CLOOTS/SCHÄR propose to make the distinction between 'DeFi' and 'on-chain CeFi' based on centralization vectors (**Figure 1**).

¹⁰ See Swiss Financial Market Supervisory Authority (FINMA), Annual Report 2021, p. 20.

¹¹ See Swiss Financial Market Supervisory Authority (FINMA), Annual Report 2023, p. 34

¹² Among others, FABIO ANDREOTTI, Dezentrale Handelsplattformen im Schweizer Finanzmarktrecht, Eine Analyse unter Erarbeitung eines Rechtsprinzips der Dezentralität, Diss. Zurich 2024; DAVID MEIRICH, Regulatorische Einordnung von Decentralized Finance, SSFM 144, Diss. Zurich 2023; SAMUEL NOSER/SVEN INFANGER/YANICK LÜDI, § 12 Decentralised Finance, in: Corinne ZELLWEGER-GUTKNECHT /DOMINIK TSCHUDI/KEVIN MCCABE (eds.), Handbuch Kryptowerte, Basel 2024; BENEDIKT MAURENBRECHER/BENJAMIN LEISINGER, Decentralised Finance (Part 1), SJZ 2022, 647-657 and BENEDIKT MAURENBRECHER/BENJAMIN LEISINGER, Decentralised Finance (Part 2), SJZ 2022, 704-718; THOMAS JUTZI/ANDRI ABBÜHL, Fintech und DLT, privat- und finanzmarktrechtliche Grundlagen in der Schweiz, § 21 DeFi, Bern 2023;

¹³ SCHULER/CLOOTS/SCHÄR, On DeFi and On-Chain CeFi, p. 219 ss.



Figure 1: On-chain CeFi denotes blockchain-based financial protocols with material centralization vectors.

This distinction stems from the initial observation that DeFi protocols are constructed across multiple technological layers. Adopting the layer-model as proposed by SCHÄR¹⁴, the authors suggest evaluating the level of decentralization of DeFi protocols using centralizations vectors within the specified levels or layers detailed below (**Figure 2**):

- 1. Blockchain level (*settlement layer*): The settlement layer serves as the foundational base for all DeFi protocols built upon it.
- 2. Smart contract level (*asset and protocol layer*): DeFi protocols utilize smart contracts to represent tokens (*assets*) and to embody the protocol's working logic (*protocol*).
- 3. User interface level (application and aggregation layer): Web-based user interfaces or frontends enable simplified user interaction with the blockchain and the smart contract layer of one or more DeFi protocols (in the latter case referred to as 'aggregators'). In principle, user interfaces are an off-chain element, i.e. merely (i) a graphical user interface, (ii) which visualises information from the blockchain, and (iii) suggests transaction commands based on the user's input. User interfaces are thus typically optional for the user, non-exclusive and have no influence on the lower (blockchain and smart contract) levels. However, centralization vectors on the user interface can nonetheless occur in exceptional circumstances, particularly when the operator gains access to user assets in specific instances (*custodial setup*).

¹⁴ FABIAN SCHÄR, Decentralised Finance: On Blockchain- and Smart Contract-Based Financial Markets, Federal Reserve Bank of St. Louis Review 2021, 153-174.



Figure 2: Multichain DeFi Stack (adapted from Schär⁵⁸)

From this, the authors propose a framework to assess decentralization of blockchain-based financial infrastructure from a technical perspective and to distinguish genuine DeFi protocols from on-chain CeFi. The assessment logic can be summarized as follows:

- 1. Blockchain level: Is the underlying blockchain sufficiently decentralized? If not, it is classified as on-chain CeFi according to the authors' framework.
- 2. Smart contract level: Do the smart contracts contain functions that (i) are limited in accessibility, (ii) are 'critical' in nature, and (iii) do not have sufficiently decentralized access? If these three conditions are met, the DeFi protocols qualifies as on-chain CeFi. An example would be (i) a function accessible solely with a majority of governance tokens, (ii) which allows control over users' tokens and is thus critical, where (iii) an individual holds the majority of these tokens and exercises effective control.
- 3. External or 'exogenous' factors: The framework then assesses factors external to the DeFi protocol itself, particularly any 'off-chain promises' (e.g., a commitment by an individual to maintain the value of a decentralized stablecoin through secondary market intervention) and dependencies on 'third-party assets or protocols' (e.g., reliance on price data supplied by a blockchain oracle). Significant 'off-chain promises' or dependencies on centralized 'third-party assets or protocols' can also qualify the overall arrangement as on-chain CeFi.

3 Decentralisation and the regulatory concept of groups

3.1 Legally relevant 'operation' vs. technical risks

Before applying the framework of SCHULER/CLOOTS/SCHÄR for the purpose of establishing a legal framework for the classification of DeFi and related activities, we need to highlight that the discussion on decentralisation from a *technical* perspective addresses different issues than the discussion from a *legal* perspective:

- Legal decentralisation focuses on the question of whether, from the perspective of the personal scope of application of financial market law, there is an operator who controls the DeFi protocol and to whom the activities of the DeFi protocol can be attributed. This constitutes a 'positive' examination: Is there an individual or a group of connected persons who effectively 'operate' the DeFi protocol, meaning they can control or influence it in a significant way?
- 2. The technical decentralization focuses more broadly on the question of whether there are any centralization vectors present that pose technical or operational risks to users. This involves a 'negative' examination: Is there *no* individual upon whom the DeFi protocol is directly or indirectly dependent, or by whom it could be compromised?

To illustrate this with an example: If a DeFi protocol is built on a public blockchain that, due to very high hardware requirements for node operators, has only a limited number of nodes, such centralization on the blockchain level can be considered a technical decentralization risk. However, the initiators of the DeFi protocol, who launch a project on this public blockchain, typically do not gain any sort of control over the DeFi protocol due to such centralization vector. Accordingly, from a legal perspective, such centralization on the blockchain level alone does not render the initiators the legally relevant 'operators' of the DeFi protocol.

From the above, we can conclude that legal decentralization can exist even if the ideal state of full technical decentralization is not (yet) achieved. However, this should not detract from the fact that, according to the views expressed in this circular, legal decentralization will regularly require a high level of technical decentralization.

3.2 Regulatory concept of groups (aufsichtsrechtlicher Gruppenbegriff)

Financial market law has always grappled with the challenge of market participants deliberately organizing their activities in a way that individually, they do not meet the relevant criteria or thresholds for regulation, but if viewed collectively as a group, they would. To combat circumvention of the laws through such strategic and artificial structuring, Swiss case law has developed the regulatory concept of a groups (*aufsichtsrechtlicher Gruppenbegriff*).

There are legitimate concerns expressed in scholarly discussions¹⁵ about the above concept, particularly regarding constitutionality (the concept lacks an explicit legal basis) and legal certainty (it is often unclear how the criteria to qualify as a group should be applied in specific cases). Nonetheless, it seems fitting to use it also when analyzing DeFi protocols to the end that it should not matter whether a regulatory-relevant activity associated with a DeFi protocol is conducted individually or as a group in the sense of financial market law. For instance, if a DeFi protocol allows control of locked assets via majority of governance tokens, it would be necessary to examine whether either an individual *or* a group (as per applicable case law) actually exercises such control via the majority of these governance tokens. If so, this would establish a direct link to potential financial market activities for such a group (or the individual members of the group respectively). However, it should be emphasized that DeFi protocols (and blockchain-based systems in general) tend to very deliberately set economic incentives for various participants to symbiotically contribute and thus maintain the functioning of the protocol. Such 'group behavior' will, however, often not meet the case law's criteria for a financial group, given that participants in these setups pursue individual rather than collective interests without any close and legally relevant connection among them.

Pro memoria on legal definition of groups: According to Swiss case law, a mere loose connection between individuals is insufficient to constitute a group. Rather, it is necessary that (i) there exists a close economic, organizational, or personal connection among the individuals, and (ii) a holistic economic assessment of the setup is warranted, particularly due to economically unjustified, complex legal structuring that is created with the intention to circumvent regulatory provisions.¹⁶

4 Framework for the classification of DeFi under Swiss financial market law

4.1 Introduction and overview

The framework for the applicability of Swiss financial market law to DeFi protocols is conducted across the three dimensions commonly used in legal assessment, which are (i) the *personal* (ii) the *material*, and (iii) the *geographical* scope. Thereby, the framework by SCHULER/CLOOTS/SCHÄR outlined above (section 2) proves particularly helpful when addressing the *personal* scope of applicability, in other words the question whether or not there is an identifiable operator or controlling operator to whom the activities of the DeFi protocol can be attributed.

¹⁵ See THOMAS JUTZI/SIMON SCHÄREN, Erfassung bewilligungspflichtiger Gruppensachverhalte in der Finanzmarktaufsicht, GesKR 3/2012, GesKR 3/2012, p. 411 et seq., p. 417 and p. 419.

¹⁶ BGE 135 II 356, E. 3.2, confirmed among others in BGer 2C_74/2009 of 22 June 2009 E. 2.2.2 and E. 3 as well as BGE 136 II 43, E. 4.3.1.



Checklist for the personal scope of applicability of Swiss financial market laws to DeFi protocols

4.2 Personal scope of application

4.2.1 Centralisation at the blockchain level (*settlement layer*): Is the blockchain sufficiently decentralised?

4.2.1.1 Background

From a technical perspective, the degree of centralization of a blockchain is directly relevant for all DeFi protocols built on it, as they directly 'inherit' its centralization vectors. From a legal standpoint, however, the key question is whether or not launching a DeFi project on a 'centralized' blockchain in fact creates a personal point of attribution (*persönlicher Anknüpfungspunkt*) for the operators of the centralized blockchain and/or the project initiators.

4.2.1.2 Criteria

'Operation' of the blockchain: Firstly, on a technical level, it is necessary to determine which individuals have influence over the blockchain and whether they meet the financial market law's criteria for constituting a financial group. This aspect is particularly relevant for private blockchains. For instance, the 'Swiss Trust Chain,' operated by Swiss Post and Swisscom, featuring only two nodes owned by two companies with the same main shareholder, would likely not be considered sufficiently

decentralized. Conversely, the majority of public blockchains, which may not achieve ideal decentralization technically, are typically not operated by a closely connected group.¹⁷

Launching a DeFi protocol on a centralised blockchain: For project initiators launching a DeFi protocol on a 'legally centralized' blockchain, it is crucial to examine the legal relationship between the initiators and the operators of such blockchain. Launching a DeFi protocol on a blockchain that is not ideally decentralized does not itself establish a personal point of attribution if the project initiators have no ability to influence the blockchain. However, if legal or actual influence over the underlying blockchain exists (which in turn allows relevant control on the smart contract or user interface level of the DeFi application), it must be determined whether this influence can be attributed to an individual or a closely connected group in the sense of financial market law (see section 4.2.2, steps 3 and 4).

4.2.1.3 Legal consequences

For the 'operators' of the blockchain: If activities subject to financial market regulation are conducted using a centralized blockchain (e.g., issuing a native token that qualifies as a payment token), the operators of this blockchain assume legal responsibility for these activities. In terms of DeFi protocols deployed on top of this blockchain, the general question arises whether such operators should be held legally accountable for any third party activity (such as the deployment of a DeFi protocol) conducted on their blockchain. While we do not discuss in detail in this circular, we generally recommend falling back to the legal doctrine relating hosting provider liability. In essence, operating a centralized blockchain utilized by third parties mirrors in many ways the operation of other centralized and more traditional hosting infrastructures.

For project initiators: Project initiators who launch a DeFi protocol on a centralized blockchain may be attributed the activities of the DeFi protocol if they obtain relevant control over by way of collaborating with the blockchain operators, e.g., through contractual claims or other structuring.

4.2.2 Centralisation at smart contract level (*asset and protocol layer*): Do the smart contracts enable relevant control over functionalities or introduce relevant third party dependencies?

4.2.2.1 Background

Following the assessment of the blockchain level, it is necessary to assess at the subsequent smart contract level whether an individual or a closely connected group has control over the DeFi protocol. This control can be exercised directly through privileged functions within the smart contract (e.g., upgrade functions) or through external dependencies (e.g., control of oracles).

¹⁷ Note that various initiatives for the comprehensive risk analysis of blockchains already exist to allow assessment of technical decentralisation, see for example L2Beat (https://l2beat.com/scaling/summary), a platform that publishes comprehensive information and analyses on Ethereum layer-2 scaling solutions.

4.2.2.2 Criteria

The assessment is divided in four steps:

Step 1: Do the involved smart contracts grant certain users special, privileged rights (*permissioned functions*)?¹⁸

In an initial step, all smart contracts of the DeFi protocol are technically analysed to determine whether they grant special access or control rights and whether such functions are accessible (or inaccessible) to all to just to certain users.¹⁹

It should be noted that such *permissioned functions* can vary widely in their scope – from upgrades of the entire protocol logic (often implemented technically through so-called *proxy smart contracts*) to (direct or indirect) access to user assets, to the ability to influence individual transactions through the blacklisting of specific addresses, up to merely limited adjustments of predefined technical variables such as a 'fee switch'.

Step 2: Concurrently with step 1, we assess whether a DeFi protocol has *external dependencies*. Such dependencies may include 'off-chain' promises or the use of oracles for pricing assets. An off-chain promise may e.g., be seen in a stablecoin setup including a legal commitment by an individual or group to maintain stability by providing their own assets in the event of depegging. Another form of external dependency may e.g., be seen in an oracle providing critical price data to a DeFi protocol, whereby the delivery of false data could significantly impair or even break the protocol's intended functionality.

Step 3: Not *every permissioned* function or *external dependency* results in the same level of control over a DeFi protocol. There hence needs to be a case-by-case assessment of *how much* control is being exercised through these elements, or in other words, which potentially regulated activities could even be conducted using the level of control granted by these elements.

For instance, merely having the control (through a *permissioned function*) to impose a transaction fee for future transactions within a defined set of parameters (*fee switch*) does not constitute control over every activity conducted by the DeFi protocol, as it does not allow the person(s) with access to the *fee switch* to control user transactions or user assets. However, if an upgrade functionality pertains to broader elements of the protocol logic, it could certainly lead to significant control. Even in the case of such broader upgrade functionalities, one should consider industry standards such as built-in time delay for the go-live of upgrades (*timelocks*) that allow users to exit or opt-out of the DeFi protocol (*exit*

¹⁸ This can be determined through a technical analysis of all the smart contracts within the DeFi application. Such analysis should focus on whether certain functions of these smart contracts can only be executed by specific addresses that are not, in turn, controlled by another smart contract.

¹⁹ Similar to initiatives at the blockchain level outlined in footnote 17, there are platforms that publish analyses of technical decentralization on the smart contract level, e.g., <u>DeFi Scan</u>.

windows) and that can drastically reduce the level of control on user transactions and user assets effectively exercised through an upgrade function.

Regarding external dependencies, we note that third parties are typically involved for very specific activities limited in scope. For example, a centralized external oracle providing price information might affect the DeFi protocol's functionality if incorrect data is delivered. Generally, however, the influence of such an oracle should not be extensive enough to allow it to gain targeted control over transactions, assets, or other relevant activities of the DeFi protocol.

Step 4: If there are *permissioned functions* or *external dependencies* that grant a relevant level of control over user transactions and user assets: Is the exercise of these functions or dependencies sufficiently decentralised?

From a *technical* point of view, the control of permissioned functions can be implemented across a spectrum ranging from (i) sole control by an individual via a private (admin) key, to (ii) a multi-signature setup involving several (independent) signing (admin) keys, up to (iii) on-chain governance, where control is typically exercised by a majority of votes from governance token holders.

For the *legal* assessment of whether control is sufficiently decentralized or not, we can once again rely on the regulatory concept of financial groups (*aufsichtsrechtlicher Gruppenbegriff*): For instance, if a *permissioned function* is controlled by a multi-signature address where the holders of the signing keys are so closely connected that they form a financial group, a personal point of attribution is established for the members of such group. The same applies to governance tokens: If a closely connected group of individuals exerts control over the permissioned function through a majority of governance tokens necessary for such actions, the control exercised through such function can be attributed to those individuals.

It should be noted that in practice, determining the facts about e.g., who holds signing keys or governance tokens, can be challenging. This was particularly highlighted by FINMA before ²⁰ However, considering the principles of proportionality, legal equality and technological neutrality, difficulty or complexity in establishing factual circumstances (*Sachverhaltsfeststellung*) do not provide a *carte blanche* to legally treat all sort of similar control mechanisms in the same manner.

4.2.2.3 Legal consequences

If there are no permissioned functions or external dependencies that grant significant control (steps 1, 2 and 3), or if such control is sufficiently decentralized (step 4), there is no 'controlling' operator, and the activity of the DeFi protocol cannot be legally attributed to any person. This constitutes 'genuine' DeFi. Where this is not the case, i.e., the setup constitutes on-chain CeFi, it is necessary to further

²⁰ Swiss Financial Market Supervisory Authority (FINMA), Annual Report 2022, p. 21.

assess the material and geographical scope (section 4.3) to determine the applicability of financial market law.

4.3 Material and geographical scope of application

If the DeFi protocol does not have a controlling operator and there is therefore no personal link to an operator, the activity of the DeFi protocol falls outside the scope of the applicable financial market law.

In the case of on-chain CeFi, however, we need to further assess both the material and geographical scope of existing Swiss financial market laws.

Regarding the material scope of application, the principles of "*same risks, same rules*" (or "*different risks, different rules*"), which have already been established and are applied in FINMA practice, can be utilized to assess the activities from a holistic and economic standpoint. In that context, a common issue in practice is whether some level of centralization should still be allowed or tolerated in the initial starting or incubation phase of a project. There have been various initiatives in the industry that advocate for creating such a "road to decentralization" exemption to create legal certainty for market participants.²¹ However, we find that no such explicit exemption exists in current Swiss legislation. Therefore, if relevant control is present, there is little room for initial centralization absent from certain thresholds typically provided in the context of whether a regulated activity is provided in a commercial manner. Lastly, regarding the geographical scope, it one needs to evaluate whether there is a significant link to Switzerland or the Swiss market based on established legal doctrine on the subject.²²

5 Regulation of DeFi related activities

There are a multitude of activities associated with the development and usage of a DeFi protocol, including writing code (*development*), deployment of code to the respective blockchain (*deployment*), services involved in operating the underlying blockchain (*node operation, validation, staking, mining, block building,* etc.), providing wallet software like MetaMask, providing off-chain internet infrastructure (*programming and hosting a frontend, transferring data packets, internet browsers*, etc.), marketing the DeFi protocol through social media channels, providing data (*oracles*), interacting with the DeFi protocol (*liquidity provision, voting, trading,* etc.), and more.

For the sake of providing legal certainty to market participants, it is important to distinguish such activities from the actual operation of a DeFi protocol itself as much as possible. Even though these related activities do not constitute the operation of the DeFi protocol, they can still represent

²¹ Most notably, see Commissioner Hester M. Peirce, <u>Token Safe Harbor Proposal 2.0</u> (based on the <u>initial token</u> <u>safe harbor proposal</u> from February 2020) and the various subsequent adjustments, comments and statements about this proposal.

²² The geographical scope is not further discussed in this circular.

independently regulated activities of their own. We hence try to address some of the most important of such activities below:

- Participation in the settlement layer: Participation in the operation of an underlying blockchain (such as *block building, validation, staking or mining*) is generally not regulated in case of a decentralised blockchain. For the operators of a centralised blockchain, however, there may be legal requirements for (i) the activities of the blockchain itself, such as the issuance of native tokens qualifying as payment tokens, or (ii) in terms of liability analogous to the liability of hosting service providers for the DeFi protocols operating on the centralised blockchain.
- Development, deployment & updates: The development and deployment of genuine DeFi protocols are generally not regulated by existing financial market law. However, how subsequent developments (*updates* or *upgrades*) are integrated into an already launched DeFi protocol is pertinent. We cover this in our framework outlined above (section 4.2.2).
- 3. Participation in on-chain governance: Mere participation in an on-chain governance process typically does not constitute an activity relevant under financial market law. However, if an individual or a group controls a permissioned function or external dependency granting relevant control, a personal point of attribution may be established with respect to such control. We cover this in our framework outlined above (section 4.2.2).
- 4. Oracles: The mere sale or provision of price or other information to DeFi protocols should typically not even fall within the material scope of financial market law in the first place; hence, even fully centralized oracles are typically unregulated. However, operating an oracle could constitute an activity relevant to financial market law if the oracle deliberately exercises relevant control over the DeFi protocol.
- 5. Licensing conditions and intellectual property rights: In principle, the specific license under which the software code of a DeFi protocol is published, and whether the license involves a fee, does not matter once the software operates in a decentralized manner on the settlement layer, the license itself does not grant the licensor any control over the DeFi protocol. Furthermore, licensing software, such as core banking solutions or payment system software, is not in itself an activity covered under financial market law in the traditional finance sector. Also, no 'ongoing business relationship' relevant under Swiss anti-money laundering regulations can be assumed merely from software licensing: The materials regarding the Swiss DLT Act state that the mere licensing part of the activity of 'non-custodial wallet providers,' who typically operate and develop their software continuously, does not by itself lead to the applicability of anti-money laundering regulations. In this context, we want to also highlight that it is appropriate that authorities have not considered the fee arrangement (whether free, subject)

to a licensing fee, etc.) of the license as a relevant criterion for non-custodial wallet providers. Lastly, the ownership of intellectual property rights (such as trademarks, domains, or social media accounts) related to the DeFi protocol is generally not suitable as a personal point of attribution (*persönlicher Anknüpfungspunkt*), as these elements do not grant any control over the DeFi protocol as discussed previously.

- 6. Generating income or 'commerciality': Generating income or revenue is typically addressed in financial market law in the context of certain thresholds that need to be reached before a regulated activity requires a license. Consequently, individuals operating on-chain CeFi do not fall within the material scope of a specific law if they remain below the commerciality or professionality thresholds set out in a specific legislation. Separately from that, the flow of funds in a DeFi protocol may be a helpful factor in determining the facts to assess legally relevant control in the DeFi protocol. However, there is no legal basis that merely 'earning money', for instance if a genuine DeFi protocol allocates a portion of the protocol's fees to developers or holders of governance tokens, would by itself constitute a personal point of attribution for the operation of a DeFi protocol.
- 7. User interfaces: User interfaces (frontends) are often the most visible elements of a DeFi protocol and one may be tempted to simply attribute the operation of the DeFi protocol to the operator of the interface. However, this assumption does not hold under a more detailed assessment: Any frontend is typically purely optional and not necessary for the actual operation of the DeFi protocol, nor is it involved in the direct interaction with the DeFi protocol and thus cannot legally be considered its 'operator'. Nevertheless, the operation of a frontend may still be relevant under other specific legislation, such as in relation to advertising financial instruments or public offerings of financial services under the Swiss Financial Services Act, or in terms of unfair competition under the Swiss Unfair Competition Act.

6 Conclusion

This circular shows that Swiss legislators, administration and academia as well as many international players have already engaged with the topic of DeFi, and that there is consensus on key issues: On the one hand, on-chain CeFi offerings fall within the personal scope of financial market laws, and operators may be subject to regulatory obligations under the *'same risks, same rules'* principles. On the other hand, genuine DeFi currently falls outside the personal scope of financial market laws in Switzerland.

Given the existing legal uncertainty that hinders market participants from advancing innovation in the DeFi sector in Switzerland, this circular suggests a practical framework for the case-by-case assessment of DeFi protocols under Swiss financial market laws. Building on technical groundwork by

SCHULER/CLOOTS/SCHÄR, the framework sets high requirements for decentralization at every step, and aims to provide both project initiators with clear guidance to direct development as well as simplify the legal analysis of existing DeFi protocols.

Finally, the framework includes examples of related activities within DeFi protocols that do not constitute their operation, providing clear criteria to differentiate these activities.