SFTI Working Group Tokenization of Digital Assets

Management Summary

As the new DLT legislation is implemented, the conditions for Switzerland's development as a leading, innovative, and sustainable location for blockchain and DLT companies continue to improve.

Companies involved in the DLT technology are very consciously addressing this new starting point. It is gratifying to see that the market is on the move and that companies are actively involved in developing and exploiting this potential by means of product and service solutions.

It is evident that the new legislation both sets the necessary protections to maintain integrity, but also leaves enough freedom to allow very different, individual application solutions as well as innovation. Time as well as customer adoption will show which standards are more likely to prevail and how business models of the offering companies will be implementing new models.

The report's three-part structure of separate business, technology / academia and legal sections was deliberately chosen and intensively examined with experts from the respective specialist area.

The findings of the working group in the areas of business case, business processes, infrastructure and operations are outlined in the *Business* Section. It can be assumed that traditional banking processes and systems will continue to exist in parallel with processes and systems in the DLT environment for some time to come. However, decisive further developments are likely to emerge very soon.

The research project of the University of Applied Sciences of Eastern Switzerland on the framework of the security token lifecycle formed the basis of the *Technology and Academia* Section. Out of the framework of the security token lifecycle, the concepts of "governance" and "on-chain and off-chain" were closer examined.

The use of value registers and the implementation of the current solutions in the context of the new legal framework are dealt within the *Legal* Section. It is established that market participants are taking precautions to set up and operate their systems in accordance with the new civil law requirements. It should be possible to issue shares as registered securities and the requirements of stock corporation and company law should also be considered.

Questionnaire for the Business Part

Subject	Definition of test object
MVP Scope	To what extent is the defined MVP scope fulfilled?
	Which products/services (use cases) are there?
	What problem is being solved?
	Are there important MVP functionalities that have not yet been implemented? If so, please list them along with the implementation schedule.
	What is the USP of the solution?
User and customer experience	On which devices the solution is supported: desktop, tablet, mobile, etc.?
	Which browsers are supported?
	Are the user interface and process guidance intuitive and easy to follow? Does the implementation of the GUI follow a certain usability paradigm?
	Are there media breaks in the process?
	Does the process foresee a step that could be considered a new banking product / service?
	If a new banking product / offering is envisaged in the process, can it be easily and simply integrated into the existing banking processes?
Business case	What are the initial costs for the solution?

	What is the fee model (lease, license, on premise, shared, pay-what-you-use)?
	On an annual basis, what are the operating costs (infrastructure, licenses, maintenance, resources)?
	What are the estimated revenues for the business case and their basis?
	How scalable is the model (fixed vs. variable costs)?
Business processes	Can the solution be handled by existing organizational units that perform similar activities in traditional transaction banking (corporate actions, payments, issuing, reconciliation, etc.)?
	How will the processes and terminology that are common in the existing interbank model be adapted? (DVP, RVP, Increase/Decrease, Confirmations, etc.)
	Are currently established communication standards reused (SWIFT, ISIN, Trade Register, Trade Notification/Publication) or how does the communication work?
	Are there ways to correct process steps when mistakes are made and if so, how is this implemented given the main characteristic of the blockchain that nothing in it can be changed?
	Are (transactional) reports or dashboards available, and if so, what do they cover (e.g. is an immediate update possible)?
	What security features are there (e.g. the 4-eyes check for the release of transactions or system integration, etc.)?
Operation and development	How good (transparent, understandable) is the service and by what means (Confluence, GitHub, etc.) are the services documented?

	What training modules are offered for mission readiness?
	What support levels are offered and at what price are they available?
	Maintenance: What are the roles and responsibilities, service contracts, etc.?
	What opportunities do the partners/licensees have to participate in the further development of the solution?
	Is there any indication by when the first implementation at a bank in Switzerland will have taken place?

Questionnaire for the Technology and Academia Part

Subject	Test object	Definition of test object
Governance structure	Access regulation	Who has access to the system/transactions? Are there permissions and restrictions in place? Are there participants with special rights?
	Maintenance	How is the maintenance of the system organized? What is the process for adding new nodes?
	Creation of new tokens	Who may mint new tokens? How are new tokens minted?
	Creation of new addresses	How are new participants accepted into the system? How are keys generated?
	Solution operator	Who is operating the solution? How many full nodes do exist? How independent are the operators? What happens if an operator drops out?
On-chain components	Type of data	What data is stored on-chain (content, format, data structures, etc.)?
	Data storage location	Where is on-chain data stored (distributed, in a data centre, etc.)? How is the data protected?
	Implementation	Which implementation of distributed ledger technology is used?

	Smart contracts	Are smart contracts verified and executed on-chain?
Off-chain components	Type of data	What data is stored off-chain (content, format, data structures, etc.)?
	Data storage location	Where is off-chain data stored (distributed, in a data centre, etc.)? How is the data protected? Is there a dependency on the on-chain data?

Questionnaire for the Legal Part

Subject	Test object	Definition of test object
Securities ledger	Power of disposal of the creditor (concerns qualification)	Article 973d para. 2 item 1 CO: Does the ledger give creditors, but not the debtor, power of disposal over their rights by means of technical procedures?
	Integrity (resistance to manipulation) (concerns qualification)	Article 973d para. 2 item 2 CO: Is the integrity of the ledger protected against unauthorised modification by appropriate technical and organisational measures, such as joint management by several independent parties? What technical and organisational measures were taken to ensure this?
	Information (concerns qualification)	Article 973d para. 2 item 3 CO: Are the content of the rights, the functioning of the registry and the registration agreement recorded in the ledger or in associated supporting data? How is this connection established?
	Publicity (concerns qualification)	Article 973d para. 2 item 4 CO: Can creditors inspect the information and relevant ledger entries and verify the integrity of the relevant ledger content without any intervention of third parties? How?

	Organisation (only liable)	Article 973d para. 3 CO: How is it ensured that the securities ledger is organised in accordance with its purpose? In particular, how is it ensured that the registry functions at all times in accordance with the registration agreement?
Ledger agreement	Transfer	Article 973f CO: What rules apply to the transfer of ledger-based securities? (What rules are provided for this in the registration agreement?)
	Finality	Article 973f para. 2 item 2 CO: When does a disposition in the securities ledger become irrevocable?
	Cancellation	Article 973h CO: How are the rules on cancellation implemented?
Stock corporation law provisions	Type of shares	Can registered and bearer shares be tokenized?
	Form of output	Are the shares issued as simple uncertified securities pursuant to article 973c CO, as ledger-based securities pursuant to article 973d or as intermediated securities pursuant to the German Federal Indemnification Law? Can the shares be suspended in the ledger (e.g. change to intermediated securities and back)?
	Ensuring compliance with the requirements of stock corporation law	Are measures taken to ensure compliance with the requirements of company law (e.g. restrictions on transferability in the case of registered shares or clauses in the articles of incorporation on the structuring as simple

		uncertificated securities, etc.)? If so, which ones?
Secondary market (optional)	Trade	Are there plans to offer trading in ledger-based securities in addition to issuing ledger-based securities? If so, in what form?
	AMLA	Does the system qualify as a financial intermediary (e.g. custody, payment system, DLT trading system)? If so: How is the customer identified? How is the beneficial ownership of the assets verified? What form of transaction monitoring is used? How is the Travel Rule implemented?
	Swiss Banking Act	Are the ledger-based securities held in custody for the clients? If on pooled accounts: can the tokens be assigned individually to the beneficiaries and do the tokens remain permanently available (no asset transaction)? Are there plans to apply for a fintech license (article 1b of the Federal E-Banking Act)?
	Swiss FMIA	Are there any plans to apply for approval as a DLT trading system?