Universität St.Gallen
Center for Financial Services Innovation

mintminds

vision&

Blockchain for financial service providers

Pulse Survey 2024

Summary

The results of the study can be divided into four key areas: Blockchain strategy, cryptocurrencies, tokenised assets and advanced blockchain applications. The most important findings are summarised below:

Blockchain strategy

- **All banks see long-term potential for blockchain technologies**
  All institutions surveyed assume that blockchain technologies will realise their full potential in the long term. Almost a third of participants already see high potential in the medium term.

- **Priority for the development and expansion of the cryptocurrency business**
  Over 80% of banks are planning to develop or expand one or more offerings in the blockchain area, with activities relating to cryptocurrencies having the highest priority.

- **Anchoring a blockchain strategy as the first implementation step**
  Almost 60% of the banks surveyed have already developed a blockchain strategy or are working on one. Almost all banks with an existing strategy are utilising the backing of management and have already launched their first blockchain offering in 2023 or earlier.

- **Blockchain as a topic for innovation**
  More than 40% of banks continue to see blockchain primarily as an innovation topic, with business cases and long-term strategies playing a subordinate role. Around 20% of institutions are actively investing in blockchain as a growth driver and are already starting to see initial successes.

- **Interdepartmental coordination as a success factor**
  At more than half of the institutions surveyed, blockchain initiatives are driven by multiple business areas and tie up considerable resources. For example, over a quarter of the banks have more than ten full-time positions dedicated to blockchain topics.

Cryptocurrencies

- **Almost two thirds of banks are planning to set up or expand a cryptocurrency offering**
  More than 60% of the banks surveyed are planning activities in cryptocurrencies, which illustrates the increasing interest and growing acceptance of this technology. Half of the banks that are pursuing such plans even classify these projects as a high priority.

- **On average, 0.5% of assets under management (AuM) are invested in cryptocurrencies**
  Banks that already have a crypto offering invest an average of 0.5% of their total assets under management in cryptocurrencies. This shows that the cryptocurrency sector is still at an early stage of development.

- **60% of banks see themselves as newcomers**
  The surveyed institutions assess their level of maturity in crypto offerings as such that most banks are still in the early stages of development.

- **Custody and trading are among the primary offerings**
  The planned portfolio of crypto offerings and their preferred implementation strategies differ significantly between the banks. Custody and trading services are planned most frequently and are often implemented through outsourcing. In contrast, the ability to deposit and withdraw crypto assets as well as staking are less frequently planned, presumably due to regulatory hurdles and technological complexity.

- **Lack of business priority as a major obstacle to implementation**
  The lack of business priority is the biggest obstacle for most banks when implementing crypto offerings, cited by 37% of respondents. In second place are the considerable hurdles posed by regulatory requirements, cited by 26% of banks.

Tokenised assets

- **47% of banks plan to offer tokenised assets**
  Almost half of the institutions surveyed are planning activities in the area of tokenised assets, which shows considerable interest and confidence in the future of this technology. However, the high proportion of newcomers (58%) shows that many institutions are only just beginning to familiarise themselves with the technology and its potential applications.

- **An unclear business case is the main obstacle to developing services for tokenised assets**
  More than half of the banks (53%) see the biggest challenge in the fact that the implementation of tokenised assets is currently not a business priority or that a clear business case is still lacking, and implementation is therefore blocked.

Advanced blockchain applications

- **58% of survey participants are planning advanced blockchain applications**
  More than half of the banks intend to use applications that go beyond cryptocurrencies and tokenised assets in the medium to long term. The main motivation here is a general willingness to innovate, as many use cases are still in the trial phase and their added value and practical feasibility must first be tested.

- **Advanced blockchain applications are usually embedded in a comprehensive blockchain framework**
  Only 18% of survey participants focus exclusively on advanced blockchain applications. The prospect of synergy effects between different subject areas is probably the decisive reason for an otherwise predominant intention to bundle blockchain applications.

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1 Introduction

Blockchain technology has been around for over 15 years, ever since Satoshi Nakamoto published the first idea for Bitcoin in 2008. It is now foreseeable that blockchain will have a significant impact on financial service providers and the infrastructure of the financial markets.

Since 2019, Swiss bank Postfinance has seen net outflows of over one billion Swiss francs to crypto exchanges - in relation to fixed assets, this is over 5 per cent.[1] Swissquote generated 11% of its turnover with crypto assets in the first half of 2024.[2] These developments show that blockchain applications are having a remarkable impact on Swiss banks. The **Blockchain Pulse Survey for financial service providers 2024** aims to provide deeper insights into this topic.

Based on previous experience and successfully implemented use cases, two key developments are currently emerging for banks in the blockchain sector: cryptocurrencies and tokenised assets. Thirdly, there are many ideas for other potential use cases that could shape the future of the financial industry:

1. **Cryptocurrencies**: Trading and custody of specific payment tokens on behalf of clients

2. **Tokenised assets**: Digital representations of assets and property on distributed ledger technology (DLT) platforms

3. **Advanced blockchain applications**: Additional applications for the exchange and storage of data and information, such as in the areas of trade finance, settlement, supply chain management and identity management

This study aims to gain a deeper understanding of how the Swiss financial industry is addressing the challenges and opportunities associated with cryptocurrencies, tokenised assets and advanced blockchain applications. In addition, the study analyses how the focus and priorities have changed over time.

Between April and June 2024, 19 banks took part in the survey, which was conducted using an online questionnaire. The participating institutions mainly included retail and private banks (47% and 37%), but universal and investment banks (11% and 5%) also provided insights into their approach to blockchain issues. The participating banks include eight of the ten largest Swiss banks, which provides interesting insights. All data was anonymised and evaluated exclusively for scientific purposes.

[1] Quote from Alexander Thoma, Head of Digital Assets at PostFinance in an Interview, SRF Börse 19th February 2024

[2] Swissquote, Half-year presentation 2024, p.11, https://www.swissquote.com/api/internal/media/get-media?filename=2024-08/Press%20conference%20Results%20H1-2024%20vFinal.pdf 13.8.2024

The study is a joint initiative of the Centre for Financial Services Innovation at the University of St. Gallen, vision& and mintminds. The authors of the study are Markus Perdrizat, Dr Lidia Kurt (vision&), Dr Tobias Trütsch (University of St. Gallen), Dr Samy Amara and Philipp Netzer (both mintminds AG).

2 Blockchain strategy

Blockchain technology has created new business models and opportunities in the banking and financial sector that are comparable in importance to the emergence of the internet, online trading and e-banking. This chapter analyses how banks strategically assess and react to blockchain technology. Based on the survey data, it explains how the institutions are developing their blockchain business models, what potential they see in them and how the implementation is planned in terms of time.

2.1 Assessment of blockchain prospects

2.1.1 The long-term potential of blockchain technology is generally recognised

Blockchain technologies will only realise their full potential in the long term. As the following Figure 1 shows, all the institutions surveyed assess the long-term potential of blockchain technology as moderate to high. Interestingly, 11% of the banks surveyed, all of which operate in the private banking segment, already see high potential within the next two years.

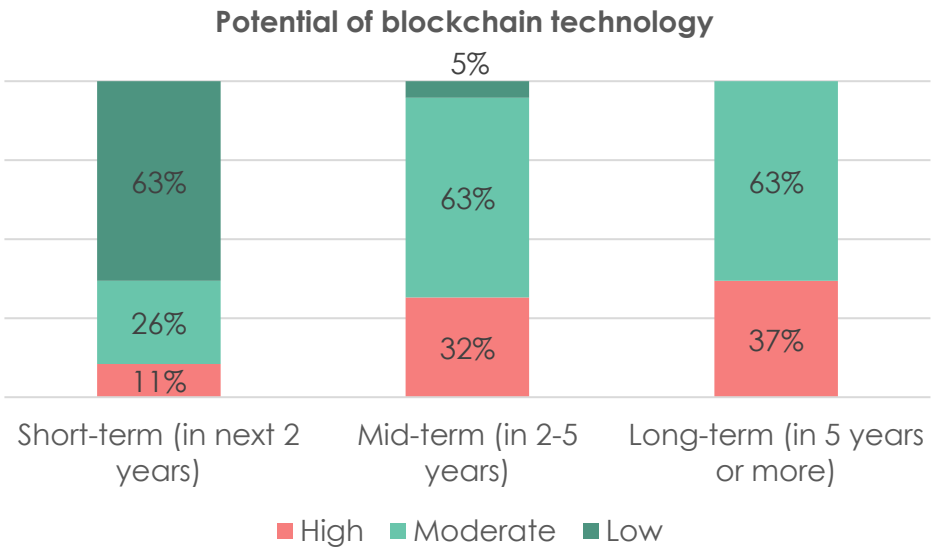

Figure 1: Assessment of the potential of blockchain technologies

2.1.2 Building up the cryptocurrency business is a high priority for a third of banks

Our survey of Swiss institutions on their strategic priorities in the development of new blockchain products and services revealed that over 80% of participants already have concrete plans in the blockchain area or have already included them in their service portfolio.

As shown in Figure 2 the cryptocurrency business has the highest priority. More than 60% of the banks stated that they are pursuing concrete plans in this area and half of them even rate the development and expansion of these offerings as a high priority (more on this in chapter 3 on the Cryptocurrencies).

Almost 50% of participants are planning activities in the area of tokenised assets. In addition, the development of advanced blockchain applications, such as trade finance or settlement, is a future topic that is already being actively pursued by over 50% of the institutions.

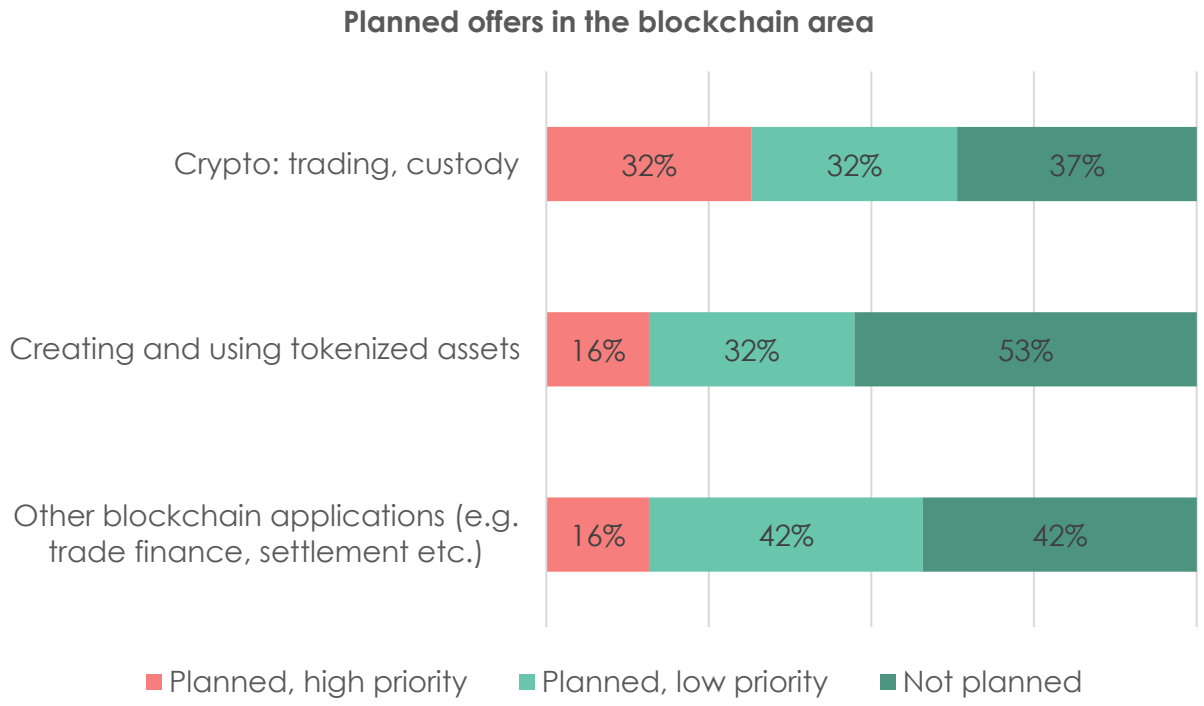

Figure 2: Planned offers in the blockchain area

A comparison with the figures from the FINMA Annual Report 20233 shows that considerable efforts are apparently currently being made to expand offerings in the blockchain sector. According to FINMA, 34 banks and securities firms in Switzerland carried out regulated activities in connection with crypto currencies or tokenised assets last year (see Figure 3).

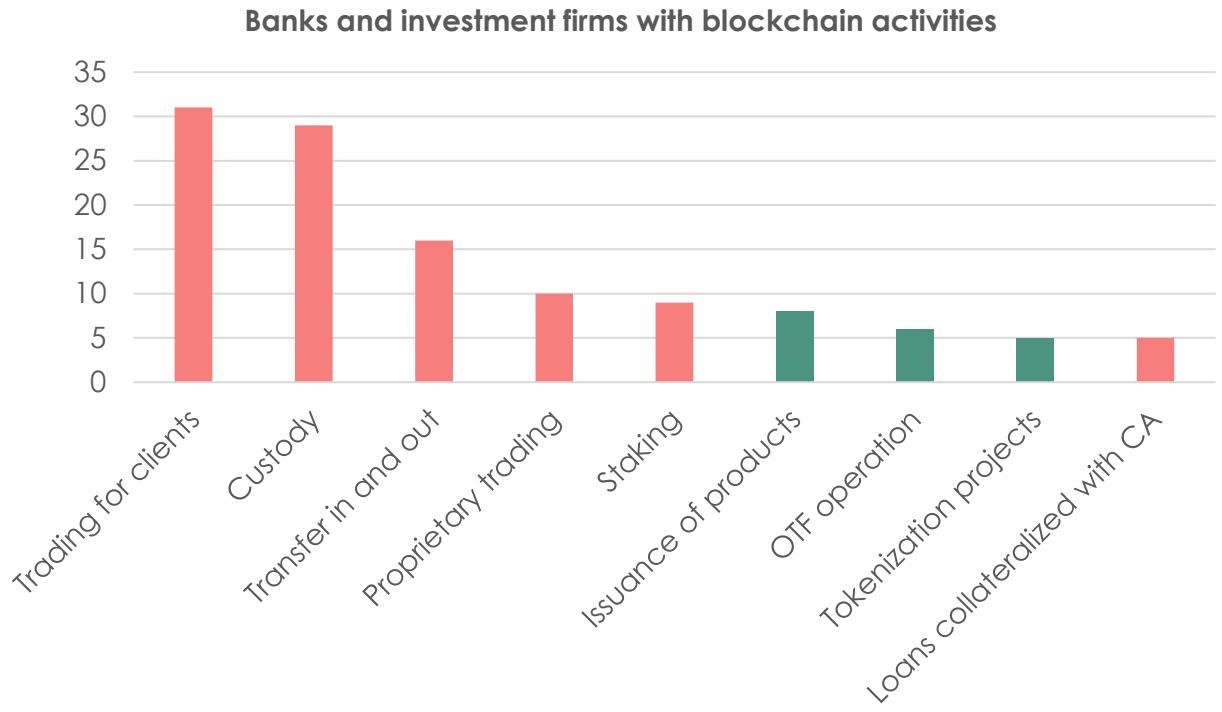

Figure 3: Swiss banks and securities firms with blockchain activities
Source: FINMA, Annual Report 2023, p. 32.

2.2 Anchoring a blockchain strategy

2.2.1 Blockchain strategy as the first step in implementation

Almost 60% of the banks surveyed have already developed a blockchain strategy or are in the process of doing so (see Figure 4). This also includes 16% of institutions that classify blockchain issues as a high priority.

All surveyed institutions with a blockchain strategy - except for one - have already launched their first blockchain offering in 2023 or earlier. This shows that an early strategic examination reveals the potential of the technology and enables banks to realise corresponding offerings.

[3] FINMA (2024a), Annual Report 2023, https://www.finma.ch/de/~/media/finma/dokumente/dokumentencenter/myfinma/finma-publikationen/geschaeftsbericht/20240320_finma_jb2023.pdf, 13.8.2024

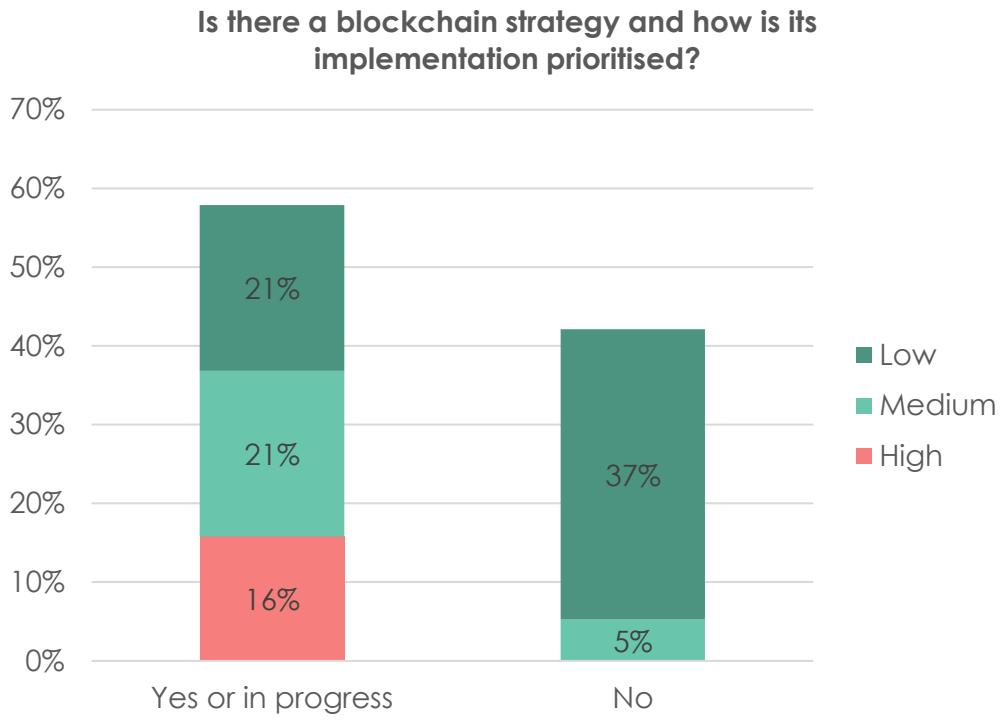

Figure 4: Distribution of institutions with or without a blockchain strategy

2.2.2 Blockchain as an innovation topic for more than 40% of banks

More than 40% of institutions see blockchain technology primarily as an innovation topic (see Figure 5). This indicates that the business case and long-term strategies play a subordinate role for these banks. This must be interpreted against the backdrop of evolving regulation and rapid technological development.

21% of institutions are investing in blockchain as a growth driver, are pursuing an offensive strategy and expect strong growth in assets under management and client numbers (see Figure 5). In contrast to these offensive institutions, just under 11% of all banks are only prioritising their blockchain strategy defensively, i.e. as a means of preventing client losses or the withdrawal of assets under management.

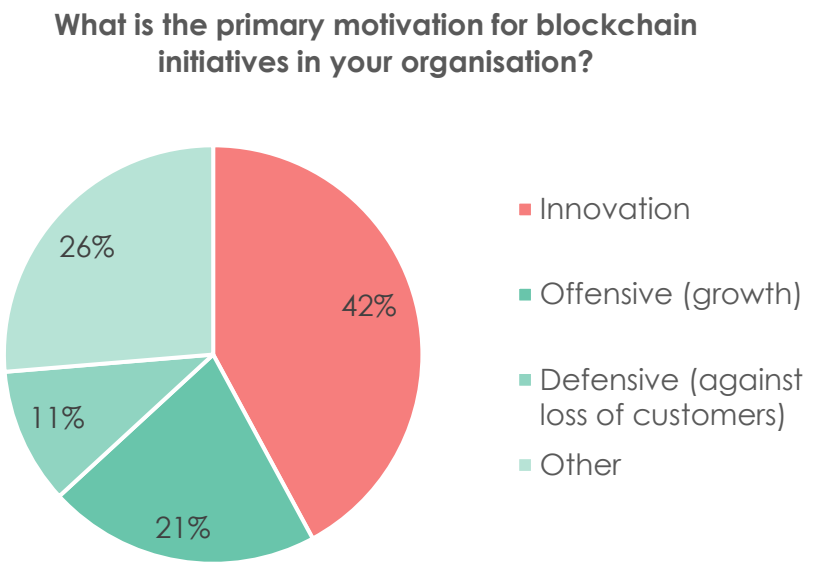

Figure 5: Motivation for blockchain initiatives

2.2.3 Early adopters have launched their blockchain offerings by mid-2024

Of the institutions surveyed that had not yet introduced their blockchain offering at the time of the survey, 5% plan to do so by the end of 2024, while the remaining 11% do not plan to do so until after 2025 (see Figure 6). The results show the existing gap between the institutions that are already pursuing a blockchain strategy and will soon implement it or have already implemented it, and those that have waited until now.

In the book "Crossing the Chasm", Geoffrey A. Moore defines the "chasm" as a gap in the technology adoption curve that separates the early adopters from the early majority. The responses to the Pulse Survey suggest that 2025 could be the year in which this chasm in the blockchain adoption lifecycle is bridged. After the early adopters have introduced their blockchain offerings by the first half of 2024, further developments will show whether and how quickly the gap can be crossed and whether the introduction of blockchain technologies will continue to be slow.

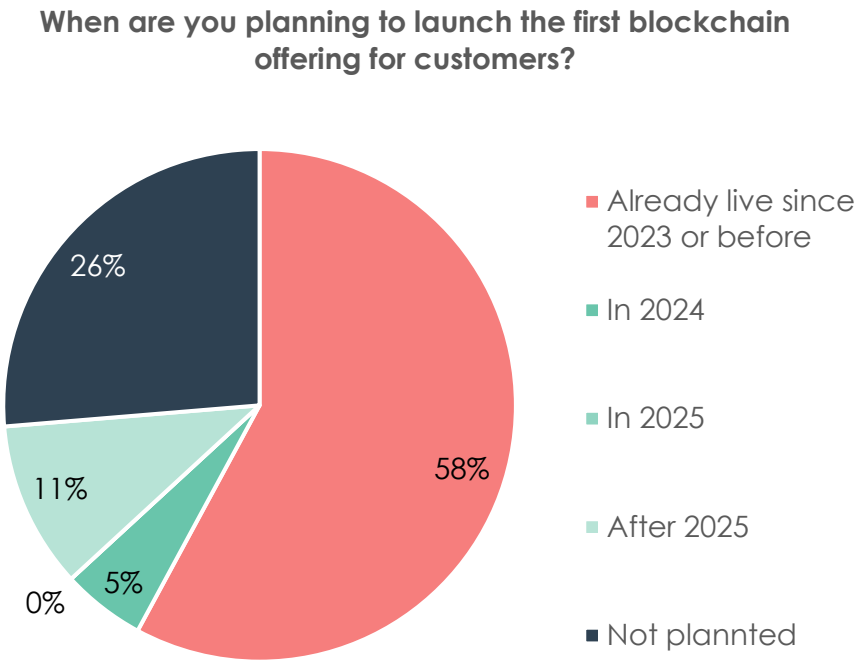

Figure 6: Planned launch of blockchain offerings

2.3 Coordination of blockchain initiatives

2.3.1 Blockchain initiatives are coordinated across divisions

New blockchain initiatives have a deep impact on banking processes and systems, which is why cross-divisional coordination is essential. A clear allocation of responsibilities and competences is therefore a key success factor for the successful introduction and further development of such initiatives.

The survey shows that there is still potential for optimisation in organisational aspects. In more than half of the institutions surveyed, blockchain initiatives are being driven by at least two of the business areas listed below (see Figure 7). The product/business development areas are most frequently responsible for blockchain initiatives, followed by the front organisation and special innovation/digital teams within the bank, which also play a key role in promoting blockchain topics.

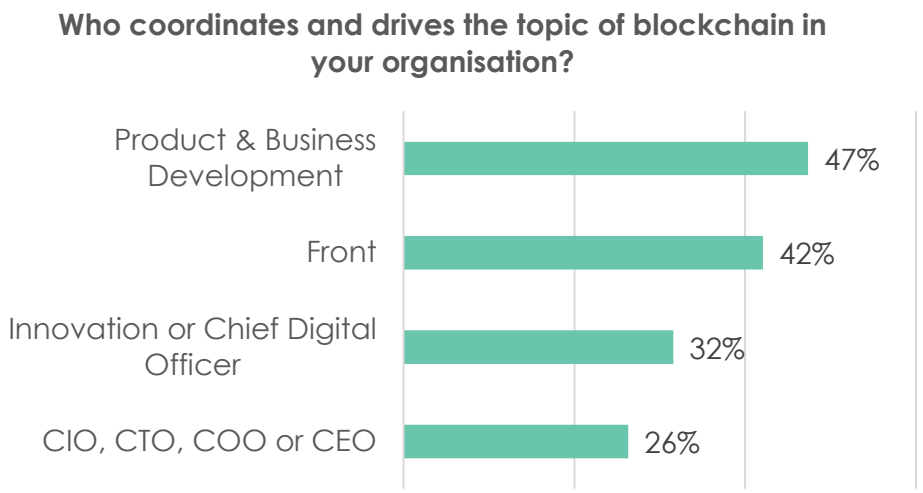

Figure 7: Driving departments for blockchain topics

The teams working on blockchain topics are reaching a considerable size in many institutions. Figure 8 shows that more than a quarter of the banks surveyed have more than ten full-time positions dedicated exclusively to blockchain topics. Universal banks and private banks in particular are increasingly allocating resources to these topics, which also correlates with their prioritisation.

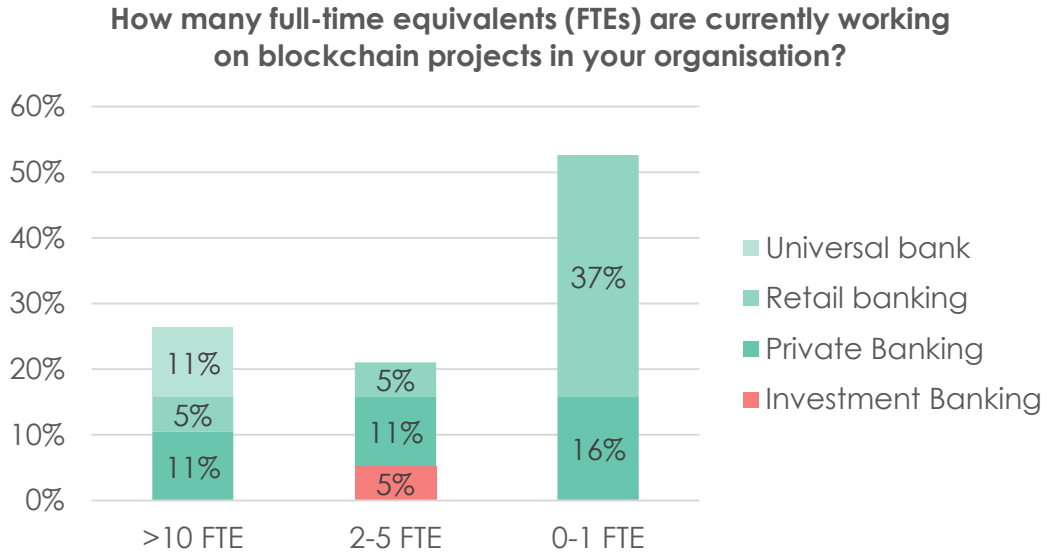

Figure 8: Number of full-time positions in blockchain initiatives

2.4 Conclusion

The study shows that blockchain technologies have arrived at Swiss banks and are being taken seriously. Analysing the planning of the remaining institutions suggests that the next wave of early majority institutions could go live in the next few years.

The high number of active banks in the blockchain sector and the high strategic weighting of blockchain topics at over half of the institutions surveyed can be read as a sign of the strength of innovation in the Swiss banking sector.

3 Cryptocurrencies

The rapid development of cryptocurrencies has helped to shape the financial sector in recent years. This chapter analyses how banks are dealing with this new asset class and what strategies they are pursuing to integrate crypto offerings. Our focus is on the planning and prioritisation of crypto offerings, the amount of assets under management in cryptocurrencies and the challenges that banks face when implementing these new services. Based on survey data and analyses, a comprehensive picture is drawn of the current situation and future trends in the banking sector in connection with cryptocurrencies.

3.1 Cryptocurrency offering

3.1.1 Almost two thirds of banks are planning a crypto offering or have already implemented one

The survey revealed that 63% of the banks surveyed are planning to develop a crypto offering or have already developed one (see Figure 9). This significant proportion illustrates the growing interest and acceptance of cryptocurrencies in the traditional banking sector.

At the same time, 37% of banks stated that they currently have no plans to implement such an offering. This shows that despite the growing interest, a significant proportion of banks remain cautious - mainly due to other internal business priorities, regulatory uncertainties or concerns about the security and stability of cryptocurrencies (see also chapter 3.2 "Obstacles to the implementation of a cryptocurrency offering").

For example, a comparison of the figures for retail banks collected in this study with the findings from the "Bank IT and Sourcing Study 2024" by HSLU[4] confirms that retail banks are still acting somewhat more cautiously than other banks but are nevertheless tending to invest more heavily in the development of a cryptocurrency offering.

Banks planning to develop a crypto offering prioritise the project differently. The survey results show that 50% of banks consider this project to be a high priority, while the other 50% give it a lower priority. This balanced distribution indicates that there are different strategies and approaches among banks when it comes to integrating cryptocurrency services into their existing offerings.

[4] Blattmann, Buschor, Ettlin (2024): IFZ Study Bank IT and Sourcing 2024, https://www.hslu.ch/de-ch/hochschule-luzern/ueber-uns/medien/medienmitteilungen/2024/05/28/bank-it-und-sourcing-studie-2024/

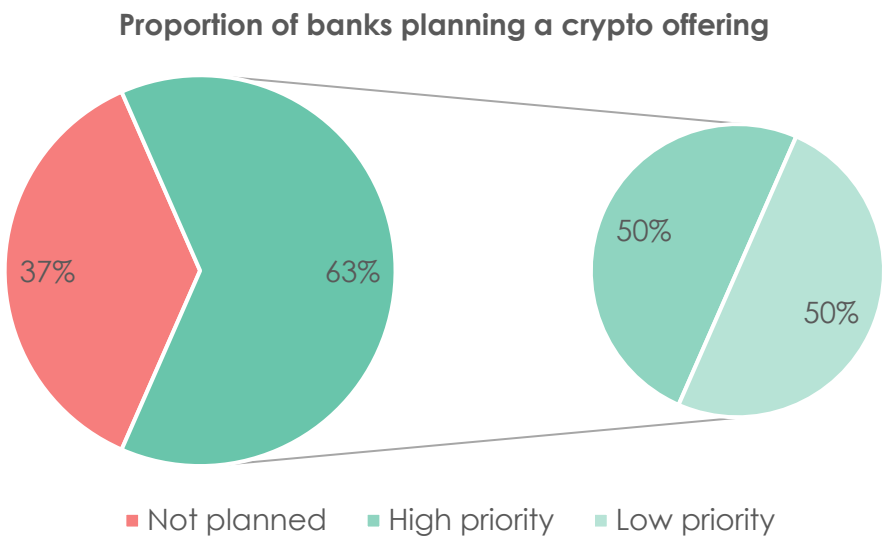

Figure 9: Proportion of banks planning a crypto offering

3.1.2 On average, 0.5% of assets under management are invested in cryptocurrencies

One notable result of the study is the proportion of assets under management (AuM) in cryptocurrencies at banks with existing crypto offerings: **0.53% of total AuM are invested in cryptocurrencies**. This figure may seem low at first glance, but it is considerable in view of several factors.

Firstly, cryptocurrencies are still at an early stage of their market development. Many institutional investors continue to analyse the risks and opportunities of this new asset class. A share of 0.53% shows that, despite existing uncertainties, there is substantial interest and confidence in this form of investment, driven primarily by retail investors.

Secondly, many banks have only recently introduced their crypto offering. Setting up the necessary technological infrastructure requires considerable investment and specialised expertise.

Overall, the proportion of AuM invested in cryptocurrencies illustrates the growing confidence and increasing acceptance of this asset class in the banking sector - despite regulatory and technological challenges.

3.1.3 60% of banks see themselves as newcomers

Another important aspect of the study was the banks' self-assessment of their level of maturity in crypto offerings. The banks were categorised as beginners, experienced or experts. The distribution of the assessments is as follows:

- 60% of banks see themselves as newcomers.
- 20% of banks classify themselves as experienced.
- 20% of banks consider themselves experts.

This distribution shows that the majority of banks are still in the early stages of developing and implementing crypto offerings. A significant proportion of banks (60%) see themselves as newcomers, which indicates that many institutions are only just beginning to familiarise themselves with cryptocurrencies and the underlying blockchain technology.

The 20% share of experienced banks shows that some institutions are already more advanced and have in-depth knowledge and experience in dealing with cryptocurrencies. These banks have already carried out initial implementations and have a certain routine in this area.

The fact that 20% of banks classify themselves as experts makes it clear that there is a small but significant group of institutions that have built up a high level of expertise and comprehensive knowledge in the field of cryptocurrencies. These banks act as pioneers and innovation leaders in the industry and serve as role models and benchmarks for other institutions for successful crypto offerings.

3.1.4 Custody, trading and crypto ETPs as primary offerings

Figure 10 illustrates the planned crypto offerings of banks and their preferred implementation strategies. It shows whether the banks are planning offerings and, if so, whether they are building them in-house or outsourcing them.

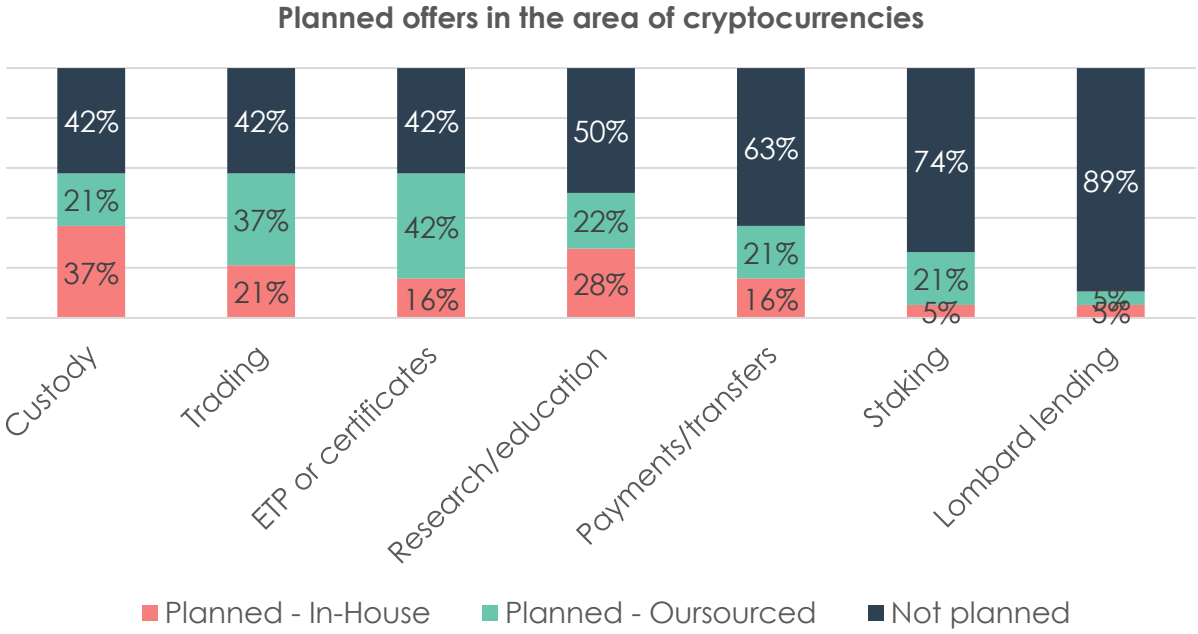

Figure 10: Planned offers in cryptocurrencies

Custody services refer to the secure storage of cryptocurrencies for customers. Figure 10 shows that around 60% of banks are planning or have already implemented custody services, with a stronger preference for in-house solutions. This emphasises the importance of secure custody options as a fundamental offering in the cryptocurrency sector.

Trading services enable the purchase and sale of cryptocurrencies. This service is important for customers who actively invest in cryptocurrencies. As expected, in line with custody services, around 60% of banks are planning or have already implemented trading services. However, the plan is to obtain trading services predominantly from external providers.

Exchange traded products (ETPs) and certificates are financial products that track the value of cryptocurrencies and can be traded on traditional exchanges. These products offer an opportunity to invest in cryptocurrencies without holding the digital assets directly. Here, too, around 60% of banks are planning to offer such products, whereby these will largely be sourced from the market in the same way as existing ETPs. This indicates that these financial products are seen as an attractive alternative for investors to participate in the performance of cryptocurrencies.

Research and education are crucial to promote the understanding and acceptance of cryptocurrencies. Figure 10 shows that around 50% of banks plan to offer research or education services, split between in-house and outsourcing. This emphasises the importance of knowledge transfer and research in the field of cryptocurrencies in order to provide clients with a sound basis for decision-making.

Payment and transfer services enable transactions with cryptocurrencies (e.g. via the integration of stablecoins or book money tokens). These services are central to the practical application of cryptocurrencies as a means of payment. Around 50% of banks are planning these services, with a slight preference for external solutions. The moderate planning frequency compared to custody and trading could indicate the challenges and regulatory hurdles that still exist in this area.

Staking services allow customers to use their cryptocurrencies to validate transactions and secure the network and receive rewards ("staking rewards") for doing so. Only around 30% of banks plan staking services. The lower frequency of planning could indicate that staking is considered more technically demanding as a specialised service.

Lombard Lending enables customers to deposit cryptocurrencies as collateral for loans. This offers a way to create liquidity without having to sell the digital assets. Only around 15% of banks are planning Lombard Lending, presumably because many banking segments do not have any products in this category.

Overall, the planned crypto offerings and their preferred implementation strategies vary greatly between the banks. Custody and trading are the most frequently planned services, underlining their central role in the cryptocurrency sector. Services such as payment and transfer services as well as staking are less frequently planned, possibly due to regulatory challenges and technical complexity. The analysis shows that banks are actively working on the integration of cryptocurrency services, with the choice between in-house and outsourcing solutions depending heavily on the service in question.

3.2 Obstacles to the implementation of a cryptocurrency offering

3.2.1 Lack of business priority hinders most banks in implementation

The implementation of crypto offerings presents banks with a variety of challenges. The survey identified various obstacles that make it difficult to integrate cryptocurrencies into the existing banking system. Figure 11 provides information on the biggest challenges and concerns when introducing a cryptocurrency offering.

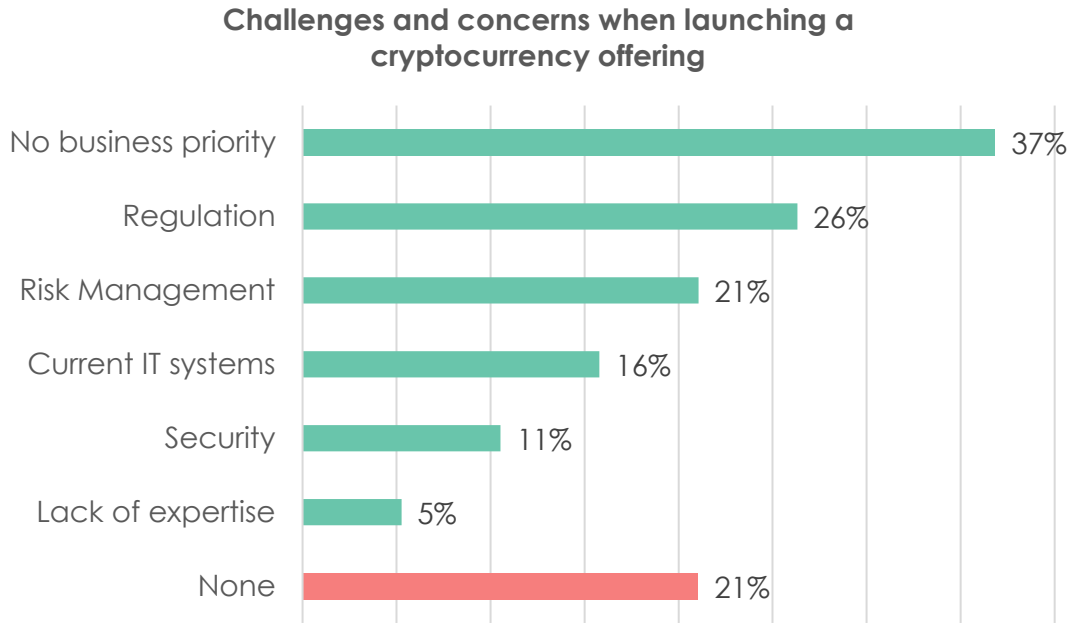

Figure 11: Barriers to cryptocurrency supply

No business priority (37%)

37% of banks state that the implementation of crypto offerings is not currently a business priority. This could be due to several factors, including strategic decisions focussing on other business areas or a lack of perceived added value from crypto offerings. Banks could also focus on strengthening their core competences and investing resources in already established business areas.

Regulation (26%)

Regulatory requirements are a significant hurdle for 26% of banks. Legislation around cryptocurrencies is still evolving and banks need to ensure that they comply with all applicable regulations. This can be particularly difficult as regulatory frameworks are often complex, leading to uncertainty and additional compliance costs.

Risk Management (21%)

For 21% of banks, risk management is a key challenge when introducing crypto offerings. Cryptocurrencies are known for their volatility and risks in the areas of cybersecurity and compliance. Banks need to develop robust risk management processes to minimise potential losses and ensure the security of their customers' investments. This requires comprehensive analyses and the development of new strategies and tools for risk assessment and -management.

Current IT systems (16%)

The existing IT systems are seen as an obstacle by 16% of banks. The integration of cryptocurrencies often requires a comprehensive overhaul or expansion of the existing IT infrastructure. This can be both costly and time-consuming and requires specialised technical knowledge. The compatibility and security of the systems must be guaranteed to ensure smooth operation and protection against cyber-attacks.

Security (11%)

11% of banks cite security concerns as an obstacle. Cryptocurrencies and the underlying blockchain technology bring with them new security requirements. Banks need to ensure that their systems are protected against hacking, fraud and other cyber threats. This requires significant investment in security protocols, encryption technologies and continuous monitoring.

Lack of expertise (5%)

A lack of internal expertise is identified as a challenge by 5% of banks. The implementation of crypto offerings requires specialised knowledge in the areas of blockchain technology, cryptocurrencies and cybersecurity. Banks may need to bring in external experts or develop extensive training programmes for their employees to build the necessary skills

No obstacles (21%)

Remarkably, 21% of banks state that they see no obstacles to the implementation of crypto offerings. These banks already have the necessary resources and expertise. This optimistic view suggests that they could potentially take a pioneering role in the integration of cryptocurrencies.

To summarise, it can be said that the implementation of crypto offerings in banks is associated with a variety of challenges. The most common obstacles are a lack of business priority and regulatory requirements, followed by risk management and IT infrastructure. Security concerns and a lack of expertise are also significant hurdles. Nevertheless, there are also banks that see no significant obstacles, which indicates different stages of development and strategic orientations within the industry. Overcoming these challenges requires careful planning, comprehensive analyses and investment in technology and staff skills.

3.3 Conclusion

The survey shows that banks are increasingly looking into the integration of cryptocurrencies. While 63% of the banks surveyed are already planning a crypto offering, many are still in the early stages of development, which is also reflected in the low share of 0.53% of assets under management invested in cryptocurrencies. This proportion may seem low, but it also indicates the growing confidence and interest in this new asset class. The maturity level of banks in relation to crypto offerings is predominantly low, with the majority classifying themselves as beginners and only a small proportion as experts.

Planned services such as custody and trading are critical to the overall approach and are often realised through outsourcing, which indicates the technical and regulatory complexity. A lack of business priority, regulatory requirements and risk management are the biggest challenges. Security concerns and a lack of expertise are also significant hurdles. Despite these obstacles, the willingness of many banks to invest in crypto offerings shows a strategic adaptation and recognition of the potential of this technology for the future of the banking sector.

4 Tokenised assets

Tokenised assets, i.e. securities and uncertificated securities based on blockchain technology, have the potential to transform the traditional securities market. This chapter examines how banks are responding to this innovation and what challenges they need to overcome. The aim is to provide a comprehensive picture of the status and prospects for the integration of tokenised assets in the banking sector.

4.1 Services for tokenised assets

4.1.1 Around half of banks plan to offer tokenised assets

In the current survey, 47% of the banks surveyed (see Figure 12) responded that they plan to develop an offering in tokenised assets. This shows a clear interest and confidence in the future of this technology.

Of the banks planning an offer, 33% rate this project as a high priority, while 67% give it a lower priority (see Figure 12). This distribution indicates that some banks are already actively working on the integration of tokenised assets and consider this to be strategically important for their future business development. Other banks, on the other hand, may be waiting to learn from the experiences of the pioneers and adapt their own strategies accordingly.

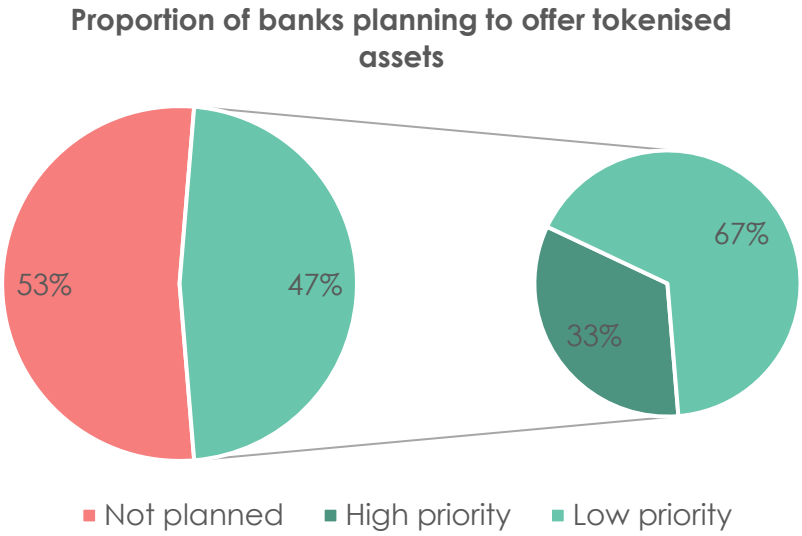

Figure 12: Proportion of banks planning an offering for tokenised assets

4.1.2 Maturity level of tokenised assets

An important aspect of the study is the banks' self-assessment of their level of maturity in tokenised assets. The results show that 58% of banks consider themselves to be newcomers, 33% are experienced and only 8% are experts.

This distribution makes it clear that the majority of banks are still in the early stages of developing and implementing offerings for tokenised assets. The high proportion of newcomers shows that many institutions are only just beginning to familiarise themselves with the technology and its potential applications. Banks that classify themselves as experienced have already taken their first steps and have in-depth knowledge and initial practical experience in this area. The small group of experts has gained in-depth knowledge and extensive experience, which puts them in a position to act as pioneers in the sector.

Compared to the maturity level for cryptocurrencies, it is noticeable that the proportion of beginners is very similar for tokenised assets. However, the proportion of experts is significantly higher for cryptocurrencies (20%) than for tokenised assets (8%). This difference indicates that, overall, banks are somewhat more advanced in dealing with cryptocurrencies than with tokenised assets. This could be due to the fact that cryptocurrencies have been in the focus of the financial industry for longer and have therefore had more time to develop and integrate.

Overall, the comparison shows that both offerings are still new and that banks are at different stages of development. While cryptocurrencies are already somewhat more mature, the integration of tokenised assets is just beginning to gain momentum.

4.2 Obstacles to the introduction of tokenised assets

4.2.1 Lack of clarity in the business case, lack of customer interest and lack of internal expertise are the main obstacles

The implementation of tokenised assets is hampered by several challenges, including lack of business priority, insufficient expertise, lack of customer interest and high costs (see Figure 13). Other obstacles include the lack of secondary trading and the lack of uniform standards. Despite these hurdles, there are also banks that do not see any significant obstacles, which indicates an increasing maturity and acceptance of this technology in certain areas. Overcoming these challenges requires targeted investment, comprehensive training and the development of a clear regulatory framework.

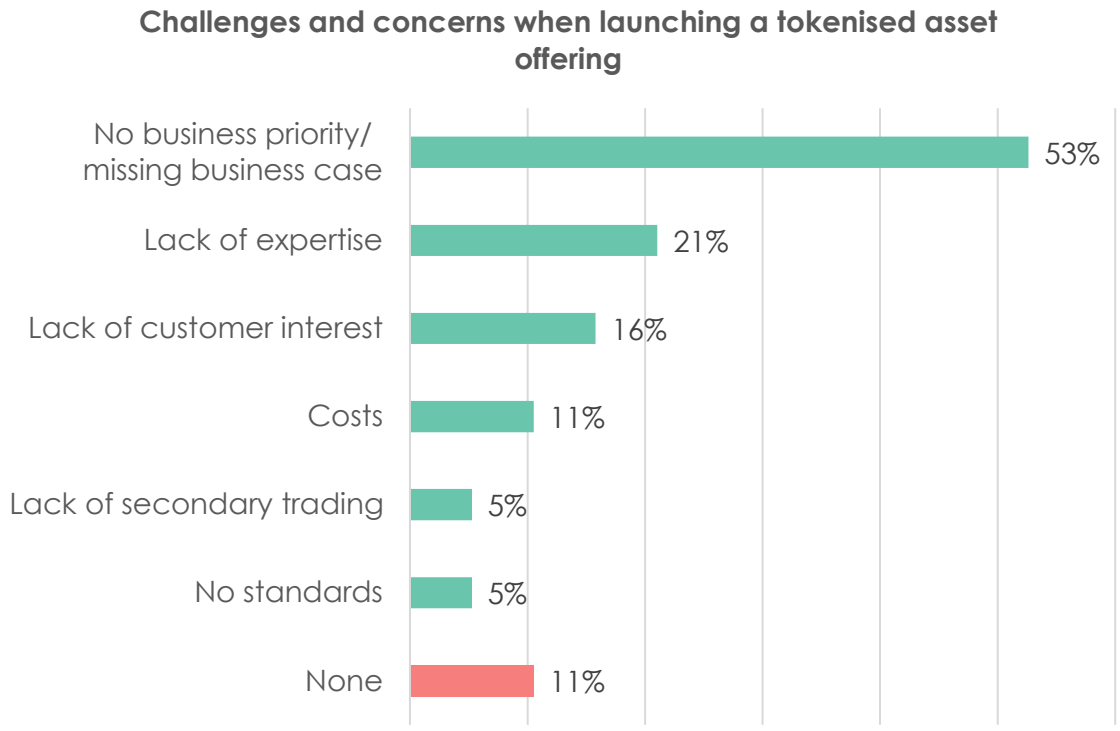

Figure 13: Barriers to the supply of tokenised assets

No business priority/missing business case (53%)

More than half of banks (53%) state that the implementation of tokenised assets is not a current business priority or that there is no clear business case. This suggests that many institutions have not yet fully recognised the economic benefits and strategic relevance of this technology. Banks may be reluctant to invest in new technologies until the immediate business benefit is clear.

Lack of expertise (21%)

Another significant obstacle is the lack of expertise, which was cited by 21% of banks. The implementation of tokenised assets requires specialised knowledge in areas such as smart contracts, settlement systems and regulatory capabilities. The lack of appropriately trained staff makes it difficult for banks to integrate these technologies effectively.

Lack of customer interest (16%)

16% of banks see a lack of customer interest as a challenge. Demand for tokenised assets may still be low at present, which reduces banks' willingness to invest. To overcome this obstacle, it may be necessary to communicate the benefits of these technologies more clearly and increase customer awareness and interest.

Costs (11%)

Implementation costs are cited as an obstacle by 11% of banks. The development and integration of technologies to support tokenised assets requires significant financial resources. These costs can be an obstacle, especially for smaller institutions or those that have already invested heavily in other innovation projects.

Lack of secondary trading (5%)

5% of banks state that the lack of secondary trading is a problem. Secondary markets for tokenised assets have not yet been developed in some cases, which limits the liquidity and trading of these assets. Without a well-functioning secondary market, tokenised assets are not very attractive for banks and their clients.

No standards (5%)

Another obstacle is the lack of standards, which is also mentioned by 5% of banks. Harmonised standards and protocols are necessary to ensure interoperability and security. The lack of clear standards can complicate the implementation and integration of tokenised assets and create uncertainty.

No obstacles (11%)

11% of banks state that they see no significant obstacles to the implementation of tokenised assets. These banks already have the necessary resources and expertise, which facilitates the integration of these technologies.

4.3 Conclusion

The survey shows that banks are increasingly interested in integrating tokenised assets into their service portfolio, even if many are still in the early stages. With 47% of banks planning an offering and 33% classifying this as a high priority, the potential of this technology is clear. Nevertheless, beginners (58%) dominate the field, while only 8% of banks consider themselves experts, indicating a general need for further expertise and technical maturity.

The biggest challenges are the lack of business priority and the high implementation costs, followed by regulatory uncertainties and a still insufficiently developed secondary market. Despite these hurdles, some banks recognise the strategic importance of tokenised assets and are already investing in corresponding solutions. The parallel development and integration of cryptocurrencies and tokenised assets show that the banking sector is actively working to adapt to the new technological realities and make use of these innovative financial instruments.

5 Advanced blockchain applications

This section examines whether banks and asset managers are already considering advanced blockchain applications and provides examples of what these could be.

5.1 Possible applications of blockchain technologies

Advanced blockchain applications are based on one or more core functionalities of blockchain technology. The combination of functionalities such as decentralisation and reconciliation, transparency and immutability, security and cryptography, consensus mechanisms, smart contracts and tokenisation form the basis for a variety of applications in the financial services sector and can promote efficiency, security and transparency.

Advanced blockchain applications include, for example, applications such as the tokenisation of assets, the use of smart contracts to automate processes and the improvement of efficiency and transparency in trade finance and transaction processing. Some practical examples are briefly described below.

Trade Finance

Blockchain technology offers considerable advantages in trade finance. The tokenisation and trading of receivables as well as the automatic processing of trade transactions can improve efficiency and transparency in the supply chain. Global tracking of goods is made possible, which leads to better monitoring and traceability.

Settlement

Tokenisation and the instant settlement of assets such as fund units are other important use cases. Blockchain technology allows these transactions to be processed in real time, which reduces risk and costs while increasing liquidity.

Digital identity

Another key area of application is digital identity. Blockchain can significantly improve the verification and authentication of natural persons and the secure exchange of sensitive data. This leads to greater security and efficiency in identity management.

Corporate Actions

Blockchain technology also offers major advantages for corporate actions, such as tamper-proof and transparent voting. This increases efficiency and transparency in the implementation of corporate decisions, both at company level (e.g. Board of Directors) and at shareholder or owner level.

Tokenisation of art

Blockchain technology can also be used in the field of art to protect copyrights and distribute licence fees. Using tokens (fungible or non-fungible tokens [NFTs]), the ownership of artworks and the associated rights can be digitally mapped and made tradable.

5.2 Activities relating to advanced blockchain applications

5.2.1 58% are planning advanced applications

According to the survey, 58% of banks are planning to use advanced blockchain applications in the medium to long term, albeit mostly as a low priority (73%) (see Figure 14). The low priority is because the use cases are not yet fully developed. It therefore remains unclear how and when these applications will come to the fore.

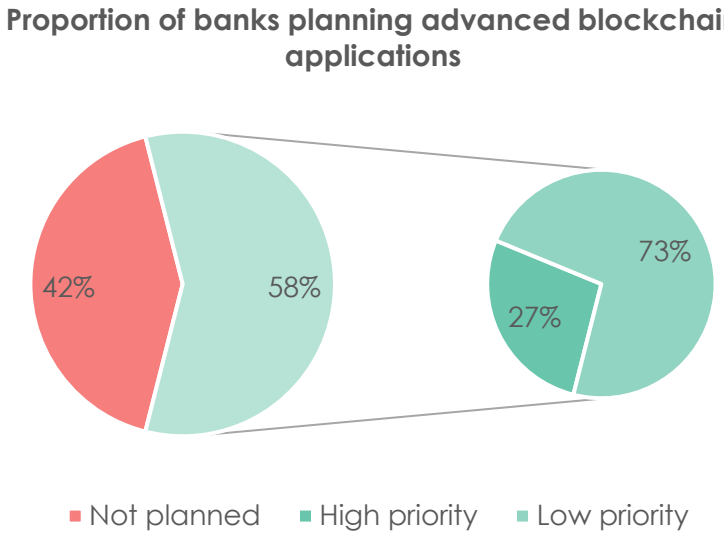

Figure 14: Development of advanced blockchain applications

5.2.2 Advanced applications are embedded in the strategy

Institutions with dedicated resources and a clear strategy are particularly considering advanced blockchain applications. 80% of institutions with an existing and approved blockchain strategy are also looking into further applications of the technology. The larger the institution and the more employees are involved in blockchain topics, the more likely it is to include advanced blockchain applications in its plans (see Figure 15).

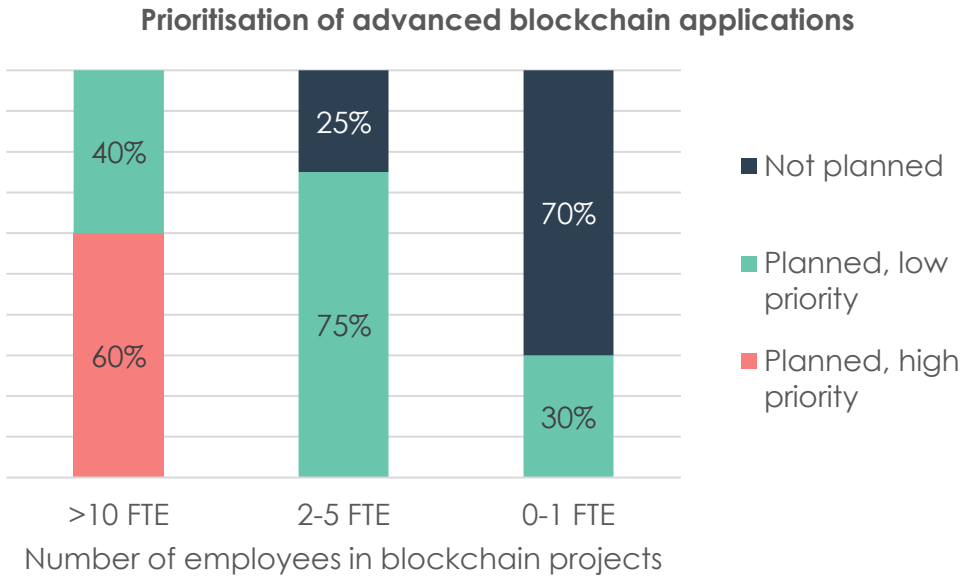

Figure 15: Prioritisation of advanced blockchain applications

5.2.3 Advanced applications in the context of cryptocurrencies and tokenised assets

Only a minority of 18% of participants focus exclusively on advanced blockchain applications (see Figure 16). Over 80% of institutions with ambitions in this area integrate these activities into a comprehensive blockchain framework that also includes services for cryptocurrencies and tokenised assets. This indicates that synergy effects between the various subject areas are being utilised in a targeted manner.

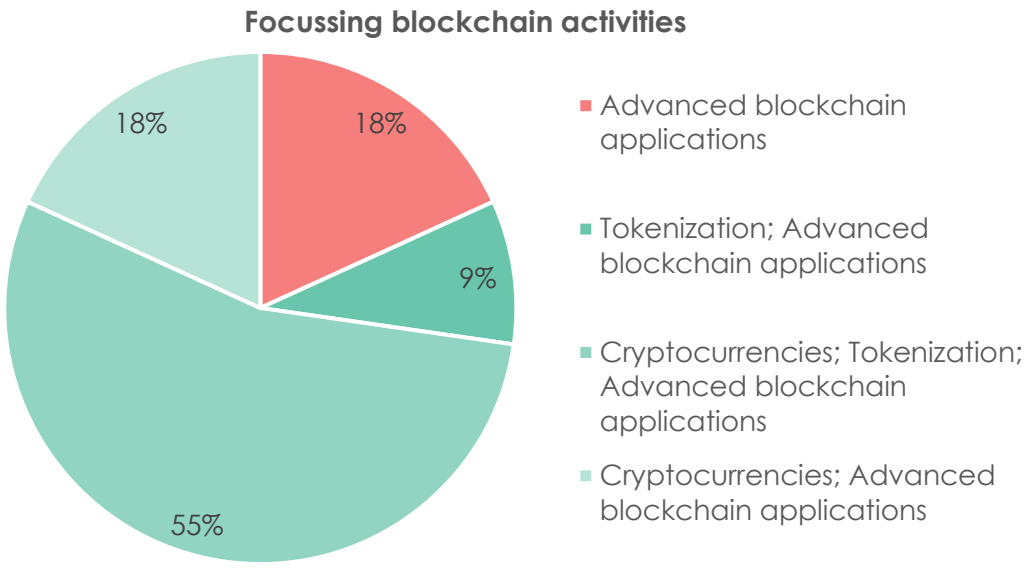

Figure 16: Focus of blockchain activities

5.3 Conclusion

The potential of advanced applications is clearly being recognised by many banks. Numerous use cases are being examined and some have already been implemented as proofs of concept. The aim of these projects is to test the practical applicability and added value of blockchain technology in various areas.

The extended application of blockchain technologies has the potential to bring about significant improvements in various areas of the financial industry and open up new business areas. Although many of these applications are still in their infancy, the survey results show a growing interest and an increasing willingness to invest. Institutions with an advanced blockchain strategy could act as pioneers and pave the way for further innovations.

6 Closing words

The aim of this study was to gain a deeper understanding of how the Swiss financial industry is addressing the challenges and opportunities associated with cryptocurrencies, tokenised assets and advanced blockchain applications.

The study shows that blockchain technologies are increasingly gaining a foothold in the Swiss banking landscape and are being taken seriously. A significant number of banks have already developed strategies or are planning to go live with blockchain solutions such as cryptocurrency offerings in the coming years. Over half of the institutions surveyed categorise blockchain technologies as strategically important, which can be interpreted as a sign of the innovative strength of the Swiss banking sector.

Although only 0.53% of assets under management are invested in cryptocurrencies, 63% of the banks surveyed are already planning corresponding offerings. This figure illustrates the growing trust and interest in cryptocurrencies, even if many banks are still in the early stages. The majority of institutions see themselves as newcomers in this area, with only a small proportion considering themselves experts. Planned services such as crypto custody and trading are key for many banks but are often outsourced due to the technical and regulatory complexity.

Similar trends can be seen in the integration of tokenised assets. Almost half of the banks are planning corresponding offerings, with 33% considering them a high priority. However, the level of maturity here is still low and the need for further expertise is high. The biggest challenges for the introduction of tokenised assets and cryptocurrencies are regulatory uncertainties, high implementation costs, a lack of business priority and a still insufficiently developed secondary market.

Despite the challenges, some banks are already investing strategically in blockchain solutions. The parallel development of cryptocurrencies and tokenised assets shows that the banking sector is actively working on adapting to the new technological possibilities. Numerous proof-of-concept projects on the practical applicability of blockchain technologies are already underway, indicating the great potential for future innovations and business areas. Banks with an advanced blockchain strategy could act as pioneers here and pave the way for further developments.

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The centre develops expertise at the interface between finance, management and law. It achieves profile-forming results in current interdisciplinary issues in the areas of FinTech, sustainable finance, digital ecosystems and platform economies, regulation of financial services and markets, entrepreneurship and private markets. In addition to scientific publications, the focus is on the transfer of scientific findings to the general public and dialogue and exchange with practice partners.

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