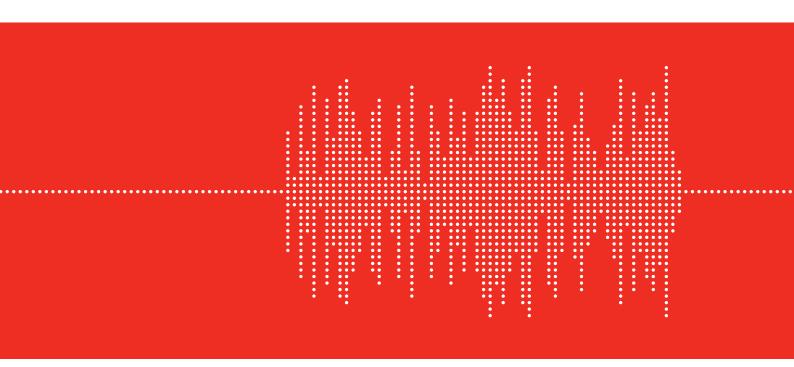


Digital Pulse Check 3.0 Switzerland vs. Europe



How high is the financial sector's digital pulse?

What is the status of digital transformation in Swiss banks?

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Foreword

January 15, 2019

Ten years after the global banking crisis, the Swiss financial industry faces its next crucial challenge. Once again, it must fundamentally renew itself, and perhaps even selectively reinvent itself. The driving force behind this new evolution is the growing digitalization of the banking sector. The stakes are high for the established players in the field, who ultimately fight for their own survival. Small agile fintech companies, as well as large innovative tech giants, are lurking ominously, ready to jump at the opportunity to serve the digital needs of a new generation of consumers with forward-looking digital solutions. Companies such as Google, Apple, Paypal, and Alibaba are increasingly tapping into the European digital payments market with their own financial services. In this endeavor, their huge customer base confers them enormous market power.

The issue of digitalization is of crucial significance to Switzerland, and its implications for one of the country's most important – if not the most important – economic sector are not to be underestimated. In light of this, the Swiss Finance Institute has partnered with the renowned strategy and management consulting company zeb to examine, through a representative study, the current status of digitalization within the Swiss banking sector. zeb has already conducted three editions of its Digital Pulse Checks in Europe, and the present study offers for the first time a specific focus on Switzerland. Our main objective is to determine the level of digital maturity of Swiss banks compared with the rest of Europe.

Our observations show that the financial sector has recognized that it risks being relegated to second place by new market players if it does not combat them with effective countermeasures and does not consider digitalization as an opportunity to be seized upon. It appears that the financial sector has accepted that challenge and the fact that digitalization will not only be an important game changer with regard to costs. Digitalization could become a powerful leverage factor on the revenue side as well, by revitalizing existing business models and creating new sustainable ways of transitioning into the digital future. Swiss banks have, for the most part, opted for a "fast follower" approach in this regard.

The present survey shows that for banking institutions, digitalization is linked to important challenges in two main areas. On the one hand, employees have to actively embark on the digital journey. In the future, bank employees will have to be equipped with additional skills, and those competencies have to be provided to them despite any reservations they might have. On the other hand, existing bank structures have to become more flexible, since only small teams and agile organizations will be able to develop tailor-made solutions within a reasonable timeframe.

It is in the nature of things that the fundamental transformation process brought about by digitalization will be interpreted and implemented in different ways by individual financial institutions. We invite you to learn more about our findings in the following report.

Andreas Borg, Senior Manager, zeb
Dr. Markus Bürgi, Member of the Management Board, SFI
Prof. Dr. Rüdiger Fahlenbrach, SFI Professor, ETH Lausanne
Prof. Dr. Damir Filipovic, SFI Professor, ETH Lausanne
Norman Karrer, Partner, zeb
Wieland Weinrich, Senior Manager, zeb

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Management summary

The digitalization of the financial sector is turning out to be a truly Herculean task for individual bank institutions. Although all market players are working towards the same goal - the digital bank - they are following different solution approaches and facing individual challenges. This much can be said: in comparison with the rest of Europe, Swiss banks are well-positioned in terms of knowledge, however they still lag behind in terms of implementing those insights into concrete measures. The specific characteristics of the Swiss banking landscape, including the importance of private banking as well as the relatively small size of the Swiss market on the European scale, explain the fact that the digitalization of the banking business is tackled at a slower, more collected pace. While the necessity of the digitalization of the Swiss retail banking sector is unreservedly accepted, the future evolution of the private banking segment will be more complex, due to the specific demands of its clients. This transition will not be exclusively based on the digitalization of business processes. In light of these and other specificities of the Swiss banking sector, the study results can be summarized around three essential findings:

In the process of digitalization,
 Swiss banks follow an intelligent
 "fast follower" approach.
 However, it is imperative that they avoid the "Kodak effect"

As mentioned above, Swiss banks in general are strategically well-positioned to successfully master the upcoming digitalization of their business. The present study clearly shows that. The greatest threat lies in the infamous "Kodak effect." Ultimately, companies need to pick the right time to launch a digital offering whose scope and outcome are defined by their own customers' needs. Like the former American leader in conventional photography, Swiss banks have also recognized early on the disruptive potential of the digitalization of their business activities. Until now, however, due to a lack of strategic necessity and to relatively weak competition, Swiss banks have failed to uncompromisingly implement and launch their digital concepts. In the context of the Swiss banking landscape, this wait-and-see approach could prove to be a smart move. The "fast follower" approach, which incidentally is also quite common in the IT industry, offers numerous advantages, such as learning from others' mistakes. In return, the market expects that the competitive advantage linked to this learning curve will mean that Swiss banks will be successful upon their first try. Hopefully, the Swiss banking sector, unlike Kodak, will not miss the right moment to implement its existing strategies and concepts and to catch up with its leading international competitors as well as with new contenders. The study findings show that, compared internationally, Swiss banking products are not systematically available for online purchase and that the end-to-end process digitalization has been delayed. Those are risk factors that will need to be addressed in the medium term.

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2. Banks need to actively embark their employees on the journey towards digitalization, otherwise they run the risk of failing. As in the past, in many places digital leaders are still a rare breed

The digitalization of the financial sector begins in people's minds, as does the corresponding fundamental change of the whole industry. Only when banks succeed in preparing and motivating their employees can digitalization be successful for all involved. The anxieties of many bank employees concerning the digital future remain a huge obstacle. Concerns about job security are tangible and stand in the way of a constructive debate on the topic. The ball is not in the court of the employees as much as in the court of management. A digital business model certainly requires employees to gain new skills and competencies. Job requirements will of course change. However, it would be wrong to assume that the human factor will become less important in a digital world. On the contrary, the capacity to innovate and be creative cannot be outsourced to machines. The same is true of individual, customized client advice in the segment of private banking. It is apparent, however, that many banks suffer from a lack of digital leadership. Banks need prominent, assertive leaders, who will be entrusted with the task of implementing digitalization and will be widely supported in the day-to-day business. Individual figureheads are still considered as "eccentrics", although it is precisely these creative minds who have the power to move things ahead and to spark enthusiasm within their company's own ranks.

3. Digital realignment requires that the banks radically rethink their organizational structures. A strict separation of IT and business expertise is not conducive to achieving objectives

Traditionally, banks are hierarchical structures and follow well-established rules that leave employees very little room for maneuver within the narrow scope of their areas of responsibility. Consequently, interdepartmental projects often fail due to disputes over respective areas of responsibility or particular interests. This issue could be tackled by implementing an agile organizational model, made of small flexible teams who could, independently of conventional structures, think and act cross-functionally. IT and business experts, however, still often work separately on the topic of digitalization, although a dynamic network encompassing and combining the expertise of all areas involved could deploy much more creative power. While many bank managers express their enthusiasm at the innovative capacity that is the hallmark of tech companies, for the time being no Swiss bank has made the decision to move away from the traditional top-down organizational model to a more modern network organization.

The present study provides in-depth insights on various aspects of the digital transformation, the goal being to determine and analyze the level of digital maturity of Swiss banks compared with their European competitors. Taking into account the specificities of the Swiss banking market is necessary in order to provide a meaningful assessment of the current situation. This analysis shows that the Swiss financial sector as a whole is ready to advance the digitalization of its business activities. Swiss banks are proceeding cautiously, without letting themselves be influenced by activist ideas. However, they would be well-advised to consider digitalization not as a necessary evil, but rather as a unique opportunity to be seized upon, and as a way to question their own thought models.

Participants & methodology

In order to determine the digital maturity level of Swiss and European banking institutions, the experts at zeb have developed the Digital Performance Indicator (DPI) model, which they then refined in collaboration with the Swiss Finance Institute in the context of the present Swiss study¹. This indicator allows us to estimate and compare the status quo and progress of financial institutions with regard to digital transformation.

The DPI is based on four core dimensions, in which specific success factors are measured and weighed by means of a scoring model. The aggregated results in the core dimensions are then consolidated into an overall DPI. The dimension-specific maturity level shows how banks have implemented the various digitalization aspects

- in their Strategy,
- in their Business Model,
- in Processes, Data & IT Services, and
- in Management & Organization

As a consolidated figure, the DPI reflects the digital maturity level of each banking institution. Based on their DPI, we have clustered banks into five groups:

Digital resisters (1)

No discernible digital transformation

Digital explorers (2)

First steps initiated towards digitalization

Digital transformers (3)

Digital transformation fully underway

Digital players (4)

Digital transformation largely completed

Digital leaders (5)

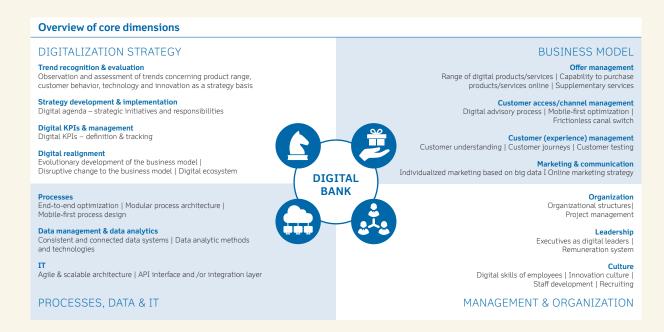
Digital transformation exceeds market standards

The present report is based partly on the results of a broad-based online DPI survey conducted by zeb among 185 decision-makers from Swiss (46 participants) as well as European (139 participants) banking institutions who provided information on the level of digital transformation in their respective institutions. As part of a self-assessment, participants were asked to fill out a multi-level questionnaire which scrutinized the various aspects of digitalization.

Additionally, the study incorporates the detailed analysis compiled from 19 structured interviews conducted by the authors of the study with top-level executives and specialists at select Swiss financial institutions. We take this opportunity to warmly thank interview participants for their time and their willingness to share information. These in-depth discussions have provided a real added value to the study and to the analysis of the Swiss marketplace. More specifically, the exchanges with specialists have provided a deeper understanding of what is theoretically possible in the field of digitalization, while the interviews with company executives have allowed us to gain knowledge regarding the current feasibility of digitalization projects. At this point, it is worth mentioning that interview participants encompass not only large Swiss banks (including Credit Suisse, Postfinance, Raiffeisen and UBS), but also cantonal and retail banks, as well as private banks, from all three language regions in Switzerland. The study thus comprehensively reflects the structural and geographical diversity of the Swiss banking landscape.

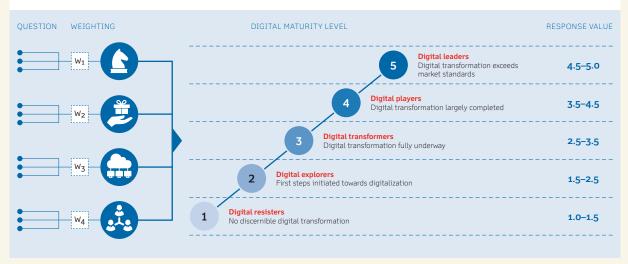
 $^{^{\}rm 1}$ It is the third time that zeb uses the DPI in the context of the Digital Pulse Check studies in order to determine the status of bank digitalization in Europe



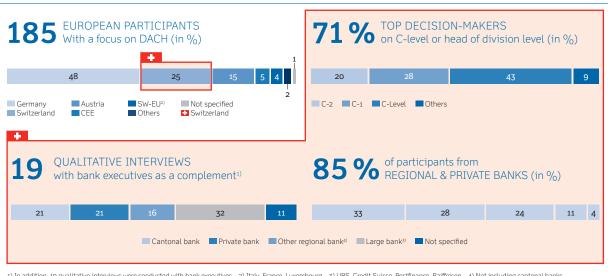


DPI calculation and maturity levels

ASSESSMENT OF DIGITAL PERFORMANCE INDICATOR (DPI) TO DETERMINE THE DIGITAL MATURITY LEVEL



Overview of bank survey's participant structure



1) In addition, 19 qualitative interviews were conducted with bank executives 2) Italy, France, Luxembourg 3) UBS, Credit Suisse, Postfinance, Raiffeisen 4) Not including cantonal banks





Initial situation

External players push digitalization forward with smart ideas and build up a healthy pressure

"In ten years, large technology firms such as Google, Apple, or Alibaba will be among the winners in digital banking"

Interview quote

The innovative strength of fintechs currently has its main impact on retail banks' traditional business areas, for example in the field of digital payments. It creates completely new product types and categories, such as crowdfunding or peer-to-peer lending. At the same time, resourceful companies establish online business models that, contrary to the traditional bank client business, entirely forego any physical presence. Bank branches are replaced by an app.

"Digital third-party providers can only become disruptive if banks don't do their homework"

Interview quote

Cash and credit cards are replaced by mobile payment methods such as Google or Apple Pay. Your smart phone becomes a bank. An indicator of the customers' growing affinity with digital offerings is the fact that, according to the experts from zeb, in 2018 more than half of European consumers – around 440 million people – are already using fintechs' digital payment services. With new providers of banking or banking-related services entering the market, the pressure to transform on established financial institutions considerably intensifies.

"We need banks to have a digital culture"

Interview quote

Interview participants expressed their wish for "a level-playing field", i.e. equal competition conditions, since in some instances new providers operate under simpler regulatory conditions (for example with a European e-money license). The world of private banks has been slightly less affected by digitalization, however it would be well-advised to set the right course early on and to keep an eye on the needs of today's Digital Natives, who in time will become private banking's future clients.

"In retail banking and in the field of payments, fintechs represent a real threat"

Interview quote

The European as well as the Swiss banking sectors are not as far ahead as their Asian competitors on the digitalization front. In Asia, technology firms such as Alibaba offer not only payment transaction solutions, but also consumer loans and securities transactions.

However, it would be wrong to conclude that there is an unhealthy competitive environment between disruptors and established financial institutions. It would be more accurate to say that unconventional fintech companies are currently moving the financial industry forward by injecting good ideas and are building a constructive competitive pressure. This pressure is absorbed by banks, who also incorporate the innovative technologies to develop new value-adding digital business models, which in the ideal case could lead to a win-win situation for all stakeholders.

Focus: structural changes

Fiction or reality? Besides online shopping, a large technology corporation offers its customers the possibility to open a salary account with its own payment app. Should said salary account show a positive balance at the end of the month, that amount could be transferred in an easy straightforward way to an online money market fund managed by the technology company. If a private or a business customer wishes to obtain a short-term loan, a centralized credit-scoring system creates, via a fully automated process, a comprehensive analysis compiling all purchases in general or all the purchases made in online shops and instantly calculates an individual credit limit. The above-described offer is hard to top in terms of customer- and user-friendliness, which is why a significant portion of the population does not use the comparable financial services offered by traditional banks and consistently relies on the services of the technology company. Is this a science fiction scenario? Think again. This description actually fairly accurately reflects the current situation in China. The Alibaba group offers the AliPay app, administers an online platform with several money market funds (Yu'e Bao), gives out short-term loans to its customers (Hua Bei) and offers electronic small business loans (Jie Bei), with all these services based on Sesame Credit, the credit-scoring system of AliPay. Any observer considering the scope of this trend will understand that employees working in these types of financial institutions will need fundamentally different skills than those working in traditional banks.

Among the participants interviewed as part of the present study, none of our interlocutors believed that the Swiss banking sector would transform itself as radically as described in the above-cited China example. Neither do the study authors. One would assume a more cautious development to occur in Switzerland, taking into account the comprehensive data protection rules, the Swiss banking regulation, the wide variety of the established banking market (which translates into high barriers to market entry by new competitors), the higher per-capita gross domestic product of Switzerland, as well as the associated need for more complex banking products.

Nevertheless, among the people surveyed, all participants agree that the banking business has changed and will continue to change, which will create tremendous challenges. These challenges must be tackled, or, as one of the interview participants very aptly put it: "Not doing anything is not an option". The example of Kodak (see box) is a cautionary tale of how the former global market leader for conventional photography reacted to structural changes in its business area. The company recognized the technological potential of digitalization early on, and was even among the first to produce a digital camera. However, fears related to the cannibalization of its lucrative core business, internal resistance due to the inadequately trained workforce, who were unqualified to implement a change of strategy, as well as fundamentally wrong assessments about the needs of its customers all ultimately led to the demise of the former industry leader.

In order to capture the scope of the ongoing structural changes, we apply to the banking sector the four key organizational management principles¹ used to identify and implement Industry 4.0 scenarios. The following list illustrates how these principles may apply to the financial industry, based on a few examples.

1. Interconnectedness:

Among other things, Internet technologies facilitate the integration of securities and client relations into digital tokens ("tokenization").

2. Information transparency:

Electronic identities allow the outsourcing of KYC (Know Your Customer) and AML (Anti Money Laundering) procedures to joint back office platforms.

3. Technical assistance:

Digital assistance systems provide support to client advisors, and allow significant improvements in performance and ability (enabling), for example in wealth management activities through the combination of discretionary portfolio management and artificial intelligence.

 $^{^1}$ M. Hermann, T. Pentek, B. Otto: Design Principles for Industry 4.0 Scenarios. In: 2016 49th Hawaii International Conference on System Sciences (HICSS). pp. 3928-3937





A Kodak moment

- 1975 Invention of the first digital camera at Kodak. Massive R&D investments.
- 1981 Market research shows that digital photography has the potential to completely replace film photography. However, at least ten years will go by before the margins of Kodak's film photography core business are threatened, due to the following factors:
 - The costs of digital cameras will remain high for a while, there are still high barriers to entry
 - The quality of digital pictures is not nearly as good as that of analog pictures
 - The connection of the needed digital devices via interfaces remains complicated

Moreover, company management came to the conclusion that a change of strategy towards digital photography would create massive problems:

- Digital technology is not correlated with the technology of photographic film production. In addition, massive barriers to entry protect margins in the traditional core business, which renders a strategic reorientation towards digitalization financially less attractive
- Employees producing photographic film do not have the right skills to work in the digital field, which will lead to resistance
- 1996 Introduction of the Advantix Preview film and camera system.

 This dual system allowed users to review on an LCD screen the image they had shot, however the digital images themselves were not saved onto the camera and only allowed some quality control before the expensive production of prints.

Kodak remained convinced that customers would continue in the future to prefer the higher quality of analog prints. The company gave priority to its traditional business model over its digital strategy.

Sources: Forbes Online, Jan 18, 2012, How Kodak Failed; Harvard Business Review, July 15, 2016, Kodak's Downfall Wasn't About Technology; MIT Sloan Management Review, May 20, 2016, The Real Lessons From Kodak's Decline

4. Decentralized decisions:

Trading, investments and loan extensions are increasingly achieved through artificial intelligence, machine learning or big-data systems, which are able to make independent decisions in a timely manner.

The interview and study participants proved very openminded with regard to all four principles. Remarkably, no one mentioned blockchain projects. The idea of the creation of a joint electronic identity or of a centralized client onboarding process was positively received. Even the possibility of a central "loan processing factory" was mentioned.

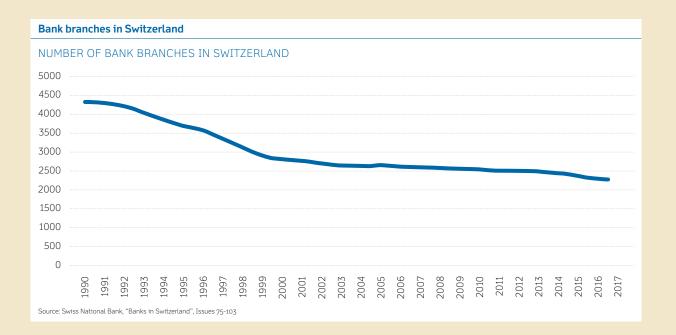
Based on all four principles, it becomes clear that the composition of the workforce will change, as well as the professional skills required of bank employees. Interview participants have drawn their own conclusions and integrated this evolution into their staff planning. Many back office positions will be eliminated and fully automated, for example the manual entry of account cancellation notices or securities orders. It is important in this regard to be honest with employees. Other tasks in the back- or front office might be simplified thanks to digitalization, but internal resistance is often tremendous, either because employees are not digitally conscious and do not understand the purpose of the new practices, or because they fear that they are "training the robots" who will ultimately replace them.

Interview participants identify two main challenges related to the hiring of workers with the necessary skills. For one thing, large technology corporations are much more attractive employers in the eyes of many job applicants. Moreover, the new employees should also possess knowledge of the banking sector. Some financial institutions try to solve the first issue by putting their digitalization experts in separate buildings, for example in a "digital factory", and trying to create a constructive environment similar to the culture of technology firms, as opposed to the more traditional structure found in banking institutions, which may stifle innovation. Regarding the second issue, the dissemination of up-to-date banking knowledge is offered through the Swiss Finance Institute and its affiliated universities, through university programs and continuing education, in close cooperation with Swiss banks. The goal

is to combine concrete banking knowledge with analytical and technical skills, and to apply those new insights in professional practice.

Study participants also have a clear vision of how the professional profile of retail and private bankers could evolve. In retail banking, most of our interlocutors assume that the branch network will become even thinner, and that an increasing number of payment transactions and account solutions will be fully automated and conducted online. Customers only go into bank branches at particular stages in their lives, for example when purchasing a house or seeking advice on estate planning. Likewise, it is possible to imagine that traditional bank employees will be replaced by mobile highly specialized advisors, who could meet their clients for consultations at the latter's home or communicate with them via modern channels such as videoconferencing. Regarding the disappearance of the banking branch network, it is worth noticing that the idea is far from a new one. As early as the 1990s, there was talk of the "obsolescence" of bank branches. The opposite chart, based on publications of the Swiss National Bank, shows the evolution since 1990 of the number of bank branch offices in Switzerland.

As shown on the chart, at the end of the 1990s, the network of bank branches decreased from 4,500 to 3,000 branches. Since the start of the new millennium, we observe a continuing decline of the number of branches, however this decrease has, perhaps surprisingly, not been as sharp as during the previous decade. Nevertheless, the number of bank employees has significantly dropped. The chart can partly be explained by the statement made by one of our interview participants. The branch network will continue to shrink, however for the time being, it is "incredibly costly to be the first bank to close a branch in a region. This decision is penalized by disproportionately high client attrition." Bank customers still favor having a contact person on site, and a significant number of mainly older and wealthy clients refuse to convert to online banking. Financial institutions opt for several strategies in order to convince these customer groups to try out their digital services. They underline the fact that online banking transactions are secure, that clients are protected against improper use, and that banks offer them financial protection in the event of a loss for which they are not responsible. All interview partners agreed, however, that the traditional model of the bank branch had no long-term future.



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By comparison, the future of private bankers seems more secure. Wealthy private clients who value their personal time seek out the customized advice of and personal contact² with their advisors, especially in times of crisis on financial markets. Fully digitalized solutions are difficult to imagine in the segment of HNWI (High Net Worth Individuals). Interview participants nevertheless believe that digitalization provides financial advisors with new tools that will allow them to better serve a larger number of clients in the future. The challenge will be to convince traditional relationship managers of the usefulness of these tools and to train them on their use.

In summary, we observe that all interview participants hope that digitalization will allow a sharp rise in productivity. New jobs requiring new skills will be created, while many traditional jobs will become obsolete.

 $^{^{\}rm 2}$ Source: 2017 zeb survey of over 100 private banking clients in Germany, Switzerland and Austria

Overview

Digital performance of Swiss banks compared to their European competitors

"We think about digitalization from the standpoint of our customers"

Interview quote

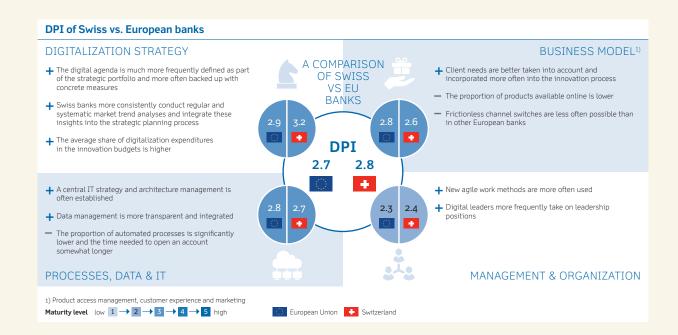
In comparison with their European competitors, Swiss financial institutions are clearly ahead across all bank types in terms of strategy. The majority of Swiss banks surveyed follow a clearly defined digital agenda, backed by concrete measures. Compared to the rest of Europe, cross-industry market trends are more regularly and more systematically analyzed by Swiss banks, which suggests that they have recognized the emerging trends and accepted the imperative for digital transformation.

"We are already well-positioned in terms of end-to-end digitalization"

Interview quote

Contrary to the quote above, with regard to business models, it appears that most Swiss banks offer less than half of their product portfolio online or more specifically, do not allow customers to conclude contracts online. On that front, European banks are significantly more agile, since they need to assert themselves in a slightly less protected

market environment and are thus under higher competitive pressure compared to their Swiss counterparts. The same applies in terms of frictionless channel switches, i.e. the ability to access online-compatible offers through various mobile devices such as smart phones, tablets or laptops. At the process level, according to the findings of the interviews we have conducted, Swiss banks have only automated a small percentage of their processes, which interestingly stands in contrast with the largely successful implementation of a central IT strategy and architecture. Swiss and European financial institutions encounter difficulties in the field of management and organization. There are few digital pioneers in senior management ranks. Up-to-date, agile working methods are still at an early stage. One can see that the digital transformation of business models has to start in people's minds.





The Swiss banking world is characterized by high heterogeneity

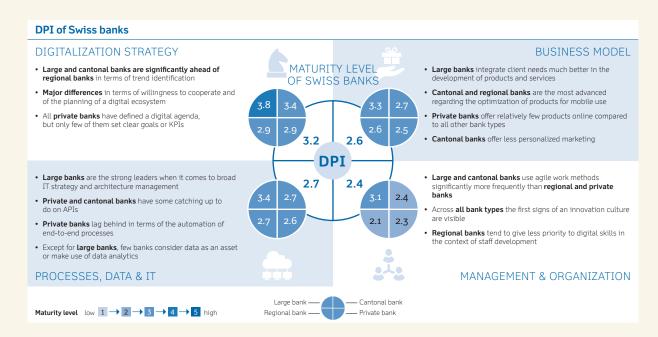
As could be expected, within the different types of Swiss banks, larger banks – as well as cantonal banks – have an advantage over regional banks at the strategic level, especially in terms of trend identification. There are also significant differences in terms of willingness to cooperate or in the planning of digital ecosystems.

"We don't follow any overarching digital strategy, we focus instead on channel strategies"

Interview quote

As far as the "Processes, Data and IT Services" dimension is concerned, large banks lead the way in the fields of IT strategy and architecture management, while the cantonal and private banks have some catching up to do, especially relating to programming interfaces for external solutions. Compared with all other bank types, private banks lag behind in terms of end-to-end process automation. This could however be primarily due to the fact that they do not operate in a mass market, which would have to be automated for profitability reasons. Compared with other customer categories, the current clientele of private banks

places higher value on personal and customized client advice, and less value on a fully digital service offer. In the "Business model" dimension, cantonal and regional banks are extremely customer-friendly. They have perfectly adapted their offering to mobile usage, while large banks consistently integrate their clients' needs in the development of new products and services. As far as the "Organization" dimension is concerned, large banks rely significantly more frequently on agile working methods. It is also interesting to note that cantonal and regional banks tend to give less priority to digital competencies in the context of staff development.



Digitalization strategy

Swiss banks are at the forefront in terms of digitalization strategy

"We want to be the most digital bank in Switzerland"

In terms of pure strategy, many Swiss banks are excellently positioned compared to their European competitors. They pay closer attention to trends and are significantly further along than their European competitors in the strategic design of their digital agenda. Although cooperation with fintechs is certainly seen as a success factor, around a fifth of Swiss banks (18 percent) categorically reject collaborating with them. In contrast, 32 percent of Swiss banks systematically examine possible collaborations with, or acquisitions of, disruptors. It appears clear that the innovative capacity of banks is strongly correlated with their willingness to cooperate.

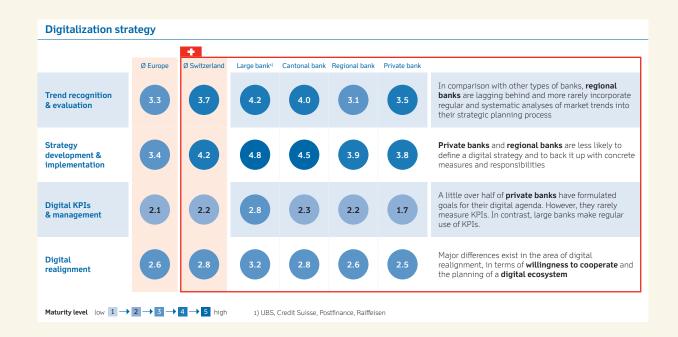
"It is a matter of digitalizing the business model, not the processes"

Interview quote

Based on the interviews conducted, it is clear that many Swiss banks actively seek out the ability to exchange knowledge with innovative fintech companies, a strategy that has already proven very effective in the IT sector.

Measuring success and creating incentives

Strategic clarity and concreteness are important success factors. Financial institutions that are the furthest along in their digital agenda also get high scores in the implementation of the corresponding projects. 95 percent of all Swiss banks have formulated a digital strategy, however only half of them have translated it into concrete measures. Swiss banks, and especially large financial institutions, are well-equipped for the digital future from a strategic standpoint. But the competitive environment in which their European competitors operate puts higher pressure on accelerating the speed of change implementation.







Pragmatism rather than radicalism

Most banks (74 percent of them) choose an evolutionary approach when digitalizing their business models. They mostly want to digitalize their existing business model, by for example making their products and services available online or via smartphones. Few of them truly reinvent themselves through digital transformation: only a quarter of Swiss banks follow radical disruptive approaches. This is also reflected in investment budgets. A mere 7 percent of Swiss financial institutions spend more than 50 percent of their investment budget on digitalization. Swiss banks are still slightly ahead of their European competitors in that regard. But they tend to follow a rather moderate – or even pragmatic – approach to digitalization, and to deliberately avoid radically new thought processes.

Bringing digital transformation to life

Having a strategy is no guarantee for successful implementation, however it is a necessary factor of success. In this regard, Swiss banks are well-positioned. While Swiss banks are at an advanced stage concerning the identification of trends and the formulation of a digital agenda (this is however slightly less true of the regional banks), our various interviews have shown that only the large banks work with concrete objectives and key performance indicators (KPIs).

"We don't consider digitalization as a strategy, but as a useful tool"

Interview quote

Digitalization strategy

TREND RECOGNITION & EVALUATION Are trends concerning product range, customer behavior, technology a

Are trends concerning product range, customer behavior, technology and innovation systematically observed and assessed in order to determine the bank's strategy and to continuously adapt its business model?

5
4
3
2
3.7
4.2
4.0
3.1
3.5

1
9 Europe
9 Switzerland
Large bank
Cantonal bank
Regional bank
Private bank

- 36% of regional banks conduct analyses of market trends in a less systematized and regular way
- 40% of large banks conduct regular and systematic analyses of market trends. 60% among those even conduct cross-industry trend evaluations
- This proportion falls to 9% at regional banks and 30% at private banks

COLLABORATIONS, HOLDINGS, AND ACQUISITIONS

In the context of digital initiatives, are standard collaborations, holdings or acquisitions (for example of fintechs) examined and implemented?

5
4
3
2
2.4
Ø Europe
Ø Switzerland
Large bank
Cantonal bank
Regional bank
Private bank

- 60% of large banks have defined a standard process in order to explore possible collaborations
- At cantonal and regional banks, this proportion drops to only 40% and 27%
- In 62% of private banks, this examination is only performed selectively

Maturity level low $1 \rightarrow 2 \rightarrow 3 \rightarrow 4 \rightarrow 5$ high

Business model

The paradox: Swiss clients are actively involved in the innovation process, but few products are available for online purchase

"We systematically involve our clients in pilot projects, to avoid zombie projects"

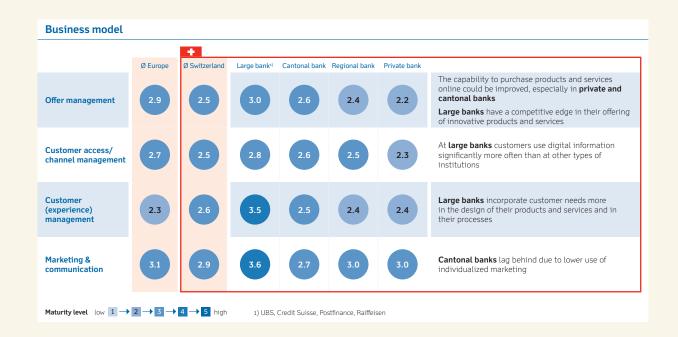
Interview quot

One would assume that the banks that involve their customers in the innovation process would make more products available for online purchase. Compared to their European counterparts, Swiss banks are however lagging behind in this regard. Digital strategies have not been reflected in the portfolio of services offered to customers. This can be explained by the high technical hurdles which need to be overcome, as well as by the relatively lower competitive environment in which Swiss banks operate.

"Customers think in terms of themes, not products"

Online is key, but only on paper

A key characteristic of digitalization for customers is the ability to access and buy products and services online, at any time, wherever they happen to be. However, 59 percent of Swiss banks offer less than half of their products and services digitally, which could be partly explained by the significance of private banking in the Swiss banking landscape. Only 11 percent of Swiss banks are in a position to digitally commercialize more than 75 percent of their products and services. In particular, the online sale of complex products, such as residential mortgages, is only possible in 9 percent of the financial institutions surveyed. Swiss banks also do not impress when it comes to particularly innovative services. Not a single market player offers the initiation of payments through voice-supported digital assistants, so-called "voice and conversational payments". At this point, one could also in all fairness wonder whether these services really create any added value and, much more importantly, answer any customer need.







Banks are continuously optimizing their mobile banking. At least 87 percent of them optimize their product and service offering for mobile use. There is however room for improvement, as evidenced by the fact that only a third of banks have fully optimized their mobile banking offering.

"Digitalization starts with the user experience"

The same holds true in terms of frictionless switching across all channels of the product and service portfolio. 50 percent of Swiss banks are not doing any sort of preliminary work towards a cross-platform service offering. 48 percent of them allow their customers smooth channel switching for at least part of their product and service portfolio.

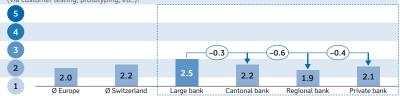
"Customers put trust in a brand, not in digital processes" Interview quote

Online marketing without strategy

Online and mobile banking products are on the rise, however systematic online marketing could be further developed. 72 percent of Swiss banks do not have a target-oriented online marketing strategy. 15 percent essentially limit their online presence to their own company website. External channels, including social media such as Facebook, are rarely used in marketing efforts. The cantonal banks are lagging behind compared to other bank types, as they rely less on personalized marketing.

Business model

INVOLVEMENT OF CUSTOMERS IN PRODUCT DEVELOPMENT In what proportion of currently offered products and services were customers involved in the development process (via customer testing, prototyping, etc.)?



- In 60% of large banks, customers were involved in the development process of less than 25% of the current product and service range
- In 10 to 15% of regional, cantonal and private banks, customers were not at all involved in the development process

OPTIMIZATION FOR MOBILE USE

Maturity level low $1 \rightarrow 2 \rightarrow 3 \rightarrow 4 \rightarrow 5$ high

Is the user interface optimized for mobile use (smartphone, tablet, etc.)?

5
4
3
2
3.3
3.2
3.2
3.5
3.5
2.8
1
Ø Europe Ø Switzerland Large bank Cantonal bank Regional bank Private bank

- Most banks have adapted part of their product and service portfolio for mobile use
- 53% of cantonal banks have adapted their entire product and service portfolio, as have 36% of regional banks
- A third of private banks have not optimized any part of their portfolio or are still in the process of doing so

Processes, data & IT

Swiss banks automate fewer processes, which means that purchasing financial services still takes too much time

"In the future, 90 percent of customer interactions will take place on digital channels"

Interview quote

In order to meet the rising expectations of a new digitally oriented generation of customers, banks must in the medium term, and in keeping with segment-specific client expectations, design their products and services to be online-compatible, and optimize user interfaces for mobile use. Both of these factors have a relatively large influence on the number of customers who use digital advisory services and make digital purchases. They are thus especially relevant for future income stemming from digital channels, provided that price competition occurs and client needs further increase.

"We have to automate our processes. Scalability is the key to future growth"

Interview quote

A necessary prerequisite is end-to-end automation of services and processes, especially in the retail banking segment and slightly less in the private banking field. Precisely in this area, Swiss banks still have a long way to

go. Only 4 percent of banks have automated the majority of their processes. 28 percent have not even started yet. This development gap is reflected in the process runtimes. Only 7 percent of the Swiss banks surveyed are in a position to open a new account in a manner of minutes.

For many banks, the "mobile first" principle is still mere strategic lip service

Despite continuing improvements, there are still numerous obstacles that hinder customers from using digital offerings efficiently. The "mobile first" principle, which defines mobile end devices as the starting point for the development of digital applications, is only implemented by half of Swiss banks via simple and intuitive products and self-services. The provision of application programming interfaces (APIs), which allow external programs to connect to the bank's own IT systems, is another area with significant room for improvement. Only 9 percent of Swiss banks have implemented those APIs to a significant extent. Several interview participants underlined that under the existing IT infrastructure, the digitalization of business processes or the involvement of fintechs could only be achieved at great expense.





"The mass market has to become digital"

Interview quote

The various divisions of a bank often use different systems, which makes the end-to-end automation of processes more complicated. According to several interview participants, the suppliers of core banking systems appear slow to react to implement specific requests, and make it more difficult for fintechs and third-party providers to connect to their system. The development of corresponding solutions requires major investments, which in times of eroding margins are not always considered as a priority area.

"Swiss banks have not realized the treasure trove of data they are sitting on"

Interview quote

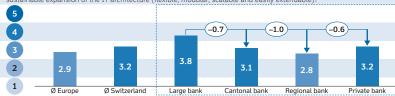
Customer data is not always considered an asset

Interestingly, only large banks systematically manage existing customer data, although its added value is obvious. 26 percent of the financial institutions surveyed do not regard their data as an asset and manage it purely based on regulatory requirements. Systematic analyses remain an exception, although the insights gleaned from them could be used to improve the banks' service portfolio. In 44 percent of Swiss banks, the data warehouse is set up in a way that linking data from different channels is only partly possible. 13 percent do not have any capacity for overarching, integrated data management. The focus is still on the manual use of internal customer data that is used if and when required. The use of algorithms for data analytics is only slowly gaining traction. The systematic use of Big Data continues to be rare. 50 percent of Swiss banks have not launched any real initiative towards the use of data analytics methods.

Processes, data & IT

BROAD IT STRATEGY & ARCHITECTURE MANAGEMENT

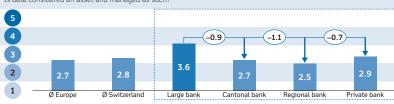
Is there a broad IT strategy and architecture management in place (defined roles and processes) that ensures a sustainable expansion of the IT architecture (flexible, modular, scalable and easily extendable)?



- Three quarters of all banks have established a company-wide IT architecture
- All large banks have also established such an architecture from a specialist and departmental perspective. Among those, 20% take into account the integration into the strategic process
- In cantonal, regional, and private banks, the integration into the strategic process only occurs in approx. 10% of banks surveyed

DATA AS AN ASSET

Is data considered an asset and managed as such?



Maturity level low $1 \rightarrow 2 \rightarrow 3 \rightarrow 4 \rightarrow 5$ high

- Approximately 40% of cantonal and regional banks only use their data based on regulatory requirements
- 75% of private banks use existing data as complementary analysis for achieving business targets
- 40% of large banks have started systematically identifying the use of data and actively managing "valuable" data

Management & organization

Agile and interdisciplinary teams are still the exception

"We have to embark employees on the journey of digitalization"

Interview quote

A bank that engages in digital transformation has to adapt its corporate culture accordingly. The resulting cultural change has to be seen as an ongoing process. In particular, large and cantonal banks have recognized the importance of agile work methods, including intervention in ongoing processes, swift action, and leveraging synergies.

"The trend is clearly towards agile organizations"

37 percent of Swiss banks, a majority of them regional and private banks, are holding on to the traditional organizational structure with a strict separation of business and IT expertise. 20 percent of them have launched pilot projects with new organizational structures. However, none of the Swiss banks surveyed have adopted a thoroughly modern network organization, in which employees can collaborate in interdisciplinary competence teams. The reluctance of Swiss banks towards agile work methods can also be witnessed in the implementation of more traditional

collaboration models. Only 15 percent of Swiss banks have introduced those. The vast majority (59 percent) have at best launched individual projects with an agile approach. Among all Swiss banks, only 11 percent opt for a mix of both traditional and agile work methods company-wide, although financial institutions are in a better position to master the digital transformation when they tear down the existing walls between business and IT. Only by having experts from both sides cooperate will banks be able to develop and implement innovations in a quick and efficient manner.







Encouraging and supporting digital skills

The focus on a digital future urgently requires the development of new concepts in the area of personnel and talent development.

"You can't teach an old dog new tricks"

Interview quote

Only 24 percent of Swiss banks take this aspect into account and have systematically oriented their staff development strategy towards digital and agile skills. In comparison with large banks, cantonal and regional banks focus even less on the development of digital talents. 37 percent do not take into account digitalization, agility or innovation in their remuneration system, neither at the employee nor at the executive level. Annual objectives do not include these factors yet either.

"Banks are running out of time"

Interview quote

Banks lack digital leaders

Less than a third of the Swiss banks surveyed state that the majority of executive positions within their company are staffed with digital talents, i.e. managers who have extensive digital know-how that they actively integrate into their leadership strategy, and who also promote the development of digital skills for their employees. According to the present study, digital leaders have a positive influence on the level of digital maturity of their company and have a strong imprint on its corporate culture. This explains why banks with a high proportion of digital leaders also lead the way in the digital transformation of their business model.

Management & organization

DIGITAL SKILLS

Does the HR development strategy promote digital skills and a rapid pace of change?

5
4
3
2
2.2
2.1
1
0 Europe

Ø Switzerland

Large bank

Cantonal bank

Regional bank

Private bank

- A third of cantonal banks and about 25% of regional and private banks have not adapted their staff development concept at all
- 74% of regional banks have only made preliminary adjustments
- In rare instances, the staff development concept was entirely overhauled and oriented towards the promotion of digital and agile skills

AGILE WORK METHODS

Has the bank aligned its project portfolio management and project management procedures with the requirements of digitalization?

5
4
3
2
4.4
Ø Europe
Ø Switzerland
Large bank
Cantonal bank
Regional bank
Private bank

- + 64% of regional banks and 38% of private banks are still in the pilot phase
- Cantonal banks are very heterogeneous; some use only traditional project methods while others use only agile methods
- 60% of large banks have established new procedures that they systematically apply to relevant projects

Maturity level low $1 \rightarrow 2 \rightarrow 3 \rightarrow 4 \rightarrow 5$ high

Focus: agile organizational structures

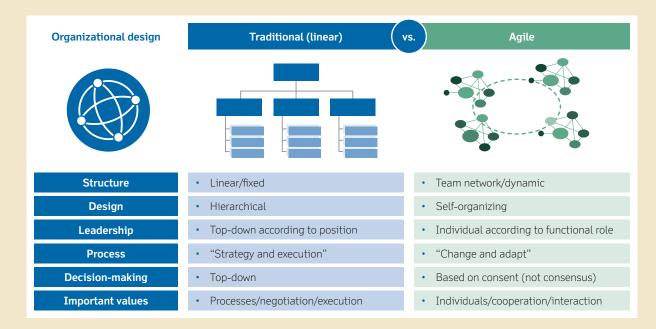
Extraordinary challenges require extraordinary measures. Currently, this motto is especially true in the financial sector. The complexity of a bank's organization has significantly increased through growth, internationalization, regulation, and now once again through digitalization. Against the backdrop of rising costs and new customer needs, banks are faced with particularly daunting challenges. The digitalization of the banking business could have a liberating effect in important areas if it succeeds in developing a high capacity for innovation that in turn will be translated into sustainable, value-adding solutions. In order to achieve this, however, banks have to become significantly more agile, not only by introducing agile project management or agile IT development in accordance with Scrum or SAFe frameworks, but also at the very heart of the company, via an agile organizational structure. The structure needs to move away from inflexible hierarchy and job titles towards largely interdisciplinary self-organized teams. The idea behind this is as simple as it is alluring: an agile organization can renew itself from within, promptly detect the rapidly changing needs of its customers and address those needs thanks to new technological possibilities. An agile organizational structure allows a company to ignite the latent innovation potential of its employees.

The best of both worlds

What exactly is an "agile organization" and, more importantly, how is this concept applied in real life? While traditional organizational charts are based on strict hierarchies as well as top-down management and decision processes, a dynamic network is based on self-organized teams with a higher degree of flexibility and free of restrictive hierarchical processes. Leadership is not based on one's hierarchical position, but on one's role within a team.

In such agile organizational structures, employees take on various tasks as part of different temporary teams. Top-down communicated planning targets ("strategy" and "execution") are complemented by the conscious awareness that those targets may deviate ("change" and "adapt"). All decisions are taken by mutual agreement within the team. Arguments raised by individuals gain in importance and cannot be overruled by colleagues who are higher up the hierarchy. In the implementation phase, this leads to a higher acceptance of decisions and to products and services that better reflect the expectations of customers.

A few banks have already recognized the potential of agile organizational structures for their ability to innovate and to adapt. As early as 2015, one of the largest and most



s:fi



successful banks in Europe – a Dutch institution – dissolved significant parts of its existing organizational structure and opted for an agile organization. It introduced 250 largely self-regulated interdisciplinary teams that get together when a customer-specific problem has to be tackled, only to be dissolved again upon project completion.

For a bank, it is of paramount importance to find a balance between, on the one hand, stability – as a foundation for a business model that is successful in the long term – and, on the other hand, agility – as a guarantor of innovation and sustainability. Hybrid organizational structures are the most promising solution to this conundrum. An agile organization thrives on employees identifying with their work and their employer. The willingness of individual employees to contribute to the company, as well as the emphasis put on cooperation among employees are of the utmost importance. The present study shows that corresponding collaboration and organizational models remain a remote prospect for most banks, not only in Switzerland. There is a lack of top-level executives who drive this evolution forward. As expressed clearly in the interviews we conducted, the challenges posed by the fast-moving banking landscape and by ever-shorter innovation cycles can only be met by moving away from traditional organizational structures.

Focus: ecosystems

On the topic of digitalization, the abstract concept of "ecosystems" is frequently mentioned. Several Swiss banks have already turned their attention to this issue and started corresponding initiatives. It is still unclear how customers will accept those ecosystems. They represent the logical consequence of a digitalized banking system and should prevail in the medium term as long as they provide a genuine added value for customers. This can only happen if the various players work together, i.e. if they agree on a common denominator regarding the content of this ecosystem. An ecosystem is thus first and foremost a virtual network that is supplied by various players. Contrary to the digital platforms currently used by banks, which are usually managed by only one provider, ecosystems derive their legitimacy based on a vast array of services provided by various market players, some of whom may be direct competitors. Ideally, in a well-balanced ecosystem, all customer needs regarding a specific topic would be addressed. For example, in the area of housing, a bank could not only sell or act as a broker for mortgages, but also offer real estate insurance policies in collaboration with one or several partners. In order to increase the added value for the customer, ecosystems could also include offers from so-called non-financial services. For the above-mentioned housing ecosystem, this could include a regional directory of skilled craftsmen recommended for renovation work, or listings of large furniture and home furnishing stores specifically targeted towards homeowners.

A successful ecosystem is based on three main factors:

1. A convincing combination of services

For the end customer, the value of the combination of services provided by the ecosystem has to be higher than that of the sum of individual services. By definition, a single provider can only create added value through the collaboration with third parties. Going it alone contradicts the basic concept of an ecosystem and is quite ineffective.

2. Win-win-win

Ecosystems have to present clear advantages to all participants, i.e. the banks, their partners and their customers. The diversity of services offered is the key to success. An unhealthy competitive spirit is destructive and incompatible with a well-functioning ecosystem.

3. A robust structure

A healthy ecosystem also has to be able to survive the potential withdrawal of suppliers. Redundancies should urgently be created so that several players are able to supply comparable services.

A major challenge for all market players who wish to establish an ecosystem is the fact that only providers who are open to smart partnerships and cooperation will be able to hold their own on the market. Customers will only consider an ecosystem relevant and use it if it covers all their major service needs. Surveys show that customers are already open to the possibility of using, in a bank's ecosystem, non-banking services offered by the bank's partners. Above all, customers consider it crucial that their bank increases the quality of its own traditional services and delivers the highest customer satisfaction possible. The ecosystems that are able to do so will assert themselves in the face of competition. At best, bank customers will limit themselves to a few ecosystems that offer services of superior quality and ease-of-use. Conversely, it would make no sense for each bank to create its own ecosystem. Each financial institution needs to determine with which partners it wishes to collaborate and what role it wishes to play in this collaboration. It may sometimes make sense to forego large investments and to choose instead to participate as a product supplier in an external ecosystem.





Banks ideally should look for partnerships in the areas where they are unable to build their own ecosystem

Swiss banks have recognized the importance and the potential of digital ecosystems. Almost all Swiss financial institutions are working on this theme and testing pilot projects in this area. It is still unclear which market players will establish their own ecosystems and which providers will participate in an external ecosystem. It is obvious however that in a broad ecosystem, interesting opportunities will emerge for banks with a strategic vision. Conversely, without strategic foundation, initiatives seem doomed to failure.

Conclusion

Studies are only as good as the knowledge that they produce. This of course also applies in the present case. The results of our study allow us to make the following statements:

- Swiss banks have opted for a "fast follower approach" and benefit from the fact that customer behavior in their domestic market has changed at a slower pace than in the rest of Europe. Furthermore, the Swiss market is characterized by a specific regulatory framework, a relatively small market size, as well as linguistic diversity. These factors make it difficult for foreign competitors to enter the Swiss market and thus provide some level of protection.
- Although Swiss banks are better positioned than their European competitors in terms of strategy, they have not yet reached their full potential in the other three core dimensions. This applies to the proportion of banking products offered online, as well as to the degree of digitalization of processes. The proportion of digital leaders and agile organizational structures is also quite modest. The lower competitive pressure opens a window of opportunity, which has so far been used by Swiss banks in a pragmatic way. The Swiss banking sector should however not forget the risks of the "Kodak effect."
- In comparison, large Swiss banks are ahead in all dimensions in terms of digital development. Their size provides them with the means and the capacity to adopt a broad perspective on digitalization and to move digital projects forward.
- Private and regional banks achieve a lower level of development than large banks. Their digitalization strategies are generally defined and at least partly backed up with concrete measures. However they lag behind in the other dimensions, which could be due to limited resources. Smaller banks need to focus and to take advantage of collaborations in order not to be left behind. In private banking, the specificity of the business model and the customer base means that the pressure for change is not as high. From the clients' perspective, the digitalization of banking services still plays a minor role.

The quality and frequency of advice provided by private bankers is much more important, as is their ability to integrate digital tools in the advisory process.

- Cantonal banks position themselves between the large banks and the private and regional banks. While they are also well-positioned in terms of strategy and business model, the technical implementation advances less decidedly. One reason might be that smaller cantonal banks are not as able to create internal synergies. Each bank acts basically autonomously. Currently there are no signs of systematic collaboration among cantonal banks.
- While large banks are able to handle the entire scope of digitalization on their own, the establishment of an appropriate range of digital services by private and regional banks will be made possible through well thought out interface and cooperation management.

In summary, it should be noted that the focus of the Swiss banking sector is not as much on digitalizing the banking business, as it is on developing a digital Swiss banking, which will bring the unique features of the Swiss banking system in line with the unavoidable digital evolution. The path towards this goal is fraught with risks. However, Swiss banks have built a solid foundation on which they can continue to develop their digital future, as long as they demonstrate the same level of ambition in the implementation of digitalization as they have shown in the strategy development phase.

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