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The Swiss Financial Services Industry in 2030

The Future of Retail Banking

Winning transformation strategies for a decade of major change

MAKING AN IMPACT THAT MATTERS since 1845

Contents

1. Introductory note

The retail banking sector has faced numerous disruptive threats in the past, but each time incumbents have adapted and grown stronger. Key events include the introduction of telephone banking in the late 1980s and online banking in the 1990s, the impact of the global financial crisis and the more recent FinTech explosion. Several new direct banks emerged in both the 1980s and 1990s, seeking to exploit their lack of a branch network as a competitive cost advantage. Although there were some successes, these new entrants were largely unable to make significant dents in the incumbents' market share.

Each of these new developments led some market commentators at the time to predict the imminent demise of retail banking as we know it. However, while telephone and online banking have led customers to migrate from the bank branch to new channels, the traditional banking business model has arguably so far remained broadly unchanged. This is despite the technological advances of recent decades. Retail banks still take deposits and lend money, earning their revenue predominantly from the net interest margin this generates. Banks have so far continued to retain ownership of the customer relationship, and, crucially, of the customer data. FinTechs and BigTechs are yet to make significant inroads into the global, European and Swiss retail banking space. So, would it be easy to dismiss all the current talk of disruption in the marketplace?

We believe it really is different this time

Why? Because of the significant impact that open banking, new regulation, and the unprecedented advances in tech, digital and the cloud will have on the sector. We expect the latest developments in these areas to lead the shift from a closed banking model to one in which data is openly shared between different members of the banking ecosystem with authorisation from the customer. So, the new ecosystem calls for a fundamental rethinking of the traditional banking business model, enabling banking to become more customer-centric. The exchange of customer data looks set to level the playing field between incumbents and new entrants, increasing competition. Even more importantly, we will observe a faster speed and time to market in the creation of new products and services that were previously impossible to imagine. The possibilities are innumerable.
In this paper, we highlight what the disruptive impact to the retail banking sector really means and lay out four key scenarios for the future that it may create. Our research shows that the threat to the traditional retail banking business model is real. But while the threats to incumbent retail banks are greater than ever, so too are the opportunities.

In what we consider a likely scenario, incumbent retail banks will be relegated to the background as pure infrastructure and commodity providers while other entities, such as FinTechs, BigTechs and price-comparison websites will come to own the customer relationship. As a result, these will eventually become the leading brands in retail banking – without ever taking customer deposits or lending on to their own balance sheets.

However, incumbent retail banks that embrace the new ecosystem to create new sources of revenue and new propositions may enjoy a significant advantage, given their access to existing customers, strong brands, and expertise. As a result, incumbents have a real opportunity to win the battle for the customer interface and, therefore, the customer relationship.

So, the future of Swiss retail banking is far from certain. However, we hope this paper will spark a debate within the community.

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2. Executive summary

With the dawn of unprecedented tech-driven disruption, Swiss retail banks face a growing imperative to understand customers' future demands and to adapt their business strategies and priorities accordingly. Hence, banks will be forced to roll out a fully re-designed business model that will enable them to leverage the emerging technologies as well as new talent, so that they have the capability to «*adjust, adapt and apply*».

Recent observations made across Swiss retail banks and key players active in other retail sectors indicate the following capabilities will be key dimensions for the successful retail banking business model of the future.

- The capability to deliver data-driven and tailor-made personalised services, products, and pricing to customers.
- The capability to react instantly and adjust to ever-changing client needs, technological advances, and industry shifts.
- The capability to drive banks' customer engagements by analysing financial data in real time, anticipating customers' latent needs and fully understanding their financial behaviours, and respond proactively to them.
- The capability to orchestrate and deliver value to customers through an integrated ecosystem of providers and partners as opposed to decoupled and siloed offerings.

We have developed four scenarios for the Swiss retail banking sector that we believe might materialise by 2030 when taking the most impactful driving forces into account. In addition, we have formulated seven «key non-regret moves» and transformation strategies that – regardless of whichever of the four scenarios ultimately plays out – will allow Swiss retail banks to create business value in 2030 and beyond.

3. European and Swiss retail banking today

By international comparison, Swiss retail banks operate in an attractive market that is characterised by a slow pace of change and long lead times for introducing technological innovation into the market. However, there is a host of challenges awaiting traditional players - of which unexpected geopolitical conflicts, energy supply shortages and inflation risks are the latest in a long list - and the promise of a new digital dawn is on the rise.

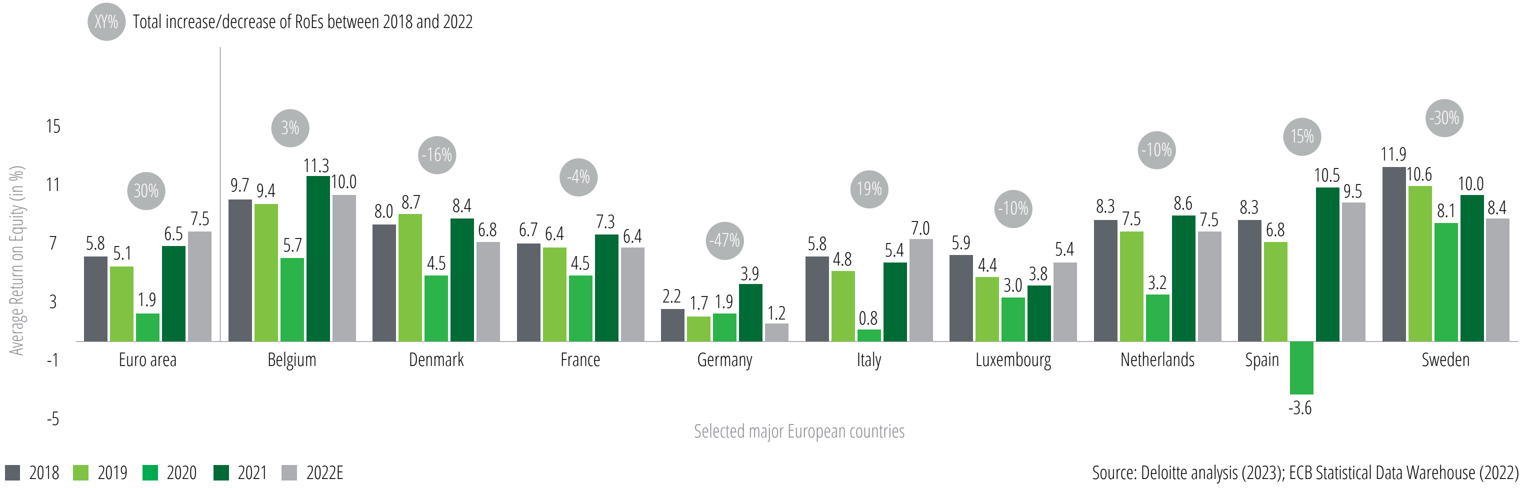
The European retail banking sector was impacted by challenging market conditions

In recent years, the European retail banking sector operated in challenging market conditions. A weak and fragile economic environment due to the pandemic, ever-increasing regulatory burden, digital disruption, and the historically low interest rates regime weighed heavily on the profitability of the sector. In line with the above, our analysis shows that between 2018 and 2020 profitability levels of banks in major European countries more than halved. Historically low margins due to negative base rates together with substantially increased business volumes exposed banks' operational inefficiencies, limited capabilities for scale and high operating cost levels. In parallel, competition from low-cost neo- and challenger banks heated up and put additional pressure on Europe's high street banks.

... and then the turnaround happened

The post-pandemic macroeconomic rebound that was largely triggered by unprecedented government intervention in 2020 and 2021, though, pushed back banks' average RoEs to levels observed before 2018 and even beyond. Hence, all good again for Europe's high-street banks? In our view, by no means: several global geopolitical conflicts on the rise have tamed the post-pandemic macroeconomic rebound, fuelling a multitude of looming economic factors. Pre-existing inflationary tensions on energy and commodity prices meanwhile have expanded to the broader real economy, exacerbating the concerns of a persistent stagflation trap.

Figure 1: Banks' average RoEs in selected major European countries[1]



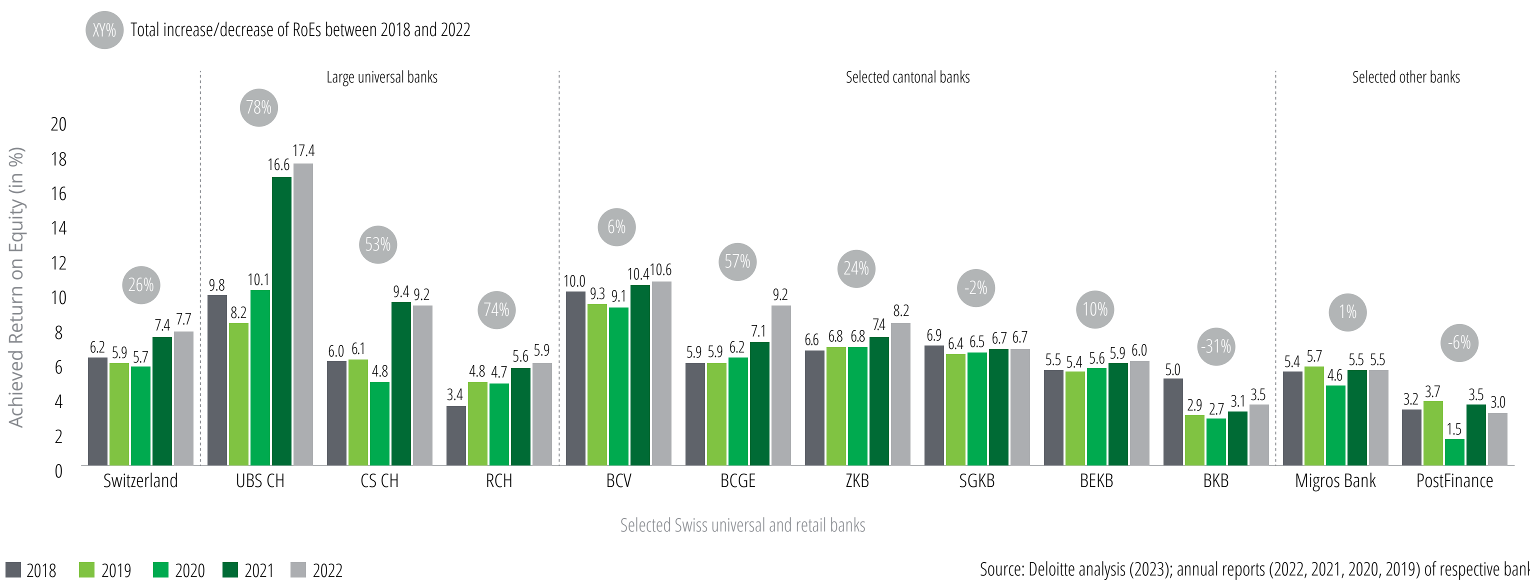
[1] RoEs for 2022 are expected year-end values based on the first three quarters of the year.

With the abrupt and material regime switch in global interest rate levels, rising financing costs and decreasing real returns put pressure on banks' P&L and balance sheets alike. In addition, banks are facing heightened risk profiles in their loan books due to deteriorating credit quality in the real economy. Hence, we believe, there will be further pressure on banks' top- and bottom line, eventually leading to hefty reductions in achieved RoEs in the near future again. Latest bank failures in the US, the forced merger of UBS and Credit Suisse here in Switzerland as well as subsequent global market turbulence in bank stocks have clearly pointed out that a global banking crisis might be on the rise again.

Swiss retail banks operate in a more robust, less volatile domestic market

Even though the Swiss banking sector has faced unprecedented events in recent weeks, our analysis shows that Swiss universal and retail banks have mastered crisis- and turmoil events of recent years much better than their peers across Europe. Profitability levels of Swiss banks as well fell between 2018 and 2020, although by far less than elsewhere in Europe. Thus, the 2021 and 2022 rebound in Switzerland was of much lower strength than for European peers. We believe that there are three key factors explaining the different, less volatile behaviour of the Swiss retail banking market.

Figure 2: Achieved RoEs of selected universal and retail banks in Switzerland[2]



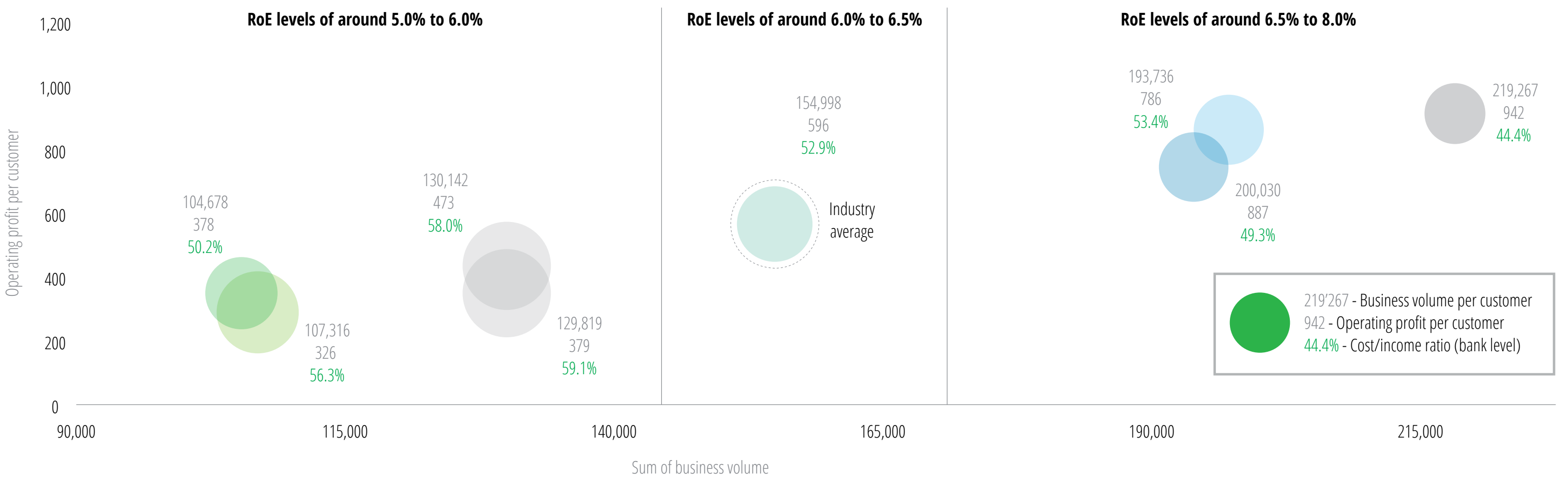
Source: Deloitte analysis (2023); annual reports (2022, 2021, 2020, 2019) of respective banks

[2] Achieved RoE here is defined as Net Profit divided by Total Equity. UBS CH - UBS Switzerland AG; CS CH - Credit Suisse (Schweiz) AG; RCH - Raiffeisen Group; BCV - Banque Cantonale Vaudoise; ZKB - Zürcher Kantonalbank; BCGE - Banque Cantonale de Genève; SGKB - St.Galler Kantonalbank; BEKB - Berner Kantonalbank; BKB – Basler Kantonalbank.

1. The base of comparatively wealthy customers allows Swiss retail banks to generate a high level of operating profit per customer.
In comparison to other European markets, top-line revenues of Swiss retail banks are driven by a relatively high business volume per customer resulting in a higher operating profit per customer.[3] The figure below shows the total business volume and operating profit at customer level as well as the cost-income ratio and RoE at bank level for selected Swiss retail banks.

Although there is considerable variation in the KPIs for Swiss retail banks, average sector numbers are materially above European averages. Swiss retail banks generate on average a total business volume of CHF 150,000 and an operating profit of CHF 550 at customer level. For European sectors, total business volumes at customer level range between EUR 30,000 and EUR 60,000, while operating profits at customer level range between just EUR 150 and EUR 350.

Figure 3: KPIs at customer level of Swiss retail banks
Ops profit, business volume per customer



Source: Deloitte analysis (2023); annual reports (2022, 2021) and company information of selected Swiss retail banks (2022); competitor analysis (2021)

[3] Business volume here is defined as the total of on-balance loans and deposits.

2. The boom in the Swiss mortgage market over the past two decades allowed for steady top-line growth for Swiss retail banks. The Swiss mortgage market was a dynamic and steadily growing business segment for Swiss retail banks as it grew in total by over 50% from the Global Financial Crisis until the end of 2021 - fuelled by the expansive monetary policies of central banks including the Swiss National Bank. Over the past two decades, the market more than doubled in size and provided a strong average annual growth of 4.5% as shown in the figure below.

Figure 4: Total lending volume in the Swiss mortgage market

Source: Deloitte analysis (2023); Swiss National Bank Statistics (2022)

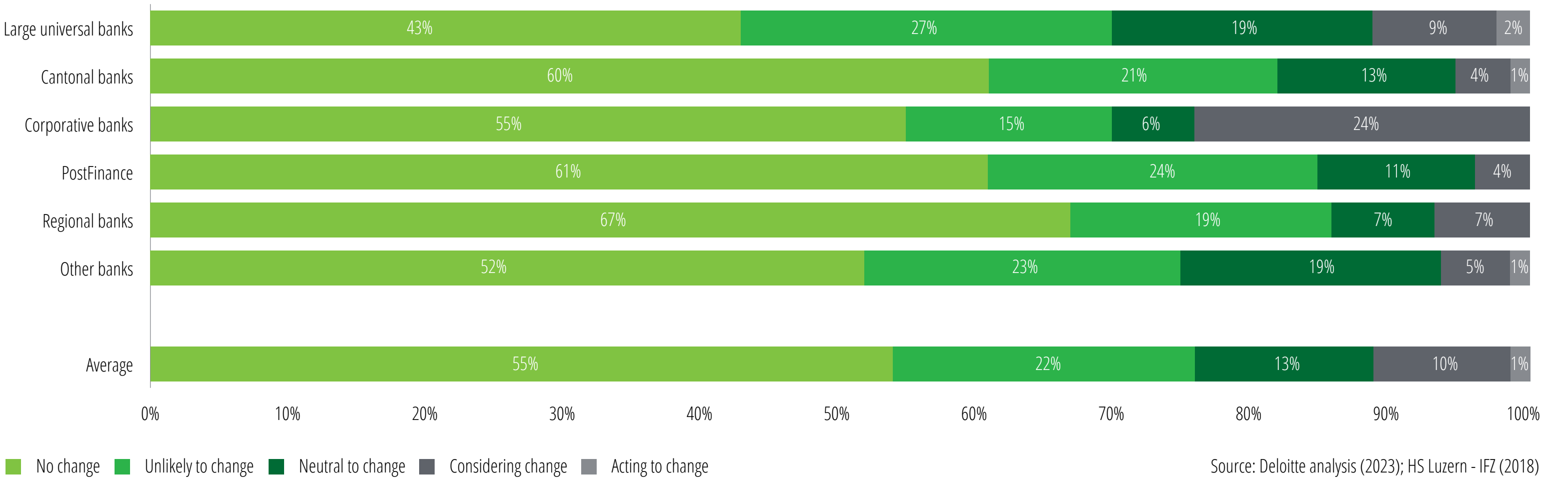
3. Swiss retail banks have so far benefited from strong brand loyalty of their customers, evidenced by remarkably low bank account switching.

Academic research shows that Swiss retail banking customers have developed a strong bond with their respective principal bank, and their is little or no willingness to change their principal banking relationship.

Before the pandemic, only 1% of Swiss retail banking customers were actively looking to change their principal bank while a further 10% were considering a move. Most customers (i.e. 76%), were not considering a change and/or deemed it highly unlikely. Moreover, market surveys and research show that roughly 90% of all Swiss mortgage customers were extending and re-financing their mortgage with their existing bank while not requesting any competitor quote.[4] Post-pandemic, however, the picture may be shifting materially. Current data shows that 50% of Swiss retail banking customers are using additional services and offerings from competitors of their principal bank and the willingness to engage with BigTechs and FinTechs is increasing. Hence, market incumbents can expect their loyalty scores to decrease in the foreseeable future.

In conclusion, Swiss retail banks continue to operate in a robust and historically well-protected domestic with limited competitive pressure from new market entrants such as neo- and challenger banks, BigTechs and FinTechs.

Figure 5: Willingness to change principal bank relationship



Source: Deloitte analysis (2023); HS Luzern - IFZ (2018)

[4] MoneyPark (2019).

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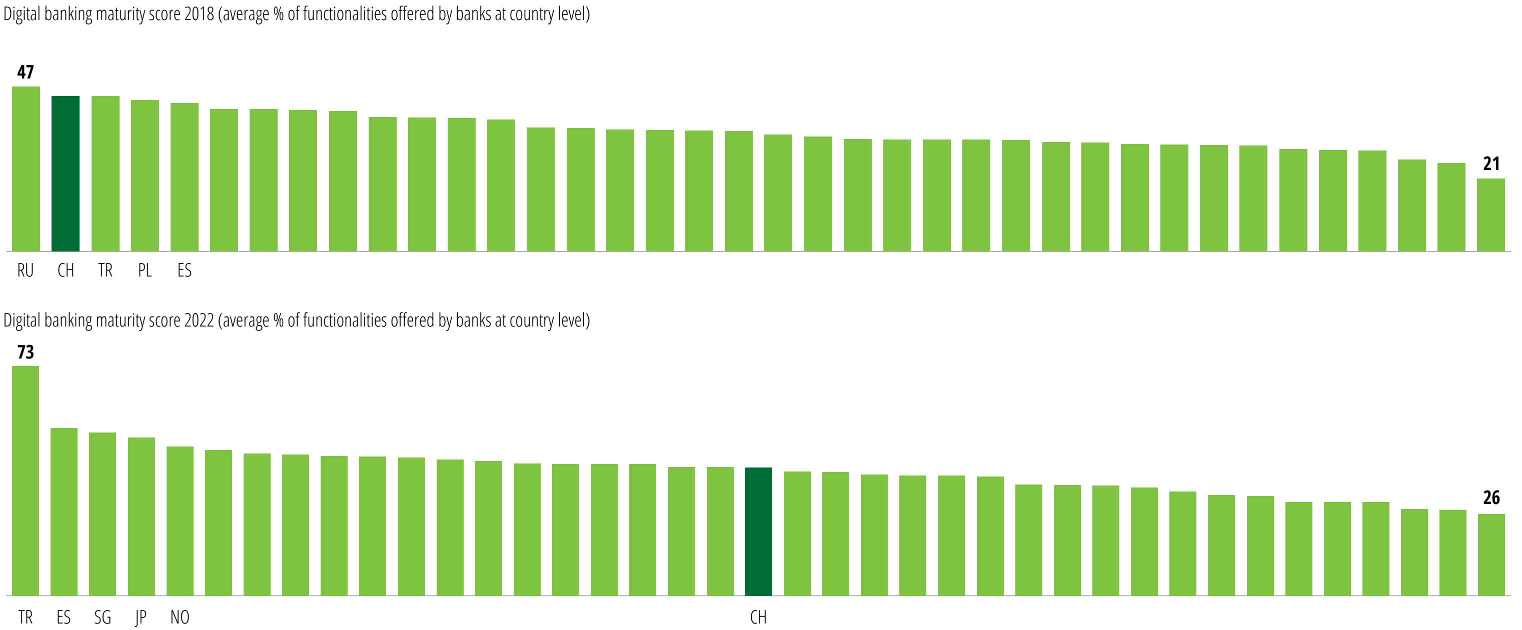
Swiss retail banks are losing ground while international competition increases

There has been a slow adoption of new technologies and digital banking among Swiss retail banks compared to other European countries. Branch closures so far have been less pronounced in Switzerland, despite an existing dense network. In addition, Swiss retail banks are falling behind with regard to their digital maturity and digital transformation efforts compared to their European peers. Deloitte frequently publishes global reports on digital banking maturity levels. The so-called derived Digital Banking Maturity (DBM) score considers a total of 1'108 functionalities and UX features across the retail banking customer lifecycle[5] and shows the share of total functionalities offered digitally.

Figure 6: Deloitte Digital Banking Maturity Study – Global country benchmarking



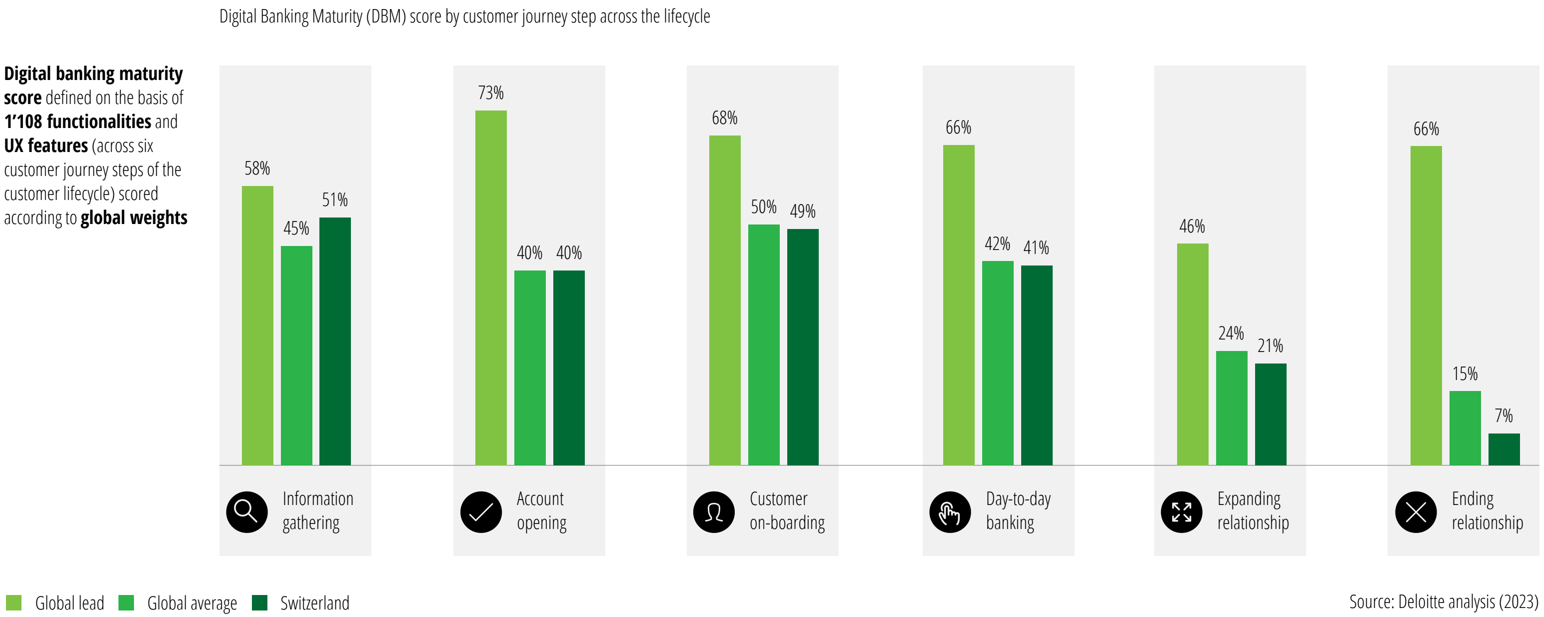
Note: Data is not fully comparable between years, due to changes in functionality catalogue, the selection of countries and the selection of banks in each country.

Source: Deloitte analysis (2023)

[5] Here, the customer lifecycle covers the six customer journey steps (i) information gathering, (ii) account opening, (iii) customer on-boarding, (iv) day-to-day banking, (v) expanding the banking relationship, and (vi) ending the banking relationship.

Although Swiss retail banks were leaders in digital banking pre-pandemic, the latest analysis shows that the pace of technological adoption has accelerated elsewhere in Europe and globally over the past two years, and Switzerland is now falling behind current digital champions across all six stages of the customer life cycle.

Figure 7: Deloitte Digital Banking Maturity Study – Switzerland benchmarking



Source: Deloitte analysis (2023)

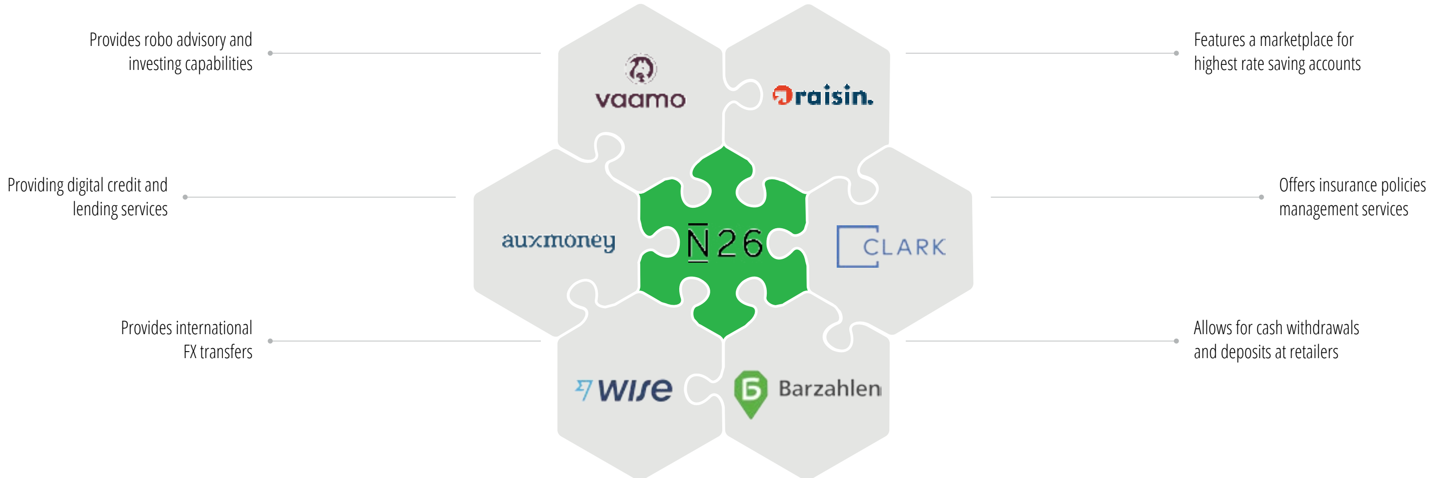
4. The future challenges for Swiss retail banks – from protection to disruption

In our view, Swiss retail banks will soon face a challenge to sustain their existing profitability and growth levels. This will be the result of the societal and economic transformation to «*net-zero*», a further maturing and saturation of the home market, a change in the demographics of the customer base and a growing demand among customers for «*state-of-the-art*» and «*end-to-end digital*» banking services. Competition will soon heat up - enabled by regulatory changes for open banking, as well as by technological advances in machine learning, artificial intelligence, the cloud and distributed ledger technology.

Attracted by robust domestic market conditions and above average revenue potential, new market entrants will challenge Swiss retail banking incumbents in several ways.

1. The rise of ecosystems will offer retail customers a comprehensive service offering, combining so far separate non-banking and banking services.
The rise of ecosystems is driven predominantly by agile FinTechs that are leveraging open banking standards and are acting as service aggregators with a comprehensive set of offerings. In this context, going forward we expect non-banks and retailers to integrate traditional banking services, banking infrastructure, as well as banking capabilities into their offerings.

Figure 8: The ecosystem model of N26[6]

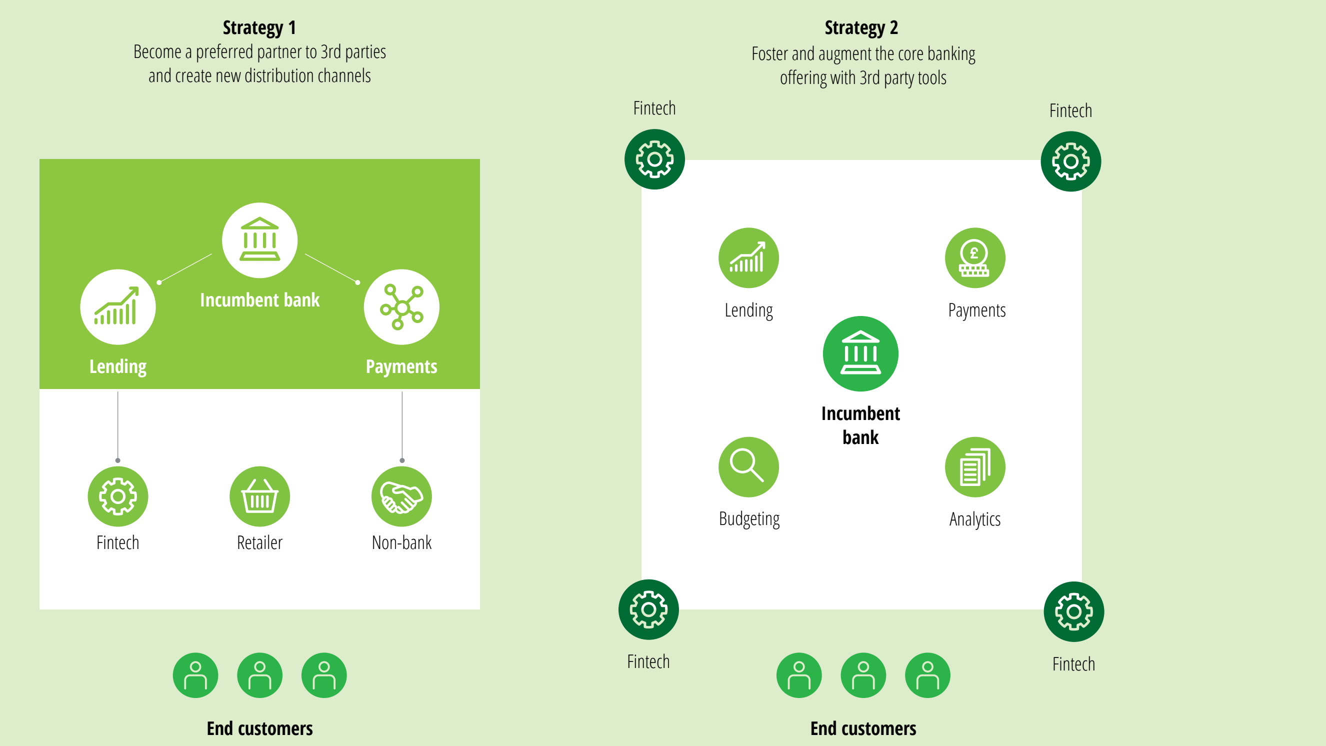


Source: Deloitte analysis (2023); N26 (2021)

Incumbent retail banks need to define their respective strategies on how how best to respond to the rise of these ecosystems and how to position themselves within them.

Overall, we see two core strategies for incumbent retail banks to remain relevant and play a vital role in the ecosystems outlined in the figure below.

Figure 9: Ecosystem strategies for incumbent retail banks



Source: Deloitte analysis (2023); competitor analysis (2018)

Irrespective of the strategy chosen to position themselves in the overall ecosystem[6], incumbent banks need to develop a well-informed view about which use cases and offerings to pursue. They need to have a clear understanding of customer values and opportunities, projected customer outcomes, profit potential, scalability, and competitive differentiation between eligible use cases and offerings, and prioritise them accordingly. Based on successful arrangements between banks, non-banks and/or retailers, we consider that the five use cases shown below will adequately cover the key dimensions stated above.

Figure 10: Potential use cases for incumbent retail banks in ecosystems[7]

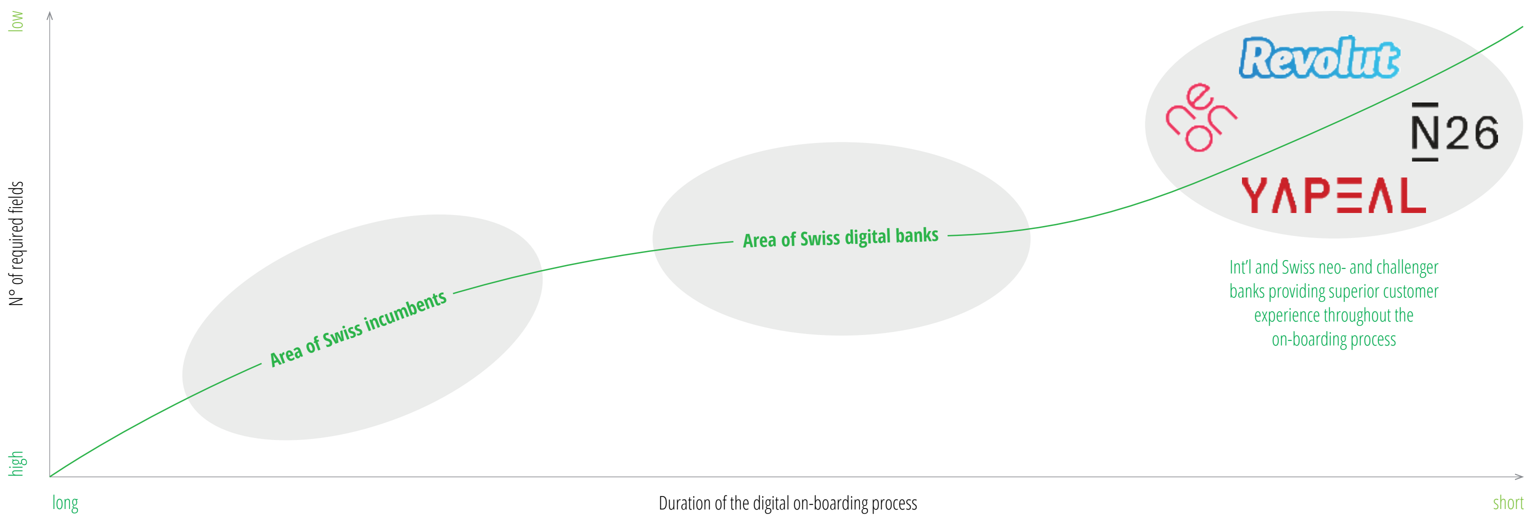
Instant POS consumer loans («BNPL»)	Mobile POS payments	Personalised savings and investments	Personalised financial management	Personalised offers and loyalty programmes
Provide instant consumer loans on demand at the retail POS on purchased goods	Provide secure, smartphone-enabled digital payment capabilities at the retail POS	Provide customers capabilities to place savings/investments and maximise (interest) gains	Provide customers capabilities to monitor and transfer funds across banks and accounts	Provide customers personalised rewards from retailers of relevant interest
IKEA, IKANO BANK	TWINT	DEPOSIT SOLUTIONS	ABN·AMRO, tink	thankyou from citi

Source: Deloitte analysis (2023)

[6] Please note, that the three core strategies outlined do not debar each other. Retail banks may engage in preferred partnerships, augment their core banking offering with 3rd party tools as well as define Joint Ventures with other 3rd parties at the very same time.
[7] Please note that on 25 June 2021, «Raisin» and «Deposit Solutions» have announced the completion of their merger and the two companies have formed «Raisin DS» accordingly.

2. Digitally-savvy banking operating models of neo- and challenger banks provide a superior customer experience at a lower cost.
Neo- and challenger banks have developed global banking operating models that provide an end-to-end digital capability, and multi-service and multi-product coverage as well as an advantageous cost base in comparison to incumbents' legacy models. Eventually, these operating models will enable neo- and challenger banks to deliver a superior customer experience and at the same time to provide a price advantage to their end customers over market incumbents – key characteristics that have amplified further throughout the COVID-19 pandemic.
In this regard, international banking and payment service providers (not necessarily equipped with a Swiss banking licence) have already entered the Swiss retail banking market: notable examples are the UK-based institutions Revolut and Wise (formerly TransferWise). While these providers typically offer selective banking services only, domestic neo- and challenger banks have launched operations based on either a «*greenfield*» approach (e.g., «*radicant*», «*YAPEAL*») or an incumbent's legacy infrastructure (e.g., Bank CLER with «*ZAK*»).

Figure 11: Superior customer experience – the digital on-boarding example[8]



Source: Deloitte analysis (2023); Inacta AG (2020)

[8] Figure 11 is based on the analysis performed by INACTA AG in 2020. The analysis takes into account the number of required entry fields by the customer only and with that provides a high-level view on the required duration of the digital on-boarding process for the customer only. It is not the intent of Deloitte to provide any external assessment of the overall quality of the digital on-boarding process, in particular with regard to KYC/AML considerations.

Additionally for SME customers, we see that neo- and challenger banks have defined a fully-fledged service offering, that covers «*in-app*» and real-time tracking of expenses, direct connectivity to and integration with the SME's accounting software via standardised API, and access to multiple funding resources, as well as the free usage of application tools for detailed business planning. All service components are fully integrated with each other, provide a fully digitised customer experience, and are offered at superior rates in comparison to similar offerings from market incumbents.

The ongoing competitive pressure from neo- and challenger banks has forced multiple Swiss incumbent banks to launch their own digital-only service offerings (e.g., Credit Suisse with «*CSX*», PostFinance with «*yuh*», Zürcher Kantonalbank with «*frankly*»).

Figure 12: Superior pricing of digital-savvy banking operating models[9]

Category	Annual account-, credit-/debit card costs	Relevant peers	Total no of customer relations
Incumbents	Ø CHF ~ 120 p.a.	Zürcher Kantonalbank, RAIFFEISEN, PostFinance, UBS	~ 12,000k customer relations
Swiss neo- and challenger banks	Ø CHF ~ 45 p.a.	Zak, YAPEAL, yuh, CSX, key4 by UBS	~ 570k customer relations
Foreign neo- and challenger banks	Ø CHF ~ 6 p.a.	Revolut, wise, N26	

Source: Deloitte analysis (2023); moneyland.ch (2021); digitalmedia.ch (2021); moneytoday.ch (2022)

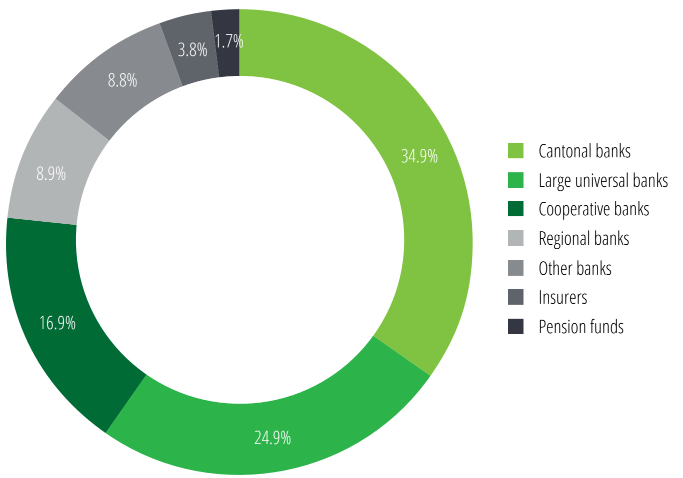
[9] Total number of customer relations in Switzerland only. Total number of customer relations for Swiss and foreign neo- and challenger banks exclude CSX and Key4.

3. Well-funded non-bank financial institutions (NBFIs) will become credible competitors in the offering of core banking services. Well-funded insurers and pension funds have recently entered the attractive retail mortgage lending business by cooperating with either independent brokers (e.g., MoneyPark) and/or credit platform providers (e.g., CreditExchange).

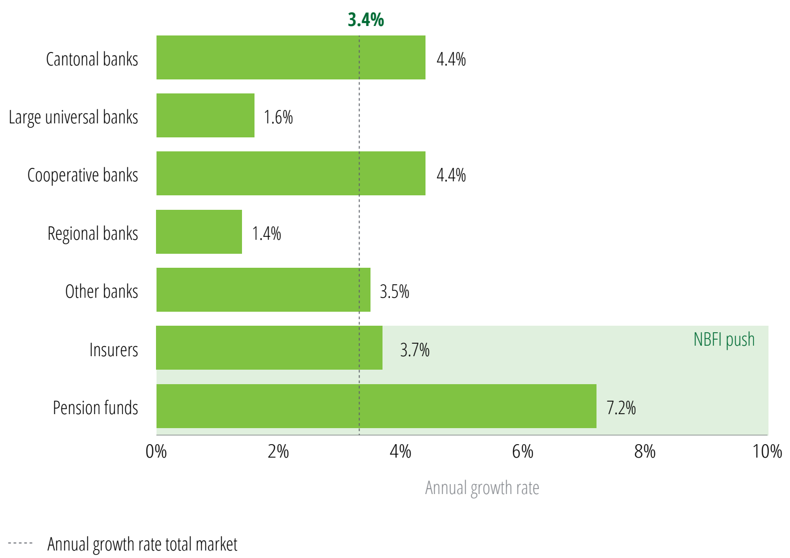
For the time being, their total market share in the business remains low in comparison to market incumbents. However, with their increasing appetite for substantial mortgage exposure on their balance sheet, their market share is growing We estimate their current combined market share to be around 6%, with annual revenue growth of about 4% for insurers and 7% for pension funds.

Figure 13: Estimated market share and growth rates of competitor segments in retail mortgage lending

Competitors segments' estimated market share in retail mortgage lending



Competitor segments' estimated annual growth rates in retail mortgage lending



Source: Deloitte analysis (2023); BfS (2021); FINMA (2022); MoneyPark (2019); SNB (2021)

In addition to mortgage lending, insurers and pension funds are seeking to increase their market share of other conventional financial services, such as financial advisory and asset management. Several institutions have invested heavily in the long-term modernisation of their capabilities and infrastructure to seize cross-selling opportunities due to their structural competitive pricing advantage over incumbent banks and their ability to offer holistic financial planning.

In conclusion, we consider the core revenue streams and profit pools of Swiss retail banks to be at risk throughout the next decade. A look at the conventional business model of an incumbent universal bank provides clarity in this regard.

Figure 14: Revenue streams and profit pools in an incumbent's conventional business model

Share of total revenue stream per core banking service	Balance sheet provision («BS heavy»)	Origination, sales and distribution («BS light»)
Lending	~30%	~10%
Current accounts	~15%	~3%
Deposits	~5%	~1%
Investment banking	~3%	~6%
Transactions, payments		~12%
Asset management, investments, insurance and pensions		~15%
Revenues, profits and RoEs per source of origin of core banking services		
Total revenues per source of origin	55% to 60%	40% to 45%
Total profits per source of origin	35% to 40%	60% to 65%
RoE per source of origin	~ 4% to 7%	~ 18% to 25%

Services covered by retail banks

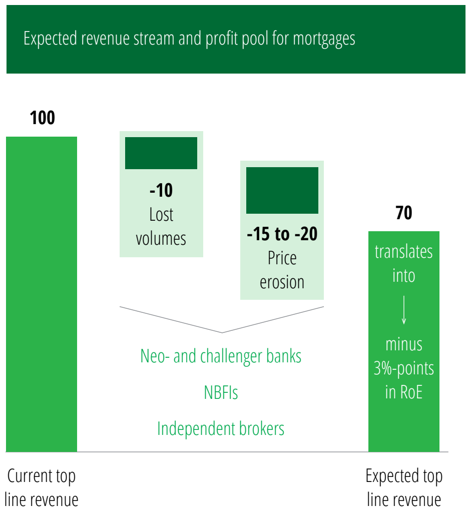
Source: Deloitte analysis (2023); competitor analysis (2015)

So far, FinTechs and neo- and challenger banks have focused on taking over the customer relationship from incumbent banks by tapping into the most lucrative parts of the value chain - i.e., the «*BS light*» service elements of origination, sales and distribution, which provide the highest RoE levels. Neo- and challenger banks are now also stepping into the lending business, and in order to do this are building up a balance sheet.

For NFBIs in the retail banking market, the primary focus is to build a balance sheet at a structurally lower cost in comparison to market incumbents. Hence, we expect incumbent retail banks over the next decade to be confronted across all their core banking services with a materially increased level of competition, putting key revenue streams and profit pools at risk.

Figure 15: Revenue streams and profit pools of retail banking products at risk[10]

Retail banking product	Share of revenue stream at risk	Share of profit pool at risk
Mortgages	**up to 30%** Deep dive to the right	**up to 35%**
Payments	up to 30%	up to 35%
Consumer finance	up to 25%	up to 30%
SME lending	up to 25%	up to 30%
Wealth management	up to 15%	up to 20%



Source: Deloitte analysis (2023); competitor analysis (2015)

[10] Top line revenues are indexed to 100 based on today's revenue streams.

Given the challenges from new market entrants, we see up to one-third of current revenue streams and profit pools for major retail banking products to be at risk throughout the next decade. Price competition (and hence erosion) in core market segments is already happening, as we see major incumbents launching promotional activities in the Swiss retail banking market with material price reductions to attract new customers. UBS recently launched its «first home» initiative, providing a 30bps interest rate reduction throughout the entire mortgage term, when customers close their first mortgage transaction with the lender.

If incumbent Swiss retail banks want to remain ahead of the curve and win the fight for customer relationships, we see an urgent need to act now and think ahead. In this regard, we believe that it will be vital for banks in the first instance to develop sound scenario planning capabilities for robust strategic decision making on future developments in the sector. In addition, we believe there are already «*key non-regret moves*» for incumbent retail banks that will help to ensure their operating and business models are «*fit for future*».

Figure 16: UBS «*first home*» promotional activities in Switzerland

Binding conditions to the promotional offer

- Customer contracts her/his first mortgage with UBS
- Max volume of the mortgage is capped at CHF 1mn
- Offer covers fixed mortgages between 3 and 10 years runtime
- Customer holds current account and banking package with UBS

Source: Deloitte analysis (2023); UBS (2021)

5. The winning transformation strategies for a decade of major change

The way that Swiss banks have done business in the past is now changing. With changing customer needs and expectations, new interaction models, increasingly decomposed value chains and technological advances, retail banks must develop new strategies to create and maintain a competitive advantage throughout the next decade.

At a time of massive disruption fuelled by «*lightning speed*» changes in technology, it is an almost unsurmountable challenge for CEOs and CIOs to set a strategic agenda for the coming years.

Scenario planning may serve as a basis for robust strategic decision making

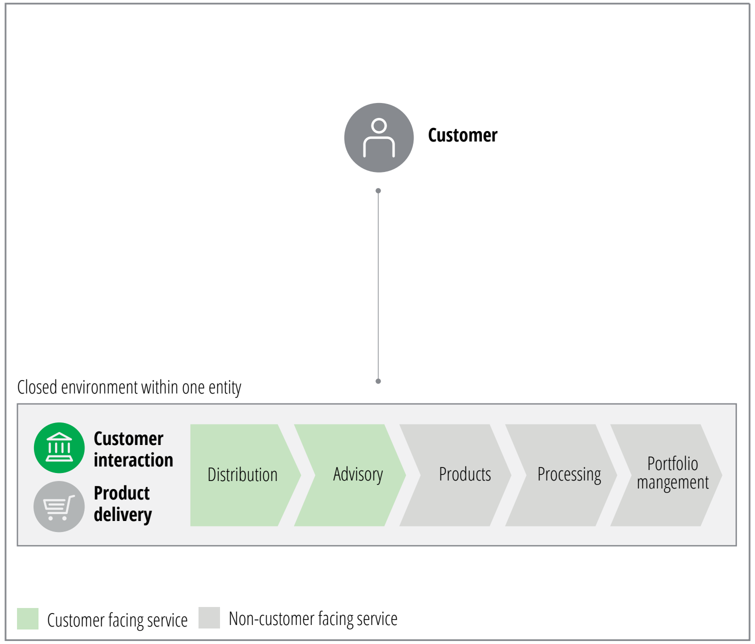
Although it is difficult, in fact almost impossible, to predict the future exactly, envisioning possible scenarios about the evolving future can help to develop sustainable survival strategies. When envisioning the future, we see four possible scenarios of what the sector may look like in 2030 regarding the transformation of the value chain, customer behaviour and demand as well as customer interaction models.

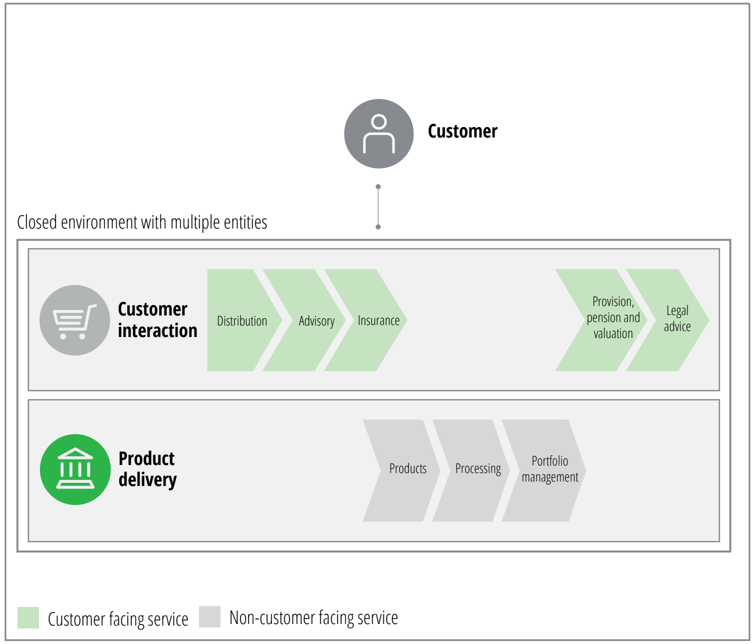
"How to deal with this era of massive disruption? Zoom out to an uncertain future, put a stake in the ground where you think it will be, then zoom back and take the first steps to get there."

John Hagel,
Co-chairman of the Deloitte Center for the Edge

Scenario 1: Dominance of the digital, multi-channel «principal bank»
Today's retail banking value chain will remain largely integrated. Banks will retain control of the key touchpoints with the customer and continue to be the main financial products provider. The digital channels of retail banks provide the main interaction points, but customers also continue to use banks' offline channels selectively. Compared to today's business models, there is no fundamental change, and incremental (digital) efforts of banks are sufficient to stay competitive.

Scenario 2: The ecosystem-oriented retail bank
The banking value chain «dis-integrates», only to «re-integrate» with broader retail value chains. Core retail banking services in the form of a stand-alone offering become largely irrelevant – everything is done in the context of use cases and digital ecosystems become the «new normal». Banks may have the «right» and also the relevant capabilities to own the customer relationship and hence to orchestrate the overall ecosystem. However, it is likely that in most ecosystems retail banks become mere participants, with the function of a product (commodity) provider, only.



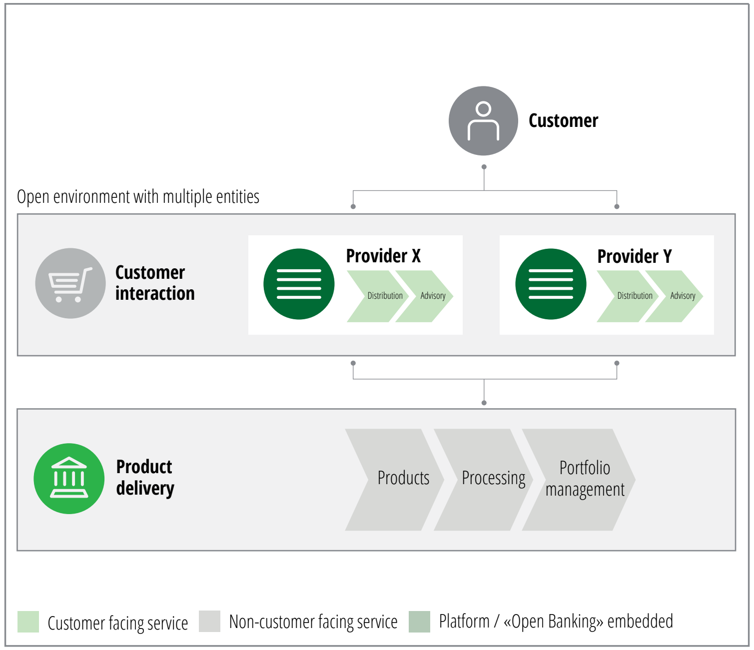


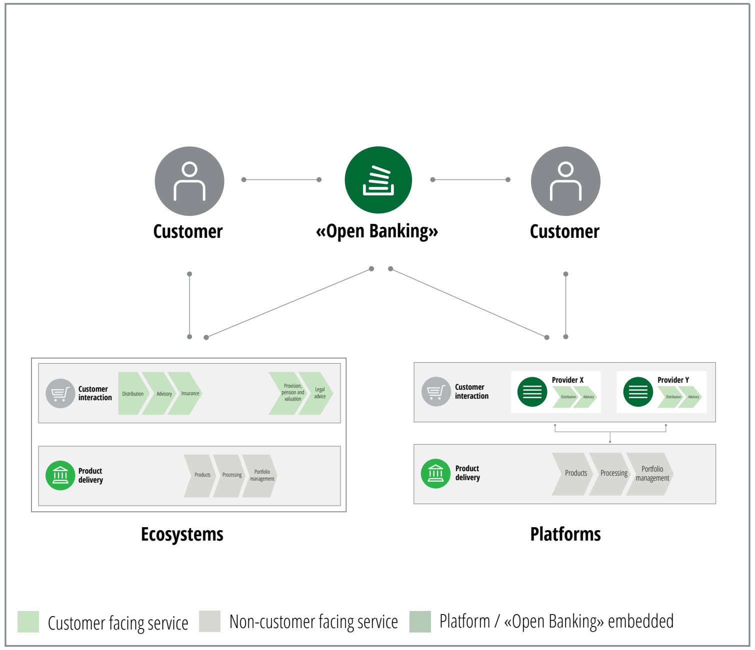
Scenario 3: The rise of the platforms

Large platform providers rise to dominate the customer relationship as they evolve from their initial and current role as pure comparison service providers to digital platforms that become the default sales, distribution, and advisory channels for retail banks. Retail banks will focus on providing the most competitive products and processing engines as commodities, with ever increasing cost pressures as differentiation becomes nearly impossible without their control over the customer relationship.

Scenario 4: The «all-digital continuum»

The retail banking value chain and customer relationships are fluid and largely *«dis-intermediated»*. Retail banking becomes fully digital with maximum focus on customer convenience and hyper-personalisation. Customers' decisions are informed by insights that are garnered on the basis of artificial intelligence and predictive analytics using financial data in real time, fully understanding customers' financial needs and behaviours and even acting on their behalf. Branches largely disappear, *«digital»* becomes the default channel for everything, and touchpoints decrease as many retail banking services become increasingly *«invisible»* for customers.





Adapting existing strategy or developing a new one in response to the developing scenario involves hard choices for banks. A key decision that banks must make is where to compete in the value chain and how to define their future business model.

Swiss retail banks need to consider the implications of the above scenarios for their current business and operating models to be successful in the next decade. Re-designing the organisation to become more «*agile*» will enable companies to proceed with confidence while staying open for new opportunities as they arise. The main benefit of scenario planning is to provide some control over an uncertain future.

Strategic choices and «*key non-regret moves*» for forward-looking Swiss retail banks

Swiss retail banks will need to make their strategic decisions about where to play with respect to the described scenarios. Focus either on creating products or managing channels and customer relationships, or a hybrid of the two. In addition, Swiss retail banks will need to position themselves in the broader ecosystem - whether to invest in open banking or alternatively pursue a Banking as a Service (BaaS), Banking as a Platform (BaaP) or a dual platform strategy. Subsequently, Swiss retail banks need to answer the question of how to blend the traditional banking elements with the wider ecosystem - should the bank launch a new platform or adapt and modernise its existing platform?

Irrespective of the final strategic choices made, we believe there are seven «*key non-regret moves*» Swiss retail banks should take into consideration that will help them to become more «*agile*» and position themselves to become a «*bank for the future*».

5.1 Become «*digital*»

Becoming «*digital*» will be an imperative key success factor in the next decade. This requires more than just staying up to date with current technological trends. We believe that focusing on a digital culture and ways of working will lead to more innovation and agility. Improving a bank's digital maturity increases significantly the quality of interaction with its customers. This will help the bank to become more connected with its customers at every touchpoint of their journey and enable it to be more responsive to shifts in customer preferences. This goes hand in hand with the potential to increase business volumes and eventually will lead to greater profitability levels.

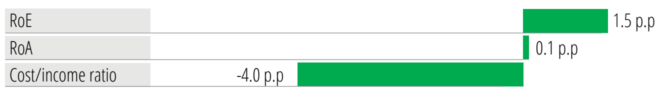
Deloitte's latest Digital Banking Maturity Study shows, that «*digital champions*» consistently outperform their market peers at elementary KPI levels. As such, they achieve higher RoE and RoA levels [plus 1.5%-points and plus 0.1%-points respectively] as well as lower C/I ratios [minus 4.0% points] when compared to their market peers.

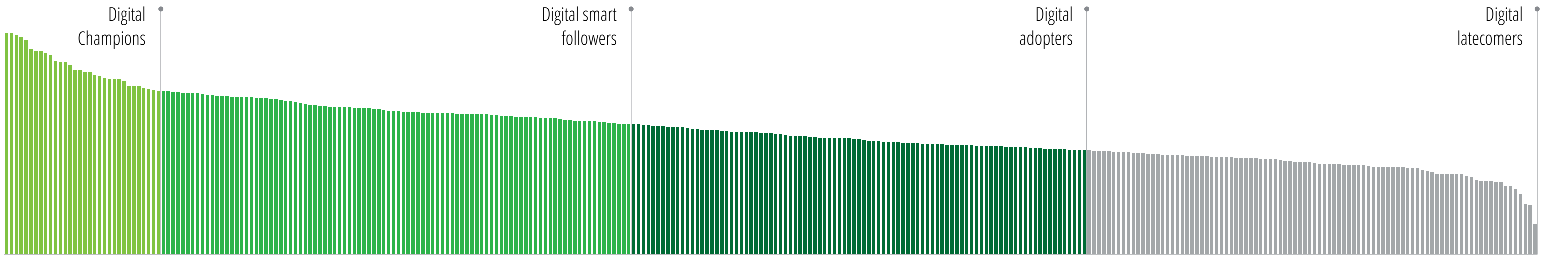
This implies that a «*digital mind shift*» is required towards embedding a start-up culture characterised by entrepreneurship, design thinking, a focus on innovation, and customer centricity at all levels, in order to succeed in a dynamic all-digital environment.

Figure 17: Deloitte Digital Banking Maturity Study – «*Digital champions*» outperformance[11]

Digital Banking Maturity index [at single bank level globally]

Outperformance of «digital champions» against market peers





«Digital Champions» defined as the top decile of all banks covered in the DBM study

Source: Deloitte analysis (2023)

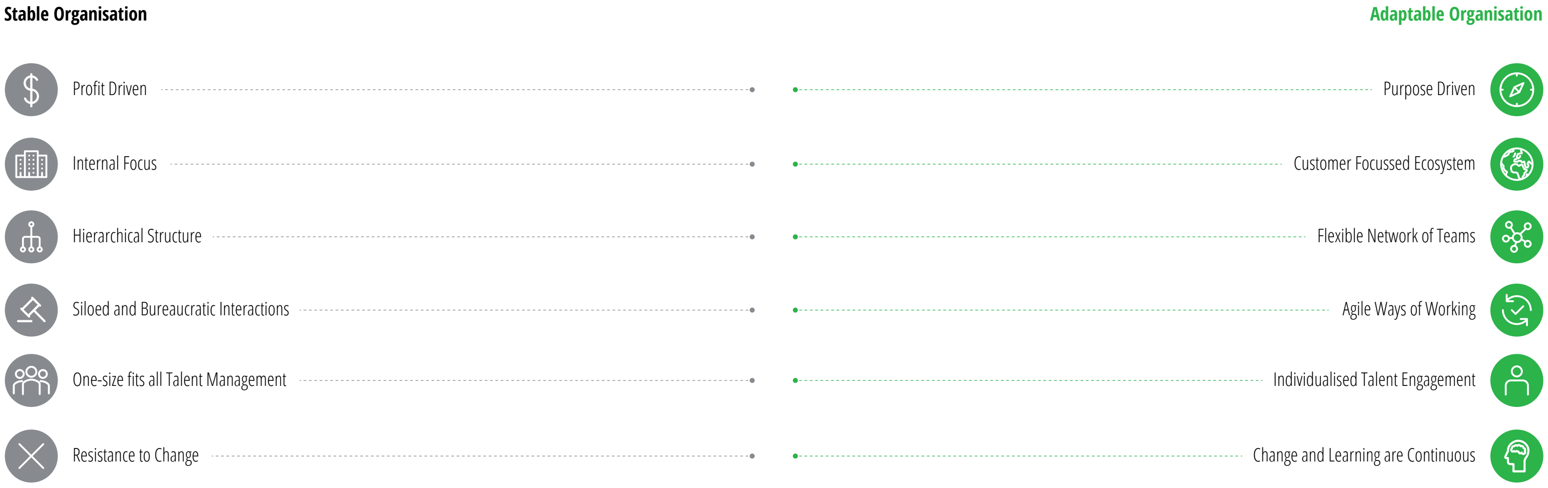
[11] The Digital Banking Maturity (DBM) index measures the maturity for channels and products offered by a bank (as introduced under section 4 of this document). Our data covers 313 out of 318 banks which participated in our 2022 DBM study. The top decile covers 31 banks being defined as «*Digital Champions*». Outperformance here is defined as the delta between the average KPI level of the «*Digital Champions*» (i.e. the 31 banks defining the top decile) and the average KPI level of the remaining 90% of participants.

5.2 Drive organisational agility

Consumer preferences, technological advances and regulatory requirements often change faster than a bank's business plans can be adjusted. The successful retail bank of the future replaces the robust profit-driven ten-year strategy with a ten-year purpose-driven vision. Instead of asking departments to translate the corporate strategy into separate sub-plans within their respective silos, adaptable organisations enable their value streams - flexible networks of teams and talented individuals - to make decisions in alignment to the organisation's vision. Organisations that enable decisions to be made at the lowest level possible, in alignment with the business strategy, turn ambiguity into clarity and can outperform their competitors. This requires an organisational shift, starting at the top, as leaders empower, entrust, and give responsibility to their people.

The shift towards more decentralised decision making requires a robust talent management system, with individualised career advancement and a focus on continuous upskilling. Leaders are at the forefront of creating a workplace of high-performance standards mixed with psychological safety and reinforced by simple guardrails instead of detailed rules and procedures. Instead of managing the workload, leaders must shift their attention to the bigger organisational challenges of becoming adaptable. For retail banks, this revolves around balancing flexibility and opportunism with structure and compliance - enabling teams to make the best decisions while ensuring they comply in this highly regulated market. How retail banks navigate this problem will determine the banking landscape of 2030.

Figure 18: Organisational agility – from a stable into an adaptable organisation



Source: Deloitte analysis (2023)

5.3 Leverage the cloud

Existing systems cannot keep up with the pace of BigTechs and FinTechs when rolling out new product offerings or enhanced service features. We believe it has become inevitable for retail banks to leverage the cloud - not only to shift from CapEx to OpEx (and to realising an increased predictability for OpEx), but also as a key technology enabler driving an extensive business model transformation. The move to cloud infrastructure will make it possible to capitalise on more powerful and agile business and technology capabilities and allow for the continuous deployment of industrialised solutions with a shorter time to market. In recent years the number of organisations adopting cloud technology has tripled. Swiss retail banks as well as institutions across the global financial services industry have been transitioning to the cloud over the past three to five years, with tremendous acceleration over the past twelve to eighteen months. The figure below shows various use cases, highlighting the potential of the cloud to have a deep impact on the business and technology of banks.

Figure 19: Emerging cloud computing use cases in the retail banking sector

Business impact

Business growth	1 Customer analytics	2 Analytics based request for action and customer interaction	3 Cross product analysis and inter-pricing models
Risk and regulatory	4 Intraday liquidity and risk calculation	5 Trade surveillance	6 Regulatory reporting
Cost reduction	7 AML/KYC applications	8 Treasury and capital funding analytics	9 Archiving and storage of emails and voice
Improved operations	10 Smart settlements	11 Real time payment flow tracking	12 Trade reconciliation

Technology impact

Storage Email archiving and storage of voice and chat	**Reporting and analytics** Leveraging cloud as an analytics platform for real-time customer insights and reporting
Containers, APIs, and microservices Exposing data and services through APIs and microservices to enable faster and easier access to data	**Master data management** Providing consistent client views across channels and identifying cross-sell opportunities

Source: Deloitte analysis (2023)

After years of focusing on the value of cloud technology as a cheaper, faster, and more «*elastic*» alternative to on-premises data storage, bank leaders today are considering how they can leverage the cloud in three «*top-line areas*» to create new business frontiers and in three «*bottom-line areas*» to optimise their organisation.

Applying cloud technology in these six areas may help Swiss retail banks drive improved business performance and shareholder returns.

Figure 20: Critical value enablement through cloud transformation

«Top-line» value enablement through cloud transformation

Synchronise the enterprise
- Drive **integration** of **business** units through **sharing of data** as well as **integrated decision making** to solve **customer problems**
- Create **common**, **connected data sets** enabling deeper, more **sophisticated insights** and **analytics**
- Enhance **collaboration** through **new shared platforms** and **tools** and increase **speed of decision making**

Drive business innovation
- Help innovate and driving **strategy** to build new **customer experiences**, optimise operations, and manage talent through **leveraging tools** such as machine learning, IoT platforms, AR & VR, image recognition, natural language processing, etc.
- Leverage new tools and capabilities to **increase revenue**, **cut costs**, make **operations more consistent**, and **retain personnel** more effectively

Unleash new talent and new ways of working
- Align tech- with business unit needs to benefit functions requiring **new talent** and **new ways of working**
- **Tech capabilities** and solutions attract new workers and **provide access** to **ecosystems** with new skill sets - DevOps, agile, UX, etc.
- Enable **process improvements** such as **automation** or **human augmentation** to **improve productivity** and **create firm integration** - resulting in agility, connectedness, transparency

«Bottom-line» value enablement through cloud transformation

Build resilient operations
- Enhance your company's **overall resilience** to respond more quickly to physical outages, disruption, etc.
- Move from your company's data center but **gain** the **ability** to **replicate data** and **app services** across more than a single data centre or region

Ensure for enhanced IT security
- Cloud environments can be **as secure or even more secure** than on-premises solution - but only when implemented correctly and with skilled and trained security
- Cloud providers **provide extreme security standards** - and have a track record

Scale computing costs as needed
- Help your organization with the way it pays for tech - away from heavy up-front **capital spending** towards **OpEx based**
- Respond more quickly to **market shifts** or **changes** in **financial priorities**
- Capture **cost efficiencies** in **dynamic cloud pricing** by increasing or decreasing computing capacity as needed and **facilitate** granular **spending control**

Source: Deloitte analysis (2023)

5.4 Think customer-centric

Customers today are looking for identity, trust and support in brands. It is not about either a great physical or a great digital experience. Customers expect to experience the best of both worlds - a personalised interaction combined with the convenience of a digital journey.

Re-positioning the organisation towards customer centricity is therefore a key differentiating factor in the retail banking market.

This requires a fundamental change in the operating model, from working along existing silos, often grouped in systems or functions, towards horizontal value streams that can cover end-to-end customer journeys.

This impacts the organisation's structures, its processes, ways of working, the technological infrastructure, and its talent.

Only by breaking up existing systemic and/or functional silos can banks put the customer at the heart of their businesses and operations and start to think in radical new ways of customer-centric value creation.

"We see our customers as invited guests to a party, and we are the hosts. It's our job every day to make every important aspect of the customer experience a little bit better."

Jeff Bezos,
Executive Chairman, Amazon

5.5 Re-define the branch purpose

In a retail banking sector that is becoming more cashless, data driven and empowered by platforms, customers engage more digitally with their respective banking service providers. In recent years, we have seen a reduction of about a third in the number of customers using branch services – obviously, a number amplified by the pandemic. Unsurprisingly, the use of digital and mobile banking services leads to strong rates of growth year-on-year. Transactions executed via digital and mobile banking channels provide a 95% cost advantage over transactions executed in branches. However, two key questions remain for banks. What does this mean for the quality and strength of the client relationship, and what is to be done with the existing branch network?

We would advise incumbent Swiss retail banks with a dense branch network across the country to question any future investments in the network given the future of a post-pandemic world. In this regard, future investments should be tested against the following four key dimensions.

1. «*Interaction and engagement*» - Embrace the new social norms and behaviours
To have a lasting effect on how and why we will interact physically. From service standards and protocols to digital interactivity and hygiene concepts, banks will need to tackle the new expectations of customers in their service design.

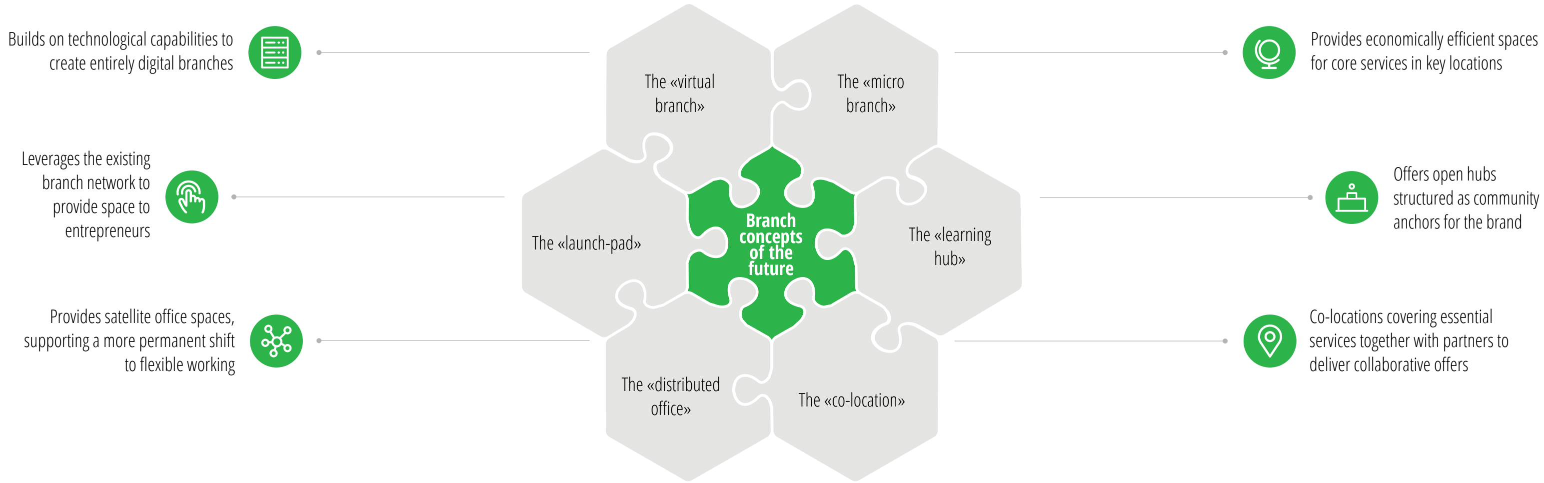
2. «*Purpose and support*» - Continue to support your customers
To have a long-lasting impact on the financial well-being of customers. The future branch needs to provide appropriate support that goes beyond the future end-to-end banking experience. Staff need to be equipped with the respective tools to handle the wide range of occurring needs.

3. «*Technology and equipment*» - Leverage smart technology and digital intelligence
To increase the adoption of new technologies, and an impetus to leverage data, analytics and the internet of things. As we move to a «*digital first*» branch development it is imperative to consider the application of new technologies to help optimise customer and business value throughout an in-branch customer visit.

4. «*People and story*» - Celebrate your history and the customers who made it
To challenge the status quo and to entice customers to explore extensively new, purely digital service offerings. Incumbents need to engage with their established customer base to their own advantage – they have the opportunity to restore and re-invent the «*customer community*» through a physical presence and human connection that neo-banks can't offer.

Considering the retail banking sector's move to become more digital-savvy and the overall change to a post-pandemic world, we can imagine the branch of the future adopting forms as outlined in the figure below. Essentially, we believe that the branch of the future (irrespective of the specific form adopted) will be successful only when providing hyper-tailored service offerings to the specific customers making an in-branch visit and at the same time providing a lean and efficient operating cost base for the incumbent retail bank.

Figure 21: The branch's role of the future



Source: Deloitte analysis (2023)

Figure 22: Capabilities and characteristics of future branch forms

The «micro branch»

The need
- Much of the amenities used in branches are **underutilised**, re-sulting in the **servicing** of **un-necessarily large** branch foot-prints and networks
- Many of the **services** provided within branches can be **digitsed**

The benefit
- Realizes reduced **operating costs**
- Improves **customer experiences**, providing the **adequate channel** for any given product
- Allows for **strategic branch footprint** in locations with e.g., high foot traffic

The «distributed office»

The need
- The pandemic has enforced **working from home regimes** and the workforce leverages the **convenience/flexibility** it offers
- Banks experience an **increase** in **productivity** and realize the **commercial impetus** to **facilitate different ways of working**

The benefit
- Provides for **improved work flexibility**, allowing for a more **diversified workforce** to **contribute** to the **organisation**
- Allows for a **reduction** in the **cost** of **servicing** as large **tenancies** are **reduced**

The «learning hub»

The need
- It is more important than ever for the **democratisa-tion** of **financial literacy** enabling customers to **better manage** their **money**
- Customers with **little financial literacy** are more likely to re-present **bad debt** for banks

The benefit
- Provides **superior customer experience** and improve **financial literacy** of customers
- Reaches **higher propensity** to convert **advisory moments** into **sale** of **financial products**
- Helps to secure **customers' financial wellness**

The «launch-pad»

The need
- **Millennials** and the **Gen Z** seek more and more their **value creation** in the **set-up** and **launch** of their **own businesses**
- **Existing (small) businesses** at risk seek to **ideate** and **test** new **concepts** to **diversify** their **business** and remain **solvent**

The benefit
- **Supports** the **accelerated set-up** of new, promising **ventures** and **capitalises** on a **growing entrepreneurial market**
- Builds **customer loyalty** and **brand recognition** amongst SMEs and supports the **growth** of **existing business customers**

The «co-location»

The need
- ATMs, while declining in use, still provide a **fundamental service** to the customer base
- Banks are forced to **reduce** their **cost of servicing** and **increase** their **market share** in an **intensely competitive environment**

The benefit
- Leverages on **shared delivery cost** and an **increased** and **seamless engagement** of the **customer** with **banking services**
- Generates a **key differentiating customer experience** to become a **competitive advantage**

The «virtual branch»

The need
- **20% of customer base** plans to **reduce** their **use of branches** or never visiting a branch again
- As banks **re-purpose** their **branch networks**, there will remain a need for **branch-type services** and **experiences** to be **accessible** to **customers**

The benefit
- Improves the **convenience** of **branch services** by providing them throughout the day, via an **on-demand channel**
- Reduces the **cost** of servicing and the **operational cost base**

Source: Deloitte analysis (2023)

5.6 Develop partnering capabilities

To build business agility, boost innovation, and enable growth, a fundamental shift is required from incumbent Swiss retail banks - moving from inward-looking practices with rules and procedures, to outward-looking engagements through partnerships and collaborations. These complex ecosystems and platforms involving banks are already a reality today and are expected to evolve rapidly and more extensively in the coming years. The authors and survey participants of a recent study conducted by the University of St. Gallen and Deloitte expect an increasing importance of collaboration and partnering between non-financial services companies and banks, to leverage the banks' direct access to a vast number of customers, their brand power and massive data sets through the application of ecosystems and platforms. Therefore, Swiss retail banks should foster their capabilities in developing and operating partnerships with FinTechs, BigTechs and RegTechs and also cross-industry, as this will be paramount for future business success in the next decade.

The required shift in mindset and underlying operating model is fundamental. Platform institutions do not merely create value themselves but orchestrate the value creation by outsiders. These network effects cause institutions to «*invert*», shifting value creation from inside the organisation to the outside. Inside scale is not as easily achieved as outside scale, as there are more customers than employees. If customers (i.e. platform users) are to create value for other customers, then they must be aided and rewarded for doing so. This means institutions (need to) shift from vertical integration to open orchestration.

Figure 23: Partnering capabilities and the «*inverted institution*» hypothesis

Why platform institutions scale so fast
By shifting production outside, they don't incur production costs, and scale as fast as they can add partners

Why platforms beat products
Network effects imply that platform value appreciates through use whereas product value depreciates through use - an increasing value proposition, based on positive feedback overtakes any static or declining value proposition

Why platform institutions have high market capitalisation but so few employees
They harness clients (i.e., users) as producers, representing an external labour force, not counted among the traditional workforce

Why the shift in executive mindset is so hard
Executives familiar with managing vertical integration must transition to managing open orchestration - from resources they control to resources their partners must volunteer

Source: Deloitte analysis (2023); WEF (2019)

5.7 Finance ESG-compliant and invest sustainably

The impact of environmental, social and governance (ESG) issues is increasing for the global, European and Swiss financial services communities. The complex transition towards an overall «*net zero*» economy will require a large-scale and long-term transformation that allows for new ecosystems to evolve across all areas of the economy.

In this regard, we expect (financial) regulators to introduce stricter and more standardised rules on ESG transparency to hold companies accountable for violations of global and local sustainability norms. In a recent example, the European Banking Authority (EBA) advised the European Commission to define a binding framework for European banks to provide increased transparency on the «*pathway towards sustainability and financing activities such as those consistent with the Paris agreement*». The European framework will entitle shareholders and stakeholders alike to improve their assessment of (long-term) sustainability risks related to their business and operating models of their banks. At the core of the framework - covered under the «*Non-Financial Reporting Directive*» (NFRD) - will sit a newly defined KPI, the so-called «*Green Asset Ratio*» (GAR). This ratio will measure European banks' overall share of sustainable, climate-friendly assets[12] and businesses, and will be published from 2022 onwards. The European «*taxonomy for sustainable activities*» (and green investments) is to be used as the benchmark for the classification of assets in the calculation of the GAR.

[12] The GAR will cover both, on- and off-balance exposures of banks.

Figure 24: Required GAR calculations for on balance sheet exposures and taxonomy classification

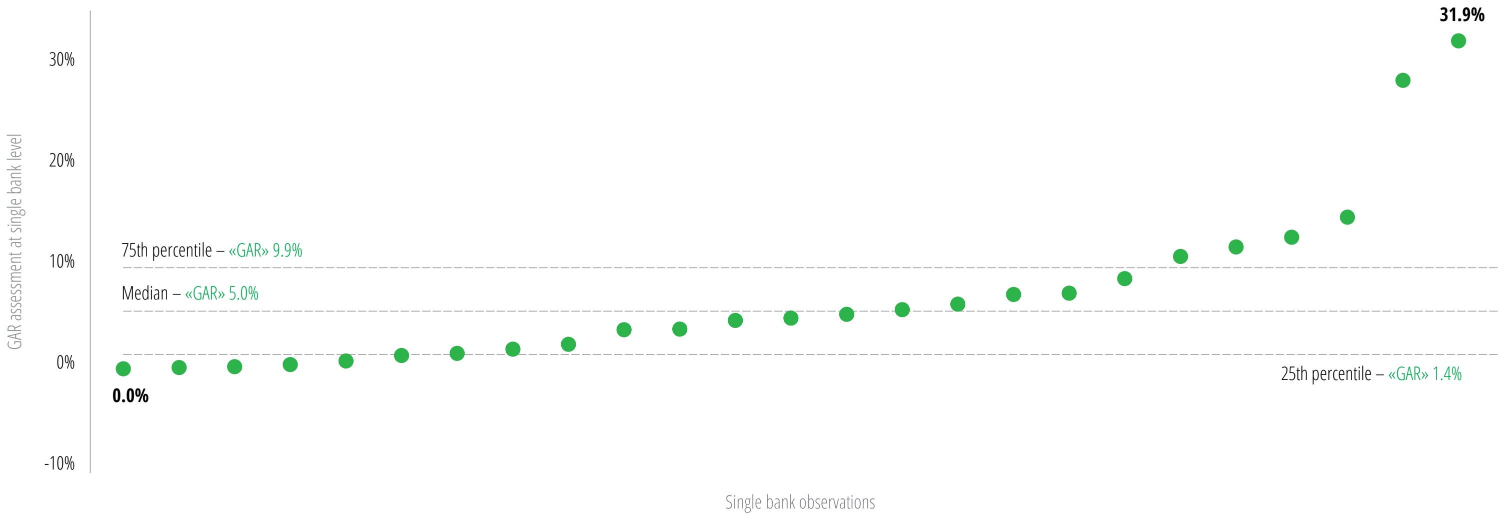
Reporting breakdown / types of exposures	CCM	CCA	Other	Transitional (CCM)	Adaption (CCA)	Enabling (CCM/CCA)	Specialised lending	Stock	Flow	Targets & forward looking
Non-financial corporations subject to NFRD disclosures	✓	✓	✓	✓	✓	✓		✓	✓	✓
Green asset ratio for loans and advances (GAR L&A)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Green asset ratio for debt securities (GAS DS)	✓	✓	✓	✓		✓	✓	✓	✓	✓
Green asset ratio for equity holdings (GAR EH)	✓	✓	✓	✓		✓		✓	✓	✓
Financial corporates(credit institutions and other)	✓	✓	✓	✓	✓	✓		✓	✓	✓
Retail exposures										
Residential real estate lending	✓			✓				✓	✓	✓
Credits for consumption (car loans)	✓			✓				✓	✓	✓
Non-financial corporations not subject to NFRD disclosures										
Commercial real estate lending and loans for renovations	✓							✓	✓	✓
Debt securities, other loans & advances to SMEs and equity	✓	✓	✓	✓	✓	✓		✓	✓	✓
Public housing	✓							✓	✓	✓
Repossessed real estate collateral	✓			✓				✓	✓	✓

CCM – Climate change mitigation objective; **CCA** – Climate change adaption objective; **Other** – Other environmental objectives.

Source: Deloitte analysis (2023); EBA (2021); ING (2021)

In May 2021, the EBA published - as part of a broader pilot exercise on climate risk – initial assessments of the aggregate GAR for a sample of 25 European banks. First results indicate an average GAR of around 7%, while single bank observations range between 0% and 30%.

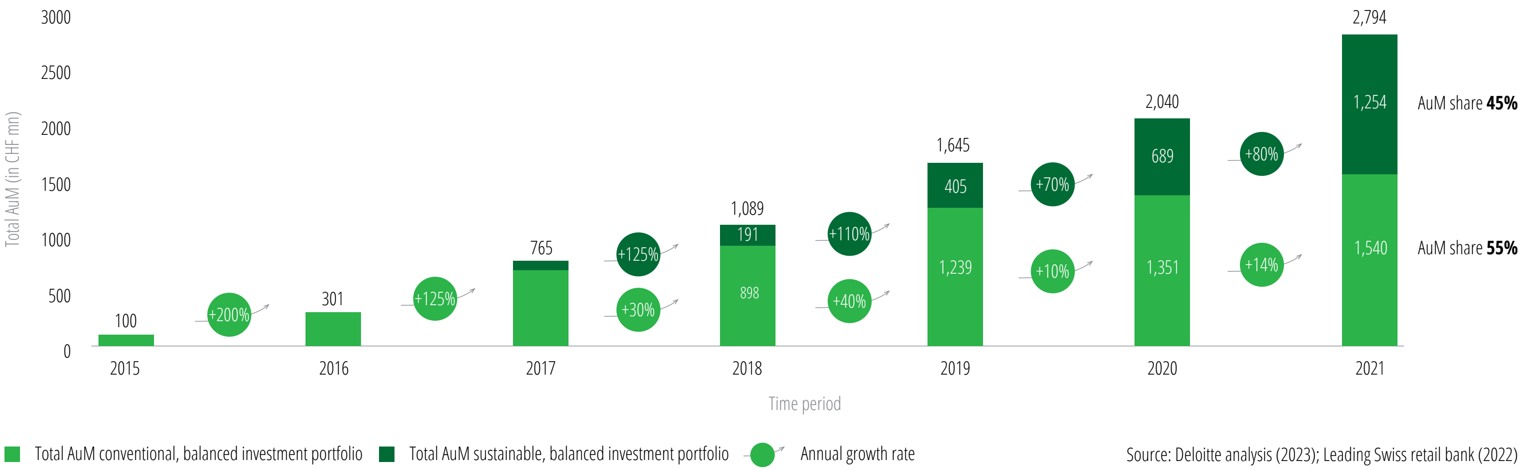
Figure 25: GAR assessments at single bank level in EU-wide EBA pilot on climate risk



Source: Deloitte analysis (2023); EBA (2021)

In addition to the increased regulatory scrutiny of ESG transparency, we will see an ongoing material shift in (retail) investor sentiment. Already in recent years, leading Swiss retail banks have seen solid growth rates in AuMs (Assets under Management) of sustainable investment funds, well outperforming those of «*conventional*» funds. Meanwhile, sustainably invested AuM in Switzerland cover roughly a third of total invested AuM, well in line with global trends and observations.

Figure 26: Growth rates and total AuM (Assets under Management) of passive, balanced investment portfolios[13]

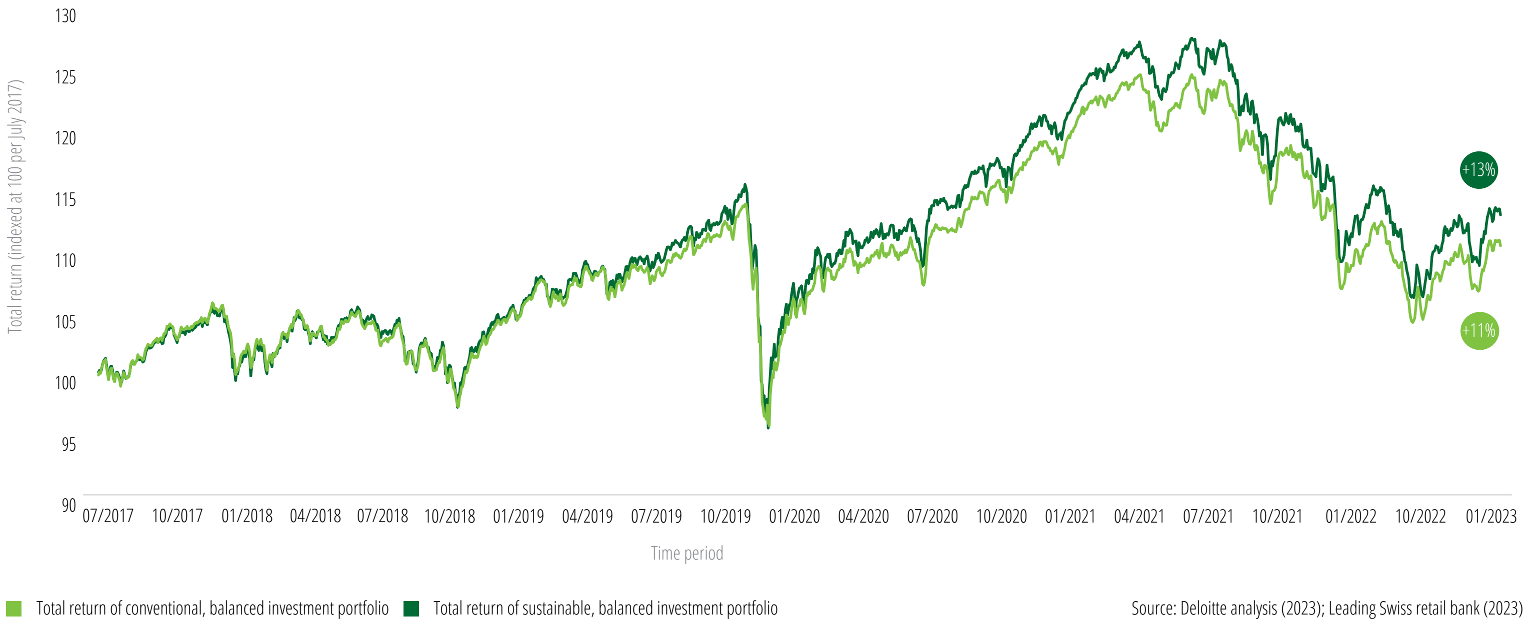


Source: Deloitte analysis (2023); Leading Swiss retail bank (2022)

[13] On the basis of the public information provided by a leading Swiss retail bank.

Similar observations hold for the performance of sustainable investment funds: in the beginning of sustainable investing, ESG-orientation was said to come at the expense of performance. This statement is no longer valid today. Over recent years, we have seen several sustainable investment funds (in terms of total return) outperforming their respective «*conventional twins*» issued by the same bank or fund manager.

Figure 27: Total returns of passive, balanced investment portfolios[14]

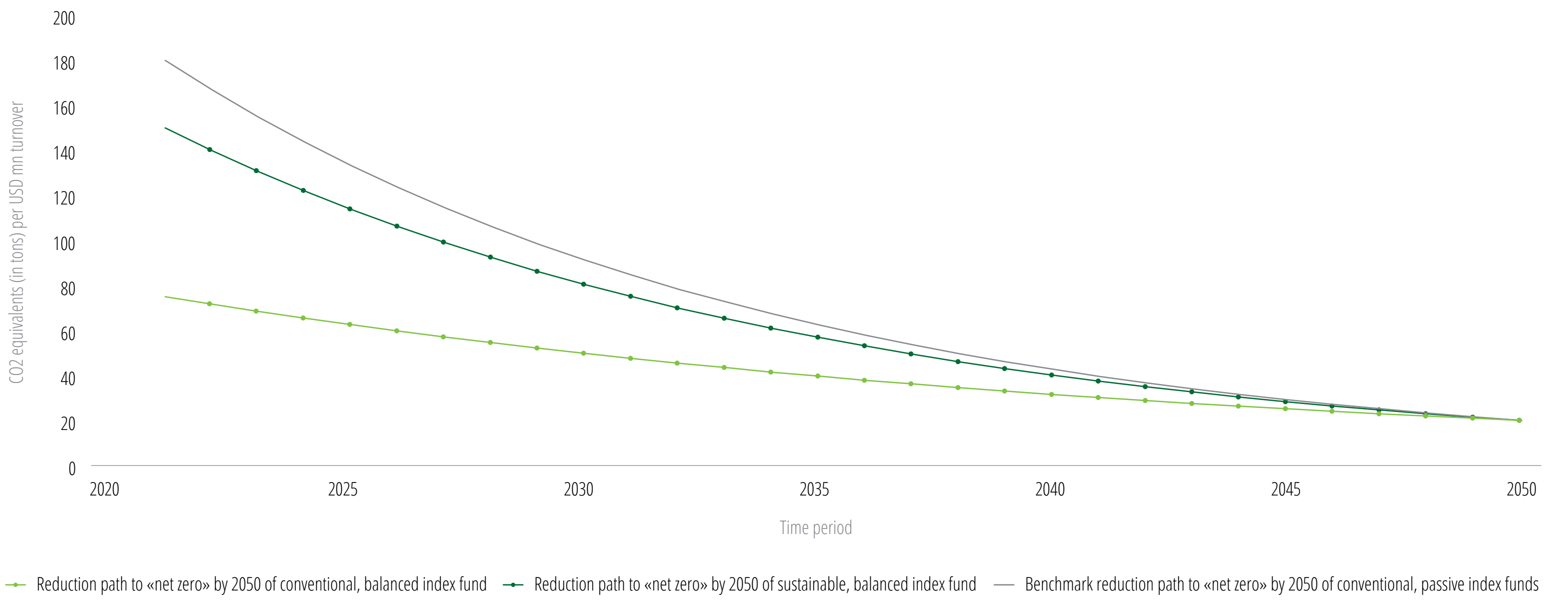


Source: Deloitte analysis (2023); Leading Swiss retail bank (2023)

[14] On the basis of the public information provided by a leading Swiss retail bank.

Going forward, the differentiation between sustainable and «*conventional*» investing approaches will disappear. Global de-carbonisation targets towards a «*net zero*» economy will transform any «*conventional*» investment fund into a sustainable investment fund (based on today's definition) given prevailing emission reduction targets and defined paths towards «*net zero*» by 2050.
Positioning a responsible retail banking sector as an integral part of society and economy in the 21st century will require banks to serve and contribute to an inclusive society that uses its natural resources sustainably. Successful and socially-accepted banks will understand their environmental and social impacts - both positive and negative for all products and services - and will strictly align their lending and investing portfolios with society's goals as set out in the UN Global Sustainable Development Goals and the Paris Climate Agreement.

Figure 28: Global de-carbonisation targets and reduction pathways to «net zero» by 2050



Source: Deloitte analysis (2023); Leading Swiss retail bank (2022)

6. The Swiss financial services industry in 2030

This paper forms part of a broader Deloitte white paper series exploring the future of the Swiss Financial Services Industry with a time horizon of ten years and beyond.

The paper focuses on the Swiss retail banking sector - it provides a critical assessment of the current business environment and explores potential future scenarios on market and ecosystem development, likely to materialise over the next ten years.

Further, it presents our view on imminent strategies and requires capabilities to allow Swiss retail banks to maintain their current competitive advantage throughout the next decade.

For further details and coverage of other Swiss financial services sectors, please see the full series of Deloitte white papers on the «Swiss Financial Services Industry in 2030».

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Sources

1. INACTA AG (2020). «*INACTA Finance On-boarding benchmark 2020*».
2. ING (2021). «*Green asset ratios – What's in store for banks?*».
3. Institute for Financial Services Zug (2018). «*Wechselbereitschaft der Schweizer Retail Banking Kundinnen und Kunden*».
4. MoneyPark (2019). «*Hypomarktstudie: Vermittler erobern den Hypothekarmarkt*».
5. Swiss National Bank (2021). «*Monthly banking statistics, mortgage loans and other loans*».
6. World Economic Forum (WEF) and Deloitte (2019). «*Platforms and ecosystems – Enabling the Digital Economy*».

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