

IT Cost Survey for Swiss Banks 2021

Evaluation report, based on 2020 effective data and 2021 budget figures

Zurich, 31 May 2021

ferhat.geyran@itopia.ch

benjamin.schlup@itopia.ch



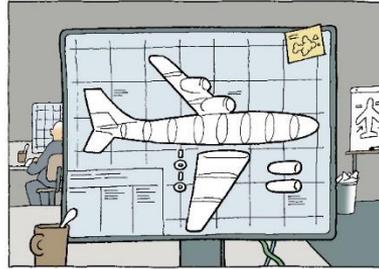
itopia is an IT and Management Consulting Boutique Focusing on the Financial Ecosystem

Imagining



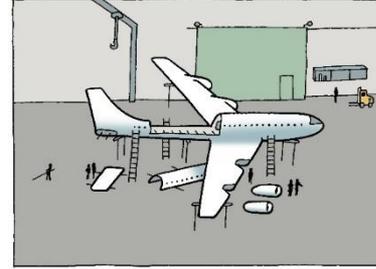
From the back of your napkin to the whiteboard: Here at itopia, we can help you sort the wheat from the chaff by drawing on our creativity and experience – giving shape to your ideas so that they can take flight.

Fleshing Out



Let's get specific: This step is crucial for the success of your project. By setting clear objectives, we can focus our energies, and define the right solution and project strategy.

Constructing



What's needed when the construction teams show up for work is leadership: We will coordinate their work and guide them firmly toward the goal. The itopia Project Risk Manager is also on hand to make sure focus doesn't turn into tunnel vision.

Taking Off



We will devise the flight plan and provide the air traffic controllers for the maiden flight. After all, no transformation is complete until everything is safely off the ground. Then it's time to sit back and enjoy the ride.



Key Conclusions 2021

1 – Digitalisation leads to higher IT costs for cantonal and retail banks

While IT cost efficiency iR_{adj} and staff productivity pR_{adj} improved slightly, other indicators reflect the necessary costs: At retail banks, IT costs per customer and per bank employee increased. Furthermore, the number of employees is increasing again at the majority of the institutions.

2 – Declining profitability of both business models

It is becoming clearer that the trend of declining gross earnings per employee since 2017 is now continuing at both retail and private banks. The decline in operating income per customer is also significant: while retail banks lost 10.5% compared to the previous year, private banks lost a full 13.1%.

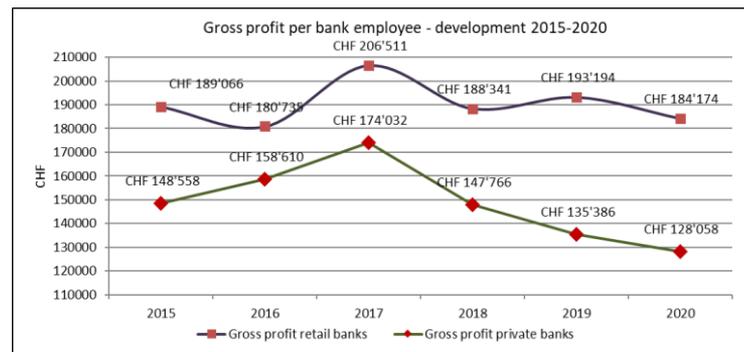
3 – Varying allocation of resources for data management and analytics

While on average 1.2% of a bank's employees are primarily involved in data management or analytics, a quarter of the institutions are below 0.6% or above 2%.

4 – Banks aim for significantly increased business value from analytics by 2023

The top 5 banks are planning an average of 3.5 to 4.2¹⁾ across all benefit dimensions for 2023, while the current average of all banks is still 2.

¹⁾ Scale from 1 (low) to 5 (high)





Contents

	Page
Introduction	5
2020 Database Evaluations	
– IT Cost Coefficient iR_{adj} (Grouped by Business Model)	6
– IT Costs per Customer – Retail Banks vs. Private Banks	7
– Operating Income per Customer – Retail Banks vs. Private Banks	8
– Operating Income in Relation to IT Costs per Customer	9
– IT Costs per Bank Employee (excl. IT Staff) in Relation to pR_{adj}	10
– IT Costs in % of Operational Expenses in Relation to CIR	11
Time Series Evaluations 2002–2020	
– IT Cost Coefficient iR_{adj} – Median of All Participants	12
– IT Cost Coefficient & Cost/Income Ratio – Retail & Private Banks	13–14
– IT Costs per Bank Employee – Retail Banks vs. Private Banks	15
– IT Cost Coefficient iR_{adj} in Relation to Bank Size	16
– IT Cost Coefficient iR_{adj} in Relation to IT Sourcing Policy	17
Focus: Data Management and Analytics (DM&A)	18 - 25

Introduction

IT cost survey

- Performed on a yearly basis since the year 2000, with more than 18,000 data points
- Participants are smaller (< 300 FTEs^{*)}) to bigger (> 900 FTEs) retail and private banks
- Pragmatic approach: questionnaire with nine bank coefficients and profile for bank complexity (self-assessment)

Participants 2020/2021

- 37 banks: 26 retail banks, 11 private banks
- High constancy and comparability: ¾ of year 2000 participants are still participating today

iR = itopia ratio

- Main coefficient used in the itopia IT cost survey evaluation report
- Based on IT costs, balance sheet total, and assets under management
- We consider this coefficient to be better than volatile earning-based ratios (e.g. cost/income ratio)

iR_{raw}

$$iR_{\text{raw}} = \frac{\text{IT costs}}{1.1 \times (\text{balance sheet total}) + 0.3 \times (\text{assets under management})}$$

iR_{adj}

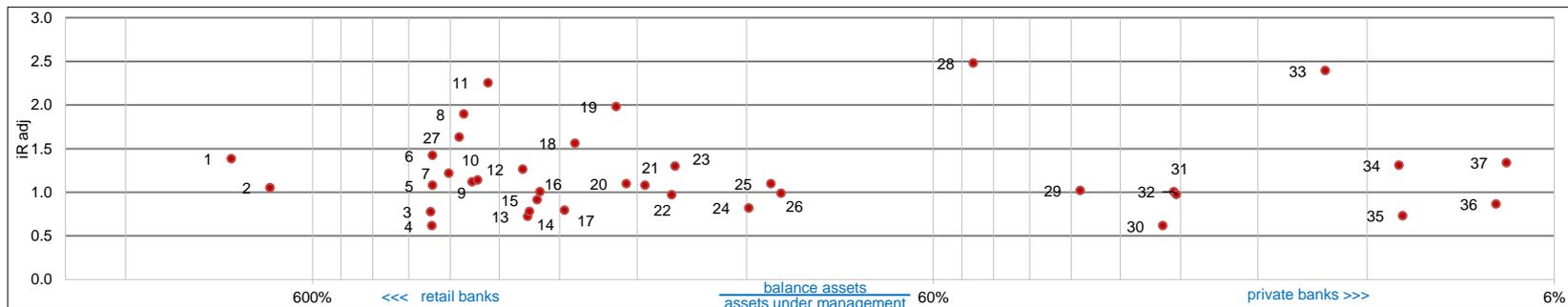
- The “bank complexity” factor (f_{Bank}) was taken into account to allow comparability of banks
- Bank complexity is derived from a profile assessed by the bank itself

$$iR_{\text{adj}} = \frac{\text{IT costs}}{1.1 \times (\text{balance sheet total}) + 0.3 \times (\text{assets under management})} \times \frac{1}{f_{\text{Bank}}}$$

^{*)} Full time equivalents.

Database 2020

IT Cost Coefficient iR_{adj} (Grouped by Business Model)



- The sorting criterion on this page is balance assets divided by assets under management. The horizontal distance is measured in percentages. The closer two banks are, the more similar is their ratio of balance assets to assets under management, and consequently their business model.
- The red dots represent the adjusted IT cost coefficient iR_{adj} :

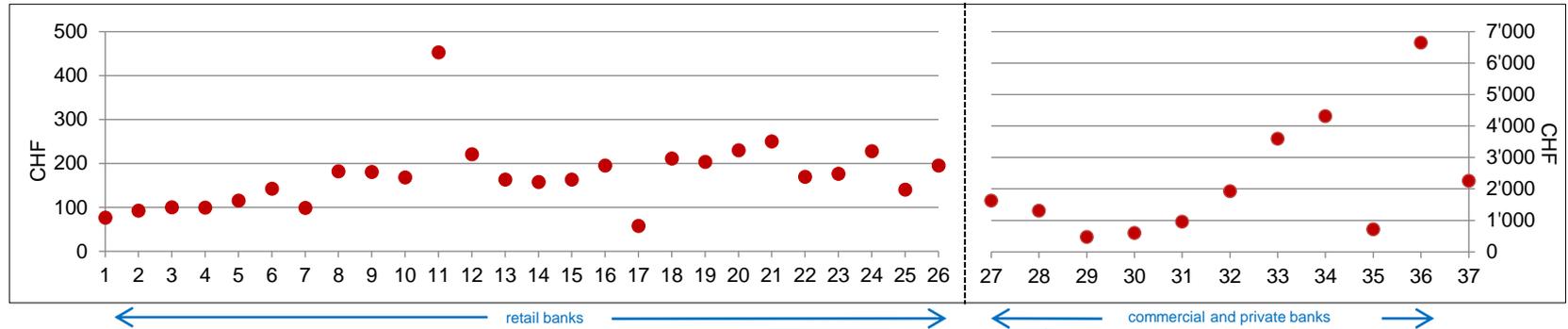
$$iR_{adj} = \frac{\text{IT costs}}{1.1 \times (\text{balance sheet total}) + 0.3 \times (\text{assets under management})} \times \frac{1}{f_{\text{Bank}}}$$

- **15 banks** (10 retail and 5 private banks) reached an iR_{adj} of **1.0 or less** in 2020. The previous year also showed 15 banks (9 retail, 6 private banks) in that range.
- **3 banks have an iR_{adj} of 2.0 or more** (one retail bank, 2 private banks). Compared to the previous year, this was slightly higher and distributed differently; in 2019, 4 banks were above an iR_{adj} of 2.0 (3 retail and one private bank).

- A bank with an iR_{adj} of 2.0 spends 100% more on IT than an ideal-typical bank with an iR_{adj} of 1.0.
- The iR_{adj} values of most banks scatter closely around 1.0, which is the ideal value to aim for.
- The situation with regard to IT costs is becoming increasingly stable; the median fell only slightly from 1.14 (2019) to 1.08 (2020); also the variance is almost stable.

Database 2020

IT Costs per Customer – Retail Banks vs. Private Banks



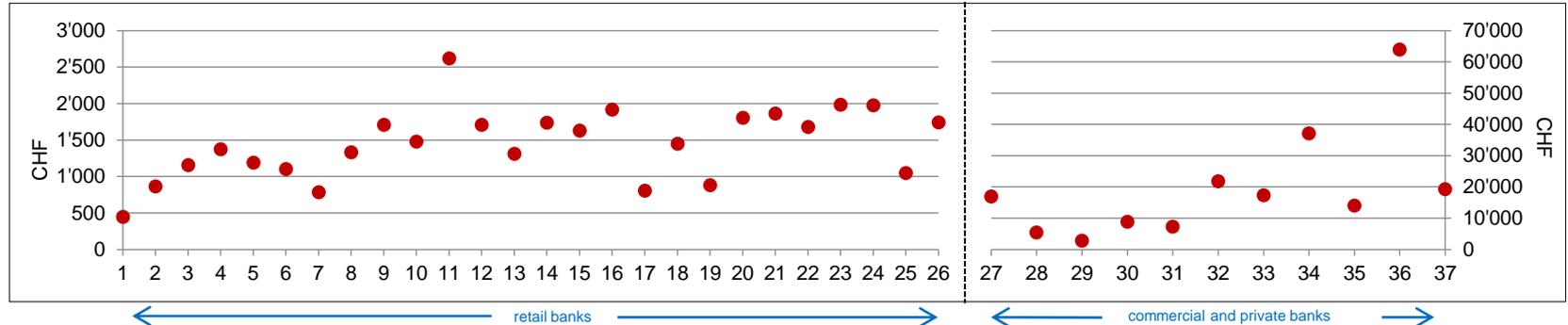
- IT expenses per active customer are significantly lower at retail banks than commercial and private banks: Different scales are therefore used for the two business models.
- The difference between retail and private banks is shown on the revenue side per active customer (see page 8).

- Among **retail banks**, the IT costs per active customer vary between almost CHF 57 and CHF 250, with one exception at CHF 452. The **median of IT costs per customer is CHF 169**.
- Among **private banks**, the IT costs per active customer vary between CHF 475 and almost CHF 4,314, with one exception at CHF 6,648. The **median of IT costs is CHF 1,628** (2019: CHF 1'875).

- For **retail banks**, the median **increased by CHF 6** per customer compared to 2019, despite a slight increase in the average number of customers. This could be a **sign of increasing digitalisation** in the retail sector.
- The participating **private banks** were able to **reduce their costs by CHF 247 per client** but also slightly increased client numbers.

Database 2020

IT Costs per Customer – Retail Banks vs. Private Banks



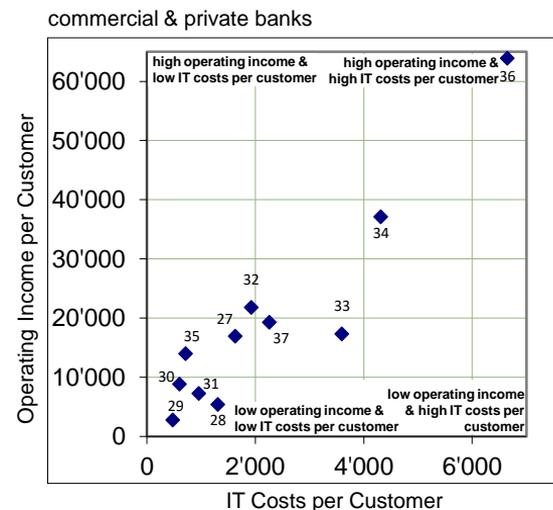
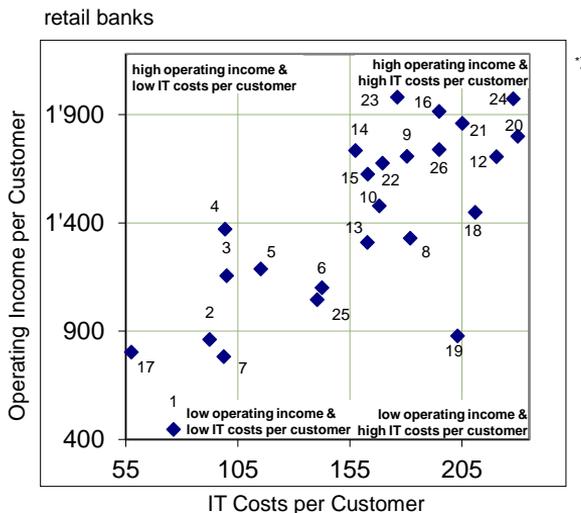
- The operating income per active customer is significantly lower at retail banks than commercial and private banks: Different scales are therefore used for the two business models.
- A consolidated view of operating income and IT costs per customer can be found on page 9.

- Among retail banks, the operating income per active customer ranges between CHF 447 and CHF 2,619. Most retail banks earn between CHF 1,000 and CHF 2,000 per year and active customer. **The median for retail banks is CHF 1,464.**
- Among private banks, the operating income per active customer varies between CHF 2,794 and CHF 37,127, with one exception at CHF 63,912. The spread is as great as for IT costs. **The median for private banks is CHF 16,953.**

- The **development of operating income per active customer remains an important issue** for the banks: While retail banks experienced a 10.5% drop compared to the previous year, the private banks suffered a remarkable 13.1% drop.
- This means that it remains vital to assess **IT investments in digitalization** in terms of their potential to generate **additional income or lower costs per customer**.

Database 2020

Operating Income per Customer - Retail vs. Private Banks



– These charts show operating income in relation to bank IT expenditure, both per active customer.

– The **retail banks** have so far shown a **constant**, but only about **medium-strong correlation** of the two values. In 2020, the value has now increased further to 0.8.

– In contrast, the **private banks** had already previously demonstrated **high correlation**, and **this remained consistently high in 2020 with a value of 0.94**.

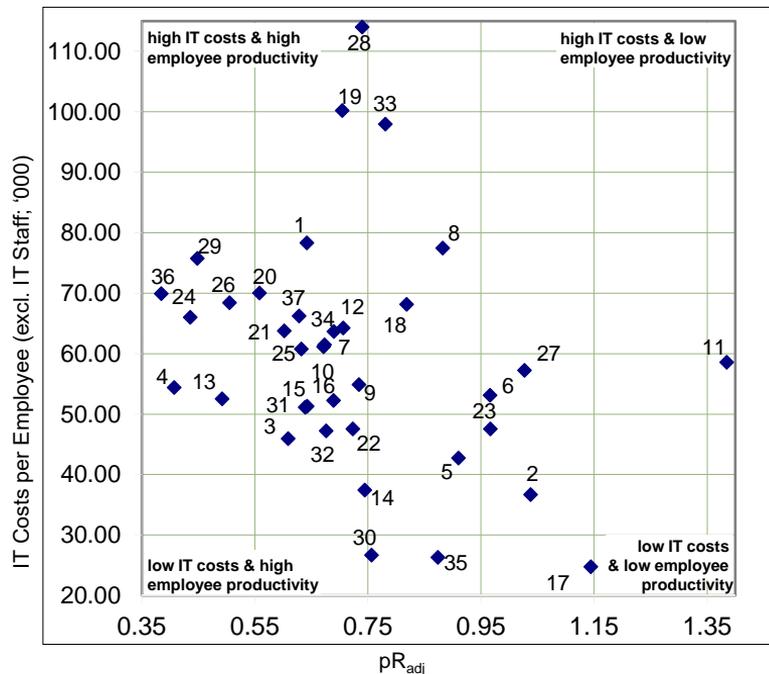
*) Bank ID 11 is out of range.

– In particular, retail banks with **low income** and **high IT costs per active customer** have room to maneuver for strategic and/or tactical improvements.

– If banks with **high IT costs** earn **high operating income** at the same time, an assessment depending on business model and staff costs is required.



Database 2020 IT Costs per Bank Employee in Relation to pR_{adj}



This chart shows **IT costs per bank employee** (excl. IT Staff) in relation to the bank's staff productivity **pR_{adj}**.

In 2020, the banks were able to **further increase employee productivity** and moved closer together:

- Both the median and variance of pR_{adj} were reduced slightly in comparison to 2019.

There is room for strategic and/or tactical improvements for banks that have:

- **High IT costs per bank employee and low staff productivity**
IT investments may not be effective at increasing productivity.
- **Low IT costs per bank employee and low staff productivity**
IT may not receive sufficient management attention and funding to support the bank's operational efficiency.

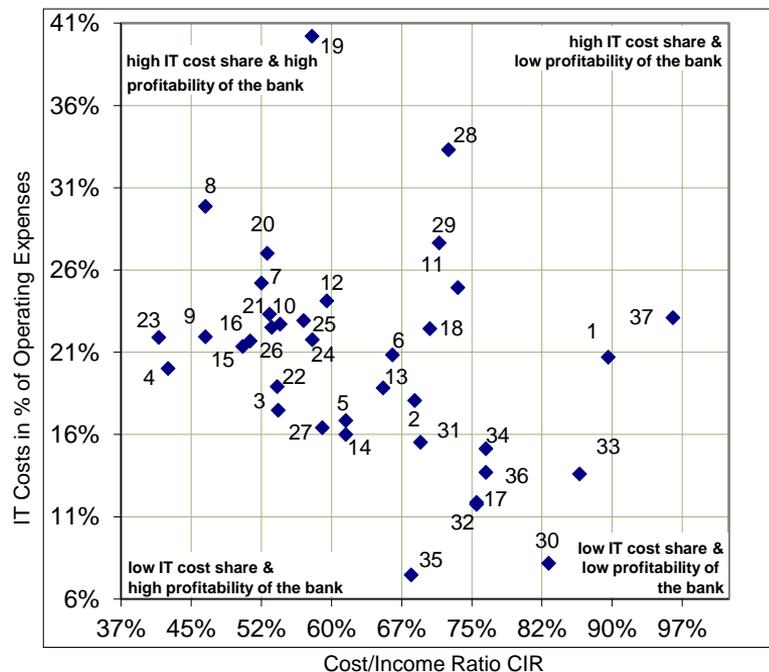
Ideally, automation and digitalization will result in above-average staff productivity that more than compensates for higher IT costs.

Banks with **low IT costs per bank employee** and **high staff productivity** must constantly monitor operational risks and market trends. Caution is still called for with regard to setting up "shadow IT" without governance.

$$pR_{adj} = \frac{\# \text{ bank employees (excl. IT staff)}}{30 \times (\text{balance sheet total}) + 10 \times (\text{assets under management})} \times \frac{1}{f_{Bank}}$$

Database 2020

IT Costs in % of Operational Expenses in Relation to CIR



This chart presents **IT costs as a percentage of operating expenses OPEX** in relation to the bank's **cost/income ratio CIR**.

IT costs as a percentage of operational expenses have continued to increase, with a median of 21.4% in 2020. This can be interpreted as a sign of ongoing digitalization.

There is room for strategic and/or tactical improvements for banks that have:

- **High cost share and low profitability**
Investments in IT do not contribute sufficiently or at all to profitability. The bank may be in the middle of an investment cycle, with IT investments often only influencing profitability after a delay of 3–4 years.
- **Low cost share and low profitability**
Too little investment is made in IT; the bank may be in a consolidation phase. If not, consider making targeted IT investments to increase profitability.

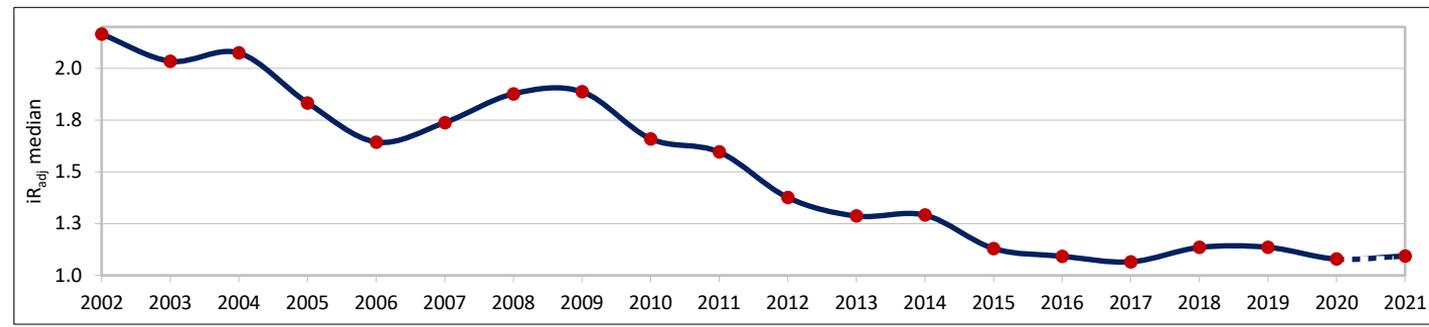
Banks that invest effectively in their IT have a **high cost share**, but are **profitable**.

Banks that have a **low cost share** but are nevertheless **highly profitable** may have increased strategic and operational risks.



Development over Time 2002–2020

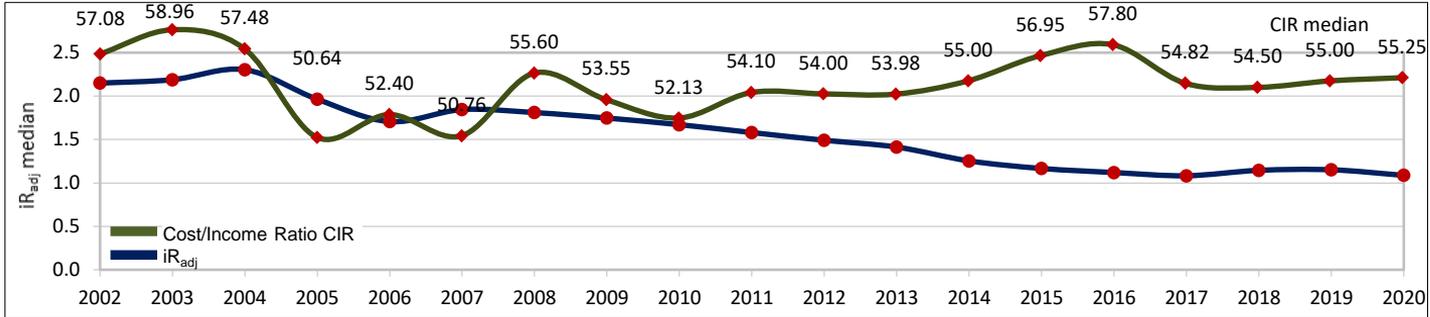
IT Cost Coefficient iR_{adj} – Median of All Participants



- Red dots: IT cost coefficient iR_{adj} calculated as the median for all participating banks, with an outlook into 2021, based on available budget figures.
- 2002 to 2006 and 2009 to 2016 were periods with an accelerated improvement of the iR_{adj} by about 6% p.a. on average. The increase in 2007 and 2008 was the result of the financial crisis.
- The itopia IT cost coefficient iR_{adj} decreases to **1.08 in 2020 after remaining stable at 1.14 in 2019**.
- Based on the reported **budget 2021** figures, we expect a **slight increase in the itopia IT cost coefficient iR_{adj} to 1.09** in 2021.
- With minor fluctuations in between, iR_{adj} will be at the same level on a budget basis in 2021 as in 2016, at 1.09.
- 5 retail banks and 4 private banks have a rising iR_{adj} value compared to 2019, while 21 retail banks and 6 private banks managed to lower their iR_{adj} again in 2020 or kept it at the same level.



Development over Time 2002–2020 IT Cost Coefficient & Cost/Income Ratio – Retail Banks



- The chart shows the development of the cost/income ratio CIR in comparison to the development of the itopia IT cost coefficient iR_{adj} for retail banks.
- Given the delayed effect of IT investment decisions, iR_{adj} is better than more volatile metrics such as IT costs in relation to the cost/income ratio CIR.

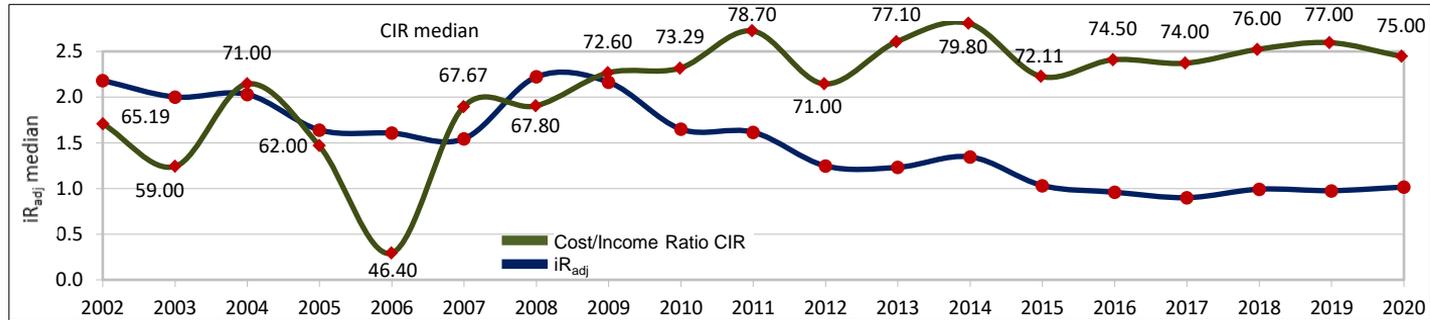
- For retail banks, the IT cost coefficient iR_{adj} and the cost/income ratio CIR were positively correlated between 2002 and 2009 (at 0.70).
- **From 2010 to 2017, iR_{adj} and the cost/income ratio CIR were negatively correlated.**
- From 2010 to 2016, the median CIR of retail banks rose from 52% to almost 58%. In 2017, the trend was broken, and the **CIR median has been between 54.50% and 55.25% ever since.**

- Improvements in the governance of core IT areas had an effect from 2010 until 2017.
- Only **holistic governance models** reduce the risk that increasingly decentralised IT-related decisions will worsen overall costs and productivity.
- The increasing fragmentation of the IT landscape, e.g. through the sourcing of specialised services from a variety of partners, leads to greater complexity and, in the long term, possibly to additional costs and operational risks.



Development over Time 2002–2020

IT Cost Coefficient & Cost/Income Ratio – Private Banks



- The chart shows the development of the cost/income ratio CIR in comparison to the development of the itopia IT cost coefficient iR_{adj} for commercial and private banks.
- Given the delayed effect of IT investment decisions, iR_{adj} is better than more volatile metrics such as IT costs in relation to the cost/income ratio CIR.

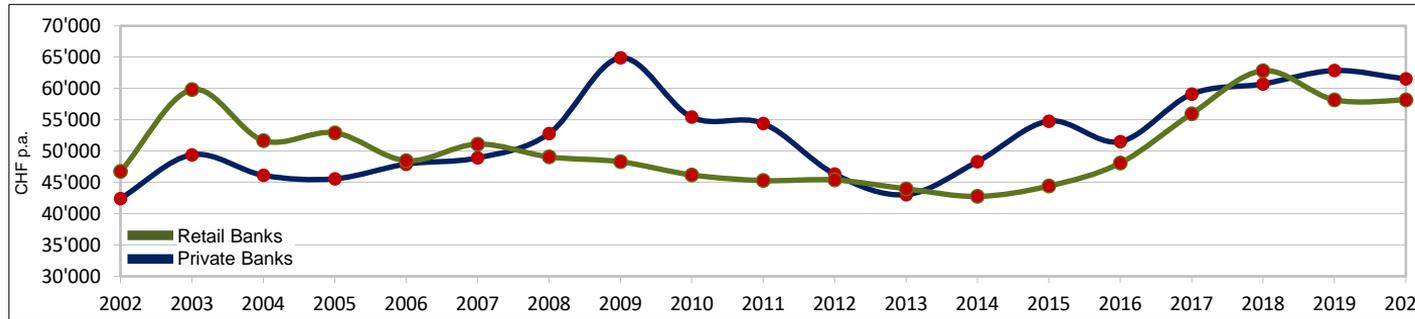
- For private banks, the IT cost coefficient iR_{adj} and the cost/income ratio CIR between 2002 and 2009 were similarly positively correlated, albeit in a looser way.
- Figures for 2020 show that the CIR decreased for the participating banks from 77% to 75%. At the same time, the **IT cost coefficient iR_{adj} increased slightly from 0.98 to 1.02**.

- Private banks had more room for maneuver in terms of improvements in IT governance than retail banks:
IT cost efficiency among private banks improved even more in comparison to retail banks between 2009 and 2015 in particular. Stringently controlled IT helped the banks stabilize their overall profitability.
- The **stable value for iR_{adj} since 2015** may indicate that the focus is now on digitalization and employee productivity.



Development over Time 2002–2020

IT Costs per Bank Employee – Retail vs. Private Banks



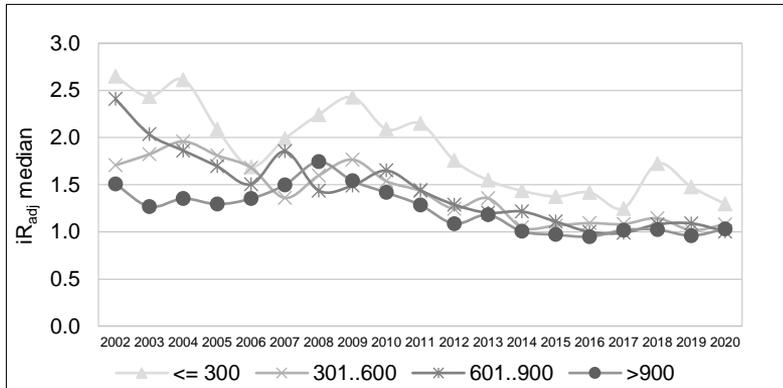
– The chart shows the development of IT costs per bank employee for both groups of participating banks.

- Until 2006, IT costs per bank employee were significantly higher for retail banks than private banks (up to 10%).
- During the period from 2013 to 2018, IT costs per employee increased **for both business models** (retail banks: +31%, private banks: +41%).
- **In 2020, the retail banks again invested more in IT per employee (+1.4%), while the private banks held back (-2.1%).**

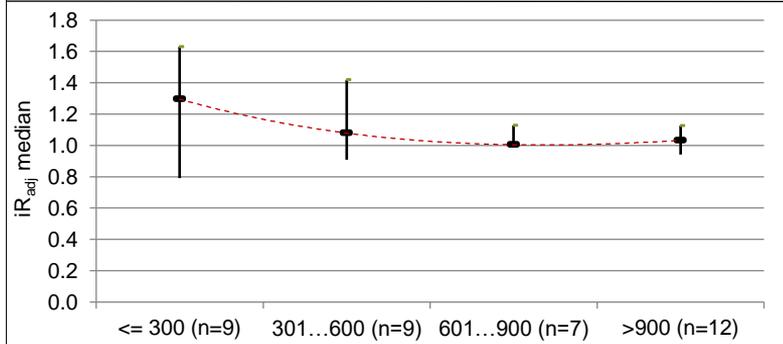
- The **increased costs per bank employee** at retail banks could be an effect of the ongoing digitalisation. However, a **majority of institutions also have increasing employee numbers**, which contradicts expectations.
- Private banks with a lower number of employees (on average) will have to continue bearing higher base costs per employee. However, the difference is declining.



Development over Time 2002–2020 IT Cost Coefficient iR_{adj} in Relation to Bank Size



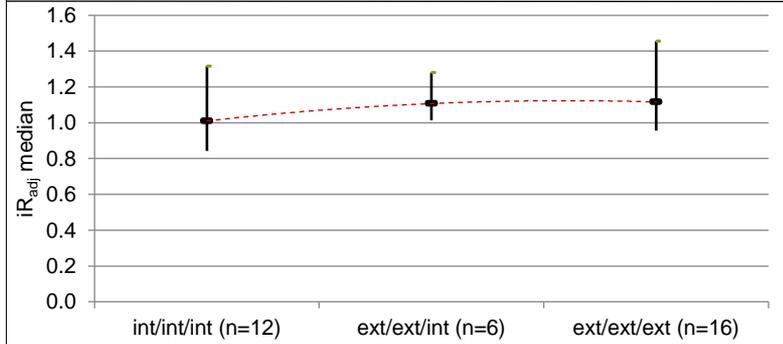
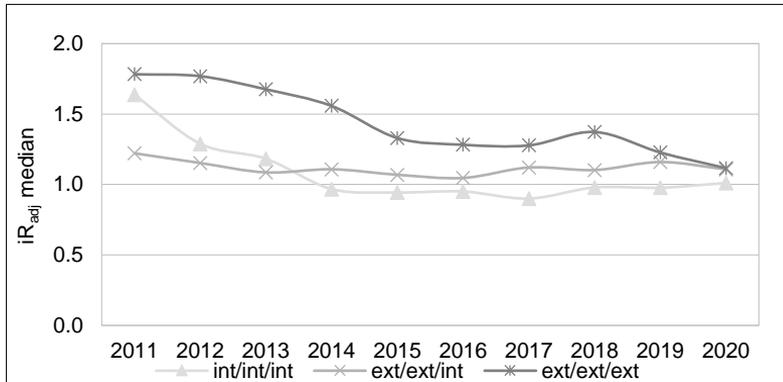
- The chart shows the development of the itopia IT cost coefficient iR_{adj} for banks of different sizes:
- Banks with up to 300 full-time employees
- Banks with 301 to 600 full-time employees
- Banks with 601 to 900 full-time employees
- Banks with over 900 full-time employees



- **Small banks managed again to reduce the high figure of 1.48 from 2019, achieving an iR_{adj} of 1.30.**
- Banks with 301–600 employees have lost some of the improvements from the previous year and have an iR_{adj} value of 1.08.
- **Banks with 601–900 bank employees were able to improve their iR_{adj} level to exactly 1.00 (previous year: 1.09).**
- The largest banks had to accept a slight deterioration and lost their leading position with an iR_{adj} of 1.03.
- **Large banks seem to manage to offset the costs of their rather complex structures and processes with economies of scale.** The higher proportion of internal IT also had a positive effect on total IT costs. It is also worth bearing in mind that some of the large banks experience a dampening effect due to the inclusion of f_{bank} in the calculation of iR_{adj} .
- While **banks with more than 300 employees all achieve similar IT cost efficiency**, the figures for **small banks show the limits of economies of scale for current sourcing models.**



Development over Time 2002–2020 IT Cost Coefficient iR_{adj} in Relation to IT Sourcing Policy



- The charts show the influence of the IT sourcing model on IT cost efficiency.
- They differentiate between three areas that can be covered internally or externally:
 - Area 1: Infrastructure operations (ITO)
 - Area 2: Application operations (AO)
 - Area 3: Application management (AM)
- Three sourcing model classes are shown.
 - **Entirely internal sourcing of IT** (int/int/int)
 - **External infrastructure and application operations** (ext/ext/int)
 - **Complete outsourcing** (ext/ext/ext)
- 3 banks have other IT sourcing policies with low occurrences and are not included for statistical reasons.

- The **class of banks with entirely internal IT remained stable in 2020 with an iR_{adj} value of 1.01** (previous year 0.98).
- The **low variance in external infrastructure and application operations and internal application management** continues to show advantages in terms of cost management (reduction of iR_{adj} from 1.16 to 1.11 in 2020).
- Banks with **complete external sourcing of IT services** have improved from 1.23 to 1.12. This is an indication of **improved maturity in external application management**.

Data Management & Analytics Survey of Swiss Financial Survey Providers 2020

Report based on effective data 2020 and planning/trend 2023

Zurich, 31 May 2021

benjamin.schlup@itopia.ch

reto.maibach@itopia.ch



The three sections of data collected for the 2020 Financial Services Survey

The survey collected data on **effort** (personnel and material costs), the **maturity** of DM&A capabilities and the **adoption** of DM&A in the different benefit areas.

1 Effort

Data collection of personnel and material costs in IT and business (effective and trend 2023)

*Optional:
Breakdown Personnel, Sourcing,
Applications, Infrastructure,
Projects*

2 Maturity

Self-assessment of the maturity level of skills in the various DM&A dimensions (current and target 2023)

3 Benefit

Review of the adoption of DM&A in different benefit areas (current and planned 2023)



DM&A Personnel and DM&A Material and personnel costs



In **80%** of the banks, **half of the staff** assigned to DM&A is recruited **from the business** and **half from IT**.



Across all banks, an **average of 1.2% of bank employees work in DM&A**. However, the differences are considerable: a quarter of the participating institutions are below 0.6% or above 2.0%.



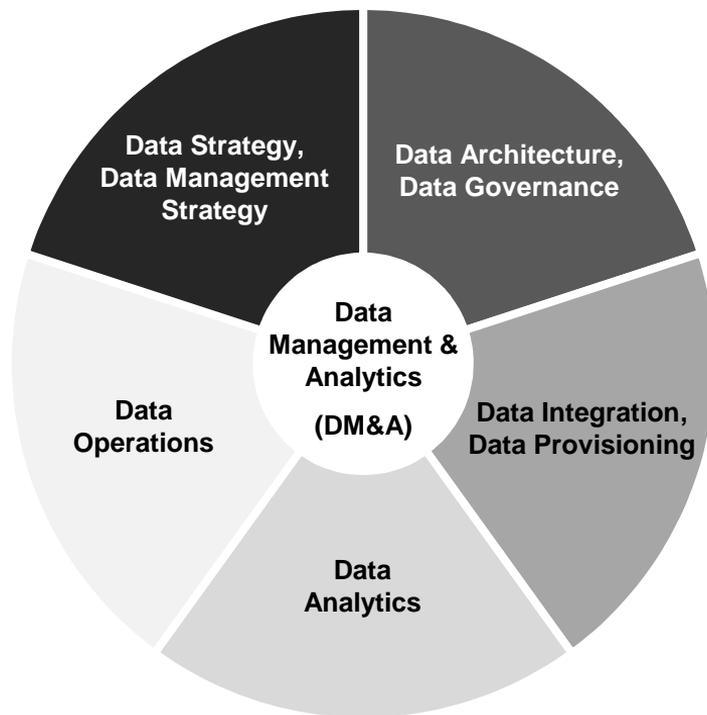
90% of the banks plan to increase the maturity level in all DM&A dimensions, 70% of the banks also take into account a corresponding **increase in current material and personnel costs**.



DM&A expenses account for an **average of 1.6% of total operating expenses at larger banks** (> 900 employees), and **0.6% of total operating expenses at small banks** (<= 300 employees).



The five DM&A dimensions for the maturity survey



The maturity of the capabilities in the different DM&A dimensions is assessed with one of 5 maturity levels.

Examples of benchmarks for the maturity level of "Data Integration, Data Provisioning":

- 1 Mainly isolated applications without comprehensive data integration
- 3 Essential data integrated and centrally accessible in real time
- 5 Comprehensive availability of internal data and systematic access to external data for the benefit of all processes in real time

The majority of banks indicate that they will increase the focus and, accordingly, the maturity level for all five DM&A dimensions by 2023



itopia

corporate information technology

60% of banks are **currently** positioned in the **midfield** in terms of their current maturity level across all DM&A dimensions, i.e. **maturity level 3: mainstream**.

55% of the banks have the ambition to significantly improve their capabilities in all DM&A dimensions by 2023 and thereby **increase the DM&A maturity level by one level**.

The **top 5 banks** in terms of **current use of DM&A** consistently have a **maturity level of 3 to 4** for each DM&A dimension. This is particularly true for the DM&A dimension "**Data Architecture & Governance**", for which **45%** of the banks currently only have a **low maturity level of 1 to 2**.

Percentage **distribution** of the 29 participating banks by DM&A **maturity level** across all five DM&A dimensions



The 8 benefit areas for assessing the use of DM&A

The use of DM&A was self-assessed for each of the 8 benefit areas or value dimensions and evaluated using a uniform evaluation scale (see slide 7). The current estimated use and the planned use of DM&A for 2023 were evaluated.



Strategic decision-making and strategic leadership



Financial management



Product management (incl. development of data-based products and pricing)



Production

(Control and optimisation of the operational business, incl. operational risk management)



Marketing and distribution



Service and support



Support functions (HR, administration, purchasing)



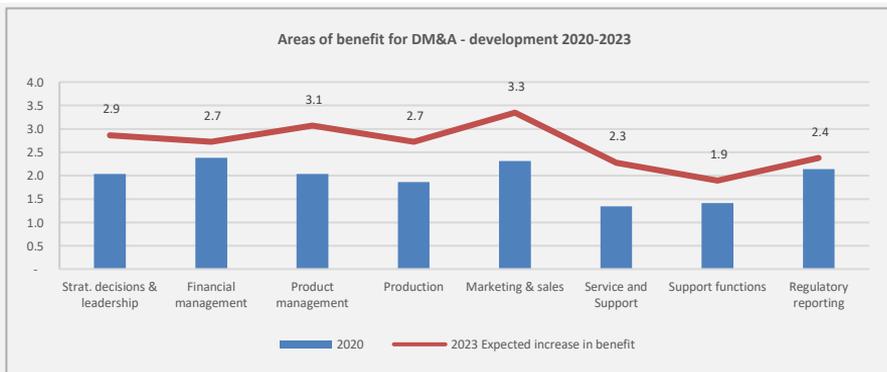
Regulatory reporting

Banks plan to significantly increase use of DM&A in all 8 benefit areas by 2023

90% of the participants **plan** to increase the use of DM&A, i.e. to **increase the mean value from 2.0 to 2.8**. The **top 5 banks** regarding the use of DM&A even aim for an **average of 3.5 to 4.2** across all benefit areas.

The banks' target of **increasing the use of DM&A from 12% to 100%** can only be realised with a corresponding maturity level (**level 3 to 4**) in all DM&A dimensions. For **30%** of the banks, based on the current DM&A maturity level, **the ambitious goals are probably very difficult to achieve**.

The benefit area "**Service & Support**" is currently **strongly neglected**. **60%** of the banks gave the **lowest rating (1)** for this, which makes a functioning "closed loop" of marketing, sales, service & support seem impossible.



Rating scale for the use of DM&A in the different benefit areas:

- 1 Minimal, complementary support through ad hoc data analyses
- 2 Systematic support through reporting
- 3 Reporting supplemented with simple predictive models
- 4 Ad hoc use of advanced analytical tools (based on AI approaches, Big Data, etc.)
- 5 Systematic use of advanced analytical tools

Comments from larger participant banks in particular show challenges and areas of focus

"A comprehensive data strategy at the group level is required to make significant investments."

Large Cantonal Bank

"Data quality is an overarching issue."

Large Retail Bank

"Tailor-made products are to be created [...]; upselling/cross-selling, the use of Big Data and AI are to be implemented."

Large Cantonal Bank

"Currently no real-time or near-realtime data, but this will be necessary in the future."

Large Retail Bank

"Processes in the DWH [...] often still require manual intervention".

Medium-sized Cantonal Bank

"Clustering of customer groups and targeted customer selection using Machine Learning..."

Large Cantonal Bank

Thank you.



Contact us

itopia ag
corporate information technology
technoparkstrasse 1
ch-8005 zürich

tel. +41 44 355 56 00

www.itopia.ch

