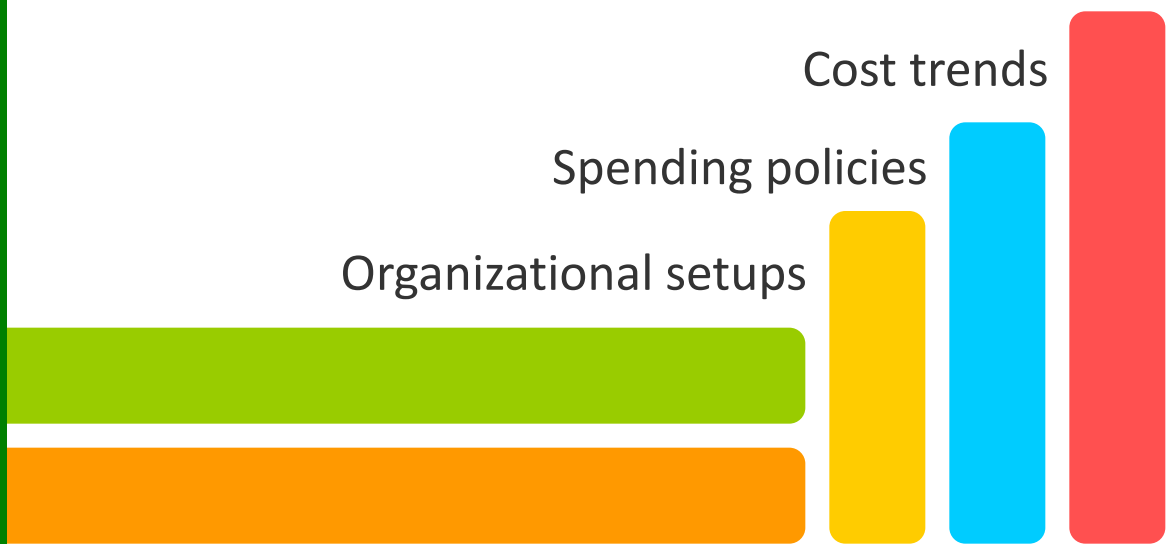
CIPA | Convenzione Interbancaria per l'Automazione

ABI Associazione Bancaria Italiana

Survey on IT in the Italian Banking Sector

Financial and Organizational Profiles

Financial year 2024



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Overview

The 'Survey on IT in the Italian Banking Sector', published annually by CIPA (Interbank Convention for Automation) and ABI (Italian Banking Association), provides an analysis on the financial, organizational and technological aspects of Information and Communication Technology in the banking sector. In addition to banking operators – for whom it provides benchmarks and reference points for evaluating IT choices – the survey is aimed at all those who, for various reasons, are interested in the evolution of IT in the banking sector.

The Survey consists of two separate surveys.

The first, which this report focuses on, is dedicated to an examination of the financial and organizational profiles of IT and analyses the trend and distribution of IT costs and investments, the main purposes of IT spending, the organizational structure and sourcing methods, technological innovation initiatives, and the composition and training of IT staff.

The second, which in each edition focuses on a specific topic, addresses technological and security aspects and aims to analyse IT choices in terms of the methodologies, tools and innovative technologies used in customer interactions, to support internal processes as well as any related IT security issues.

The Survey reports are published on the CIPA website (www.cipa.it).

The CIPA Chairmanship would like to express its appreciation for the contribution made by the banking groups and banks that participated in the Survey and to thank the members of the working group that conducted the Survey and prepared this report.

CHAIR OF CIPA
(Banca d'Italia)

Giuseppe Zingrillo

DEPUTY CHAIR OF CIPA
(ABI)

Barbara Pelliccione

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CIPA SURVEY

FINANCIAL YEAR 2024

RESULTS OF THE 23 BANKING GROUPS

€6.3 billion IT COSTS (TCO)

€2.1 billion IT INVESTMENT
- **€1.8 billion** in software
- **€290 million** in hardware

€366 million IT SECURITY (cash outflow)

247,587 EMPLOYEES
- **12,887** in IT

CLOUD COMPUTING

3.4% of IT FTEs

Most used models

DIGITAL EURO

AREAS OF GREATEST FINANCIAL COMMITMENT

- Collections and payments
- Traditional banking services
- Security management
- IT systems management

OPPORTUNITIES

- New services for customers
- Revision of IT peripheral systems
- Review/optimization of infrastructure and applications

CIPA SURVEY

Summary

The sample for the 'Survey on IT in the Italian banking sector – Financial and organizational profiles – FY 2024' consists of 23 banking groups and 32 banks, two of which do not belong to any group or belong to groups that did not participate in the Survey.

Banking groups

The 23 participating groups account for 92 per cent of all Italian banking groups in terms of total consolidated assets and are classified by size as six Main, nine Medium and eight Small groups. Operationally, most of them mainly carry out retail banking activities, which on average constitutes 63.4 per cent of their total activity.

TCO

In 2024, the total cost of ownership - TCO (current spending plus depreciation/amortization) - incurred for the IT sector by the 23 participating banking groups amounted to €6,334 million.

Based on an analysis of trends across a constant sample of 19 groups, the overall TCO for FY 2024 increased by 4.3 per cent compared with the previous year. For most groups, the increase in TCO is due to the launch of new projects and to rising prices for IT products, services and consumption, while the main factors contributing to its reduction are related to the suspension or postponement of IT activities and to cost savings in IT products, services and consumption. A decrease in TCO of 1.8 per cent is expected in 2025.

The breakdown of TCO by production factor shows that third-party services account for more than half of IT costs (54.5 per cent); the remaining share is mainly divided between licensed software (24 per cent), internal staff (12.6 per cent) and hardware (7 per cent). The analysis of the evolution of TCO for 2020-2024, with a forecast for 2025, shows significant growth for licensed software in 2023 and an even more significant leap in 2024. The forecasts for 2025 see a decrease or substantial stability in costs for all production factors.

The breakdown of TCO by thematic area confirms that most IT costs are concentrated in the development and maintenance of Applications (50 per cent) and in the Data center (22.1 per cent). In the latter area, the costs for the Server farm (56 per cent) are higher than for the Mainframe (44 per cent). Analysing the trend shows that, there are significant changes for adaptive and corrective maintenance and for the Server farm in the FY 2024, with an increasing trend, and for the Mainframe, with a decreasing trend.

IT Cash outflow

The IT cash outflow (current spending plus investment) has a similar breakdown to TCO. Current IT spending exceeds investment in all areas.

IT Security accounts for an average of 4.9 per cent of the IT cash outflow. This percentage includes an estimated share (0.7 per cent), reported by those groups that are unable to separate these costs analytically. The trend in TCO and cash outflow relating to IT Security, for the constant sample, has been on the rise since 2022.

In absolute terms, the total IT cash outflow allocated to compliance interventions by 21 groups amounted to €780.9 million. IT compliance initiatives account for an average of 11.1 per cent of the IT cash outflow. The largest percentages of this expenditure are allocated to adjustments required

by the supervision of Banca d'Italia/ECB/EBA/ESMA, to digital operational resilience, to financial markets and to payment services regulations. There has been an upward trend since 2022.

Breaking down the IT cash outflow by functional area, the main portion is employed in Operations processes (41.1 per cent), followed by support process (28.6 per cent), marketing, sales and customer service (16.7 per cent) and governance (13.7 per cent). 67.2 per cent of the IT cash outflow is committed to maintaining current operations (run) and the remaining share (32.8 per cent) is dedicated to initiatives aimed at improving/innovating banking operations (change). The share of the IT cash outflow dedicated to change tends to increase as the size of the groups increases.

On average, the IT cash outflow for public cloud services is 4.1 per cent, in line with the 2023 figure. The forecast trend for the 2025-2026 period is increasing for 16 groups.

The average percentage of total IT cash outflow dedicated to open banking appears to be low, standing at 0.5 per cent. Looking at the forecast trends, nine groups, especially those already active in this area, expect an increase in their percentage share in the 2025-2026 period.

IT investment and technological innovation

IT investment, which totalled €2,140 million in 2024, is mainly concentrated in the Applications area (67.7 per cent), followed by Peripheral Systems (16.4 per cent) and the Data center (10.3 per cent). 73.3 per cent of this investment relate to Software and 26.4 per cent to Hardware. For 2025, the 23 groups expect a 12 per cent increase in the total IT investment compared with 2024. On average, in 2024, 20 groups allocated 3.9 per cent of their IT investments, €2.1 million in absolute value, to initiatives relating to innovative technologies (artificial intelligence, application programming interfaces - API, robotic process automation - RPA, distributed ledger technology - DLT, quantum computing).

Financial indicators

The chapter on financial profiles concludes with a set of indicators, calculated as a ratio of banking groups' main income statement to the operating figures. These indicators are presented in three-year time series, using a constant sample, by size class and by IT sourcing model. In the years 2022-2024, among the main indicators, there was an increase in the ratio between IT costs and total assets, between IT cash outflow and the number of employees, between net profit and IT costs, and between IT costs and the number of loan and deposit accounts. Conversely, the ratio between operating costs and operating income is affected by a progressive reduction over the same period.

IT sourcing

The analysis of organizational profiles shows that seven groups handle infrastructures and applications in-house, in line with the Insourcing model, seven fall under the Facility management model – which involves the direct management of applications and the outsourcing of Data center infrastructures to third parties – and nine in Outsourcing for the Data center and applications. The Main groups tend to fall more into the Insourcing model, the Facility management model prevails among the Medium groups, while Small groups are largely oriented towards IT management entrusted to third parties.

Cloud computing

Decentralized systems, individual equipment, and applications are mainly handled internally. POS, data networks and fixed telephony, and ATMs/kiosks are areas where IT activities are mainly outsourced. Cloud computing, especially the public model, is most frequently adopted for infrastructural applications, personnel management, procurement and telephone banking. In the public cloud, the SaaS model prevails, as reported by 18 groups; 12 use IaaS/PaaS models. The private cloud, adopted by a limited number of groups, is used across all application services, including Operations services, which are characterized by a higher level of criticality; private cloud usage is broadly balanced between on-premises and off-premises solutions. There is some use of hybrid cloud, generally on a limited scale,

with the exception of ICT governance. Finally, it emerges that, overall, 11 groups only use the public cloud, one only uses the private cloud, and the remaining groups rely on more than one of these models.

Groups allocate an average of 3.37 per cent of their total IT FTEs (full-time equivalents) to the cloud across various areas (governance, centre of expertise, infrastructure, development, management, etc.); the highest percentage is recorded for the Outsourcing groups (5.2 per cent).

For contracts, regarding the possibility of negotiating ad hoc contractual clauses in the drafting of contracts with cloud service providers (CSPs), four groups believe they have (or have always had) it, four believe they do not (or have not had it). One group reports that it has had the opportunity to negotiate them in most cases, while most groups (11) report that they have only negotiated such clauses in some cases. The liability model defined in the contracts is considered substantially adequate in terms of balancing responsibilities between the provider and the bank, including in cases where negotiation capacity is limited.

The definition of an exit strategy from the public cloud is another topic under analysis: it emerges that six groups have a general exit strategy, 12 report that they define it in relation to individual initiatives and two groups do not have an exit strategy.

The groups reported about 30 CSPs and, among these, the highest frequency concerns hyperscalers. Compared with concentration risk, the use of the public cloud for the delivery of IT services involves the use of one or more CSPs: on average, groups use 3.5 CSPs for the SaaS model and 1.8 CSPs for IaaS/PaaS.

Elements of IT Security

From a human resources perspective, groups with at least 50 IT employees allocate an average of 6.7 per cent of their IT FTEs to IT Security. This average rises to 7.6 per cent if technical staff dedicated to Business Continuity and Disaster Recovery are included. There is a higher percentage of technical staff allocated to IT Security, almost double, for groups with fewer IT employees and that use the Outsourcing model, compared with those with a larger number. This finding underscores the banking sector's strong focus on cybersecurity. In the field of security governance, the average level of skills (self-assessment score, the value of which ranges from a minimum of zero to a maximum of five) recorded in 2024 is 3.7 and, for the years 2025-2026, the need to increase this level to 4.2 is perceived, with 52 per cent of groups reporting a skills gap to be addressed. There is a smaller skills gap for operational security management than for security governance. In terms of technological innovation applied to IT Security, almost half of the groups report significant innovation initiatives in 2024 and five plan to launch them in the years 2025-2026.

FinTech

In 2024, all participating groups collaborated in various ways with companies operating in FinTech. Payment, personal financial management and account aggregation services are the most affected, in which more than 60 per cent of the groups are involved. Among the technologies in use are artificial intelligence, RPA and open APIs. The largest IT investment in this area is mainly in payment services, credit, regulation management and financial investment services.

Digital Euro

This edition aims to provide a qualitative forecast of the financial commitment that would have to be sustained by banking groups to prepare their information system for the introduction of the digital euro and its full-scale operation. It also focuses on the IT opportunities envisaged by those groups.

A total of 12 groups contributed to the analysis of the impacts on banking processes, by quantifying forecasts. Financial impacts affect all processes, but are going to be particularly significant for collections and payments, security management, information systems management and customer service.

From a strategic point of view, the 12 groups report that they see an opportunity to provide new and optional services to customers; for more than half of them , the offer revolves around multiple forms of payment services - primarily P2P, offline and public payments - investment/insurance services and e-wallets. Some groups also plan to carry out reviews and optimization of their IT environment.

Open banking The use of open banking is rather limited and takes place mainly to create account integration services and services on the open API marketplace, a figure also reflected in the forecast, for 2025-2026.

Technological innovation All the thematic areas are affected by significant technological innovation initiatives, either in progress or completed in 2024. Specifically, more than half of the respondents report initiatives involving the Server farm and the sector of development and evolutionary maintenance. In the field of banking processes, the area most affected by innovation is that of Operations processes. Initiatives aimed at improving existing products and services are the most common across all areas.

For 2025-2026, more than one fifth of the groups report initiatives that will concern decentralized systems and individual equipment, the Server Farm, Data networks and fixed telephony and IT security.

IT staff IT employees represent an average of 5.3 per cent of the total workforce, a parameter that has been growing steadily in recent years. The lowest figures relate to Small groups (4.1 per cent), a figure attributable to their greater reliance on outsourcing IT services.

Among IT staff, the largest age group is between 50 and 59; most IT professionals belong to management staff (54.5 per cent) and men are in a clear majority compared with women, who represent 28.9 per cent of the entire IT staff. The female share is higher in the younger age groups, gradually rising from 14.3 per cent for the over 60s to about 35 per cent for the under 40s.

Some 56.8 per cent of IT resources are allocated to the area of Applications, followed by transversal functions (21.8 per cent), the Data center (10.2 per cent), IT Security (6.7 per cent) and residual shares for peripheral and transmission systems.

IT Skills & Training With regard to technical training, by averaging the values declared by 15 groups with at least 30 IT employees, it can be observed that, in 2024, 70.1 per cent of IT employees participated in company-funded training initiatives, attending an average of 3 training days per year, at an average cost, for groups, of €266 per person-day.

In terms of skills, traditional IT profiles are associated with medium-high levels, which drop significantly in the new technology sectors, with the exception of sustainability and green IT, AI and data science. For 2025-2026, there is a need to strengthen the level of competence in all IT profiles, particularly for AI and data science, cloud management, IT governance, security governance and DLT. To strengthen IT skills, a greater propensity of groups to train their staff, rather than to hire or use external resources, is confirmed again in 2024. Hiring is more frequent in the areas of security governance and AI and data science.

Remote work The remote and on-site hybrid working model has been in place since 2024 for 21 out of 22 respondent banking groups, with different formulas and approaches from group to group. For most of them, the percentage of days worked remotely compared with the total working days is higher for IT staff than for other employees. This percentage, on average equal to 34 per cent for IT employees, drops to 18 per cent for the rest of the staff.

Workstations

Data reported by 22 groups show that, on average, each employee has 1.3 standard workstations at their disposal. On average, 78.5 per cent of the workstations are owned by the banking group and 21.5 per cent are leased. About two thirds of the workstations of 21 groups are laptops, about 30 per cent are desktop devices and a residual share is made up of virtual workstations. The upward trend in the share of laptop devices has continued over the last three years.

Banks

The 32 banks that participated in the Survey, analysed on a standalone basis with no other group components, represent 62.8 per cent of the Italian banking sector in terms of intermediated funds.

The analysis of the TCO breakdown by thematic area shows that 56.5 per cent of costs are absorbed on average by Applications and 18.9 per cent by the Data center, followed by Peripheral Systems (10.7 per cent), Transmission Systems (5.4 per cent) and IT Security (4 per cent). As the size increases, banks indicate higher percentages for the Data center and the IT Security.

Analysing TCO by production factor, the largest portion is allocated to third-party services on average (66.6 per cent).

Some 72 per cent of IT investments made by banks in 2024 are allocated to Software and 25.7 per cent to Hardware. The total amount of investment planned for 2025 is up 13 per cent from 2024.

Retail banking is the main business activity (56 per cent), followed by corporate and investment banking and private banking. About three quarters of the responding banks operate in multiple business activities, while the others operate in a single sector.

The prevailing model for IT sourcing is Outsourcing: 66 per cent of banks entrust the management of their Data center and Applications to one or more suppliers. 16 per cent of banks adopt the Insourcing model, while 19 per cent outsource Data center infrastructures and maintain the management of the Applications internally (Facility management).

In relation to the Data center, almost one fifth of the banks own it and take care of its development/evolution and corrective maintenance/day-to-day management. The majority (31-34 per cent) relies on group entities within the CIPA perimeter, another significant share (25-28 per cent) uses vendors and 13 per cent rely on bank consortiums.

With regard to Applications, about one quarter of banks take direct care of both development and management, 31 per cent outsource these activities within the CIPA perimeter, while a significant share rely on external providers, primarily IT vendors.

On average, IT staff account for 5.2 per cent of the bank’s total workforce.

Evolution of the Italian banking sector[1]

In 2024, credit dynamics in Italy remained weak, albeit with signs of recovery favoured by the gradual easing of monetary policy. Loans to businesses continued to contract, falling by 2.6 per cent, mainly due to weak demand, attributable to lower investment financing needs and still high interest rates. Loans to households, on the other hand, returned to growth (+1.1 per cent in December compared with a year earlier), mainly driven by the increase in loans for house purchase (+1.3 per cent), attributable to the reduction in the general level of interest rates. In the last quarter of 2024, the flow of new non-performing loans in relation to the size of performing loans increased slightly (+1.4 per cent), driven by corporate loans (+2.4 per cent).

Total bank funding in 2024 decreased by 2.6 per cent, mainly due to lower liabilities to the Eurosystem. In the wholesale component, the use of the foreign interbank market and the issue of bonds increased; the retail component returned to growth, due to the increase in deposits from residents (+1.8 per cent). The average cost of outstanding funding fell to 1.4 per cent, reflecting the reduction in interest rates. Interest rates on deposits fell slightly, to 0.7 per cent (0.8 per cent in 2023), while those on bonds rose slightly, to 2.8 per cent (from 2.7 per cent).

Banks' profitability in 2024 further improved. Italian banks' annualised return on equity (ROE) rose to 12.8 per cent. The main contribution was the increase in commissions (+9.5 per cent), in particular those deriving from asset management, and to a lesser extent the further increase in net interest income (+3.7 per cent). Operating income increased by 7.2 per cent, operating costs increased by 2.5 per cent and personnel expenses by 5.1 per cent due to the renewal of the employment contract. The ratio of operating costs to operating income (cost-income ratio) fell to 53.2 per cent (from 55.6 per cent in 2023). The decline in net loan loss provisions (-6.4 per cent) also contributed to the improvement in profitability, albeit marginally.

The digital transformation process of the Italian banking sector continues and its efficiency continues to improve thanks to growing investment in innovation. The use of online transfers reached 93 per cent of total transfers, with a higher share among companies (96 per cent) than households (91 per cent). The share of customers with home banking contracts has also gradually risen to 73 per hundred inhabitants (68 in 2023). There is also some use, albeit by a limited number of banks, of new technologies – including artificial intelligence – for creditworthiness assessment, potentially improving access to credit for smaller and more innovative companies.

[1] Source: Banca d'Italia, Annual Report for 2024.

Samples and methodological notes

The 'Survey on IT in the Italian banking sector - Financial and organizational profiles - FY 2024' included 23 banking groups and 32 banks, two of which did not belong to groups or belonged to groups other than those participating.

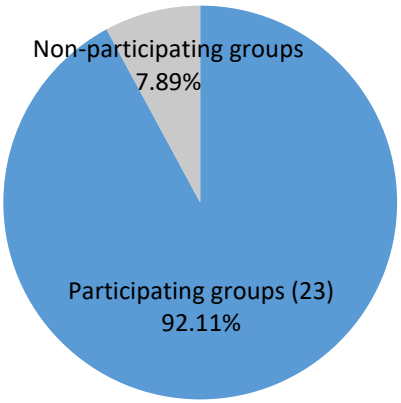
The analyses presented in the Survey, unless otherwise indicated, refer to the so-called **CIPA perimeter**.[2]

The survey uses two samples: one covering banking groups (Chapters 1 and 2) and one covering individual banks (Chapter 3).

Sample of banking groups

The 23 participating groups represent 92.11 per cent of all Italian banking groups in terms of total assets[3] (Figure 1).

Figure 1 - Representativeness of participating banking groups by total assets



For the purposes of this Survey, banking groups are classified according to two criteria: by operating size and by IT sourcing model.

The classification by operating size is based on the group's total assets, including all its entities (banking and non-banking) subject to prudential regulation, as derived from consolidated

[2] The CIPA perimeter concerns the national perimeter of banks and groups, for the latter limited to banking entities and ancillary services undertakings, IT and non-IT, supporting banking activities.

[3] Total assets as of December 31 of the reporting year refer to the banking group, including all its banking and non-banking entities subject to prudential regulations (e.g. banks, ancillary services undertakings, financial companies, SIMs, foreign branches) according to consolidated supervisory reporting requirements.

supervisory reporting. According to this criterion,[4] the sample for FY 2024 is divided into six Main groups, nine Medium groups and eight Small groups (Table 1).

Table 1 - Classification of banking groups by size

		Main	Medium	Small
01005	Banca Nazionale del Lavoro		X	
01030	Monte dei Paschi di Siena	X		
02008	UniCredit	X		
03032	Credito Emiliano – CREDEM		X	
03062	Mediolanum		X	
03069	Intesa Sanpaolo	X		
03075	Banca Generali			X
03104	Deutsche Bank		X	
03311	Sella		X	
03395	illimity Bank			X
03440	Banco di Desio e della Brianza			X
03599	Cassa Centrale Banca		X	
05034	Banco BPM	X		
05036	Banca Agricola Popolare di Sicilia			X
05262	Banca Popolare Pugliese			X
05387	BPER Banca	X		
05696	Banca Popolare di Sondrio		X	
05856	Banca Popolare dell'Alto Adige			X
06085	Cassa di Risparmio di Asti			X
06230	Crédit Agricole Italia		X	
06270	La Cassa di Ravenna			X
08000	ICCREA Banca	X		
10631	Mediobanca		X	
	Total	**6**	**9**	**8**

The classification by IT sourcing model is based on the indications provided by the parent company about the prevailing way of managing the group's infrastructures and applications.[5] According to this criterion, the sample for FY 2024 is composed of seven groups that fall under the Insourcing model, seven in Facility Management and nine in Outsourcing model (Table 2).

[4] The size classes for groups are defined as follows:

- ✓ Main total assets over €120 billion;
- ✓ Medium total assets between €21 and €120 billion;
- ✓ Small total assets between €5 and €20 billion.

[5] This structure is independent of any use of selective outsourcing for individual initiatives or areas.

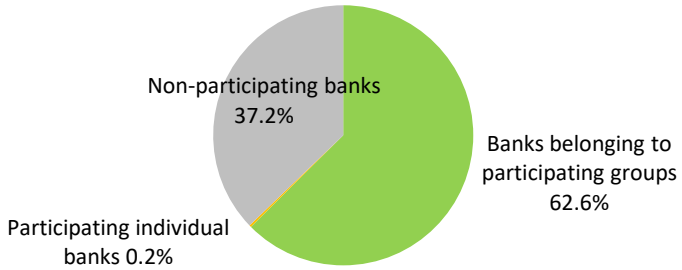
Table 2 - Classification of banking groups by IT sourcing model

		Insourcing	Facility management	Outsourcing
01005	Banca Nazionale del Lavoro		X	
01030	Monte dei Paschi di Siena	X		
02008	UniCredit		X	
03032	Credito Emiliano – CREDEM		X	
03062	Mediolanum			X
03069	Intesa Sanpaolo	X		
03075	Banca Generali			X
03104	Deutsche Bank			X
03311	Sella	X		
03395	illimity Bank		X	
03440	Banco di Desio e della Brianza			X
03599	Cassa Centrale Banca	X		
05034	Banco BPM	X		
05036	Banca Agricola Popolare di Sicilia			X
05262	Banca Popolare Pugliese			X
05387	BPER Banca	X		
05696	Banca Popolare di Sondrio		X	
05856	Banca Popolare dell'Alto Adige			X
06085	Cassa di Risparmio di Asti			X
06230	Crédit Agricole Italia		X	
06270	La Cassa di Ravenna			X
08000	ICCREA Banca	X		
10631	Mediobanca		X	
	Total	**7**	**7**	**9**

Sample of banks

The 32 banks (joint-stock companies and cooperative companies) participating in the Survey represent 62.8 per cent of the Italian banking sector in terms of intermediated funds[6] (Figure 2).

Figure 2 - Representativeness of participating banks by intermediated funds



The Appendix shows the representativeness of the participating banks in terms of number of branches and number of employees, with reference to the national perimeter (Figure 112).

[6] Intermediated funds (total assets of banks net of expenses and losses and outstanding items) refer to the arithmetic average over thirteen months: the reference year plus the month of December of the previous year.

The 32 banks are classified according to their operational size, taking as a reference the average intermediated funds derived from supervisory reporting. According to this criterion[7] they are divided into the following classes: Major (8), Large (6), Medium (7), Small A (5) and Small B (6) (Table 3). Compared with previous editions, from this year the 'Banks with specialized operations' class, which included banks with very diversified organizational and operational structures, is no longer present and the related banks are classified by size.

Table 3 - Classification of banks

		Major	Large	Medium	Small A	Small B
01005	Banca Nazionale del Lavoro	X				
01030	Banca Monte dei Paschi di Siena	X				
02008	UniCredit	X				
03032	Credito Emiliano		X			
03045	Akros Bank					X
03062	Banca Mediolanum		X			
03069	Intesa Sanpaolo	X				
03075	Banca Generali			X		
03102	Banca Aletti					X
03104	Deutsche Bank		X			
03239	Intesa Sanpaolo Private Banking			X		
03268	Banca Sella			X		
03296	Banca Fideuram		X			
03311	Banca Sella Holding				X	
03332	Banca Passadore & C.				X	
03385	isybank					X
03395	illimity Bank				X	
03440	Banco di Desio e della Brianza			X		
03442	Banca Wise Dialog Bank - Widiba					X
03493	Cassa Centrale Raiffeisen dell'Alto Adige					X
03599	Cassa Centrale Banca – Credito Coop. Italiano			X		
05034	Banco BPM	X				
05036	Banca Agricola Popolare di Sicilia				X	
05262	Banca Popolare Pugliese					X
05387	BPER Banca	X				
05696	Banca Popolare di Sondrio		X			
05856	Banca Popolare dell'Alto Adige			X		
06085	Cassa di Risparmio di Asti			X		
06230	Crédit Agricole Italia	X				
06270	La Cassa di Ravenna				X	
08000	ICCREA Banca – Istituto Centrale del Credito Coop.		X			
10631	Mediobanca – Banca di Credito Finanziario	X				
	Tot.	**8**	**6**	**7**	**5**	**6**

[7] The size classes for banks are defined on the basis of intermediated funds (i.f.) as follows:

- ✓ Major i.f. over €90 billion;
- ✓ Large i.f. between €30 and €90 billion;
- ✓ Medium i.f. between €12 and €30 billion;
- ✓ Small A i.f. between €5 and €12 billion;
- ✓ Small B i.f. between €1 and €5 billion.

Methodological notes

This survey is based on the questionnaire for FY 2024 published on the CIPA website,[8] with data collected via INFOSTAT, the Banca d'Italia's online data collection platform.

The analyses reported in this Survey refer, unless otherwise indicated, to the CIPA perimeter[2].

The aggregates expressed as percentage averages relating to the breakdown of IT costs (e.g. by thematic area and by production factor) are calculated by dividing each component by the total IT costs incurred by each respondent and subsequently averaging the results obtained. In general, unless otherwise specified, the term 'average' or '% averages' in this report is to be understood as the arithmetic average of the values of the individual respondents. In some analyses, reference is made to the wording '% share' of a quantity with respect to the total: this share is determined by the ratio between the sum of the values of that quantity for all respondents and the total.

In the analyses relating to thematic areas, carried out for different financial variables (TCO, investment, cash outflow), to ensure a meaningful representation of the phenomena, respondents who provide a sufficiently detailed breakdown of the variable among the various areas are usually included, while those assigning more than 30 per cent of the total of that variable to column E2 ('Unclassifiable IT costs' of tables 2.1 and 4.1 of the questionnaire) are excluded.

The calculation of financial indicators, referring to the main financial parameters reported in the questionnaire or taken from the respective supervisory reporting or from the reclassified financial statements (limited to groups), is carried out by determining the indicator for each respondent and then calculating the statistical indices among the respondents (averages, coefficients of variation and medians).

In some analyses, where a single respondent can provide multiple answers associated with the same item, the indication 'multiple responses' is reported.

In the case of analyses concerning too small a sample of banks or groups, which could make it possible to identify individual respondents, the results may not be made available.

In the captions of figures and tables, where these refer to banks rather to banking groups, this is expressly stated.

For the sake of completeness, in charts that refer to questions answered using checkboxes, the label shows both the number of groups that actually answered the question and the total number of groups to which the question was administered (e.g. '18 respondents out of 23').

Numeric values on some charts may be affected by decimal rounding. In such cases, the sum of the values represented may not be 100 per cent.

Participating groups and banks are provided with 'feedback results', also customized, which allow each institution to evaluate its positioning in relation to multiple quantities and indicators, with respect to both the entire sample and its peer group.

IT Cost reporting

The methodology adopted for the analysis of IT financial profiles makes it possible to assess:

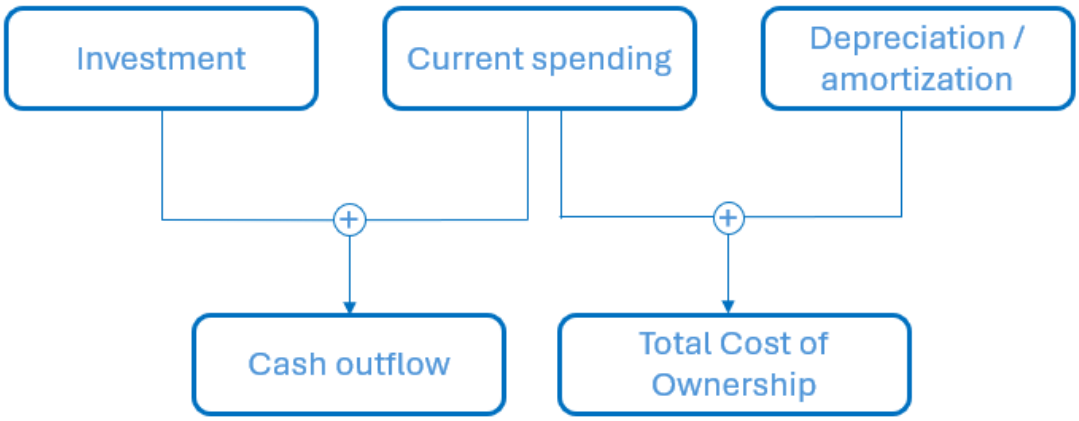
- ✓ total cost of ownership (TCO), gross and net of any IT revenues;
- ✓ cash outflow;
- ✓ current spending;
- ✓ investment;

[8] https://www.cipa.it/rilevazioni/economiche/2024/QUEST_A_2024.pdf

- ✓ depreciation and amortization.

Unless otherwise specified, the term TCO is used in this report to mean gross of any IT revenues.

The following diagram illustrates the relationships between the financial quantities treated:



The reporting of IT costs expressed in terms of TCO is carried out with a two-dimensional table, described below: 'production factor' (per row) and 'thematic area' (per column).

The cash outflow is calculated as the sum of investment plus current spending, with the latter obtained by subtracting depreciation/amortization from the TCO.

Production factors and thematic areas

The production factors considered and their associated costs are:

- ✓ **Hardware**: TCO for the purchase, rental, leasing and maintenance of equipment;
- ✓ **Software**: costs for system software, middleware and licensed application software;
- ✓ **Internal staff**: all expenses incurred for IT employees (e.g. social security contributions, provisions, IT training at external companies), including amortization;
- ✓ **Services received from third-parties**: costs for Facility management services (software owned by the institution managed by the supplier on its own computers), Outsourcing, external personnel and professional consultancy;
- ✓ **Other IT costs:** IT costs not attributable to the previous categories (e.g. those incurred for various reasons for real estate used exclusively for IT operations, for consumables, for insurance coverage on equipment and to protect against computer fraud).

The thematic areas considered are:

- ✓ **Data center**: includes the Mainframe (central computers and centralized input/output units) and the Server farm (centralized servers and equipment with specialized functions not typical of branch offices and not directly dependent on the Mainframe);
- ✓ **Transmission systems**: includes data networks (connection between bank offices/branches, between the central subsystem and the peripheral subsystem and with the outside of the bank), fixed telephony (VoIP and analogue) and mobile telephony;
- ✓ **Peripheral systems**: includes decentralized systems and individual equipment (e.g. personal computers, printers, tablets, graphometric tablets), ATMs (automatic teller machines, such as banknote dispensers and multifunction kiosks) and POS;
- ✓ **Applications**: includes the purchase, development and maintenance of application software.

In some detailed analyses, the term 'thematic areas' refers directly to the individual sub-areas (e.g. Mainframe and Server farm are considered sub-areas of the Data center area).

The item '**IT security**' includes all IT security costs relating to the following areas: perimeter security, identity management, anti-fraud systems, server farm security, end point security, security analytics, code/application security, data security, security awareness initiatives, participation in security/infosharing communities. Costs associated with the management of security processes (e.g. security incident management, vulnerability and patch management, CERTFin) are also included. On the other hand, costs relating to physical security or those for Business Continuity and Disaster Recovery are not included.

Chapter 1. Banking groups: Financial profiles

This section analyses the overall trend of IT costs with a focus on integration costs.[9] The overall IT financial figures reported for the FY 2024 by the 23 groups that participated in the Survey are:

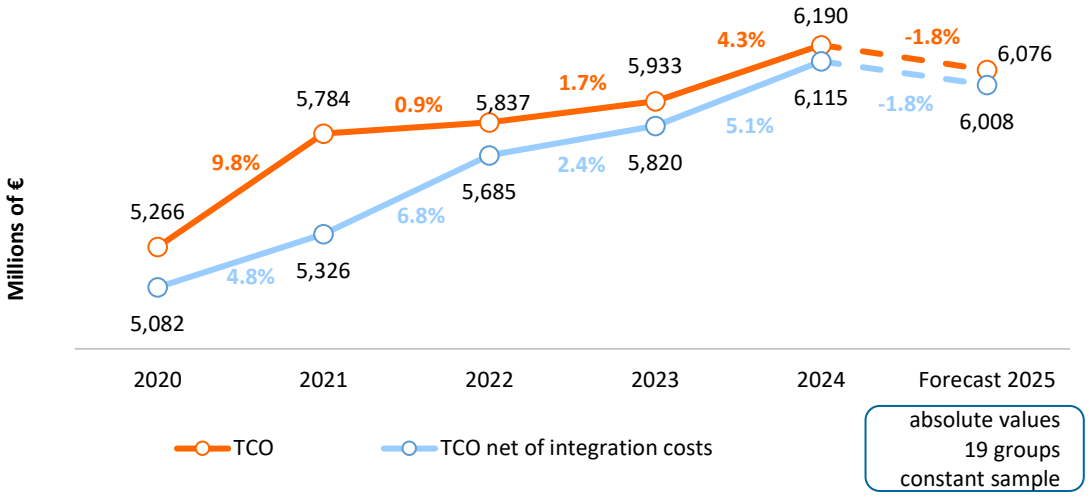
- ✓ **Gross TCO** (current spending plus depreciation/amortization): €6,334 million;
- ✓ **Cash outflow** (current spending plus investment): €6,618 million;
- ✓ **Current spending**: €4,478 million;
- ✓ **Investment**: €2,140 million;
- ✓ **Depreciation and amortization**: €1,857 million.

1.1 Total cost of ownership (TCO)

1.1.1 Overall trends and individual changes

Figure 3 shows the trend in TCO, overall and net of integration costs, with reference to a constant sample of 19 banking groups,[10] for which there is an increase in the overall TCO of 4.3 per cent compared with the previous year in 2024, for a total of €6,190 million. Net of integration costs, TCO stood at €6,115 million, up 5.1 per cent. A decrease of 1.8 per cent is expected for 2025.

Figure 3 - TCO: 2020-2024 trend and forecast



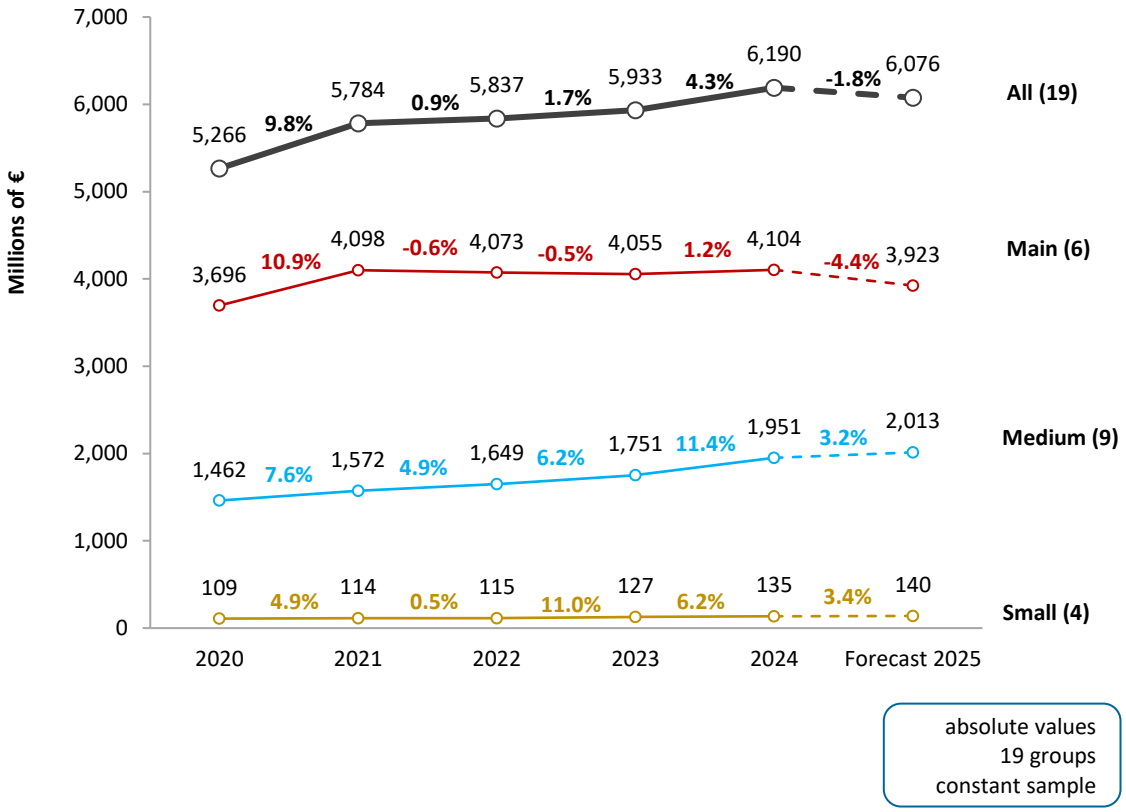
[9] IT costs incurred for integration/restructuring of corporate information systems related to integration operations with other entities (mergers, acquisitions, acquisition of business units and/or branches).

[10] Groups that provided TCO for all years from 2020 to 2024.

In the Appendix, Figure 113 compares the total TCO for the FY 2024 based on actual data (solid line) to the corresponding forecast made by groups in the previous year (dotted line), on a constant basis.

From the constant sample trend of the TCO by size class reported in Figure 4 for the Main groups, which account for about two thirds of total costs, there has been a lower percentage growth in recent years (1.2 per cent in 2024 after two years of negative change) than for the Medium and Small groups (11.4 per cent and 6.2 per cent respectively in 2024).

Figure 4 - TCO by size class: 2020-2024 trend and forecast



A similar analysis, carried out net of integration costs, is shown in Figure 5.

Figure 5 - TCO net of integration costs, by size class: 2020-2024 trend and forecast

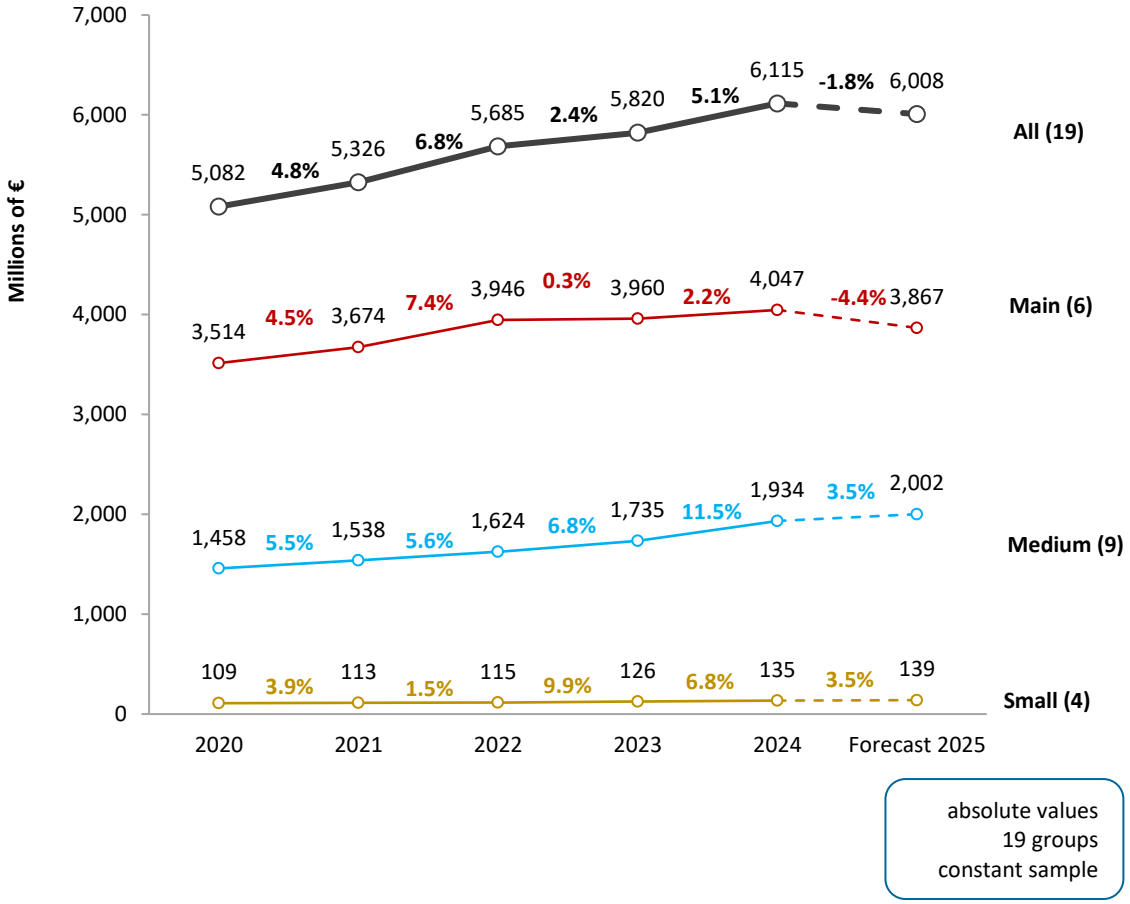
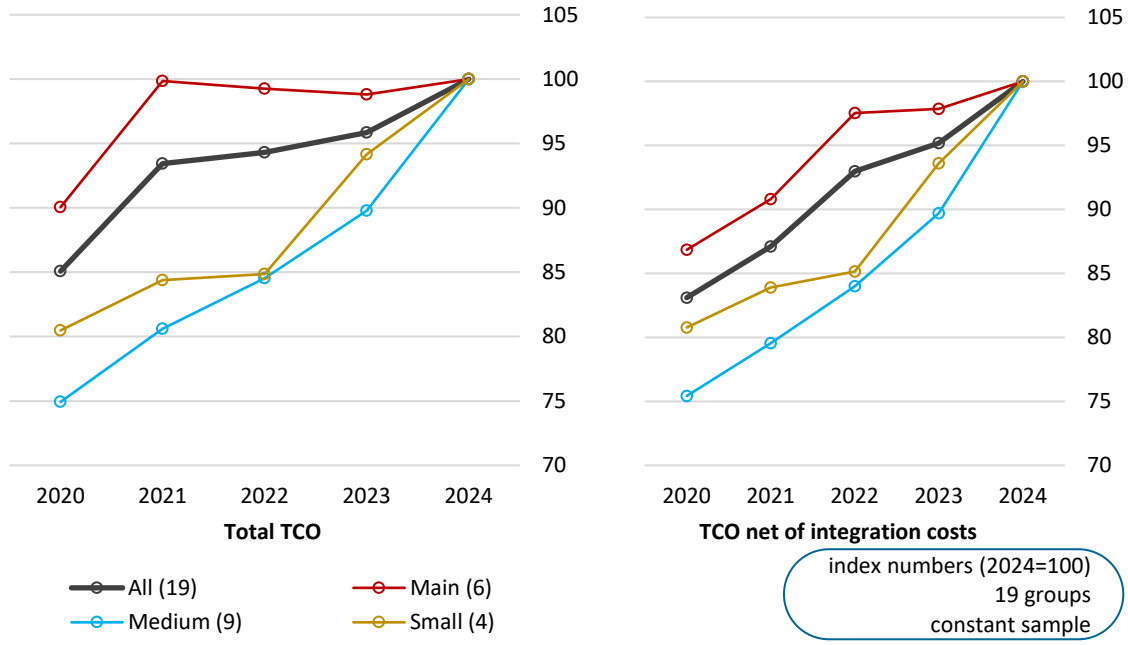


Figure 6 provides another view of the TCO trend by size class, using the index numbers for the same constant sample and the same observation period. The reference year is 2024, in which the total TCO of each class corresponds to the value 100. Previous years values are obtained as a percentage ratio between the relative TCO and that of the reference year for the same class. The constant increase in costs for the Medium and Small classes can be noted, albeit with different intensities. For the Main groups, the peak in 2021 is attributable to integration costs.

Figure 6 - TCO by size class: index numbers 2020-2024



For the 22 banking groups participating in the Survey in both 2023 and 2024 financial years, the percentage changes in the 2024 TCO compared with the 2023 TCO are within a range from -16.7 to +25.7 per cent and more than three quarters of the groups report an increase in IT costs for more than 1 per cent (Figure 7).

Figure 7 - Individual change in TCO 2024/2023

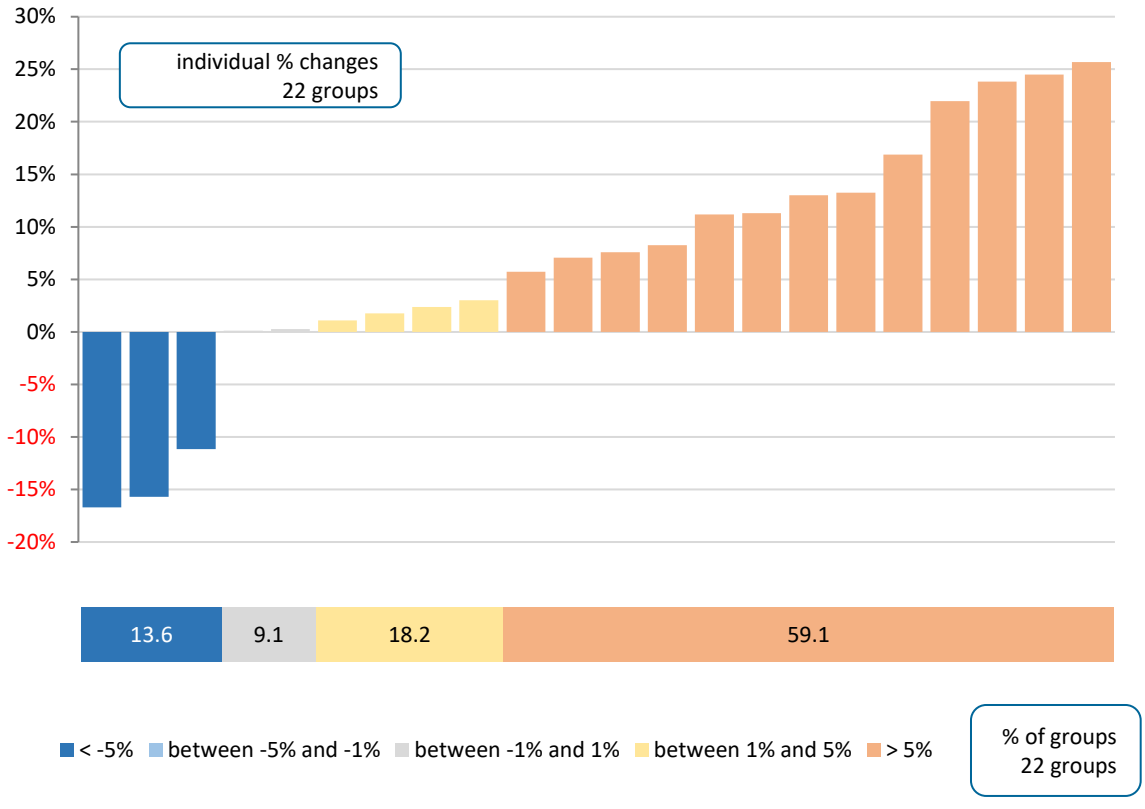
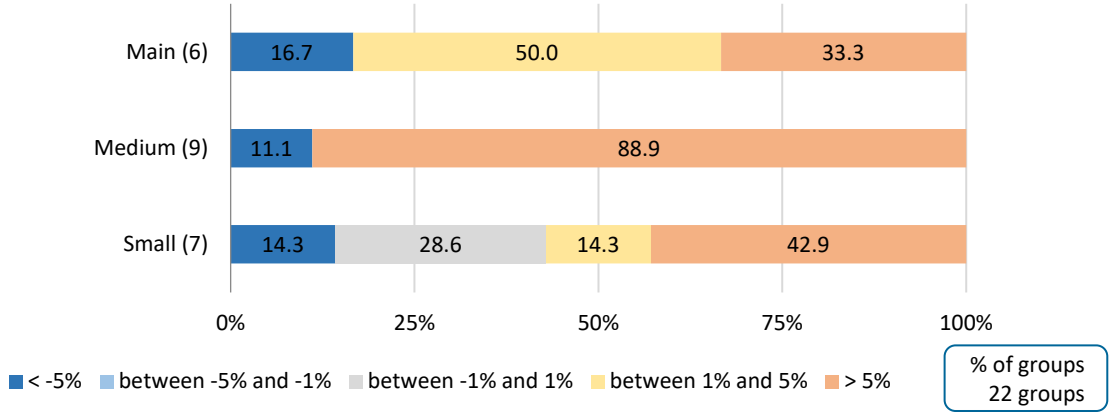


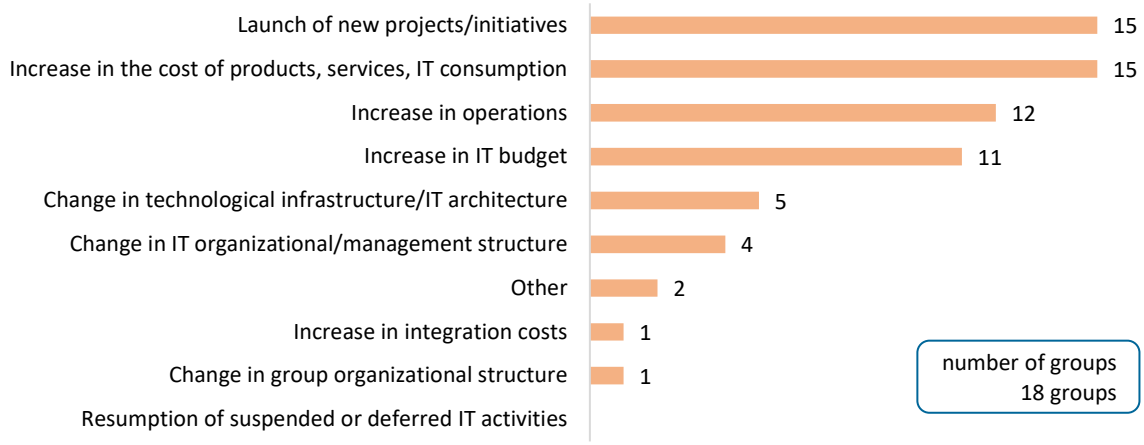
Figure 8 analyses the variation bands by size class.

Figure 8 - Individual variation in TCO 2024/2023, by size class



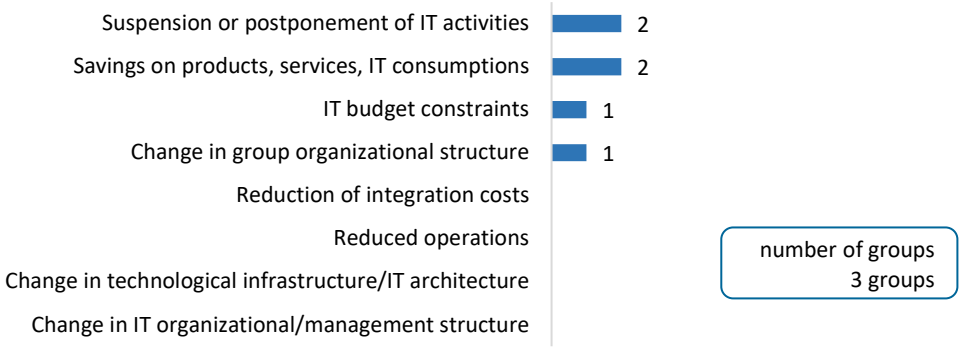
This is followed by an analysis of main reasons for increases and decreases in total TCO reported by the groups. The increase in TCO is mainly related to the launch of new initiatives and the increase in the price of IT products and services (15 out of 18 groups) (Figure 9).

Figure 9 - Reasons for increases in TCO



Among the most significant factors contributing to the reduction of total IT costs, for two out of three groups, are the suspension or postponement of IT activities and savings on IT products, services and consumption (Figure 10).

Figure 10 - Reasons for decreases in TCO

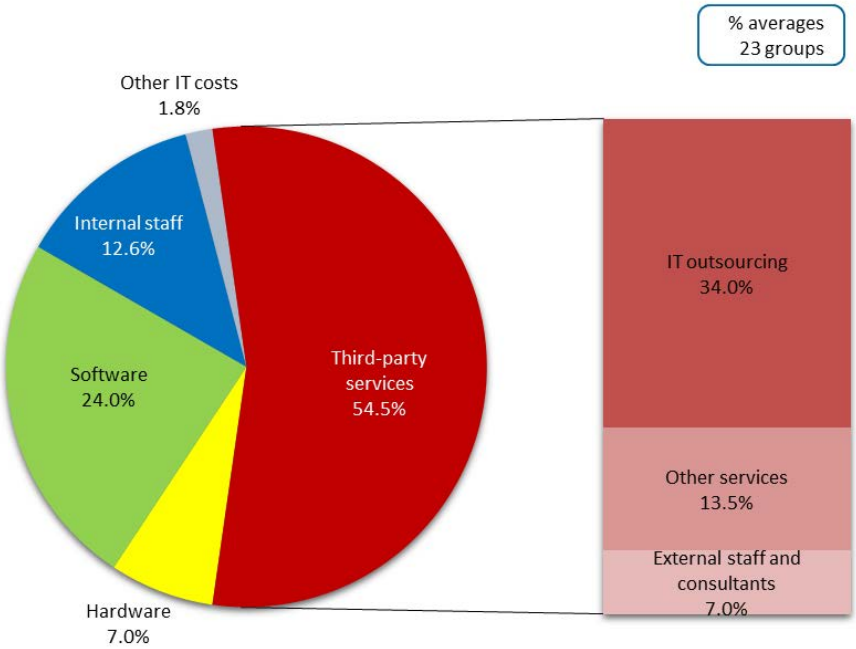


1.1.2 Production factors

The adopted analysis model allows the breakdown of IT costs by thematic area and by production factor, promoting a better understanding of the costs incurred by banking groups for IT services to support banking activities.

The TCO of the 23 participating groups, amounting to €6,334 million, when broken down by production factor in percentage averages, show that 54.5 per cent is dedicated to third-party services, divided between IT Outsourcing (34 per cent), External staff and consultants (7 per cent) and Other services[11] (13.5 per cent). Looking at IT costs incurred directly by the groups, Software accounts for the predominant share, standing at 24 per cent of the total TCO, Internal staff 12.6 per cent and Hardware 7 per cent (Figure 11).

Figure 11 - TCO by production factor



The breakdown of TCO by size class (Figure 12) shows that the share of costs for third party services (shades of red), standing at 30.5 per cent for the Main groups, rises to 57.4 per cent for the Medium and over 69 per cent for the Small groups, progressively eroding all other items. This phenomenon can be explained by the fact that groups are more likely to outsource as their size decreases. Similar results, analysed from the perspective of the IT sourcing model, are shown in Figure 13.

[11] The item "Other services" includes fees for network services, voice traffic, turnkey projects, outsourced technological help desk services, Disaster Recovery service.

Figure 12 - TCO by production factor and size class

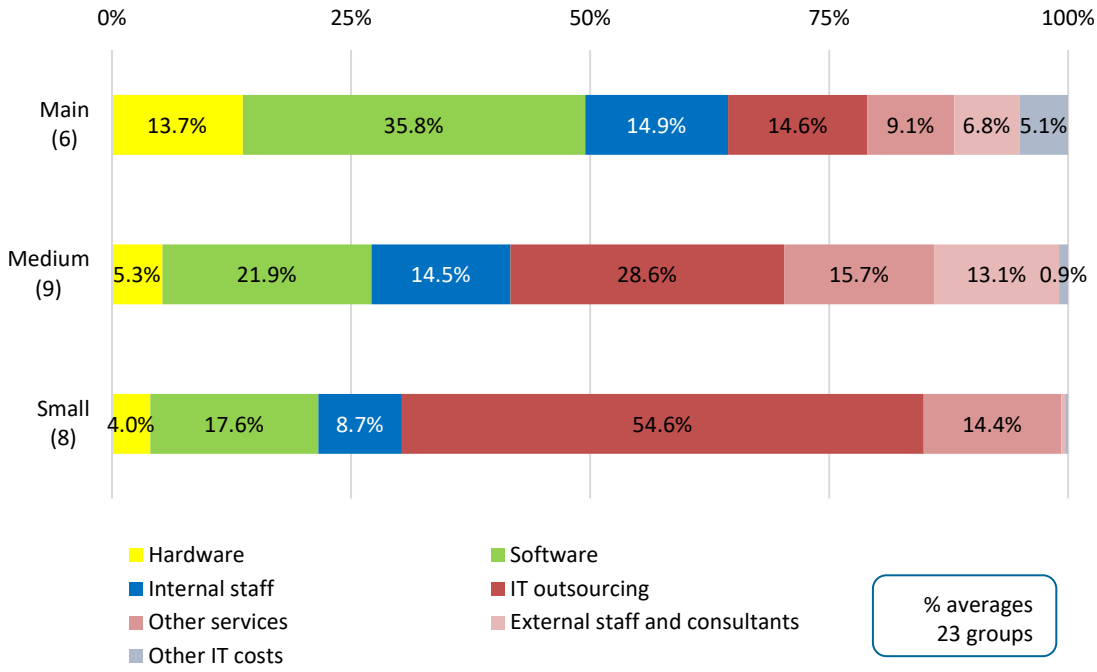


Figure 13 - TCO by production factor and sourcing model

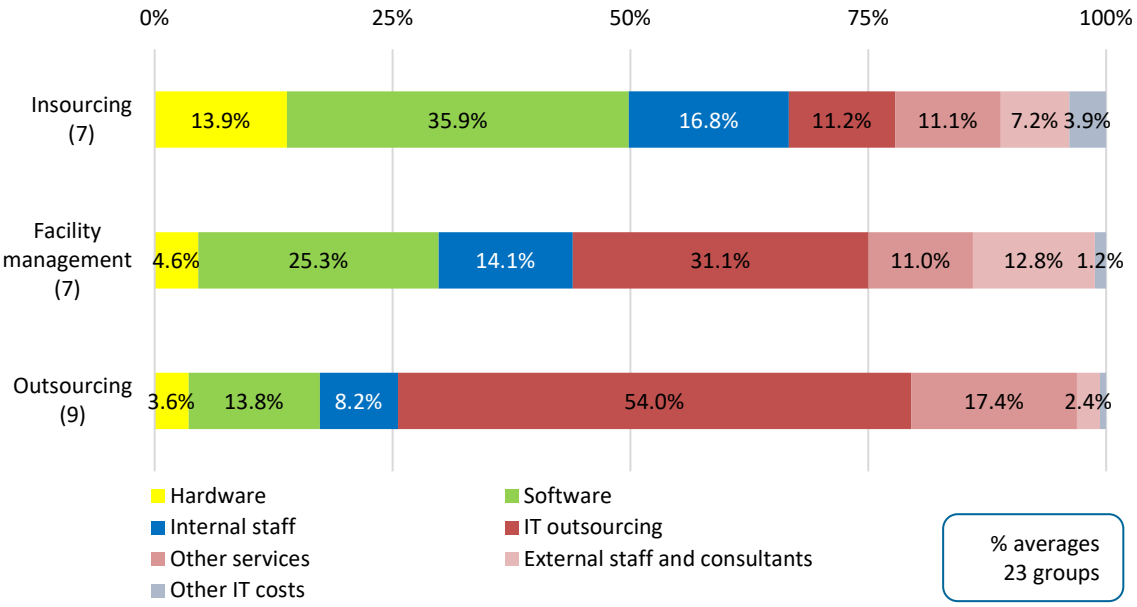


Figure 14 represents, in absolute terms and on an actual basis, the evolution of the TCO by production factor in 2020-2024 and forecast for the FY 2025, for a constant sample of 19 banking groups. In Software, there is significant growth, going from less than €1.5 billion in 2020 to more than €2 billion in 2024, with a strong increase in 2023 and an even more significant leap in 2024; the increase in the TCO for Hardware continues, albeit very slightly. Forecasts for 2025 point to a decrease or substantial stability in costs for all production factors.

Figure 14 - TCO by production factor: 2020-2024 trend and forecast - absolute values

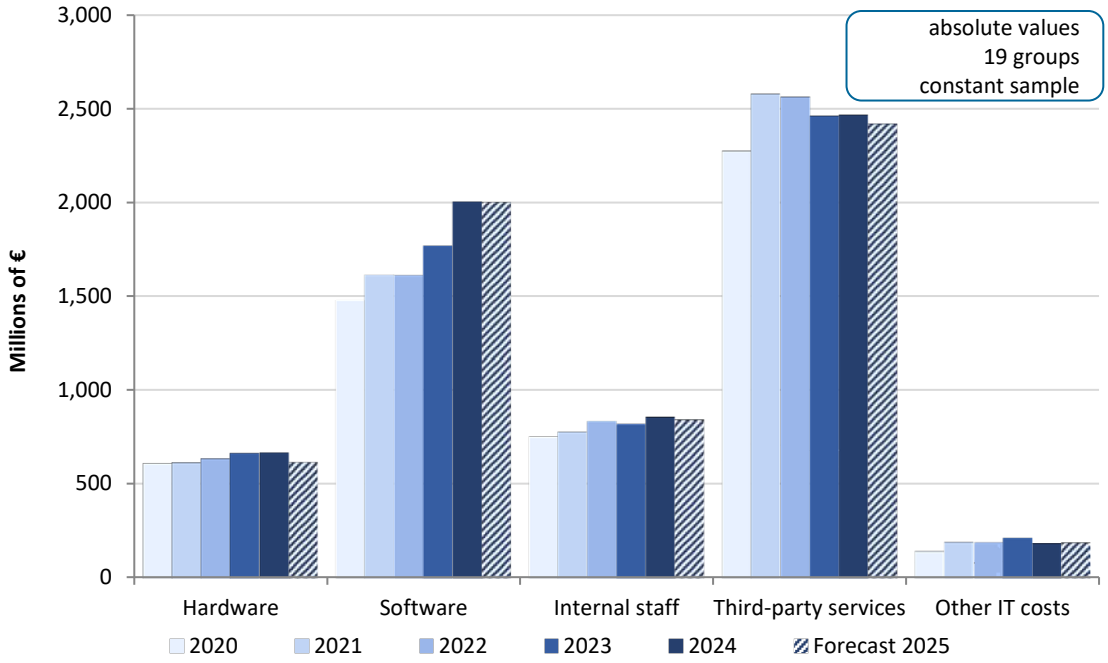
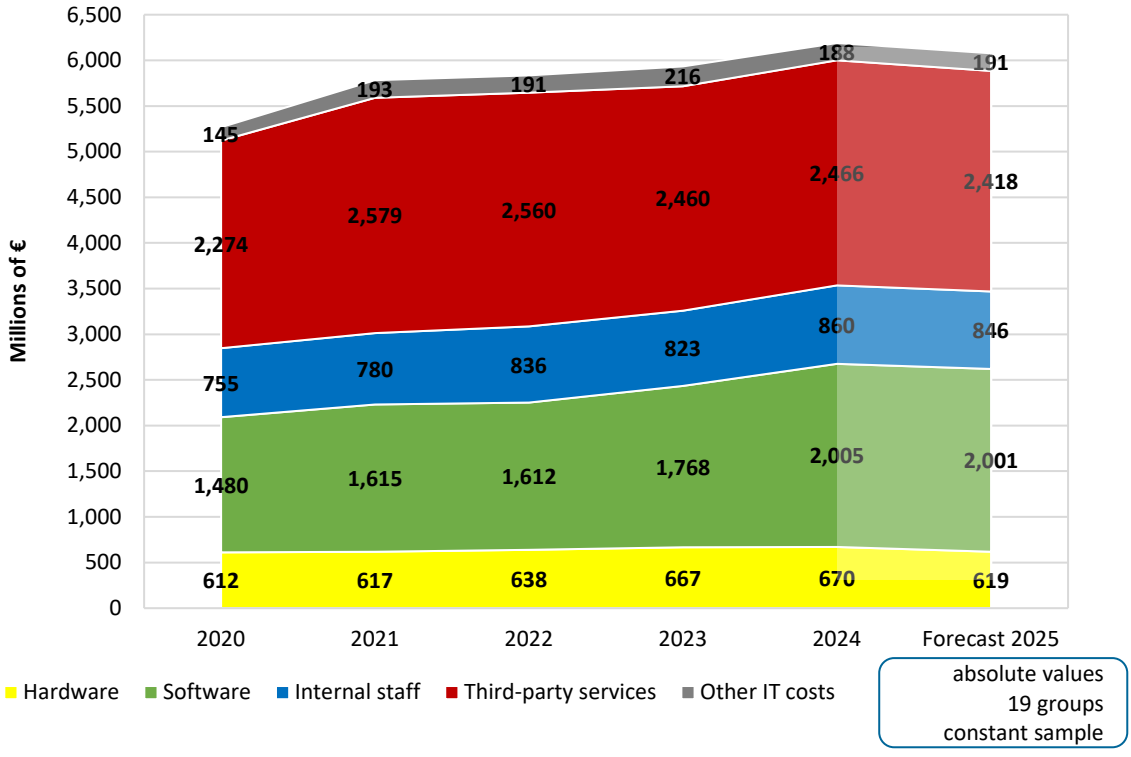


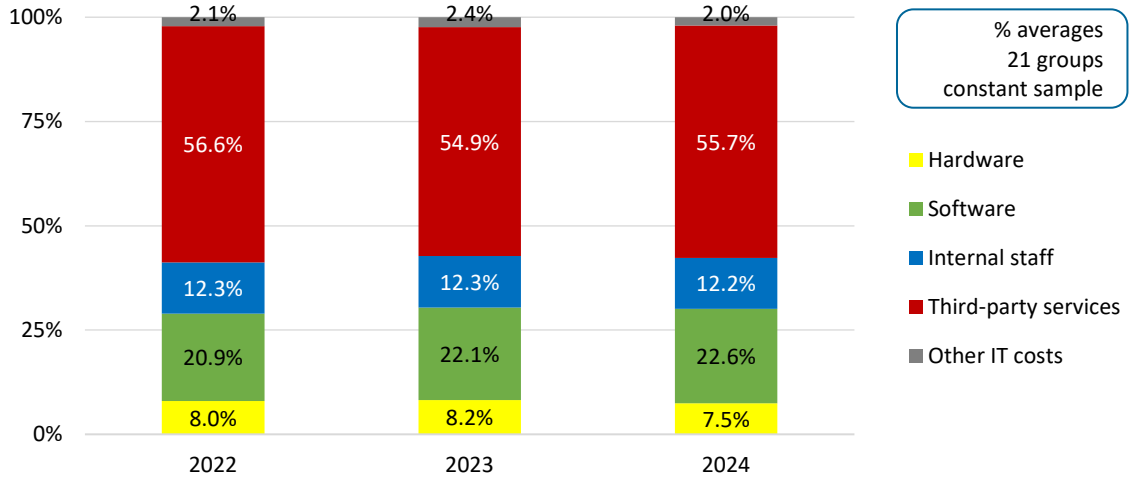
Figure 15 shows the trend of TCO in absolute value over the same time period and for the same sample of 19 groups, presenting the production factors in a cumulative view for each year analysed.

Figure 15 - TCO by production factor: 2020-2024 trend and forecast - absolute values (view 2)



This analysis, expressed in percentage terms over the years 2022-2024 period, highlights the production factors for which TCO is of greater or lesser importance for a constant sample of 21 groups (Figure 16).

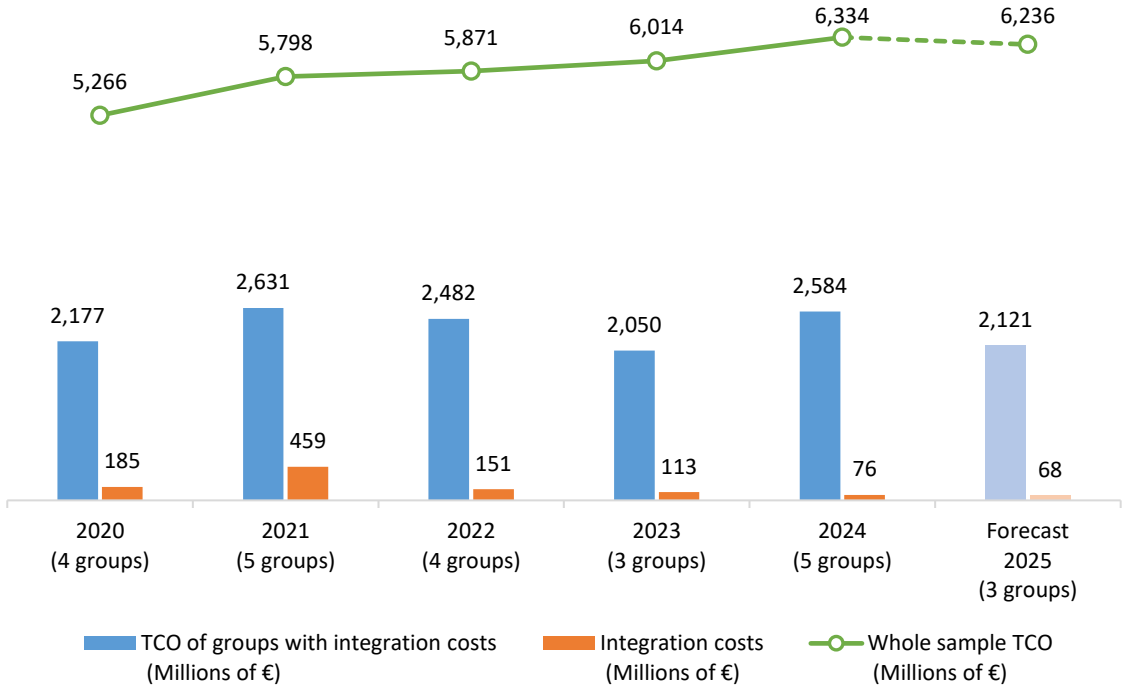
Figure 16 - TCO by production factor: 2022-2024 trend - per cent



1.1.3 Integration costs

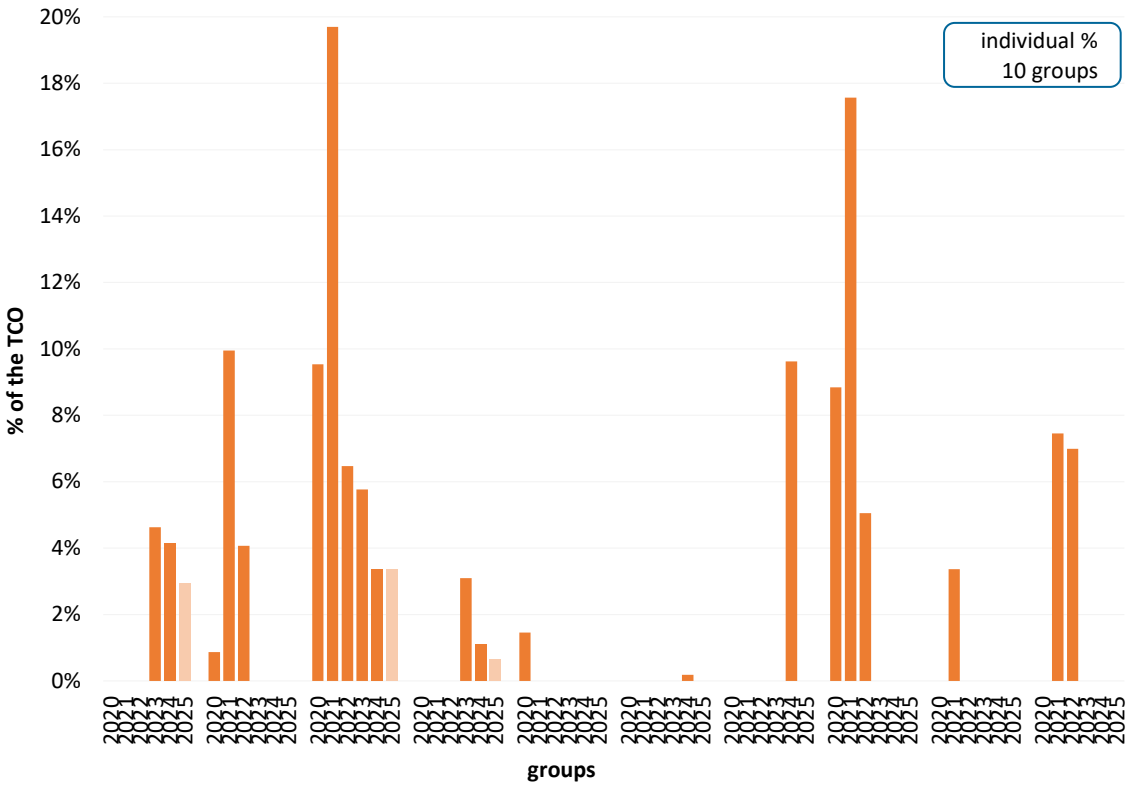
Figure 17 shows, over a time horizon of five years, the actual integration costs[9] (orange bar) for those banking groups that have reported them, together with the overall TCO of those groups (blue bar); the x-axis shows the number of groups that reported IT integration costs for each year. The total costs of all the groups that participated in the Survey year by year are also represented (green line). For the quantities mentioned, the forecast values for the FY 2025 are also provided.

Figure 17 - Total integration costs: 2020-2024 trend and forecast



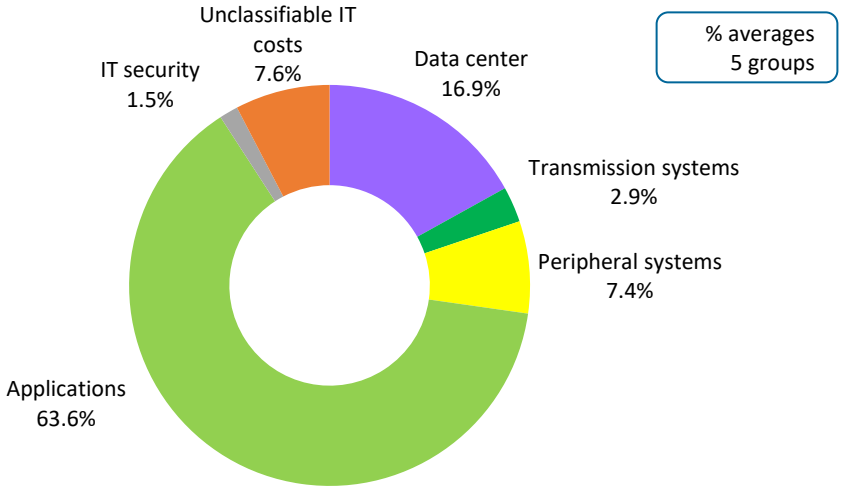
For the same time interval, Figure 18 reports, as a percentage of individual TCO, the trend in integration costs for the ten groups that reported this type of cost at least once in the period under review.

Figure 18 - Individual integration costs: 2020-2024 trend and forecast



Breaking down the integration costs for the FY 2024 by thematic area and expressing them in percentage averages, it can be observed that the five groups that incurred them allocated the largest share to the Applications area (63.6 per cent) (Figure 19).

Figure 19 - Integration costs by thematic area

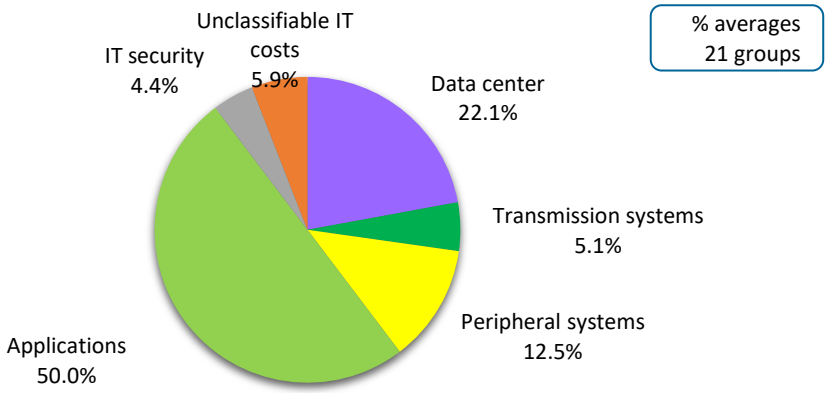


1.2 TCO and IT cash outflow

1.2.1 Thematic areas

This section analyses TCO and IT cash outflow (current spending plus investment) from the perspective of thematic areas. These analyses cover costs incurred both directly by the groups and through third-parties, and are based on a sample of 21 groups.[12] As shown in Figure 20, the Applications and Data center areas account for the largest shares of IT costs, respectively 50 per cent and 22.1 per cent of the TCO. IT security costs stand at 4.4 per cent, which may be underrepresented due to the difficulty of isolating this type of cost.

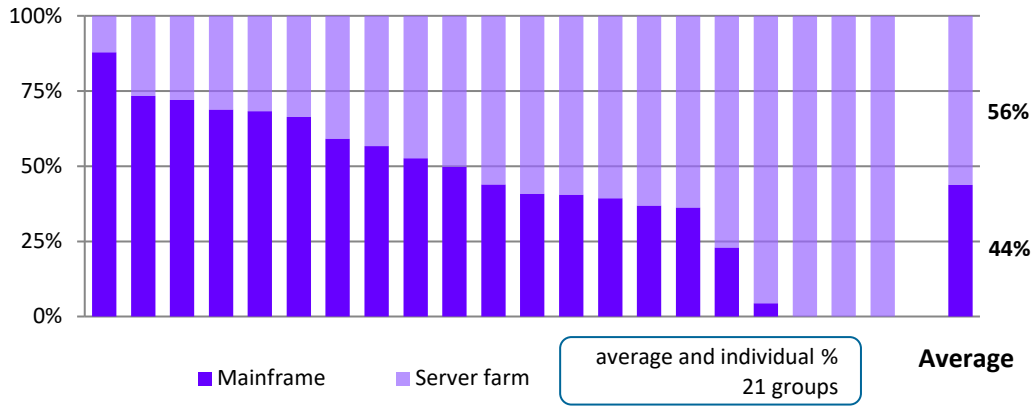
Figure 20 - TCO by thematic area



The Appendix presents the results of the analyses by size class (Figure 114) and by IT sourcing model (Figure 115).

Figure 21 focuses on the TCO of the Data center by showing, for each group, the percentage breakdown between the Mainframe and the Server farm share. A heterogeneous situation can be observed, with 18 groups incurring costs for both types of systems and three only declaring costs for the Server farm. On percentage average, the largest share of the Data center costs goes toward the Server farm (56 per cent).

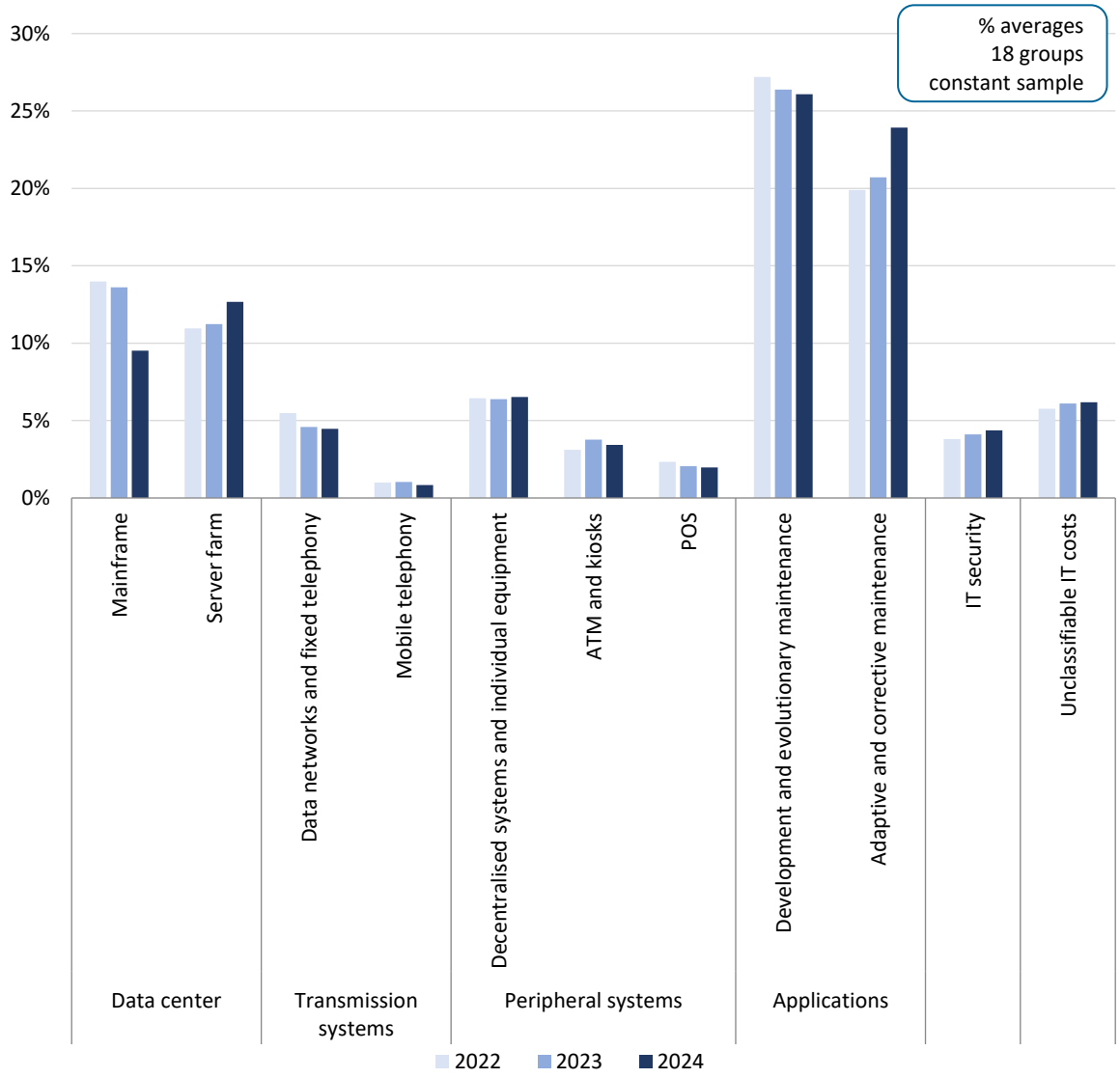
Figure 21 - Data center TCO: individual distribution between Mainframe and Server farm



[12] For a meaningful representation of the phenomena, the analysis by thematic areas percentage averages exclude groups - usually in Outsourcing - that have attributed more than 30% of the total TCO to the "Unclassifiable IT costs" item.

Figure 22 shows the trend in TCO by thematic area in percentage averages over a constant sample of 18 groups that have allocated costs with sufficient granularity in 2022-2024. In particular, there were significant changes for Adaptive and corrective maintenance and for the Server farm in the FY 2024, with an increasing trend, and for the Mainframe, with a decreasing trend.

Figure 22 - TCO by thematic area: 2022-2024 trend



The IT cash outflow by thematic area, expressed as percentage averages over the 21 groups that break it down in sufficient detail (Figure 23), shows a distribution very similar to that of TCO.

Figure 23 - IT cash outflow by thematic area

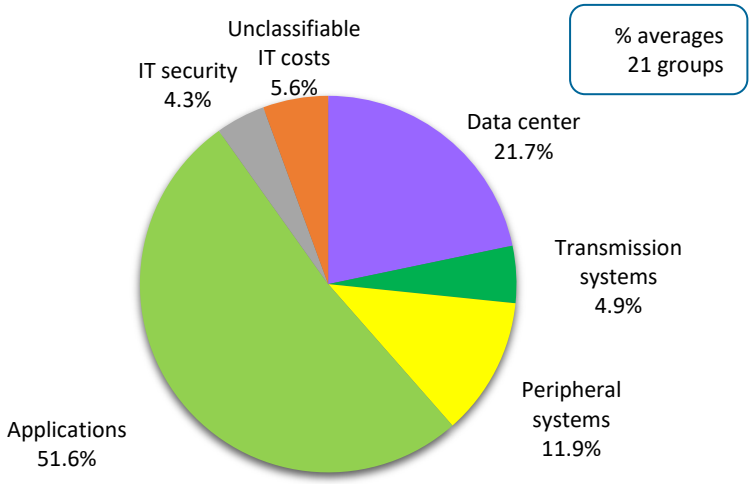
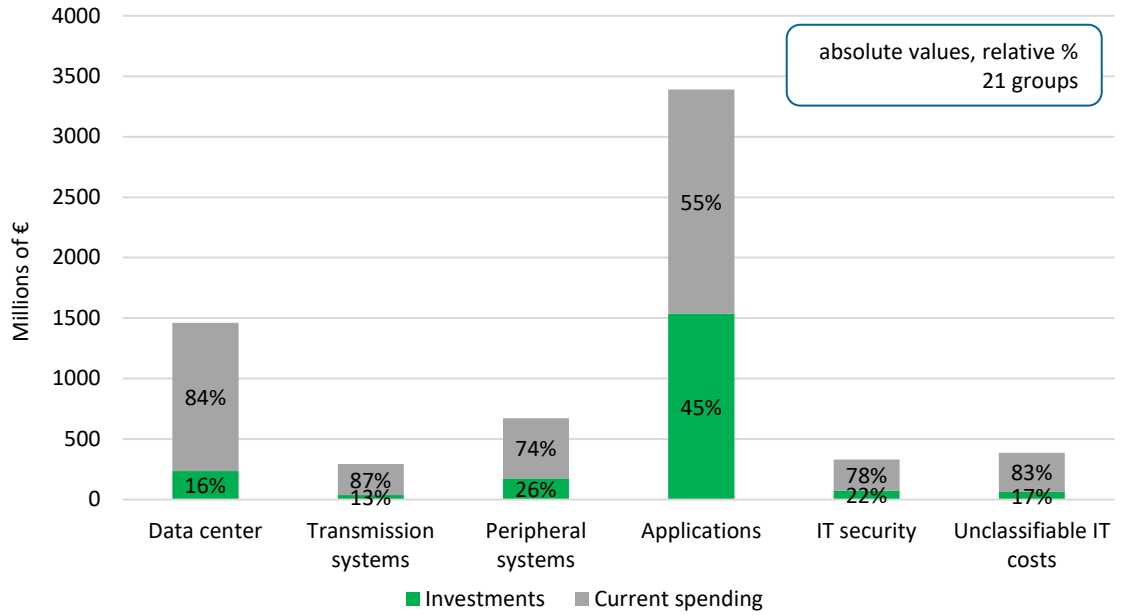


Figure 24 shows the breakdown in absolute terms of the IT cash outflow by thematic area - for the 21 groups that provided sufficiently detailed data - along with the breakdown, within each area, between investment and current spending, which are the two components that make up this outflow. This can be compared with the overall breakdown of the entire IT cash outflow of the 23 groups, whose shares of current spending and investment are 67.7 per cent and 32.3 per cent respectively.

Figure 24 - IT cash outflow by thematic area: current spending vs. investment



In the Appendix, from Table 16 to Table 23, the breakdown between thematic areas and production factors of the financial dimensions discussed above is reported, with regard to the 21 groups that provide sufficiently detailed data. All values are expressed as percentage averages, also with reference to IT sourcing models and size classes.

1.2.2 IT Security

Financial variables relating to IT Security[13] are reported separately from the thematic areas, therefore, the amounts allocated to the various areas should, in principle - and except in cases where groups have difficulty isolating them - be considered net of this component.

Figure 25 reports the individual percentages of cash outflows dedicated to IT Security, values ranging between 0.3 per cent and 8.4 per cent and averaging 4.2 per cent. Eight groups supplemented the value provided with a percentage estimate of IT Security expenses that cannot be analytically identified (the estimated shares are represented in the graph by the dotted areas). Including the estimated shares, the average value rises to 4.9 per cent.

In absolute terms, the cash outflow that the 23 groups allocated to IT Security in 2024 totalled €365.7 million, including estimated components.

Figure 25 - Individual cash outflows for IT security

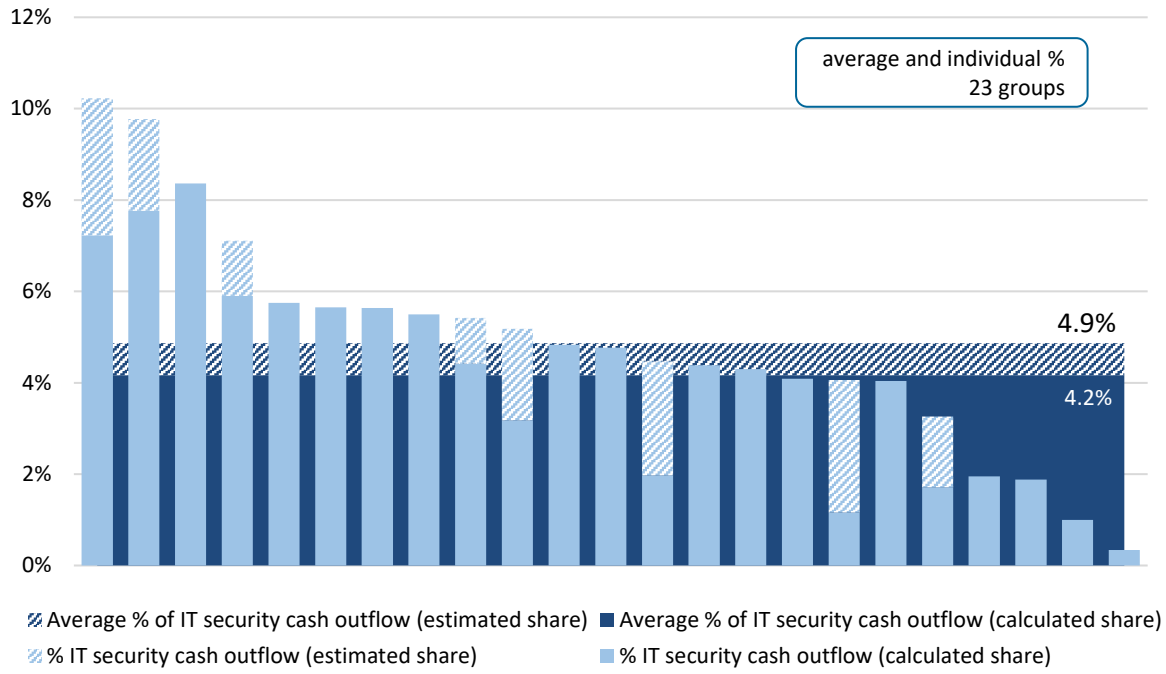


Figure 26 shows the trend of the cash outflow for IT Security, in percentage averages of total IT cash outflow, in 2020-2024 on a constant sample (19 groups), documenting an ever-increasing financial commitment starting in 2021.

[13] The list of cost items included in IT Security is shown in the paragraph "Production factors and thematic areas" of the Chapter "Samples and methodological notes".

Figure 26 - Cash outflow for IT security: 2020-2024 trend

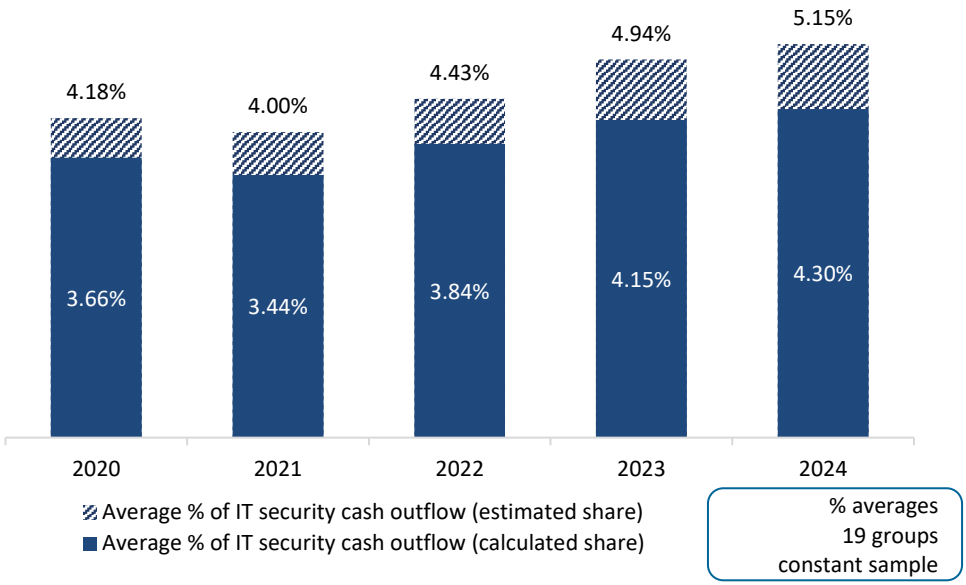


Figure 27 compares the trends in absolute terms of TCO and cash outflow - the latter shown both net of and including estimated shares - allocated to IT Security for the same period and sample. There is an overall upward trend for both curves, with the cash outflow steadily above the TCO.

Figure 27 - TCO and cash outflow for IT security: 2020-2024 trend

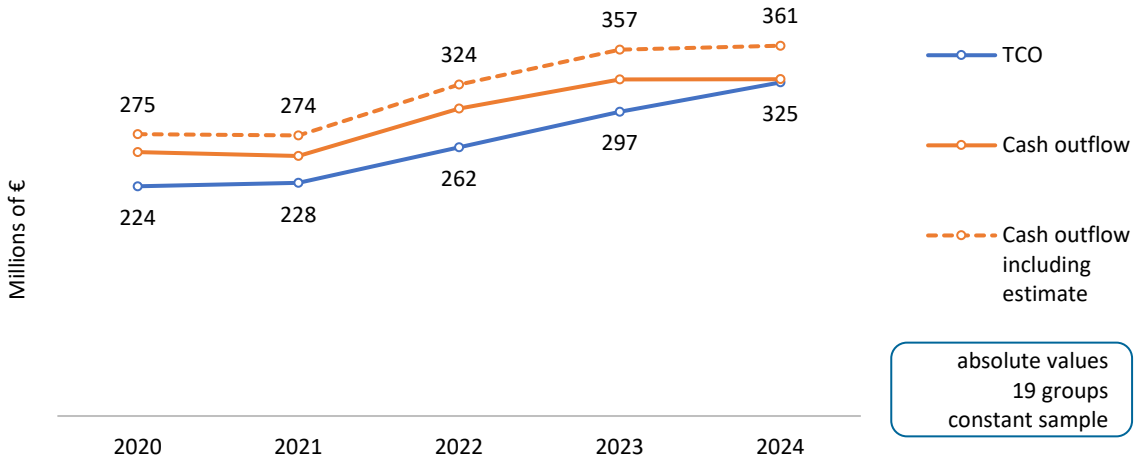
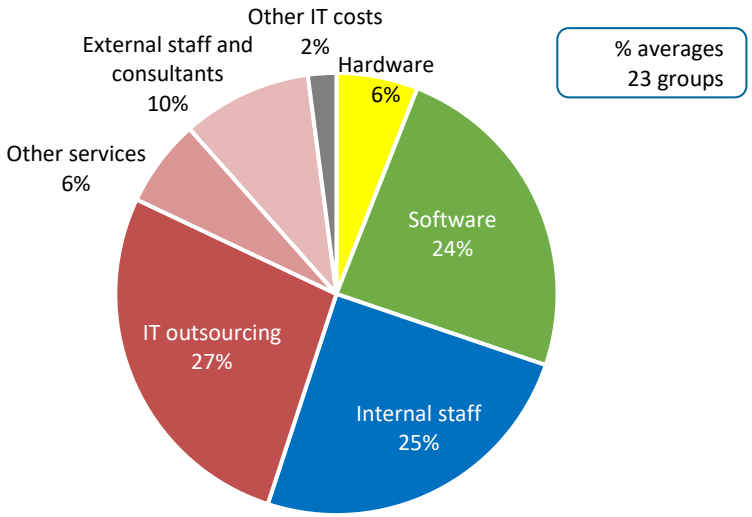


Figure 28 analyses the TCO for IT Security broken down by production factor. These costs are mainly allocated to third-party services (slices in shades of red, 43 per cent), followed by Internal staff (25 per cent), Software (24 per cent) and Hardware (6 per cent).

Figure 28 - TCO for IT security, by production factor



1.3 IT Cash outflow

1.3.1 Compliance

This paragraph reports the expenses incurred in 2024 for compliance, specifically for IT interventions undertaken to meet the requirements of national and European regulations, as well as international principles and standards, which mandate certain interventions for the banking group (excluding interventions deriving from internal regulations or policies and recurring costs for compliance interventions carried out in previous years). In absolute terms, the total IT cash outflow allocated to compliance interventions by the 21 responding groups amounts to €780.9 million.

Figure 29 reports the individual percentages of IT cash outflows dedicated by each group to compliance interventions, ranging from 3.1 per cent to 20 per cent, with an average value of 11.1 per cent. The variability between individual values, also found in previous years, appears to be partly attributable to the different methods of allocating compliance costs adopted by the groups, to the different time period of implementation of the interventions, and, more generally, to the difficulties encountered in isolating compliance costs within the overall IT expenditure.

Figure 29 - Individual IT cash outflows for compliance

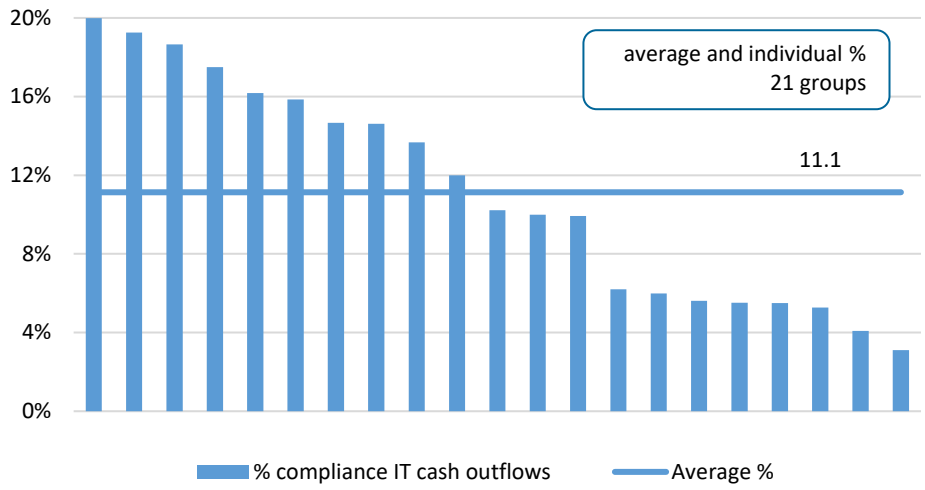
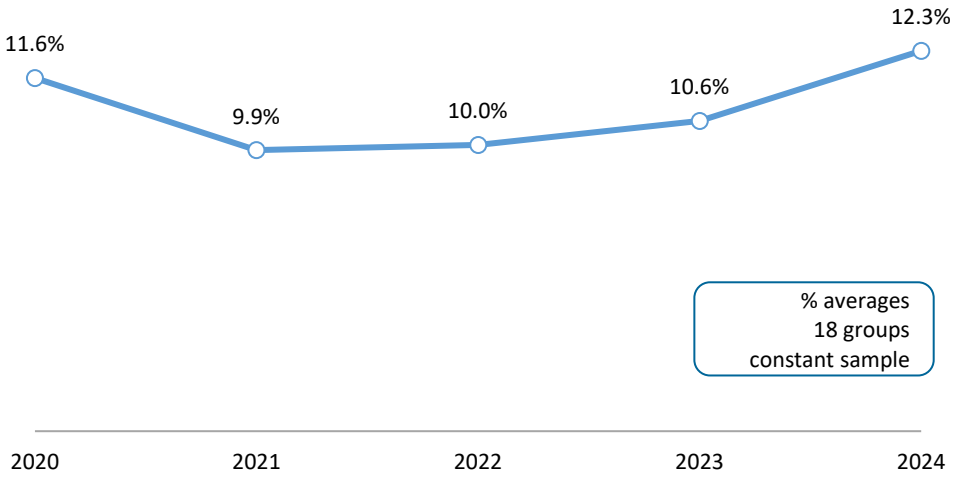


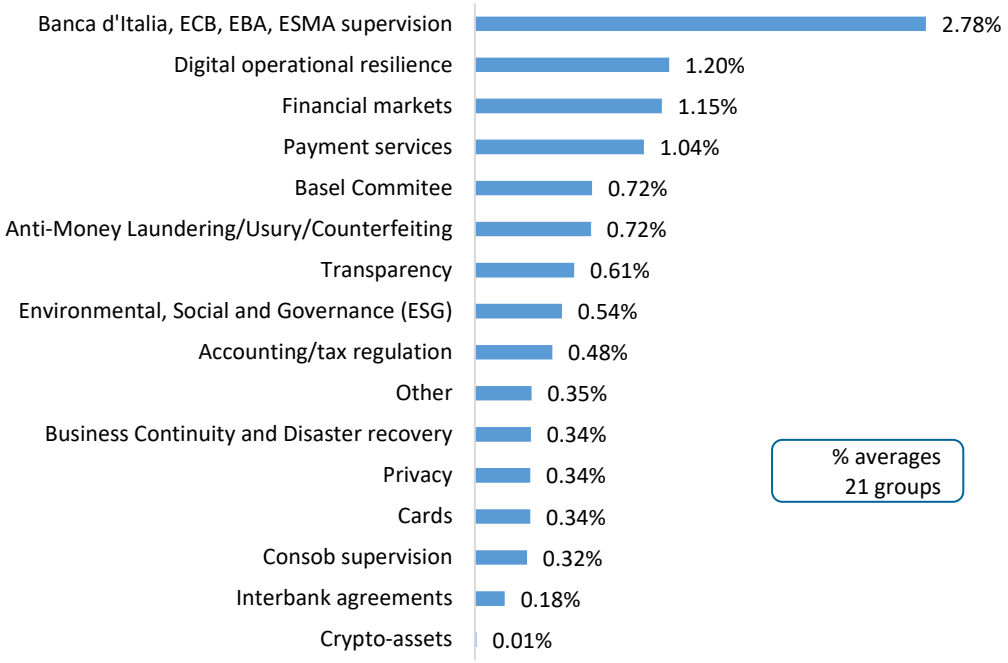
Figure 30 shows the trend in the percentage average of the IT cash outflow allocated to compliance over the period 2020-2024, based on a constant sample of 18 groups, which has been growing steadily in recent years.

Figure 30 - IT cash outflow for compliance: 2020-2024 trend



Returning to the sample of the 21 groups, the areas that, on average, required the greatest financial commitment for regulatory compliance are - even in 2024 - those related to Banca d'Italia/ECB/EBA/ESMA supervision (2.78 per cent of their total IT cash outflow), financial market regulations (1.15 per cent), payment services (1.04 per cent), and digital operational resilience (1.2 per cent); the other areas all stand at values below 1 per cent (Figure 31).

Figure 31 - IT cash outflow for compliance: average by area



In the Appendix, Figure 121 shows in detail, for each area, the distribution of the share of IT cash outflow allocated to compliance.

The Table 4 shows the areas of the previous figure and the percentage averages by size class.

Table 4 - Compliance IT cash outflow: breakdown by area and size class

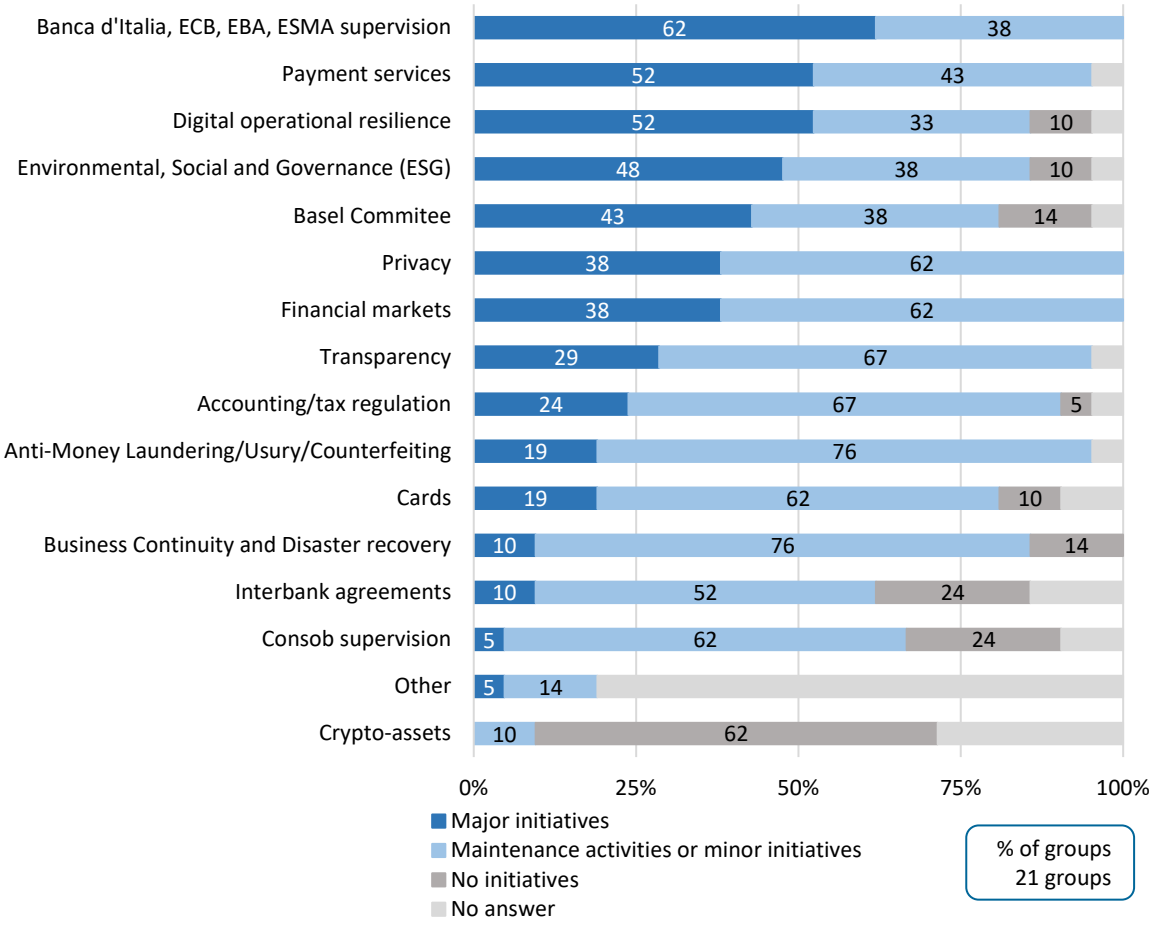
Areas	Main(5)	Medium(9)	Small(7)
Banca d'Italia, ECB, EBA, ESMA supervision	3.95	2.55	2.24
Digital operational resilience	0.95	1.50	0.99
Financial markets	1.78	1.03	0.86
Payment services	0.96	0.76	1.47
Basel Commitee	1.85	0.45	0.27
Anti-Money Laundering/Usury/Counterfeiting	0.94	0.86	0.38
Transparency	0.22	0.95	0.46
Environmental, Social and Governance (ESG)	0.46	0.77	0.29
Accounting/tax regulation	0.58	0.64	0.20
Other	0.11	0.75	0.00
Business Continuity and Disaster recovery	0.19	0.39	0.40
Privacy	0.50	0.32	0.26
Cards	0.22	0.34	0.42
Consob supervision	0.48	0.38	0.13
Interbank agreements	0.01	0.19	0.30
Crypto-assets	0.00	0.00	0.03
Total	**13.2%**	**11.9%**	**8.7%**

To complete the compliance analysis, the scope of the IT project initiatives undertaken in 2024 in the same regulatory areas is analysed. These are classified into large project initiatives (e.g.

initiation or continuation of projects of significant scope as a result of new or substantially modified regulations) and maintenance or minor project initiatives (e.g. minimal changes to existing applications, projects with minimal impact on IT).

More than half of the sample has undertaken major IT project initiatives in areas related to supervisory and payment services regulation, digital operational resilience and cybersecurity. The areas where at least 90 per cent of the responding groups engage in IT interventions (of any scale) concern regulation on supervision, financial markets and payment services, privacy, transparency and anti-money laundering/usury/counterfeiting (Figure 32).

Figure 32 - Project initiatives for compliance



The analyses of project initiatives for compliance interventions referred to the groups broken down by size class are reported in the Appendix (from Figure 122 to Figure 124).

1.3.2 Processes and functional areas

The analysis of the breakdown of IT expenditure by functional area and process refers to the ABI Lab taxonomy of banking processes, which provides for a composition of processes classified into four functional areas: governance processes, support processes, Operations processes, marketing, commercial and customer service processes.[14]

[14] The list of processes included in the four functional areas is given in Figure 34.

With reference to the IT cash outflow, Figure 33 shows that, for 20 respondent groups, Operations processes account for an average of 41.1 per cent of the expenditure; followed by support processes (28.6 per cent), marketing, sales and customer service (16.7 per cent) and governance (13.7 per cent). Business-oriented activities overall account for 57.8 per cent of the IT cash outflow, and those dedicated to functional support, referred to as functions,[15] stand at 42.2 per cent. The ratio between business and functions shares in 2024 is 1.37, lower than that of the previous year (1.42). The figure also breaks down the same shares by size class.

Figure 33 - IT cash outflow by functional area

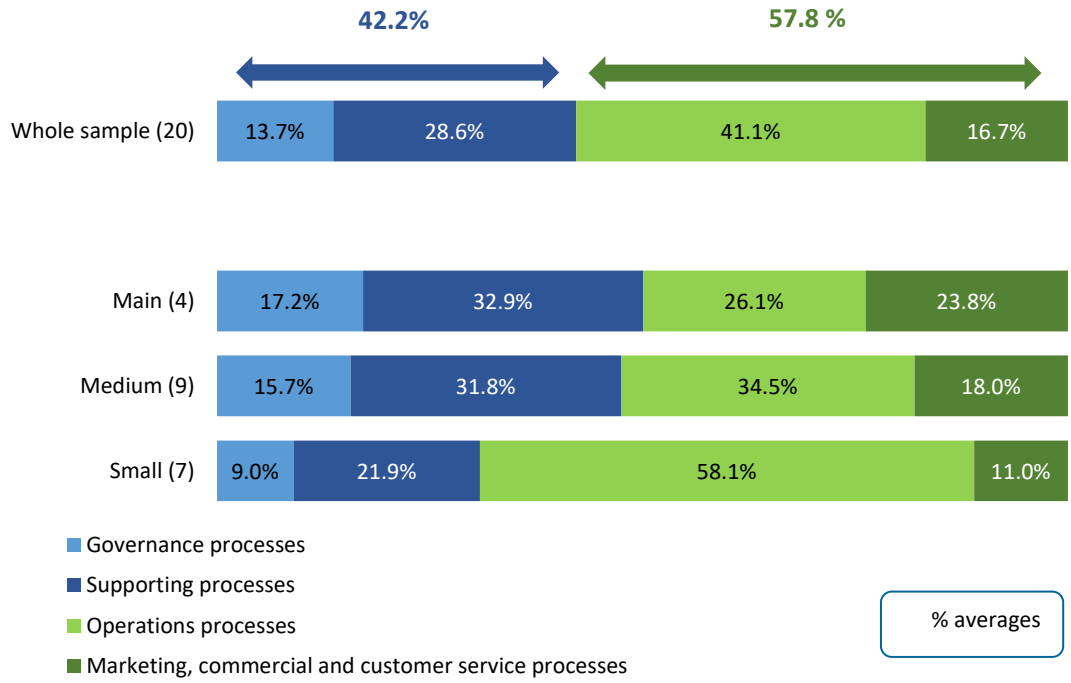
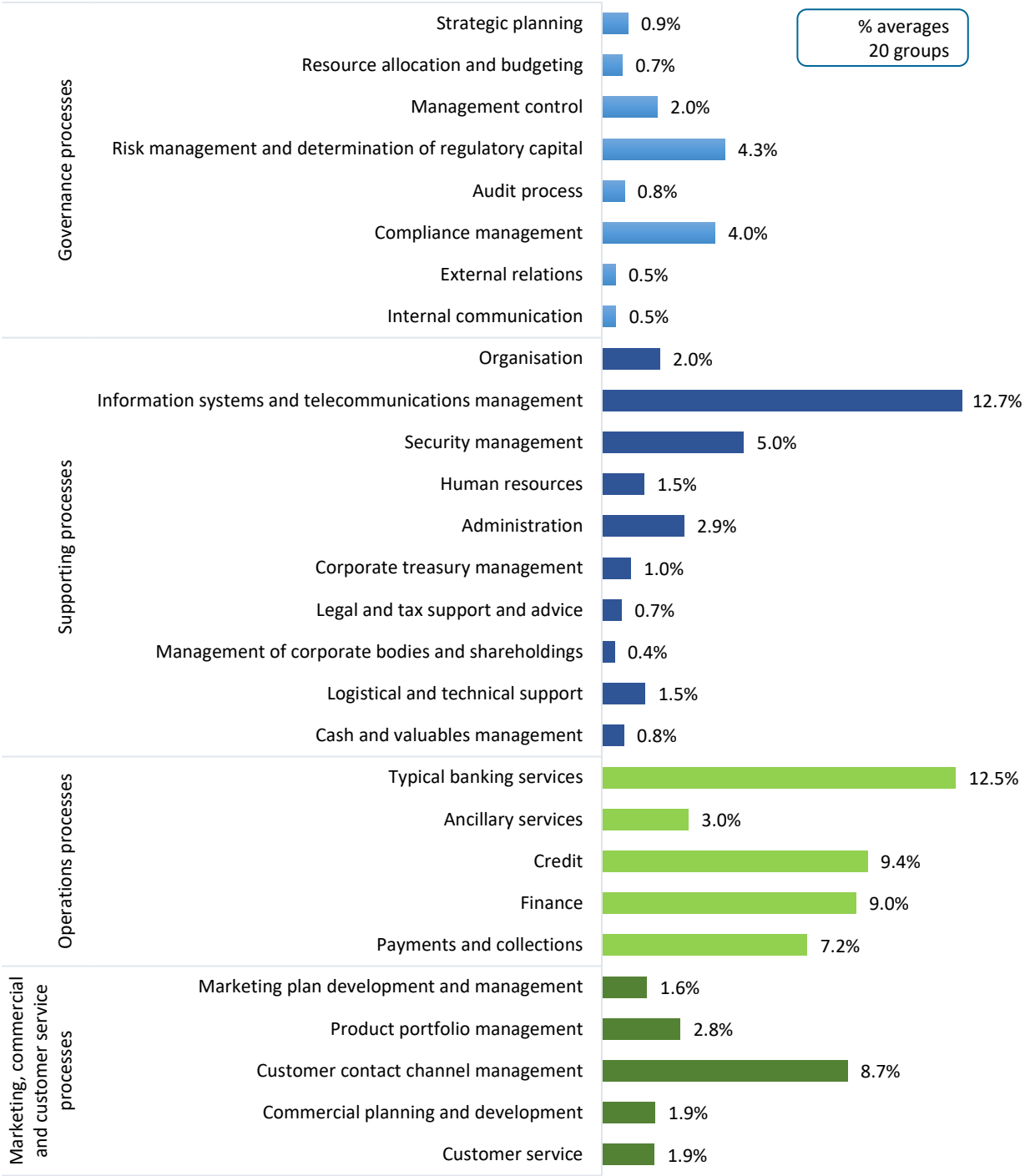


Figure 34 analyses in detail, for the same sample, the distribution of the IT cash outflow as percentage averages within the individual processes relating to the four functional areas. In the area of governance processes, the largest shares are absorbed by risk management and determination of regulatory capital (4.3 per cent) and compliance management (4 per cent). In support processes, the greatest weight is made up of the information systems and telecommunications management (12.7 per cent), followed by security management (5 per cent). The largest shares were reported in the core of Operations processes, going from 7.2 per cent of the IT cash outflow for collections and payments to 12.5 per cent for typical banking services. In the area of marketing, sales and customer service processes, the customer contact channels management has a preponderant weight on total IT cash outflow (8.7 per cent).

[15] The Business area is composed by functional areas "Operations Processes" and "Marketing, Commercial and Customer Service Processes". The Functions area consists of the functional areas "Governance Processes" and "Support Processes".

Figure 34 - IT cash outflow by process



The Appendix shows the breakdown of the IT cash outflow by functional area and process, referring to the four size classes (from Figure 116 to Figure 118).

The IT cash outflow breakdown by functional areas, in 2022-2024 and with reference to a constant sample of 19 groups, shows a downward trend in Operations processes (-4.4 per cent over three years), compared with an increasing trend for all other areas (Figure 35).

Figure 35 - IT cash outflow by functional area: 2022-2024 trend

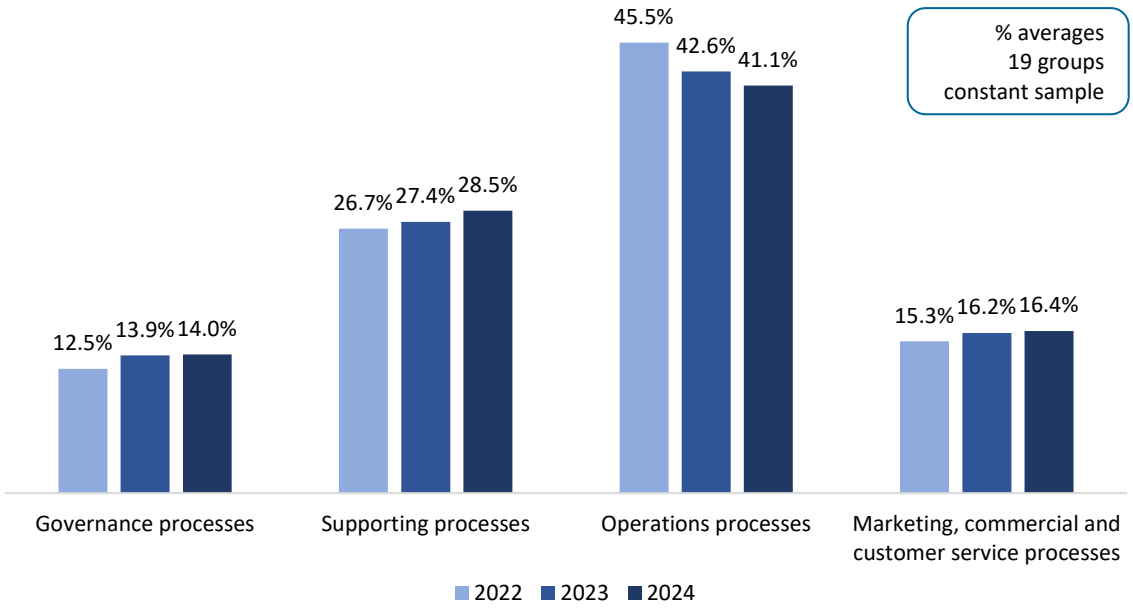
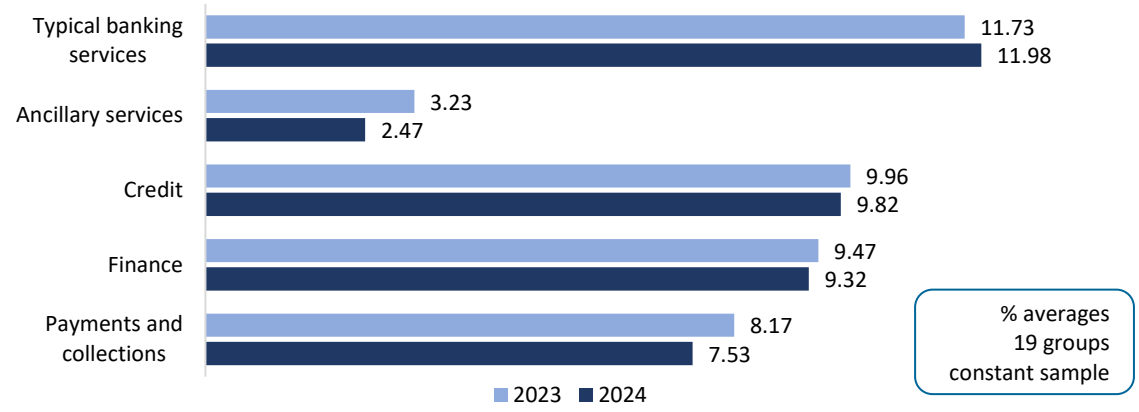


Figure 36 provides an in-depth analysis of the aforementioned phenomenon: the analysis refers to the same constant sample as in the previous figure and compares the cash outflow dedicated to individual Operations processes, in the last two years.

Figure 36 - IT cash outflow of the Operations area: comparison 2023-2024



1.3.3 Run and change

IT cash outflow is broken down into two components, which are distinguished according to the purpose and regardless of the accounting system:

- ✓ **Run**: IT cash outflow (e.g. purchases, fees, internal/external staff, outsourcing) used to maintain current operations (run the business), including corrective/adaptive maintenance and regulatory and organizational adjustments of limited scope.
- ✓ **Change**: IT cash outflow (e.g. purchases, fees, internal/external staff, outsourcing) intended for projects or initiatives aimed at improving and/or innovating banking operations (change the business), including wide-ranging regulatory and organizational adjustments and evolutionary maintenance.

For the 20 groups that provided the breakdown for 2024, 67.2 per cent of the IT cash outflow is dedicated to the run on average and 32.8 per cent to the change share (Table 5). Total IT cash outflow for run and change amounted to 3,138 and €2,101 million, respectively. Focusing on change, it may be useful to recalculate it excluding expenses related to actions taken to meet regulatory requirements (compliance), obtaining, for the 20 groups in question, an IT cash outflow of €1,376 million (possible indirect indication of the expenditure intended to implement business innovation strategies).

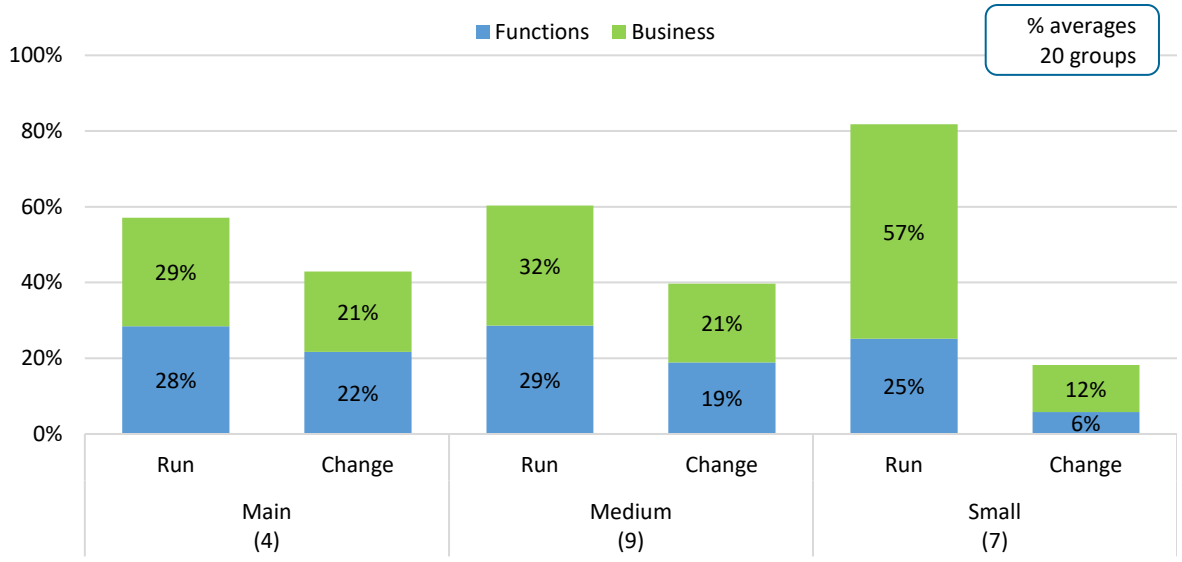
When analysed within the functional areas, change spending has a greater impact on governance processes (5.6 per cent out of 13.7 per cent). Conversely, run activities have a greater impact on Operations processes (29.5 per cent out of 41.1 per cent).

Table 5 - IT cash outflow for run/change by functional area

	IT cash outflows percentage		Run		Change	% averages 20 groups
Governance processes	13.7%	=	8.0%	+	5.6%	Functions 42.2%
Supporting processes	28.6%	=	19.3%	+	9.2%	
Operations processes	41.1%	=	29.5%	+	11.6%	Business 57.8%
Marketing, commercial and customer service processes	16.7%	=	10.4%	+	6.4%	
Total	100.0%	=	67.2%	+	32.8%	

Figure 37 compares, for each size class, the IT cash outflow bar dedicated to run and change (in total, each pair of bars represents 100 per cent), further divided into functions and business components. The share of the IT cash outflow dedicated to the change increases as the operational scale of banking groups grows, rising from 18 per cent for Small groups to 43 per cent for Main groups.

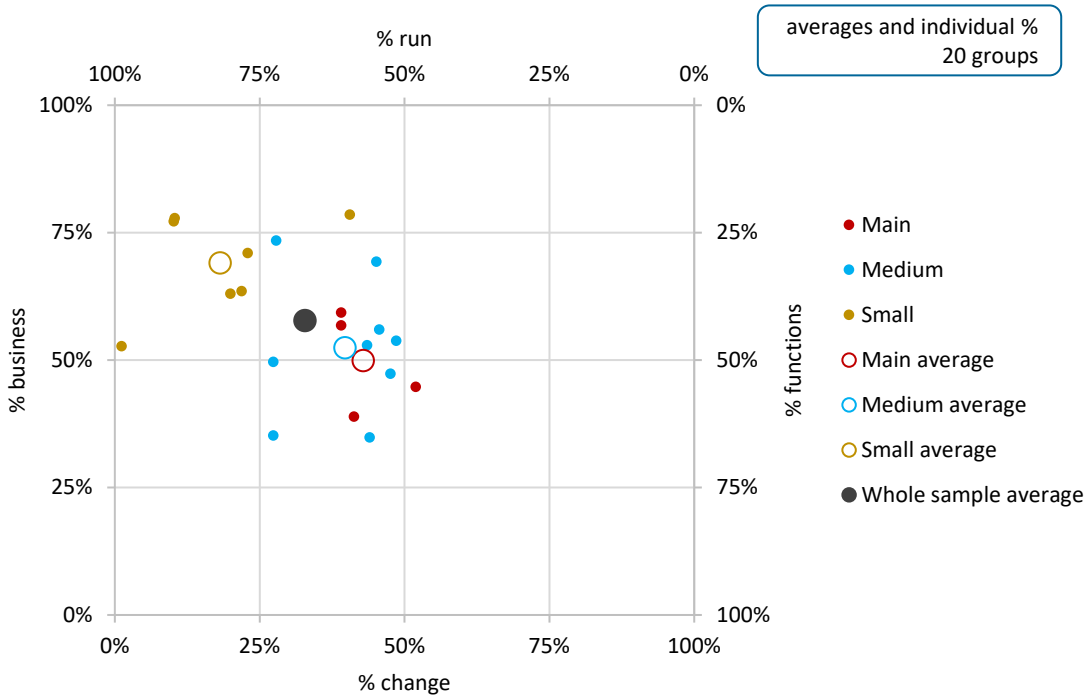
Figure 37 - IT cash outflow for run/change by size class



Banking groups can be positioned individually, differentiated by size class, in a diagram whose horizontal axis represent the percentages of run and change and the vertical axis represents those of business and functions (Figure 38).

All groups examined, with the exception of one of the Main groups, are positioned in the left half of the square, characterized by the prevalence of the run over the change. Out of 20 groups, 14 are in the top half, where business-related spending prevails. Groups tend to cluster on the basis of size classes, whose average values are located approximately along a diagonal: larger groups tend to allocate a greater share of their IT cash outflow to change and functional support areas than smaller groups which, conversely, direct expenses mainly to run and business areas.

Figure 38 - IT cash outflows for business/functions and run/change: individual and by size class values



Similar charts based on IT sourcing models are shown in Appendix (Figure 119 and Figure 120).

1.3.4 Public cloud

This section analyses the amount banking groups spend on public cloud services, as a percentage of their total IT cash outflow. In absolute terms, the total cash outflow allocated by 22 groups to the public cloud amounted to €239.9 million in the FY 2024.

Figure 39 shows, in the grey bars, the individual percentages relating to 2024, ranging up to a maximum of 14.5 per cent. The share of the IT cash outflow allocated to the public cloud is 4.1 per cent on average, in line with the 2023 figure. The forecast trend for 2025-2026 is upwards for 16 out of 22 groups.

Figure 39 - Individual IT cash outflows for public cloud services

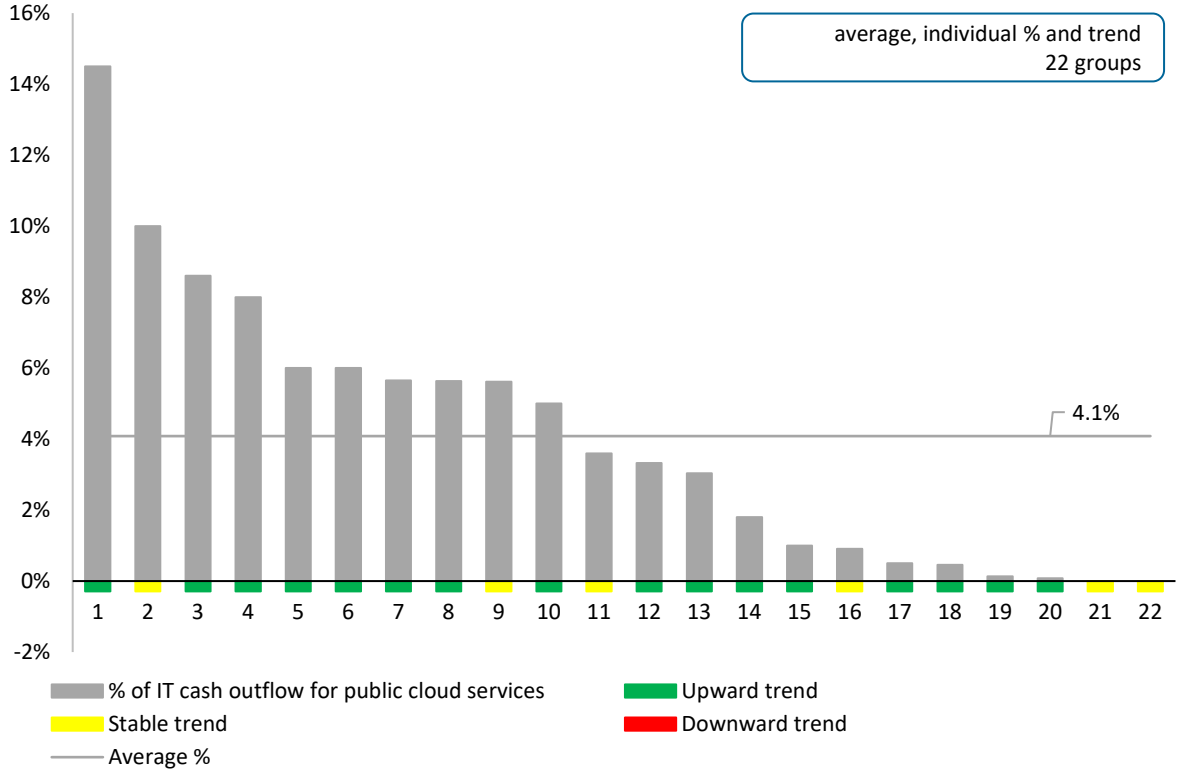
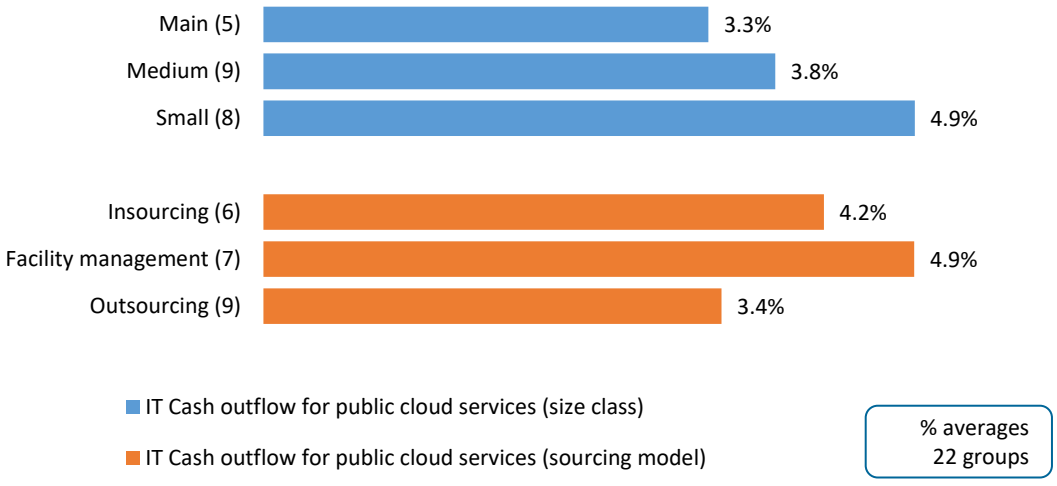


Figure 40 aggregates the above percentages by size class and by IT sourcing model of the groups. The averages by size class confirm the same phenomenon as in the previous year, for which the class with the lowest percentage is that of the Main groups (3.3 per cent), while the Small groups are those with the highest percentage (4.9 per cent).

Figure 40 - IT cash outflow for public cloud services by size class and sourcing model



1.3.5 Open banking

The analysis below focuses on the IT cash outflow that 21 banking groups allocated in 2024 to open banking initiatives and which, in absolute terms, amounted to a total of €24.7 million.

The average percentage of the total IT cash outflow dedicated to open banking appears to be contained, standing at 0.5 per cent. At the individual level, the maximum percentage stands at 2.3 per cent, but 15 groups spend less than the average and nine of these report almost zero spending percentages. Looking at the forecast trends, nine groups, especially those already active in this area, expect an increase in their percentage share in 2025-2026 (Figure 41).

Figure 41 - Individual IT cash outflows for open banking

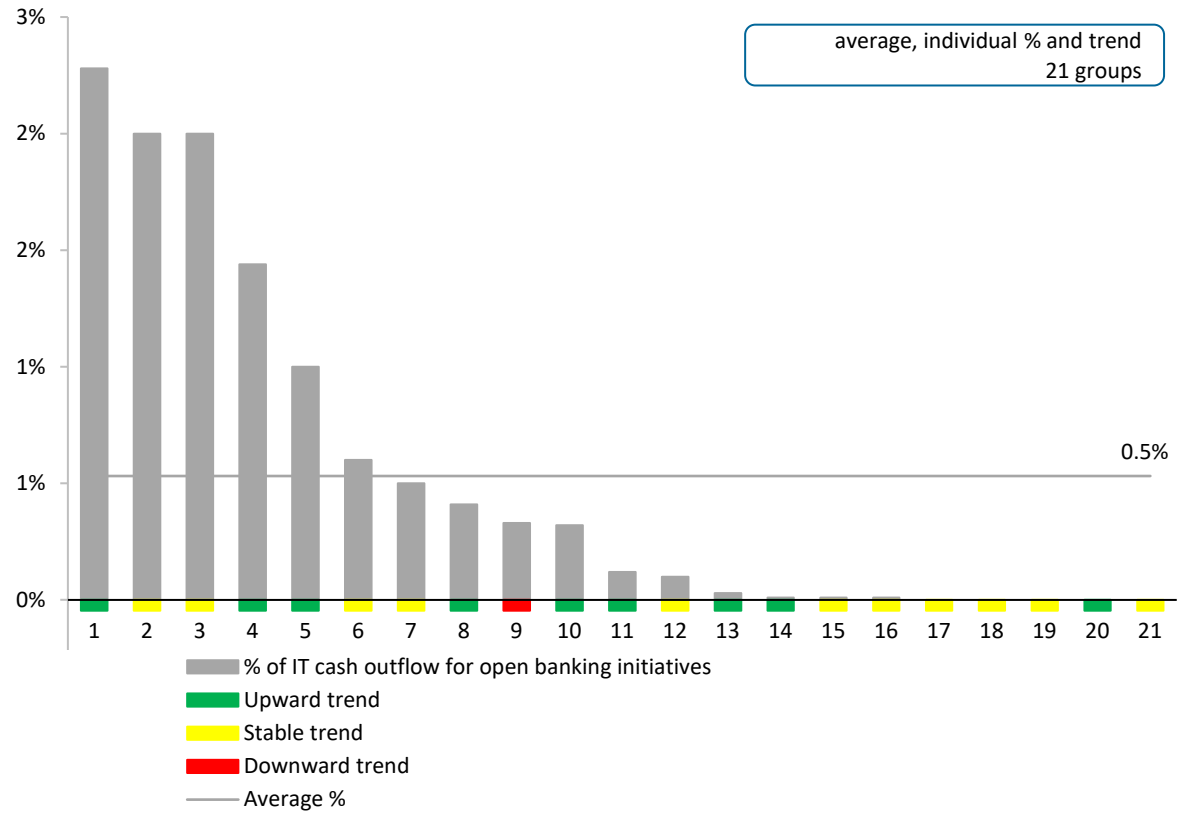


Figure 125 in the Appendix aggregates the above percentages by size class and by IT sourcing model.

1.4 IT investment and technological innovation

This section focuses on IT investments of the 23 banking groups which, in 2024, amount to a total of €2,140 million.

Figure 42 shows the trend of the total IT investment reported by a constant sample of 19 groups for 2020-2024, together with the forecast indicated for 2025.

Figure 42 - IT investment: 2020-2024 trend and forecast

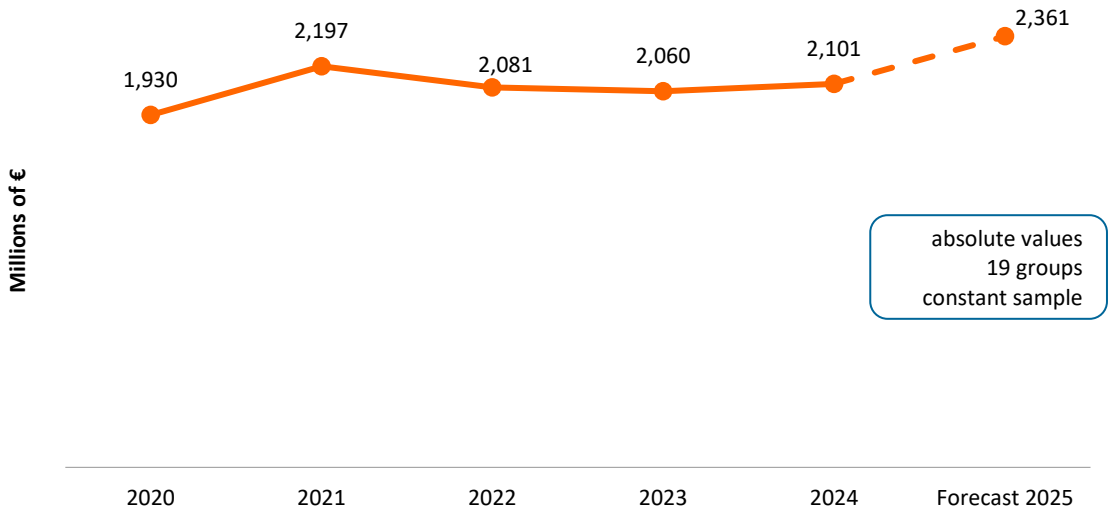


Figure 43 reports the percentage changes, referring to individual groups, between IT investments reported in 2024 and those planned for 2025, compared with 2024 values. Only three groups expect a reduction; in some cases the percentages of increase are significant. Nominally, the amount of IT investments planned for 2025 by the 23 groups is 12 per cent higher than that recorded in the 2024 actuals.

Figure 43 - IT investments: variation in the 2025 forecast compared with the 2024 actuals

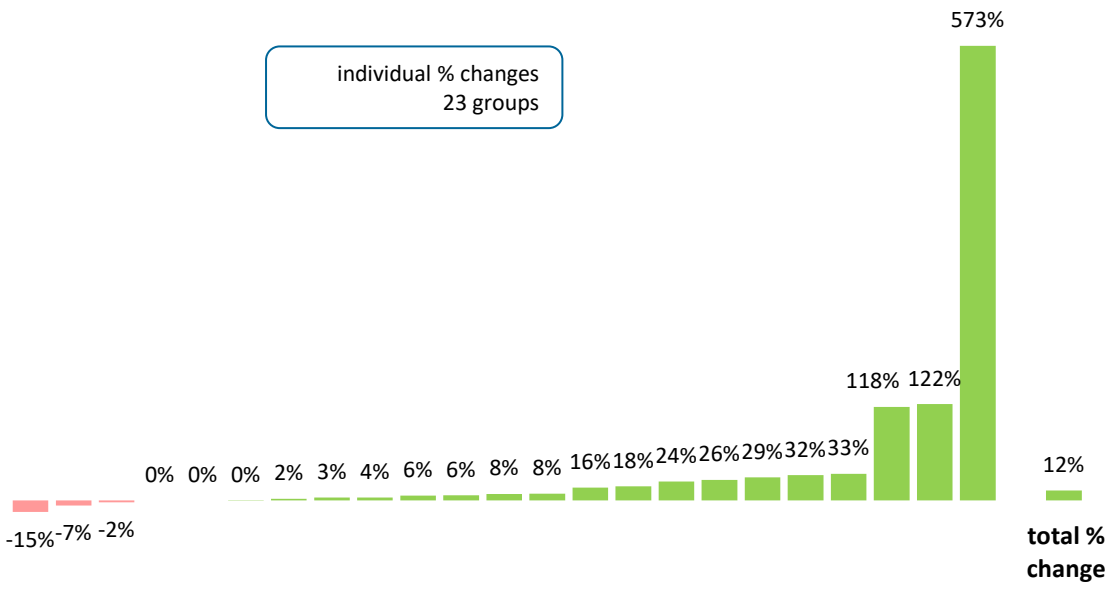


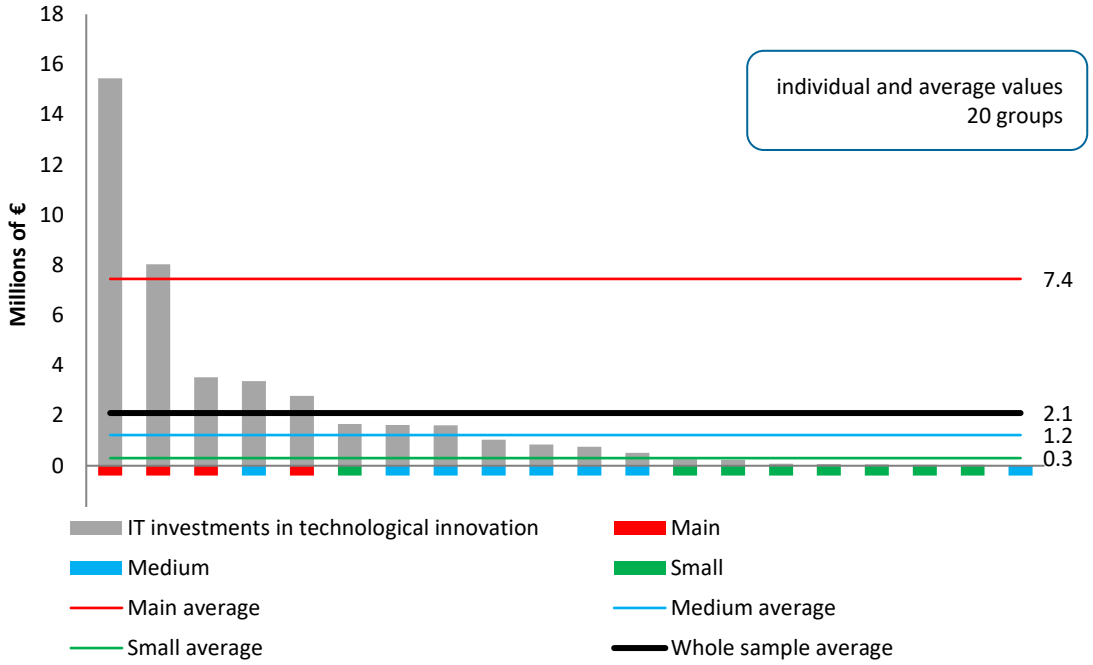
Figure 44 shows absolute values of the IT investments that each group has allocated in 2024 to the following innovative technological areas:

- ✓ Artificial intelligence (including generative AI and machine learning);
- ✓ API - application programming interface (net of compliance interventions);
- ✓ RPA - robotic process automation;

- ✓ DLT - distributed ledger technology (including the 'Spunta' project);
- ✓ Quantum computing.

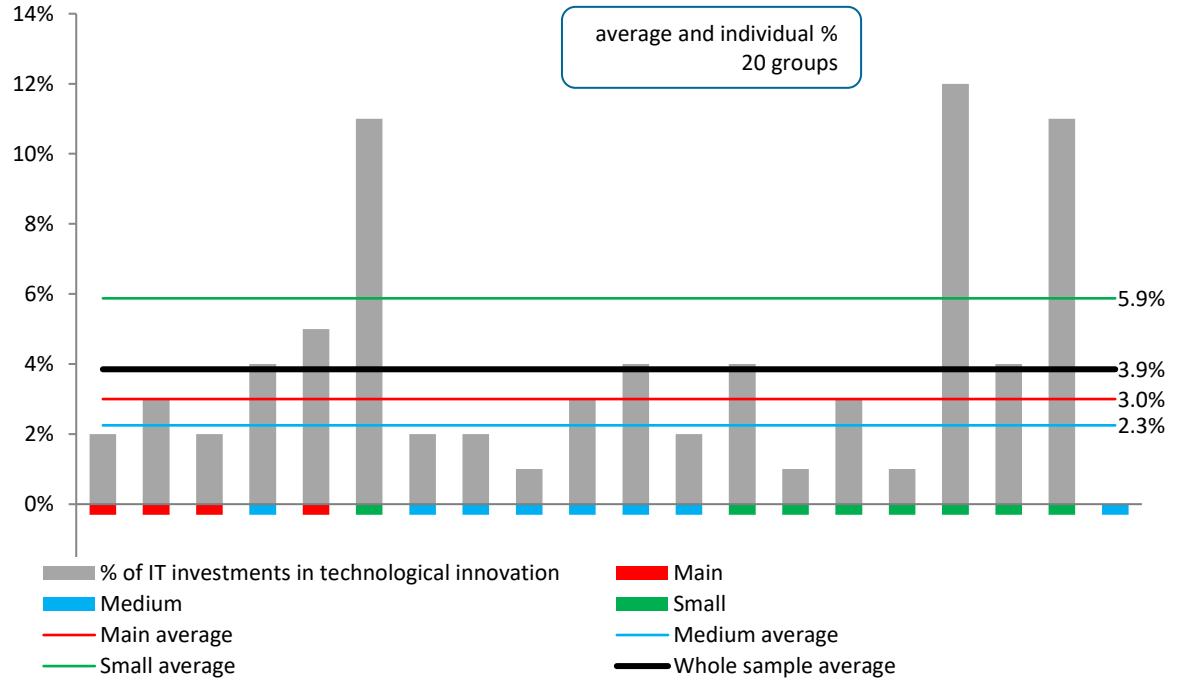
In addition to individual values, which are colour-coded according to the size class, the chart also shows the average values of the individual classes and the entire sample. 20 groups invest €2.1 million each in these innovative areas, an average that rises to €7.4 million for the Main groups.

Figure 44 - IT investments in innovative technology areas



To complete the previous analysis, Figure 45 reports the percentage values of IT investments that groups dedicated to the innovative technological areas listed above, together with the averages for size classes and the entire sample. To allow individual comparisons between absolute and relative amounts, the order of the groups represented in the vertical bars is the same as that shown in the previous figure. In 2024, the 20 respondent groups allocated an average of 3.9 per cent of their IT investments to initiatives related to these innovative technologies. The largest percentage concerning Small groups on average (5.9 per cent) takes into account the phenomenon of outsourcing, which sees some of them benefit indirectly from IT investment made by the supplier and invest resources directly mainly in experimental initiatives or innovative areas.

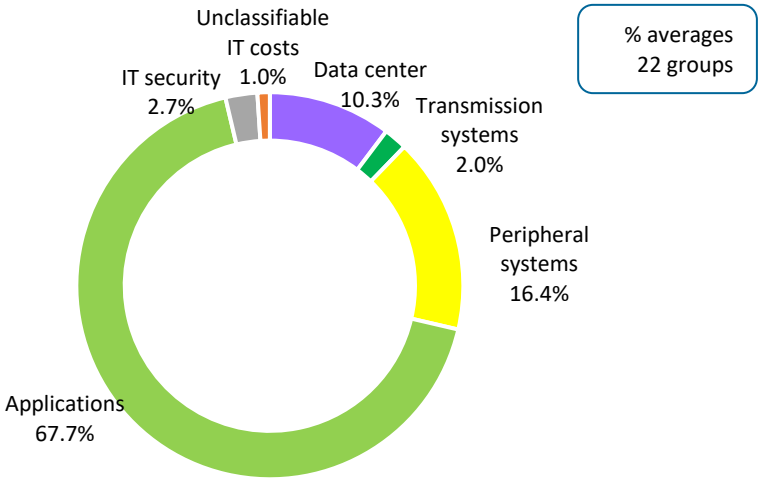
Figure 45 - IT investments in innovative technology areas - per cent



Referring to Figure 24 in the previous sections, which covers a sample of 21 groups that break down their IT cash outflows among thematic areas with sufficient granularity, it distinguishes, in percentage within each area, the portion of cash outflow related to current spending from that related to the investment. This is lower than current spending in all areas. In the Applications area (development and maintenance), investment is predominant compared with that in the other areas, both in absolute terms (approximately €1,500 million) and in terms of relative share (45 per cent).

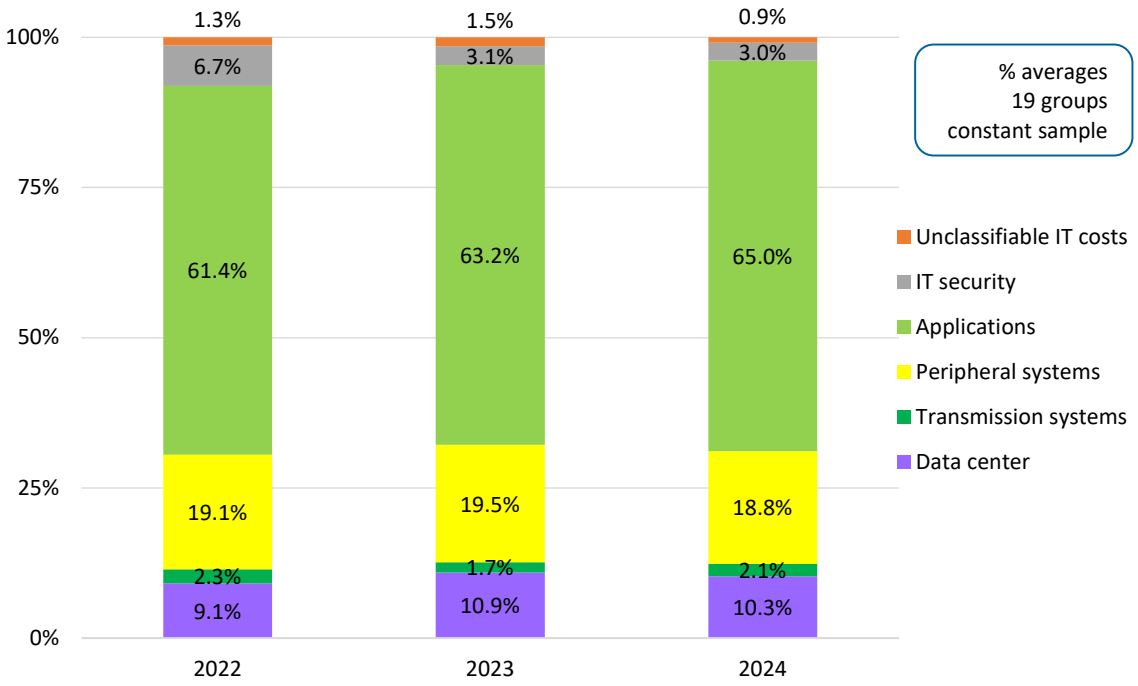
The breakdown as percentage averages of the IT investment between thematic areas, based on a sample of 22 groups that subdivide them in sufficient detail, also shows in Figure 46 a prevalence of the share dedicated to Applications (67.7 per cent). If we do a comparison with the TCO broken down by thematic area (cf. Figure 20, with a slightly different sample) it is interesting to note that the share of the investment for Applications is significantly higher than the corresponding share of the TCO (50 per cent).

Figure 46 - IT investment by thematic area



Analysing the IT investment by thematic area over the 2022-2024 period, for a sample of 19 groups that indicate them stably with sufficient granularity, the percentage dedicated to Applications remains the majority and grows over the years, followed by investment in Peripheral Systems and the Data center (Figure 47).

Figure 47 - IT investment by thematic area: 2022-2024 trend



In Figure 48 the IT investment in Hardware and Software are represented in percentage averages over 22 groups. The investment in Software is strongly predominant (73.3 per cent).

Figure 48 - IT investment in HW and SW

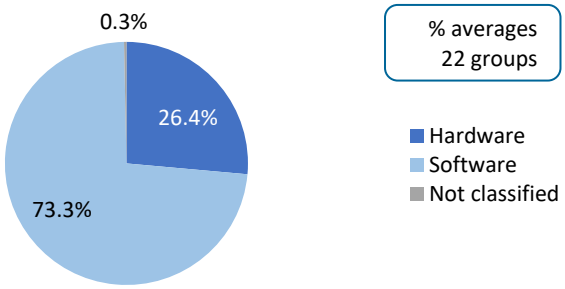
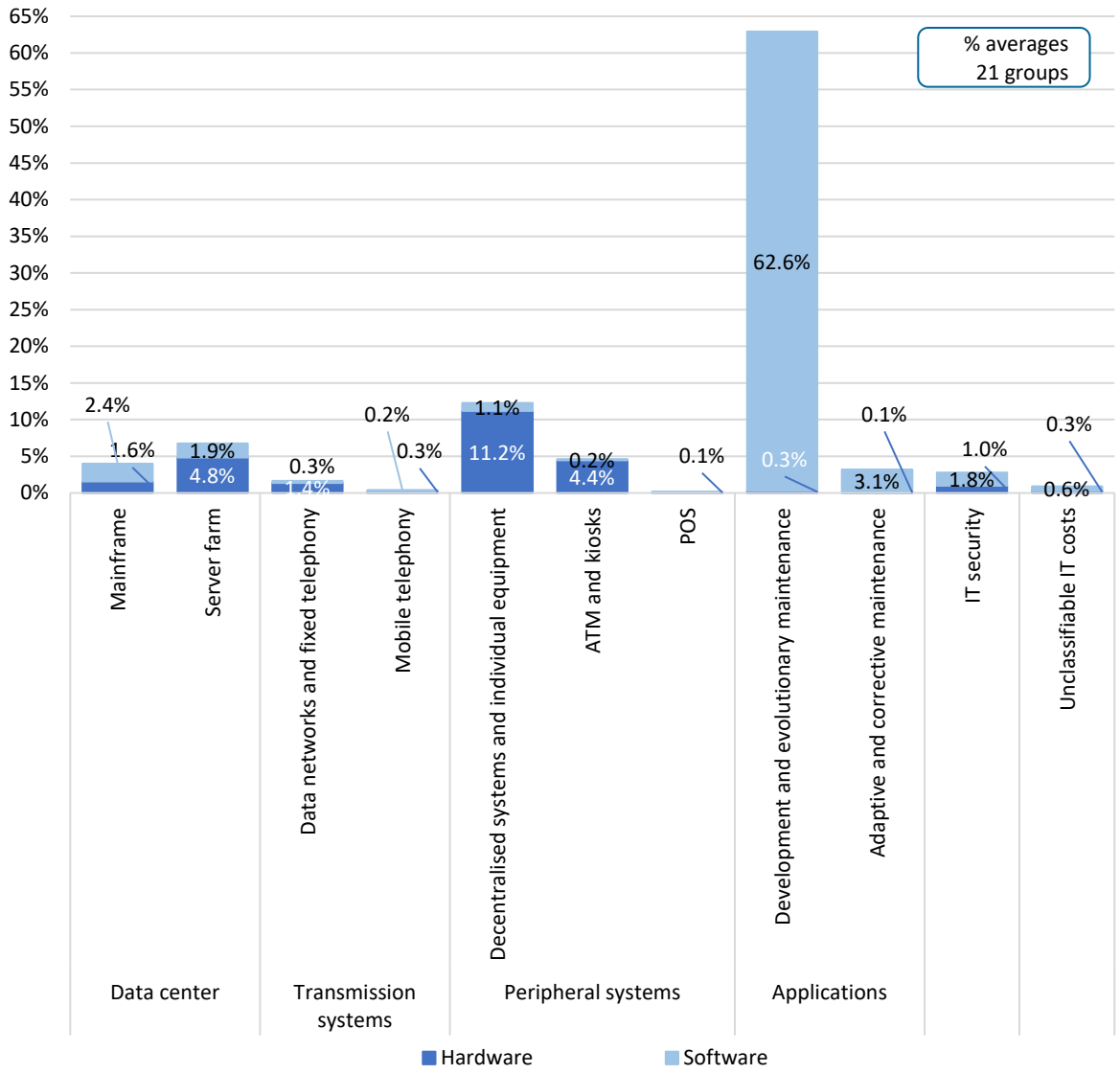


Figure 49 shows a similar breakdown, within the thematic areas, for the 21 groups that report their investments in sufficient detail.

Figure 49 - IT investment in HW and SW by thematic area



Similar breakdowns, referring to the groups analysed by size class and by IT sourcing model, are reported in the Appendix, from Figure 126 to Figure 137.

1.5 Financial indicators

The following are some indicators calculated by comparing key items from the income statement and operating results. They were processed for a constant sample of 21 groups that participated in the Survey in the last three years (Table 6), broken down by size class (from Table 7 at Table 9) and by IT sourcing model (from Table 10 at Table 12).

For the items 'IT costs',[16] 'IT cash outflows', 'IT investments',[17] 'IT amortizations',[18] 'total number of employees' and 'number of employees net of IT' (the number of employees is an average of monthly values) the values reported by the groups in the questionnaire are used; the values 'total assets', 'operating costs', 'operating income', 'net profit' and 'operating margin'[19] are also reported by the groups in the questionnaire and refer to the values of the consolidated and reclassified financial statements. All quantities listed refer to the CIPA perimeter.

The items 'number of branches',[20] 'number of loan and deposit accounts'[21] and 'gross banking product'[22] are derived from supervisory reports made by banking group components, based in Italy.

In determining the indicators calculated on the basis of net profit or operating margin, the values of groups with negative operating margin or net profit are eliminated. In general, outlier values are removed from the measures.

The financial indicators reported in the tables, which are necessarily dependent on the composition of the sample analysed and the calculation methodology used, are of statistical nature and do not represent an assessment of the merits of the IT technical and organizational decisions adopted by the groups.

Figure 50 shows a graphical representation of some of the indicators (in averages) included in the Table 6. It is interesting to note the presence of certain consistent trends over the 2022-2024 period.

[16] TCO net of adjusted IT revenues.
[17] It includes investments in hardware and software.
[18] Share of depreciation and amortization based on TCO.
[19] Difference between operating income and operating costs.
[20] Average of the quarterly values taken from the archives of Banca d'Italia.
[21] Aggregate consisting of the sum of the items "loans: number of accounts" and "deposits: number of accounts".
[22] Aggregate consisting of the sum of the items "direct deposits", "indirect deposits" and "total loans".

Figure 50 - Trend of some indicators with a constant sample (extract from Table 6)

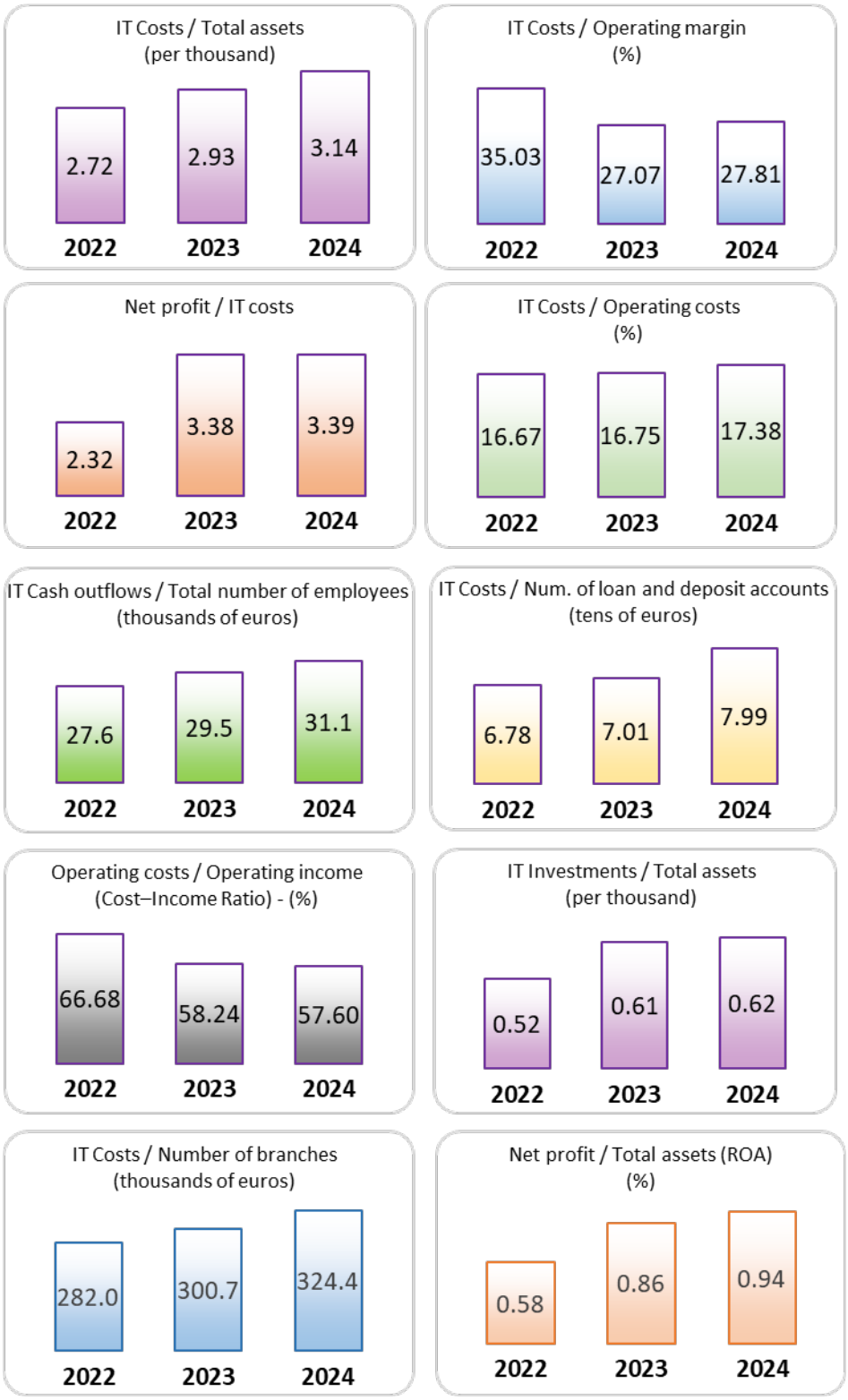


Table 6 - Indicators based on reclassified financial statements: constant sample of 21 groups

IT cost indicators*	Average			Coefficient of variation			Medians		
	2022	2023	2024	2022	2023	2024	2022	2023	2024
IT Costs/Total assets (per thousand)	2.72	2.93	3.14	0.42	0.39	0.38	2.42	2.44	2.72
IT Costs/Operating income (%)	11.27	9.81	10.03	0.44	0.36	0.34	10.24	8.48	9.00
IT Costs/Operating margin (%)	35.03	27.07	27.81	0.74	0.66	0.69	26.72	21.35	22.44
IT Costs/Operating costs (%)	16.67	16.75	17.38	0.30	0.27	0.24	15.79	15.00	15.94
IT Costs/Number of branches (thousands of euros)	281.96	300.71	324.39	0.58	0.61	0.59	220.94	216.75	266.17
IT Costs/Number of employees net of IT (thousands of euros)	27.53	29.23	31.30	0.52	0.50	0.46	22.72	24.26	25.40
IT Costs/Total number of employees(thousand of euros)	26.10	27.66	29.52	0.50	0.47	0.43	22.18	23.11	24.83
IT Costs/Number of loan and deposit accounts (tens of euros)	6.78	7.01	7.99	0.26	0.29	0.52	6.77	6.51	7.01
IT Costs/Gross banking product (per thousand)	1.47	1.47	1.54	0.44	0.44	0.45	1.29	1.18	1.28
IT Investments/IT Depreciations	1.14	1.43	1.38	0.34	0.51	0.55	1.09	1.13	1.21
IT Investments/Total assets (per thousand)	0.52	0.61	0.62	0.73	0.64	0.71	0.41	0.58	0.51
IT Investments/Operating costs (%)	3.99	4.14	4.07	0.83	0.71	0.74	3.10	3.92	3.59
IT Cash outflows/Operating income (%)	11.95	10.51	10.63	0.43	0.37	0.36	10.39	9.53	9.36
IT Cash outflows/Number of employees net of IT (thousands of euros)	29.14	31.17	33.00	0.50	0.49	0.45	23.39	25.82	27.91
IT Cash outflows/Total number of employees (thousands of euros)	27.59	29.46	31.08	0.47	0.46	0.42	22.60	24.80	26.86
Other indicators*	**Average**			**Coefficient of variation**			**Medians**		
	2022	**2023**	**2024**	**2022**	**2023**	**2024**	**2022**	**2023**	**2024**
Operating income/Total assets (%)	2.48	3.02	3.16	0.22	0.17	0.16	2.38	3.03	3.20
Operating margin/Total assets (%)	0.88	1.26	1.33	0.30	0.27	0.30	0.82	1.26	1.24
Net profit/IT Costs	2.32	3.38	3.39	0.62	0.61	0.60	1.99	2.89	3.12
Net profit /Total assets (ROA) (%)	0.58	0.86	0.94	0.54	0.54	0.61	0.50	0.77	0.90
Operating costs/Total assets (%)	1.65	1.77	1.82	0.30	0.28	0.30	1.63	1.68	1.83
Operating costs/Operating income (*cost-Income Ratio*) - (%)	66.68	58.24	57.60	0.19	0.18	0.20	65.58	56.91	57.72
Operating costs/Number of branches (hundreds of thousands of euros)	17.25	18.19	19.00	0.52	0.54	0.59	15.34	15.42	15.27
Total assets/Number of employees net of IT (millions of euro)	10.51	10.20	10.33	0.42	0.38	0.42	9.40	9.62	9.52
Total assets/Total number of employees (millions of euro)	10.00	9.69	9.78	0.40	0.36	0.40	9.06	9.41	9.15
Total assets/Number of branches (millions of euro)	109.97	108.78	111.00	0.57	0.60	0.65	93.98	87.74	89.09

**** the indicators are calculated by eliminating outliers.***

Table 7 - Indicators based on reclassified financial statements: 6 Main groups

IT cost indicators*	Average			Coefficient of variation			Medians		
	2022	2023	2024	2022	2023	2024	2022	2023	2024
IT Costs/Total assets (per thousand)	2.25	2.25	2.39	0.24	0.12	0.15	2.11	2.28	2.38
IT Costs/Operating income (%)	9.73	7.72	7.62	0.30	0.20	0.17	9.35	7.53	8.21
IT Costs/Operating margin (%)	28.82	16.48	16.09	0.46	0.23	0.29	24.91	16.38	15.29
IT Costs/Operating costs (%)	15.88	15.50	15.45	0.43	0.39	0.29	13.57	13.92	14.56
IT Costs/Number of branches (thousands of euros)	297.35	297.62	311.70	0.51	0.54	0.52	266.66	242.75	279.45
IT Costs/Number of employees net of IT (thousands of euros)	21.44	21.59	22.53	0.41	0.35	0.28	20.60	19.83	23.32
IT Costs/Total number of employees(thousand of euros)	20.43	20.55	21.44	0.39	0.33	0.27	19.71	19.12	22.44
IT Costs/Number of loan and deposit accounts (tens of euros)	6.67	6.57	7.02	0.20	0.22	0.24	6.82	6.53	6.70
IT Costs/Gross banking product (per thousand)	1.23	1.15	1.13	0.27	0.23	0.17	1.11	1.05	1.07
IT Investments/IT Depreciations	1.17	1.28	1.20	0.27	0.48	0.31	1.28	1.10	1.15
IT Investments/Total assets (per thousand)	0.81	0.86	0.93	0.54	0.57	0.52	0.79	0.73	0.83
IT Investments/Operating costs (%)	5.55	5.50	5.62	4.63	4.01	4.69	6.70	5.62	5.79
IT Cash outflows/Operating income (%)	10.34	8.43	8.11	0.35	0.20	0.19	10.50	8.86	8.56
IT Cash outflows/Number of employees net of IT (thousands of euros)	22.95	23.47	23.93	0.44	0.32	0.27	23.14	23.75	25.27
IT Cash outflows/Total number of employees (thousands of euros)	21.86	22.35	22.79	0.43	0.30	0.26	22.14	22.66	23.89
Other indicators*	**Average**			**Coefficient of variation**			**Medians**		
	2022	2023	2024	2022	2023	2024	2022	2023	2024
Operating income/Total assets (%)	2.37	2.96	3.17	0.13	0.11	0.10	2.31	2.91	3.10
Operating margin/Total assets (%)	0.86	1.40	1.55	0.30	0.17	0.18	0.79	1.40	1.63
Net profit/IT Costs	2.96	4.68	4.80	0.70	0.48	0.36	2.77	4.19	4.27
Net profit /Total assets (ROA) (%)	0.65	1.02	1.11	0.56	0.39	0.22	0.84	1.01	1.05
Operating costs/Total assets (%)	1.51	1.55	1.62	0.20	0.23	0.22	1.58	1.55	1.70
Operating costs/Operating income (*cost-Income Ratio*) - (%)	63.61	52.30	50.97	0.17	0.17	0.18	66.48	54.51	53.48
Operating costs/Number of branches (hundreds of thousands of euros)	18.83	19.17	20.21	0.43	0.46	0.51	16.14	17.07	17.00
Total assets/Number of employees net of IT (millions of euro)	9.38	9.42	9.37	0.27	0.23	0.24	8.74	8.88	8.79
Total assets/Total number of employees (millions of euro)	8.95	8.98	8.92	0.25	0.21	0.23	8.45	8.60	8.46
Total assets/Number of branches (millions of euro)	130.00	128.40	128.32	0.45	0.47	0.47	107.84	107.52	108.48

**** the indicators are calculated by eliminating outliers.***

Table 8 - Indicators based on reclassified financial statements: 9 Medium groups

IT cost indicators*	Average			Coefficient of variation			Medians		
	2022	2023	2024	2022	2023	2024	2022	2023	2024
IT Costs/Total assets (per thousand)	3.21	3.42	3.74	0.49	0.44	0.41	2.94	2.77	3.22
IT Costs/Operating income (%)	13.34	11.65	12.00	0.50	0.40	0.34	11.50	9.28	10.69
IT Costs/Operating margin (%)	43.90	36.89	37.47	0.87	0.64	0.68	29.62	23.22	26.59
IT Costs/Operating costs (%)	18.41	18.46	19.81	0.27	0.24	0.20	18.03	18.78	19.66
IT Costs/Number of branches (thousands of euros)	359.81	398.90	446.24	0.53	0.54	0.47	289.61	330.20	391.05
IT Costs/Number of employees net of IT (thousands of euros)	36.26	38.57	42.45	0.49	0.46	0.37	31.78	36.75	42.00
IT Costs/Total number of employees(thousand of euros)	33.81	35.85	39.28	0.48	0.44	0.35	30.42	34.58	40.00
IT Costs/Number of loan and deposit accounts (tens of euros)	7.13	7.56	9.49	0.33	0.36	0.63	7.04	7.17	7.65
IT Costs/Gross banking product (per thousand)	1.59	1.62	1.80	0.54	0.53	0.51	1.29	1.22	1.34
IT Investments/IT Depreciations	1.17	1.39	1.33	0.42	0.29	0.42	1.00	1.37	1.23
IT Investments/Total assets (per thousand)	0.55	0.67	0.67	0.53	0.38	0.54	0.48	0.73	0.69
IT Investments/Operating costs (%)	4.80	4.99	4.94	0.78	0.62	0.67	3.65	4.01	4.69
IT Cash outflows/Operating income (%)	14.40	12.63	12.95	0.46	0.40	0.36	12.72	10.15	11.80
IT Cash outflows/Number of employees net of IT (thousands of euros)	38.78	41.34	45.20	0.42	0.44	0.34	37.58	38.84	48.24
IT Cash outflows/Total number of employees (thousands of euros)	36.12	38.38	41.76	0.41	0.42	0.31	35.28	36.54	45.09
Other indicators*	**Average**			**Coefficient of variation**			**Medians**		
	2022	2023	2024	2022	2023	2024	2022	2023	2024
Operating income/Total assets (%)	2.54	2.99	3.16	0.32	0.24	0.22	2.59	2.97	2.97
Operating margin/Total assets (%)	0.89	1.15	1.26	0.40	0.41	0.40	0.82	1.13	1.08
Net profit/IT Costs	2.32	2.89	3.17	0.58	0.67	0.73	2.07	2.79	2.98
Net profit /Total assets (ROA) (%)	0.66	0.84	1.03	0.53	0.70	0.78	0.51	0.77	0.90
Operating costs/Total assets (%)	1.75	1.84	1.90	0.40	0.34	0.38	1.63	1.71	1.83
Operating costs/Operating income (*cost-Income Ratio*) - (%)	69.65	61.57	60.02	0.25	0.21	0.24	65.56	64.65	62.75
Operating costs/Number of branches (hundreds of thousands of euros)	20.68	22.58	23.91	0.53	0.53	0.56	17.81	18.46	20.45
Total assets/Number of employees net of IT (millions of euro)	12.42	12.11	12.49	0.47	0.41	0.45	10.06	11.28	11.54
Total assets/Total number of employees (millions of euro)	11.62	11.30	11.61	0.47	0.40	0.44	9.57	10.66	10.91
Total assets/Number of branches (millions of euro)	126.41	129.66	136.34	0.61	0.61	0.66	113.85	117.65	117.20

**** the indicators are calculated by eliminating outliers.***

Table 9 - Indicators based on reclassified financial statements: Small groups

IT cost indicators*	Average			Coefficient of variation			Medians		
	2022 (6 groups)	2023 (7 groups)	2024 (8 groups)	2022 (6 groups)	2023 (7 groups)	2024 (8 groups)	2022 (6 groups)	2023 (7 groups)	2024 (8 groups)
IT Costs/Total assets (per thousand)	2.45	3.37	3.32	0.24	0.43	0.27	2.26	2.87	2.88
IT Costs/Operating income (%)	9.71	10.22	9.49	0.19	0.31	0.17	9.56	9.64	9.51
IT Costs/Operating margin (%)	29.41	27.04	23.98	0.37	0.45	0.32	25.45	22.22	23.14
IT Costs/Operating costs (%)	14.83	16.74	16.35	0.14	0.24	0.13	14.49	16.93	16.83
IT Costs/Number of branches (thousands of euros)	162.76	172.88	174.63	0.11	0.15	0.13	161.56	180.19	170.50
IT Costs/Number of employees net of IT (thousands of euros)	20.53	28.11	32.78	0.11	0.51	0.57	20.63	23.21	25.47
IT Costs/Total number of employees(thousand of euros)	20.21	26.34	30.93	0.11	0.41	0.54	20.37	23.11	24.96
IT Costs/Number of loan and deposit accounts (tens of euros)	6.37	7.49	8.49	0.13	0.35	0.45	6.18	6.51	6.88
IT Costs/Gross banking product (per thousand)	1.53	2.02	1.77	0.34	0.62	0.50	1.42	1.55	1.49
IT Investments/IT Depreciations	1.06	1.74	1.52	0.30	0.66	0.74	1.02	1.56	1.08
IT Investments/Total assets (per thousand)	0.21	0.28	0.34	0.71	0.60	0.88	0.20	0.26	0.25
IT Investments/Operating costs (%)	1.23	1.50	1.61	0.70	0.69	0.78	1.17	1.34	1.30
IT Cash outflows/Operating income (%)	9.90	11.20	9.77	0.21	0.44	0.19	9.51	9.53	9.52
IT Cash outflows/Number of employees net of IT (thousands of euros)	20.87	23.60	33.76	0.10	0.19	0.58	20.94	22.54	25.53
IT Cash outflows/Total number of employees (thousands of euros)	20.54	23.21	31.81	0.10	0.18	0.54	20.73	22.36	25.02

Other indicators*	Average			Coefficient of variation			Medians		
	2022 (6 groups)	2023 (7 groups)	2024 (8 groups)	2022 (6 groups)	2023 (7 groups)	2024 (8 groups)	2022 (6 groups)	2023 (7 groups)	2024 (8 groups)
Operating income/Total assets (%)	2.52	3.23	3.52	0.10	0.14	0.25	2.51	3.11	3.29
Operating margin/Total assets (%)	0.87	1.26	1.50	0.16	0.08	0.45	0.89	1.25	1.25
Net profit/IT Costs	1.78	2.74	2.83	0.47	0.58	0.61	1.71	2.27	2.79
Net profit /Total assets (ROA) (%)	0.40	0.83	0.91	0.32	0.46	0.81	0.40	0.68	0.69
Operating costs/Total assets (%)	1.65	1.97	2.02	0.16	0.23	0.18	1.68	1.87	1.98
Operating costs/Operating income (*cost-Income Ratio*) - (%)	65.30	60.44	58.35	0.10	0.09	0.14	65.32	60.29	60.43
Operating costs/Number of branches (hundreds of thousands of euros)	11.09	11.36	11.24	0.12	0.20	0.13	11.26	10.98	11.75
Total assets/Number of employees net of IT (millions of euro)	8.76	8.31	9.58	0.25	0.17	0.37	8.69	7.87	8.79
Total assets/Total number of employees (millions of euro)	8.62	7.97	9.12	0.25	0.16	0.35	8.56	7.74	8.48
Total assets/Number of branches (millions of euro)	68.03	61.32	59.91	0.13	0.13	0.12	68.29	62.50	61.07

**** the indicators are calculated by eliminating outliers.***

Table 10 - Indicators based on reclassified financial statements: 7 Insourcing groups

IT cost indicators*	Average			Coefficient of variation			Medians		
	2022	2023	2024	2022	2023	2024	2022	2023	2024
IT Costs/Total assets (per thousand)	2.56	2.77	3.21	0.47	0.53	0.57	2.01	2.37	2.56
IT Costs/Operating income (%)	9.43	8.36	8.98	0.30	0.32	0.36	8.68	8.05	8.46
IT Costs/Operating margin (%)	33.47	22.84	26.63	0.52	0.62	0.84	25.79	17.37	19.15
IT Costs/Operating costs (%)	13.48	13.87	14.85	0.22	0.19	0.18	13.10	13.13	14.71
IT Costs/Number of branches (thousands of euros)	246.73	263.16	296.89	0.52	0.55	0.53	240.14	208.35	261.62
IT Costs/Number of employees net of IT (thousands of euros)	19.53	20.95	23.84	0.29	0.30	0.33	18.91	19.17	23.89
IT Costs/Total number of employees(thousand of euros)	18.52	19.74	22.30	0.28	0.27	0.29	18.22	17.90	22.99
IT Costs/Number of loan and deposit accounts (tens of euros)	5.93	6.21	7.15	0.15	0.17	0.22	5.35	6.11	7.01
IT Costs/Gross banking product (per thousand)	1.10	1.07	1.13	0.18	0.07	0.14	1.09	1.06	1.13
IT Investments/IT Depreciations	1.21	1.43	1.40	0.30	0.42	0.33	1.26	1.14	1.40
IT Investments/Total assets (per thousand)	0.78	0.88	1.00	0.58	0.54	0.44	0.70	0.76	0.97
IT Investments/Operating costs (%)	5.97	6.18	6.42	0.68	0.57	0.50	5.67	5.01	6.02
IT Cash outflows/Operating income (%)	10.97	9.88	10.39	0.43	0.42	0.48	9.65	9.53	9.03
IT Cash outflows/Number of employees net of IT (thousands of euros)	22.95	24.70	27.51	0.45	0.39	0.44	21.00	23.69	25.87
IT Cash outflows/Total number of employees (thousands of euros)	21.67	23.22	25.67	0.42	0.35	0.39	20.24	22.13	24.06
Other indicators*	**Average**			**Coefficient of variation**			**Medians**		
	2022	2023	2024	2022	2023	2024	2022	2023	2024
Operating income/Total assets (%)	2.68	3.20	3.44	0.24	0.18	0.17	2.38	3.10	3.25
Operating margin/Total assets (%)	0.82	1.27	1.37	0.24	0.17	0.22	0.79	1.26	1.34
Net profit/IT Costs	2.52	4.08	4.07	0.79	0.62	0.54	1.97	3.24	3.53
Net profit /Total assets (ROA) (%)	0.57	0.92	1.03	0.56	0.45	0.31	0.50	0.79	1.05
Operating costs/Total assets (%)	1.86	1.93	2.07	0.32	0.32	0.36	1.69	1.77	1.88
Operating costs/Operating income (*cost-Income Ratio*) - (%)	68.91	59.47	59.07	0.10	0.14	0.18	66.63	59.46	55.82
Operating costs/Number of branches (hundreds of thousands of euros)	17.87	18.47	19.72	0.45	0.46	0.50	15.94	17.69	17.26
Total assets/Number of employees net of IT (millions of euro)	8.06	8.08	7.96	0.20	0.20	0.19	8.07	7.86	7.72
Total assets/Total number of employees (millions of euro)	7.69	7.69	7.54	0.21	0.21	0.20	7.84	7.42	7.39
Total assets/Number of branches (millions of euro)	102.85	102.86	102.29	0.55	0.58	0.58	93.47	87.80	88.32

**** the indicators are calculated by eliminating outliers.***

Table 11 - Indicators based on reclassified financial statements: Facility management groups

IT cost indicators*	Average			Coefficient of variation			Medians		
	2022 (6 groups)	2023 (7 groups)	2024 (7 groups)	2022 (6 groups)	2023 (7 groups)	2024 (7 groups)	2022 (6 groups)	2023 (7 groups)	2024 (7 groups)
IT Costs/Total assets (per thousand)	2.43	3.10	3.11	0.22	0.48	0.30	2.50	2.66	2.72
IT Costs/Operating income (%)	10.64	10.51	9.89	0.22	0.38	0.30	10.99	9.28	9.00
IT Costs/Operating margin (%)	26.60	27.74	21.87	0.42	0.75	0.54	25.61	18.75	18.84
IT Costs/Operating costs (%)	19.11	19.58	20.00	0.26	0.26	0.21	18.59	19.61	18.99
IT Costs/Number of branches (thousands of euros)	377.62	398.92	446.40	0.38	0.42	0.43	362.32	374.79	380.38
IT Costs/Number of employees net of IT (thousands of euros)	31.29	36.51	38.78	0.22	0.33	0.26	33.78	36.75	42.00
IT Costs/Total number of employees(thousand of euros)	29.56	33.49	35.76	0.21	0.28	0.24	31.86	34.58	40.00
IT Costs/Number of loan and deposit accounts (tens of euros)	7.81	8.79	10.59	0.34	0.40	0.63	8.37	8.33	7.65
IT Costs/Gross banking product (per thousand)	1.37	1.83	1.96	0.24	0.71	0.60	1.33	1.25	1.34
IT Investments/IT Depreciations	1.28	1.30	1.27	0.35	0.35	0.32	1.15	1.10	1.19
IT Investments/Total assets (per thousand)	0.65	0.64	0.72	0.46	0.45	0.45	0.73	0.65	0.71
IT Investments/Operating costs (%)	5.10	6.25	4.93	0.48	0.75	0.34	4.52	5.34	5.16
IT Cash outflows/Operating income (%)	11.21	11.37	10.29	0.23	0.47	0.28	11.73	9.79	9.36
IT Cash outflows/Number of employees net of IT (thousands of euros)	33.10	33.31	40.54	0.24	0.21	0.27	35.35	35.90	41.12
IT Cash outflows/Total number of employees (thousands of euros)	31.26	31.45	37.35	0.23	0.20	0.24	33.49	33.82	39.15
Other indicators*	**Average**			**Coefficient of variation**			**Medians**		
	2022 (6 groups)	2023 (7 groups)	2024 (7 groups)	2022 (6 groups)	2023 (7 groups)	2024 (7 groups)	2022 (6 groups)	2023 (7 groups)	2024 (7 groups)
Operating income/Total assets (%)	2.34	2.96	3.18	0.24	0.20	0.16	2.19	2.69	2.97
Operating margin/Total assets (%)	1.02	1.37	1.59	0.37	0.35	0.26	0.91	1.46	1.61
Net profit/IT Costs	2.57	3.00	3.45	0.55	0.51	0.50	2.13	2.79	3.38
Net profit /Total assets (ROA) (%)	0.60	0.84	0.89	0.46	0.48	0.33	0.51	0.77	0.95
Operating costs/Total assets (%)	1.33	1.59	1.59	0.30	0.34	0.30	1.36	1.54	1.55
Operating costs/Operating income (*cost-Income Ratio*) - (%)	56.58	53.61	49.93	0.19	0.27	0.24	56.17	54.88	53.42
Operating costs/Number of branches (hundreds of thousands of euros)	21.22	22.69	23.99	0.56	0.58	0.62	16.97	17.07	17.97
Total assets/Number of employees net of IT (millions of euro)	13.85	12.71	13.27	0.41	0.33	0.38	12.37	11.51	11.54
Total assets/Total number of employees (millions of euro)	13.07	11.83	12.31	0.40	0.34	0.38	11.60	10.90	10.91
Total assets/Number of branches (millions of euro)	160.91	159.41	163.81	0.47	0.49	0.55	134.03	142.77	140.85

**** the indicators are calculated by eliminating outliers.***

Table 12 - Indicators based on reclassified financial statements: Outsourcing groups

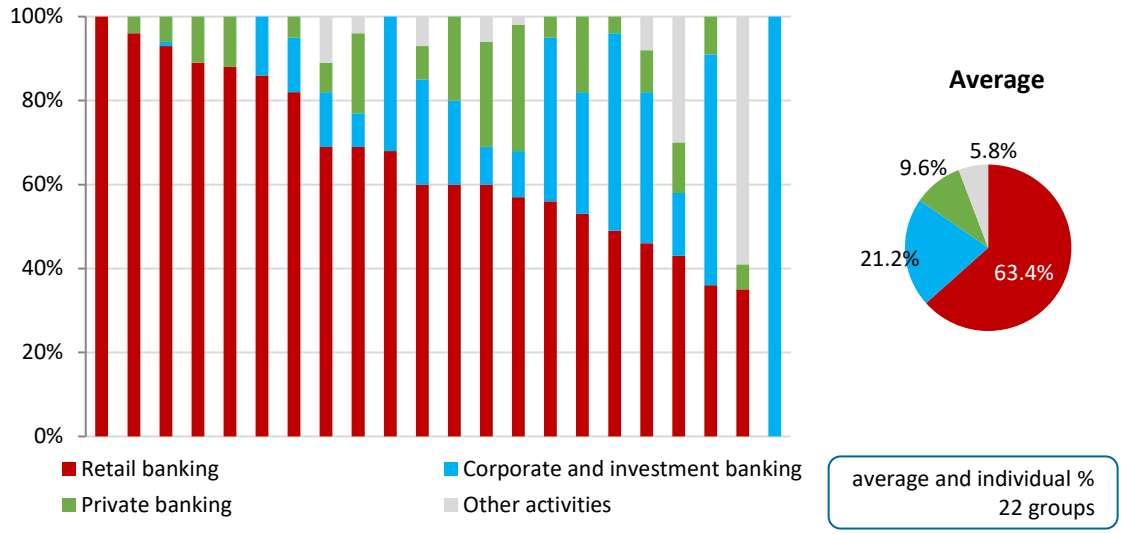
IT cost indicators*	Average			Coefficient of variation			Medians		
	2022 (8 groups)	2023 (8 groups)	2024 (9 groups)	2022 (8 groups)	2023 (8 groups)	2024 (9 groups)	2022 (8 groups)	2023 (8 groups)	2024 (9 groups)
IT Costs/Total assets (per thousand)	3.08	3.36	3.37	0.47	0.35	0.25	2.58	2.93	2.99
IT Costs/Operating income (%)	13.35	11.32	10.84	0.53	0.37	0.33	9.97	9.76	9.81
IT Costs/Operating margin (%)	43.82	33.27	31.79	0.90	0.60	0.64	27.65	22.29	23.85
IT Costs/Operating costs (%)	17.62	17.77	17.54	0.31	0.26	0.21	15.42	17.26	17.73
IT Costs/Number of branches (thousands of euros)	235.18	254.08	247.32	0.82	0.85	0.78	165.60	185.21	180.43
IT Costs/Number of employees net of IT (thousands of euros)	31.71	33.90	37.91	0.66	0.61	0.60	22.06	24.85	25.94
IT Costs/Total number of employees(thousand of euros)	30.14	32.20	35.90	0.61	0.57	0.56	21.69	24.34	25.09
IT Costs/Number of loan and deposit accounts (tens of euros)	6.76	6.86	7.92	0.17	0.17	0.45	6.70	6.64	6.57
IT Costs/Gross banking product (per thousand)	1.87	1.90	1.73	0.46	0.44	0.37	1.71	1.75	1.52
IT Investments/IT Depreciations	0.96	1.64	1.40	0.36	0.64	0.80	1.00	1.37	1.08
IT Investments/Total assets (per thousand)	0.24	0.38	0.33	0.62	0.66	0.82	0.22	0.29	0.25
IT Investments/Operating costs (%)	1.43	2.01	1.65	0.71	0.64	0.74	1.17	1.70	1.30
IT Cash outflows/Operating income (%)	13.36	11.73	10.95	0.51	0.38	0.33	9.95	9.68	10.00
IT Cash outflows/Number of employees net of IT (thousands of euros)	31.59	35.21	38.24	0.63	0.62	0.60	22.00	25.39	26.08
IT Cash outflows/Total number of employees (thousands of euros)	30.03	33.44	36.21	0.59	0.58	0.56	21.84	24.87	36.21
Other indicators*	**Average**			**Coefficient of variation**			**Medians**		
	2022 (8 groups)	2023 (8 groups)	2024 (9 groups)	2022 (8 groups)	2023 (8 groups)	2024 (9 groups)	2022 (8 groups)	2023 (8 groups)	2024 (9 groups)
Operating income/Total assets (%)	2.42	3.02	3.26	0.21	0.16	0.28	2.51	3.07	3.20
Operating margin/Total assets (%)	0.81	1.13	1.33	0.24	0.24	0.54	0.88	1.24	1.18
Net profit/IT Costs	1.98	2.97	3.10	0.52	0.66	0.73	1.71	2.26	2.79
Net profit /Total assets (ROA) (%)	0.58	0.91	1.07	0.65	0.66	0.91	0.46	0.65	0.69
Operating costs/Total assets (%)	1.72	1.89	1.93	0.23	0.21	0.17	1.68	1.78	1.90
Operating costs/Operating income (*cost-Income Ratio*) - (%)	72.30	62.43	61.09	0.21	0.12	0.17	68.55	61.82	61.33
Operating costs/Number of branches (hundreds of thousands of euros)	13.22	14.06	14.00	0.44	0.53	0.53	11.44	11.65	11.88
Total assets/Number of employees net of IT (millions of euro)	10.14	9.77	10.74	0.39	0.39	0.41	9.35	8.75	9.65
Total assets/Total number of employees (millions of euro)	9.72	9.34	10.23	0.34	0.34	0.37	9.03	8.66	9.33
Total assets/Number of branches (millions of euro)	73.43	71.30	74.45	0.22	0.38	0.52	69.33	64.59	61.83

**** the indicators are calculated by eliminating outliers.***

Chapter 2. Banking groups: Organizational profiles

An analysis of the business activities of banking groups[23] shows that, in percentage averages terms, retail banking accounts for 63.4 per cent of their total activities, corporate and investment banking for 21.2 per cent and private banking for 9.6 per cent (Figure 51).

Figure 51 - Business activities of banking groups



The Appendix contains a similar analysis by size class (Figure 138).

2.1 IT sourcing

The analysis of organizational profiles focuses primarily on the structure adopted by groups for IT sourcing, which can be traced back to four models using a prevalence criterion:

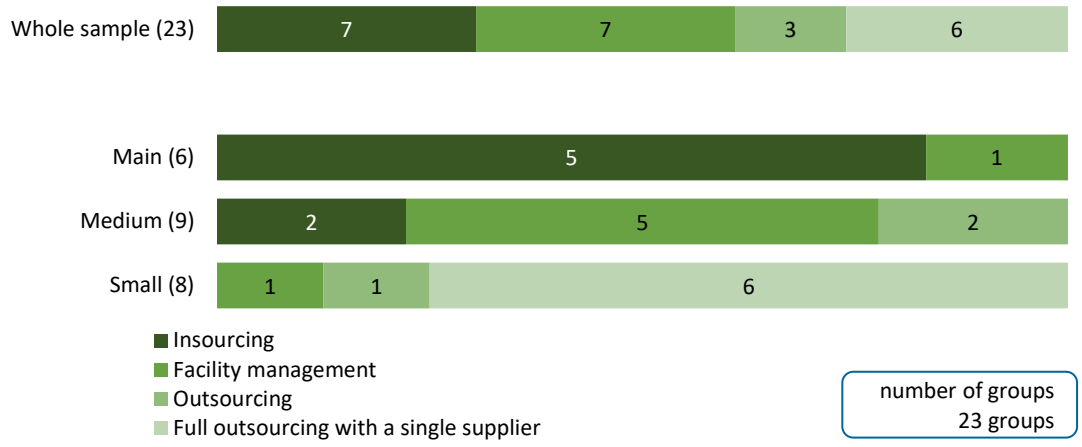
- ✓ **Insourcing**: Data center infrastructure (hardware and system software) and Applications are managed within the CIPA group, regardless of any application management or use of selective outsourcing for individual areas or initiatives;

[23] Based on the operating income referred to the CIPA perimeter.

- ✓ **Facility management**: Data center infrastructure is managed by a supplier outside the CIPA perimeter[24] while Applications are managed within that perimeter, regardless of any use of selective outsourcing;
- ✓ **Outsourcing**: both Data center infrastructure and Applications are managed by suppliers outside the CIPA perimeter;
- ✓ **Full outsourcing**: this model is a special case of Outsourcing, from which it differs in the use of a single prevailing external supplier, which manages both Data center infrastructures and Applications. Depending on the context, in this document Full outsourcing is sometimes equated and merged with Outsourcing.

The analysis of the data received from the groups shows that seven of them maintain the governance of infrastructure and applications internally, identifying themselves with the Insourcing model, seven with the Facility management and nine with the Outsourcing model, of which six are in Full outsourcing. Main groups are mainly characterized by Insourcing and Small groups mainly resort to Full outsourcing (Figure 52).

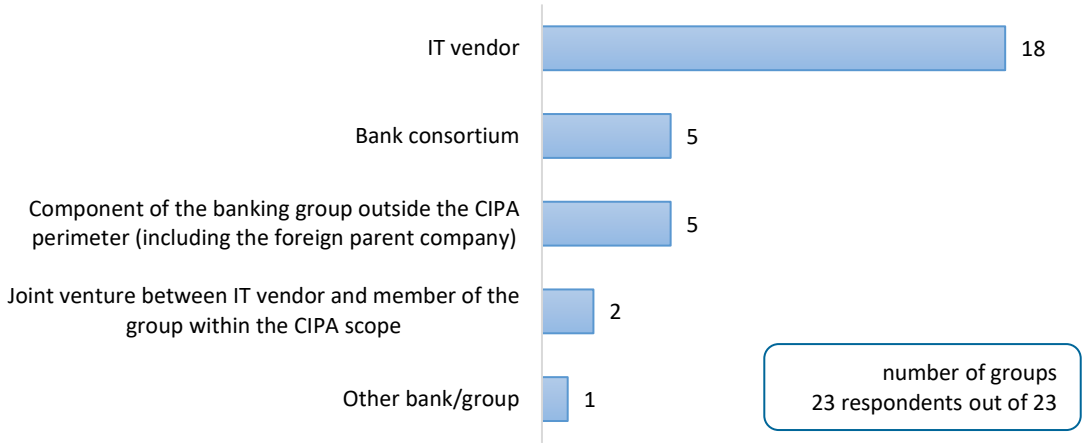
Figure 52 - Prevailing IT sourcing model



An analysis of the various types of IT providers used by the groups (within the CIPA perimeter) (Figure 53) shows that most respondents rely on vendors (the term 'IT vendor' includes any joint venture between vendors and banking group entities outside the CIPA perimeter).

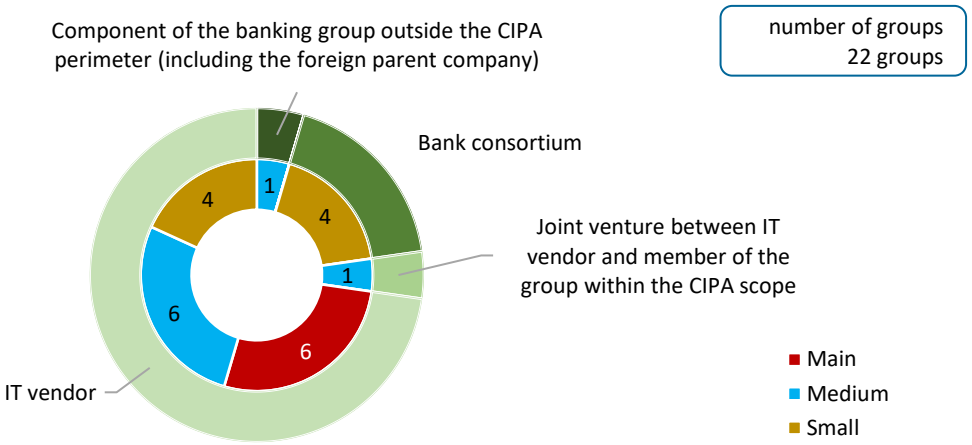
[24] An entity of the group outside the scope of CIPA (including the foreign parent company), another bank or other banking group, a consortium of banks, vendors and joint ventures between vendors and entities of the group.

Figure 53 - Types of IT provider



Narrowing the analysis to the main provider (in terms of IT costs billed), the most reported category remains IT vendors, which are mainly addressed by 16 groups. Figure 54 shows this breakdown by size class.

Figure 54 - Prevailing IT provider

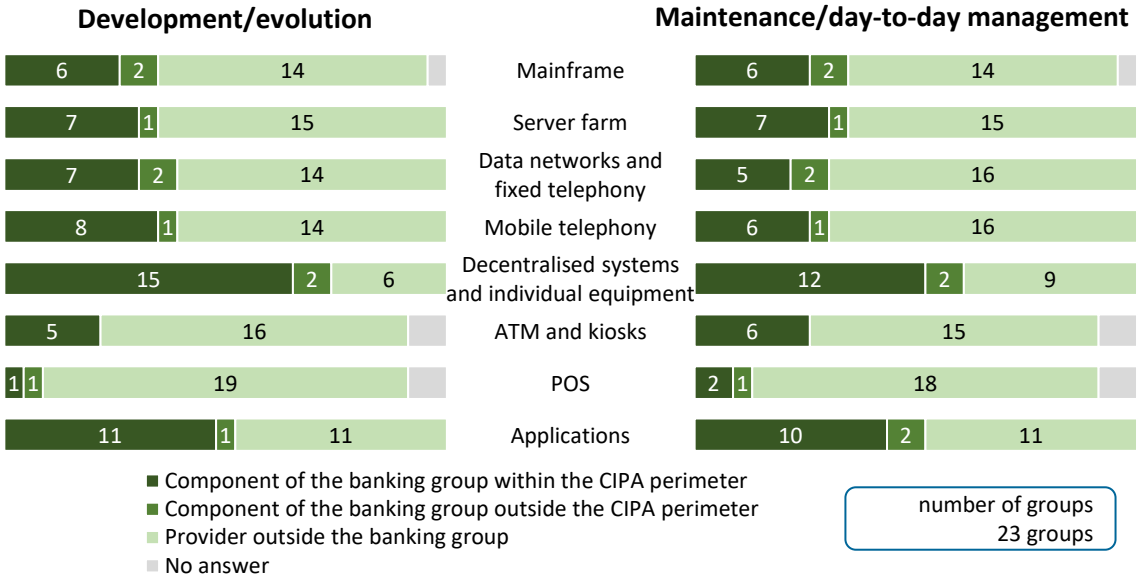


2.1.1 IT sourcing by thematic area

This paragraph analyses the sourcing choices made for the development, evolutionary and corrective maintenance and day-to-day IT services management, differentiated by thematic area. For this purpose, the allocation of these activities is classified into the following cases: i) component of the banking group within the CIPA perimeter; ii) component of the banking group outside the CIPA perimeter (including the foreign parent company); iii) provider outside the banking group (other banking group, other bank, consortium of banks, IT vendor, joint venture with IT vendor). A prevalence criterion is used.

Figure 55 shows that, overall, group entities are involved in less than half of the cases. The outsourcing of services outside the banking group is confirmed to be prevalent. The sourcing approach for development and evolutionary maintenance is quite in line with that adopted for maintenance and day-to-day management, with a slight prevalence of the external supplier for the latter. At the level of thematic areas, groups tend to keep in-house mainly the development and management of decentralized systems and individual equipment and applications.

Figure 55 - Location of IT service development and management activities

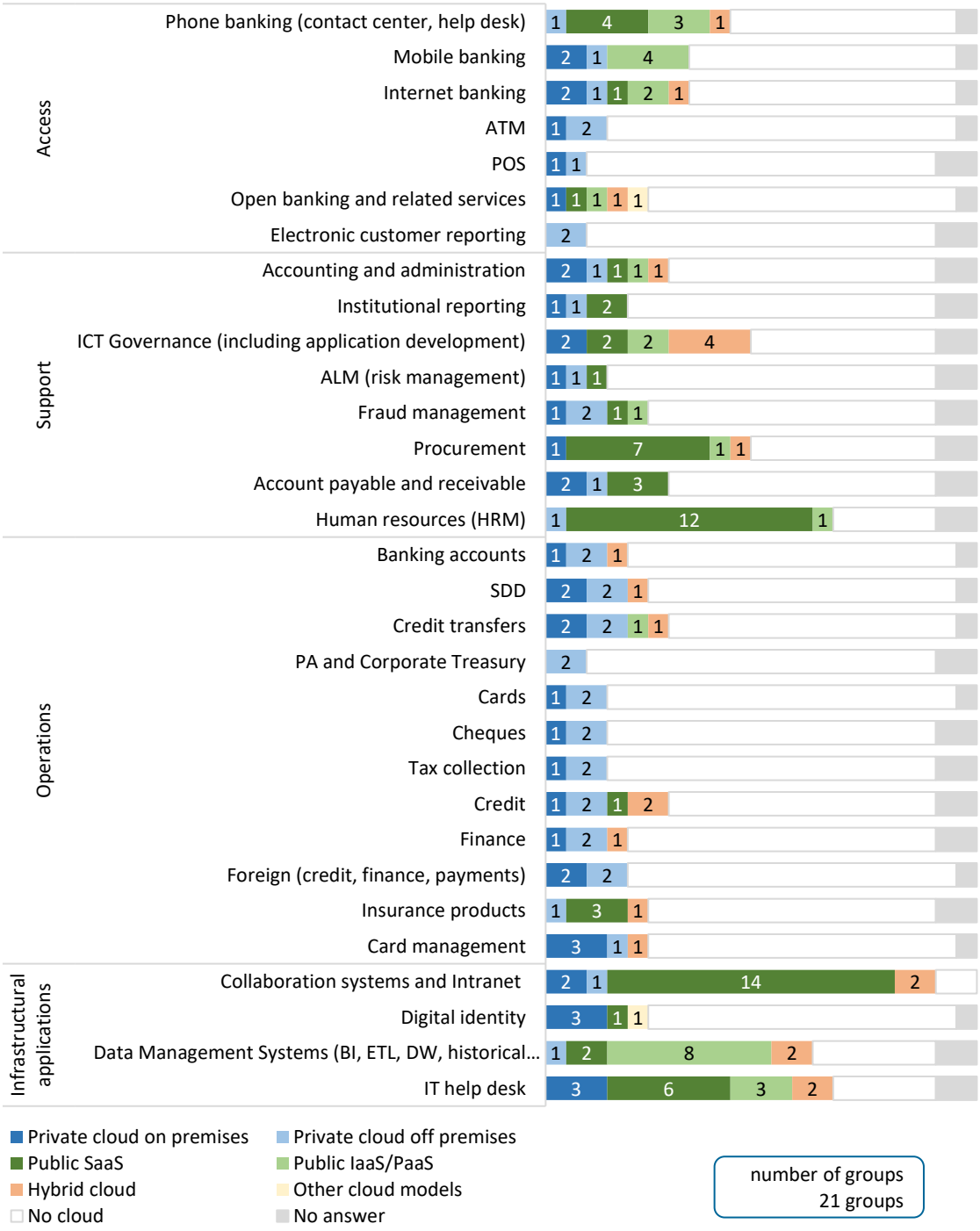


2.2 Cloud computing

This section addresses cloud computing. Figure 56 shows the use of different service models and deployment models by banking groups to deliver key application services (most of the services shown in the figure are taken from the ABI Lab application map). Infrastructural services, personnel management, procurement and telephone banking are most frequently provided via cloud computing – especially the public model. On the other hand, Operations services, characterized by a higher level of criticality, experience less use of the cloud, which is often private. Within the private cloud, on-premises and off-premises solutions are used to a similar extent. Within the public cloud, the SaaS model prevails. There is generally a limited use of the hybrid cloud, with the exception of ICT governance.[25]

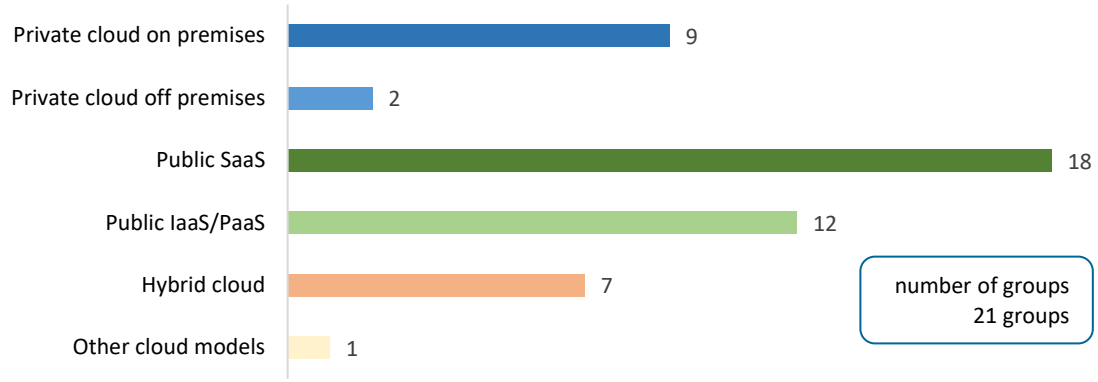
[25] The hybrid cloud is understood as a combination of the public and private models, whose infrastructures are connected and allow the portability of data and applications.

Figure 56 - Cloud computing: application services and models in use



For each cloud models examined in the previous graph, Figure 57 shows the number of groups that use that model for at least one of the services analysed above. It emerges that public models are the most used, especially SaaS, reported by 18 out of 21 groups. The private model is most frequently based on on-premises infrastructure, and the use of the hybrid cloud is reported by seven groups.

Figure 57 - Cloud computing: models in use



An analysis of the microdata[26] also shows that, overall, 11 groups only use the public cloud, one only uses the private cloud and the rest use a combination of public, private and hybrid models.

The human resources employed are also reported, in terms of FTEs (full-time equivalents) dedicated to the cloud in various capacities (governance, centre of expertise, infrastructure, development, management, etc.). Figure 58[27] shows the distribution of relative FTEs, percentages values calculated by comparing the FTEs dedicated to the cloud to the total IT FTEs reported by the groups. Across the 22 groups, an average of 3.4 per cent of their IT FTEs are employed in the cloud, up to peaks of 15 per cent.

Figure 58 - Cloud computing: dedicated FTE resources

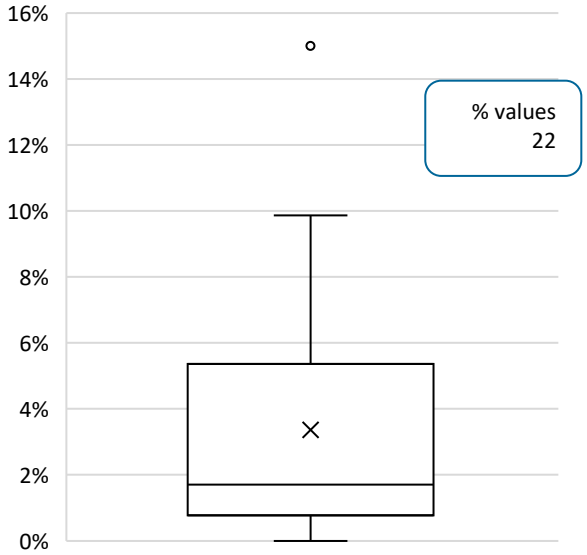
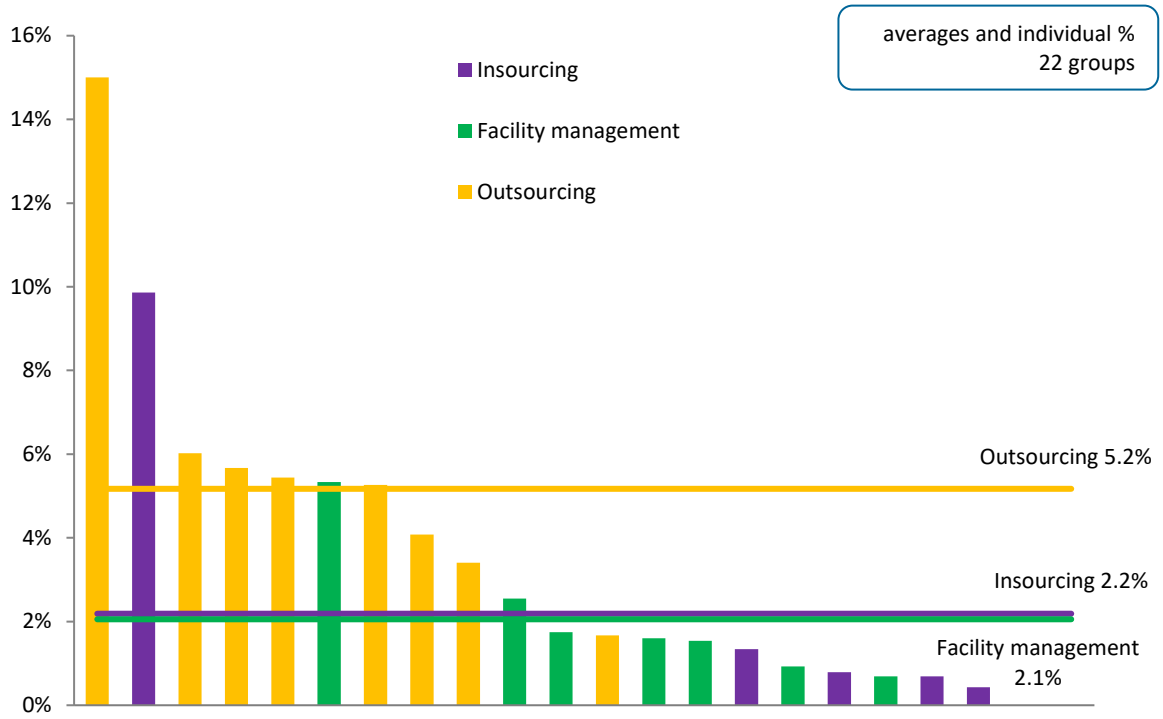


Figure 59 shows individual percentages of FTEs dedicated to the cloud, broken down by IT sourcing model. Each bar represents the group's value, and the colour identifies its pattern. Outsourcing groups commit a relative share of FTEs to the cloud standing at 5.2 per cent on average, higher than other sourcing models. This phenomenon is also influenced by the total number of IT staff employed by the groups, which increases as the volume of IT activities managed directly by the group grows.

[26] The analysis neglects the residual data relating to the item "Other cloud models".

[27] "X" represents the average.

Figure 59 - Cloud computing: dedicated FTE resources - individual values



For each application service examined, Figure 60 shows the CSPs (cloud service providers) reported by banking groups and their frequency, i.e. the number of groups that use that provider within the specific service. Providers reported at least three times across all groups and all services are identified and described, while the rest are grouped under the single heading 'Other provider'. Approximately 30 CSPs are mentioned by the groups, and among these, hyperscalers are reported most frequently.

Figure 60 - Cloud Service Providers

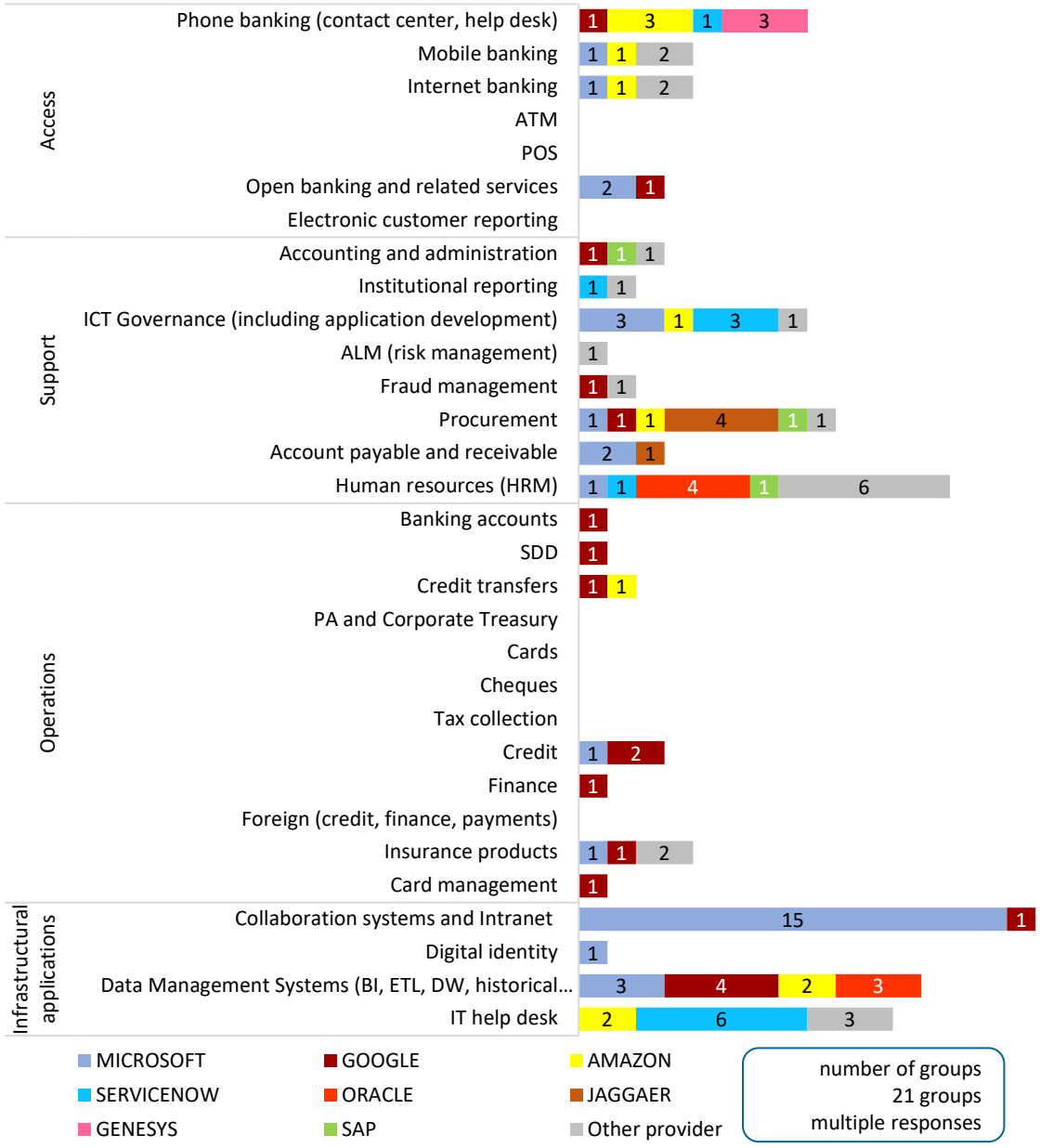
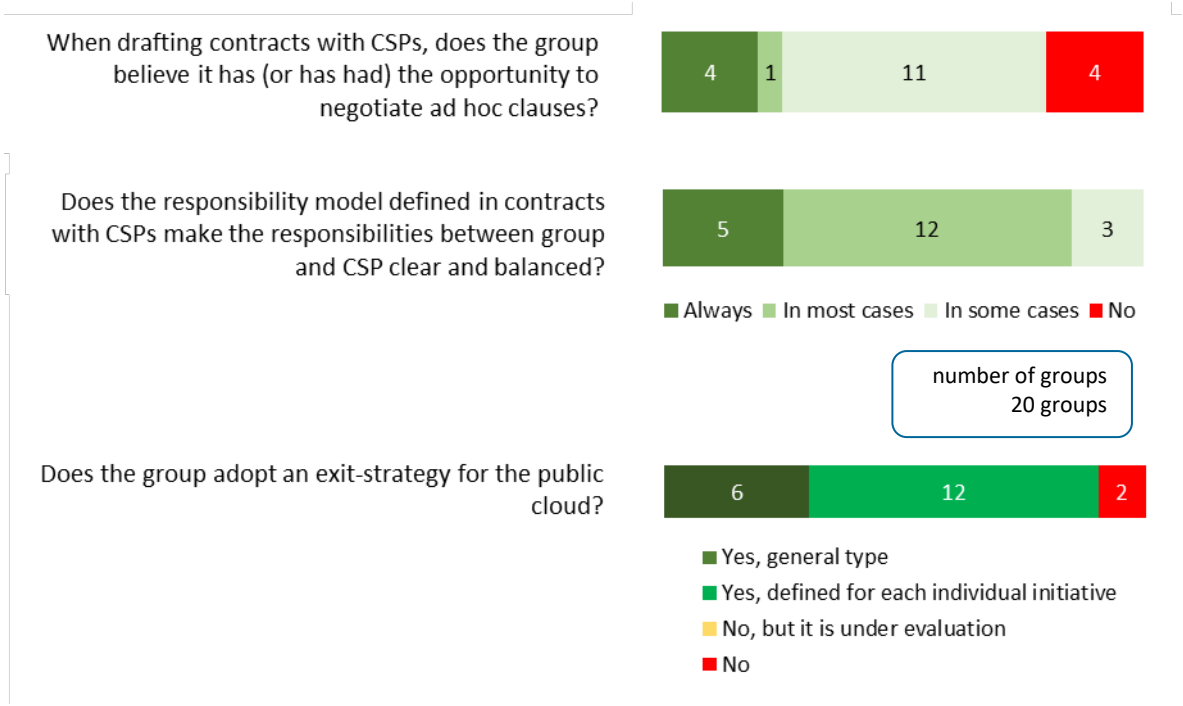


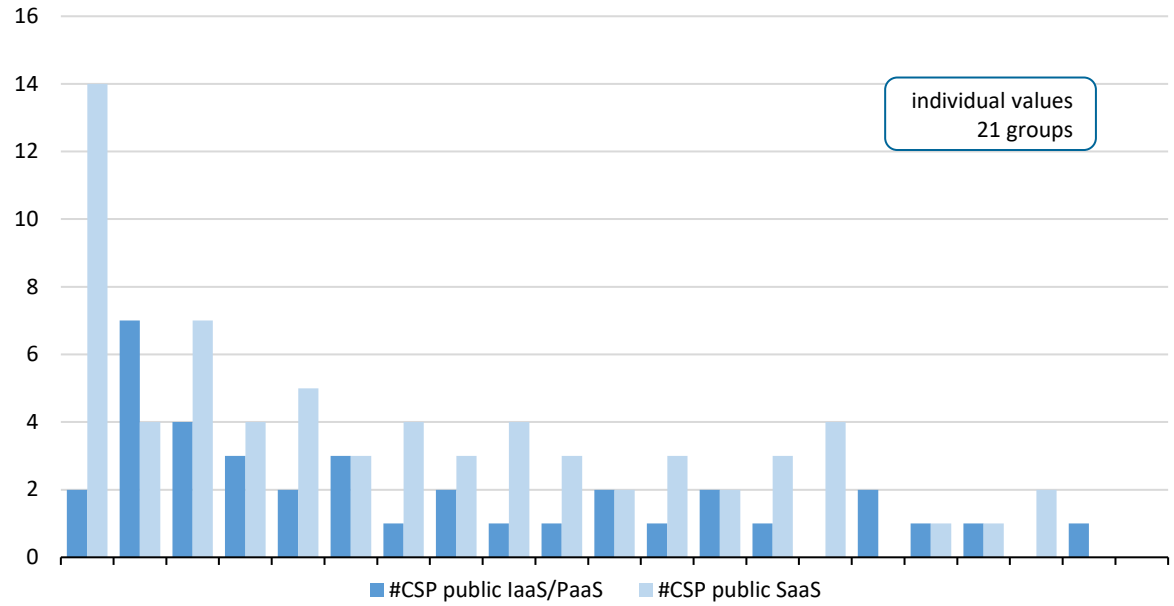
Figure 61 focuses on some of the most important subjects relating to the public cloud and, in particular, to the relationship established between the banking group and the CSP. On the subject of bargaining power, with regard to the possibility of negotiating ad hoc contractual clauses when drafting contracts with CSPs, four groups believe they have (or have had) this ability, conversely, four others believe they do not (or have not) had it. While one group reports that it has had the opportunity to negotiate ad hoc clauses in most cases, most groups report that they have only negotiated such clauses in some cases (11). Five groups believe that the liability model defined in the contracts always assigns responsibilities between the banking group and the CSP in a clear and balanced manner. In general, the liability model is considered substantially adequate, including in cases of limited negotiation capacity. Another key topic concerns public cloud exit strategies. It emerges that six groups have a general exit strategy, 12 report that they define it in relation to individual initiatives and two groups do not have a defined exit strategy.

Figure 61 - Public cloud: negotiation power, responsibilities, exit strategy



Using the public cloud to deliver IT services involves the use of one or more CSPs. Figure 62 shows, for each group, two bars representing the number of CSPs it relies on for the SaaS (light blue) and IaaS/PaaS models (dark blue). Groups use 1.8 CSPs for IaaS/PaaS on average, while there is greater diversification in SaaS, with an average of 3.5 CSPs. If the same CSP provides both SaaS and IaaS/PaaS services to the group, it is counted in both bars.

Figure 62 - Public cloud: number of CSPs - individual values



2.3 Elements of IT Security

The purpose of this section is not so much to provide an exhaustive description of the organizational initiatives undertaken by the groups in the area of IT Security, but rather to group the related elements that emerge from analyses of IT organizational profiles.

From a human resources perspective, groups with at least 50 IT employees allocate an average of 6.7 per cent of their IT FTEs to IT Security. This average rises to 7.6 per cent if technical staff dedicated to Business Continuity and Disaster Recovery are included. Similar analyses carried out on groups that have less than 50 IT employees show that the percentage average of IT FTEs dedicated to security is 12.6 per cent, which rises to 14.7 per cent including Business Continuity and Disaster Recovery. The higher percentage - nearly double - reported by groups with few IT staff compared with those with larger IT teams demonstrates the banking sector's strong focus on cybersecurity, which drives the decision to keep these resources in-house, including when IT outsourcing is extensively utilized (cf. Figure 85 and Figure 144).

Human resources strategies are closely linked to the issue of skills. The specialized technical skills in IT Security covered in this Survey mainly concern two areas: the current level of skills within banking groups in 2024 (as is) and the level they expect to achieve in 2025-2026 (to be), as well as the methods for finding the related skills. The two areas, examined by Figure 88 and subsequent ones, are as follows:

- ✓ **Security governance**: in this area, the average level[28] of skills recorded in 2024 is 3.7 out of 5, and increases to 4.2 in 2025-2026, with 52 per cent of groups reporting a skills gap to be filled. In this area, more than in all the others analysed, skills are more often found through the hiring of IT staff, further proof of how strategic the governance of IT Security is considered;
- ✓ **Operational security management**: in this area there is a smaller skills gap than the previous one; in fact, it is expected to go from an average level of 3.8 in 2024 to 4.1 for the following two years, a gap reported by 35 per cent of the groups; most of them resort to training their IT staff to acquire the necessary specialized skills.

On the subject of technological innovation applied to IT Security, ten groups report significant innovation initiatives in 2024 and another five plan to launch them in 2025-2026 (cf. Figure 71). Overall, these initiatives concern the strengthening of data protection safeguards, the improvement of anti-intrusion systems on endpoints (e.g. laptops, servers), the standardization of the security configurations of cloud services, the enhancement of anti-fraud engines, the implementation of ZTNA (zero trust network access) models, the activation of the SOC (security operations center) and CTI (cyber threat intelligence) integrating continuous monitoring and threat analysis.

2.4 FinTech

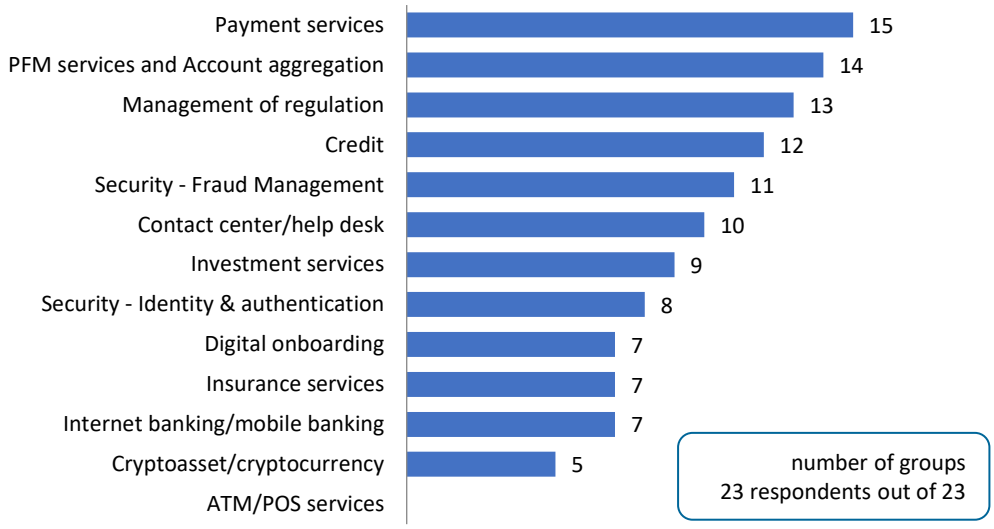
This section focuses on the collaboration of the banking world with FinTech, investigating in particular areas and technologies involved.

Of the 23 participating groups, all report some form of collaboration in various capacities with companies operating in FinTech and all areas are affected by the phenomenon, with the exception of ATM/POS services; the most impacted are payment services, PFM (Personal Financial

[28] Subjectively determined by each banking group on a scale ranging from a minimum of zero to a maximum of five.

Management) services and account aggregation, regulation management and credit, involving more than half of the groups (Figure 63).

Figure 63 - Areas of collaboration with FinTech



The technological paradigms involved in the various areas are examined below. In particular, the graphs of Figure 64 and Figure 65 provide two different views of the same phenomenon and show the technologies used in the largest number of areas, are RPA (robotic process automation), artificial intelligence and open API. The area best suited for the use of multiple technologies is PFM services and account aggregation.

Figure 64 - Collaboration with FinTech and technologies

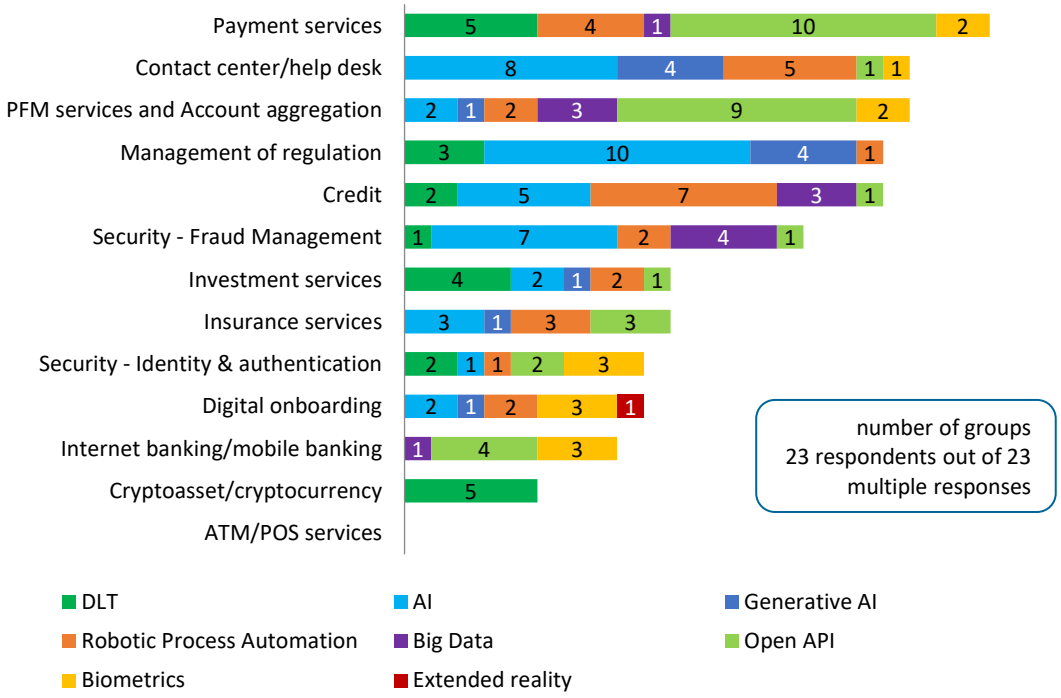
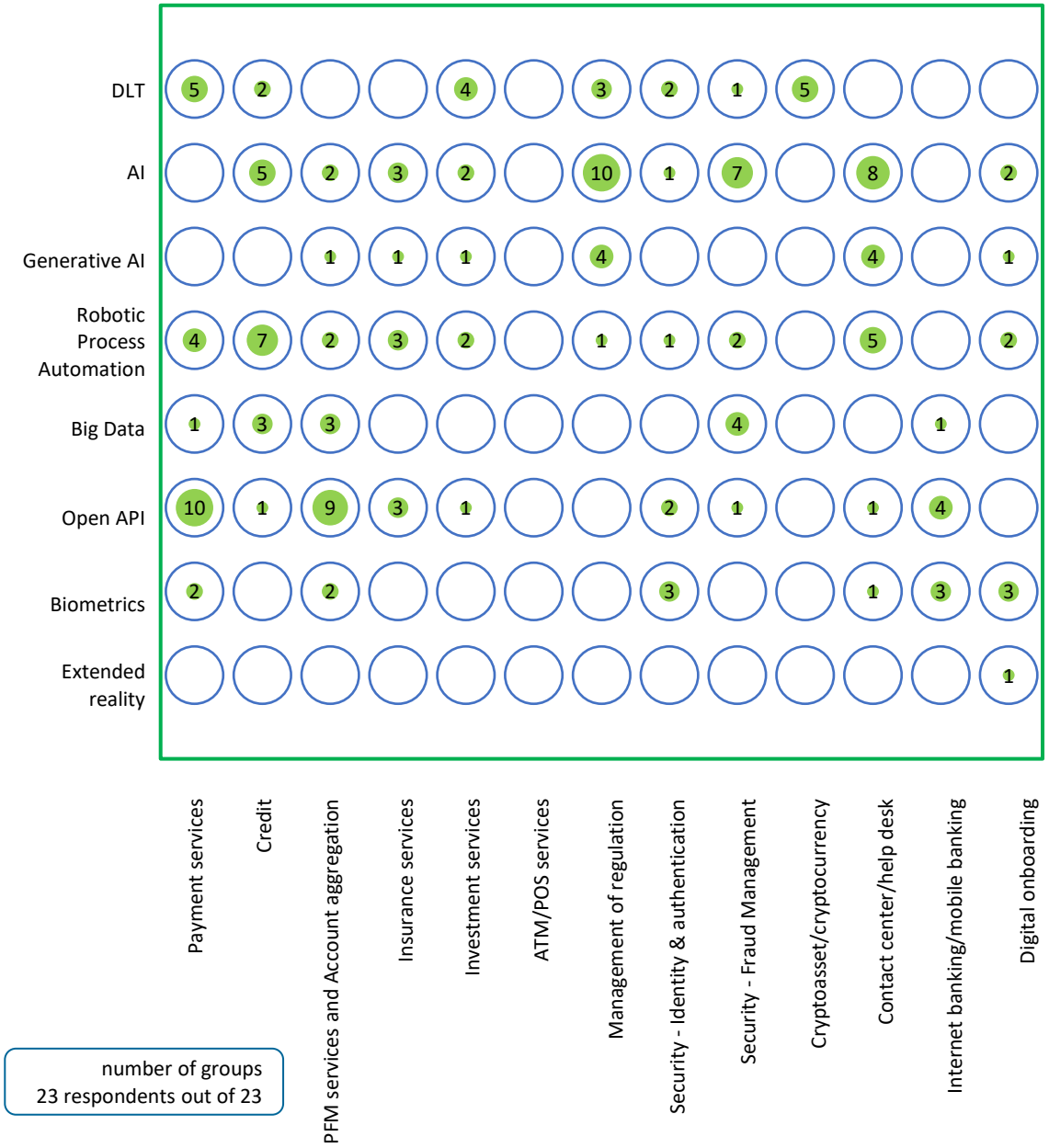


Figure 65 - Collaboration with FinTech and technologies (view 2)



To complete the investigation, Figure 66 reports the areas (each group could report up to three) that in FY 2024 absorbed the largest IT investment in collaboration with FinTech companies. Payment services attracted IT investments from the largest number of groups (13), followed by credit, regulation management (RegTech) and investment services.

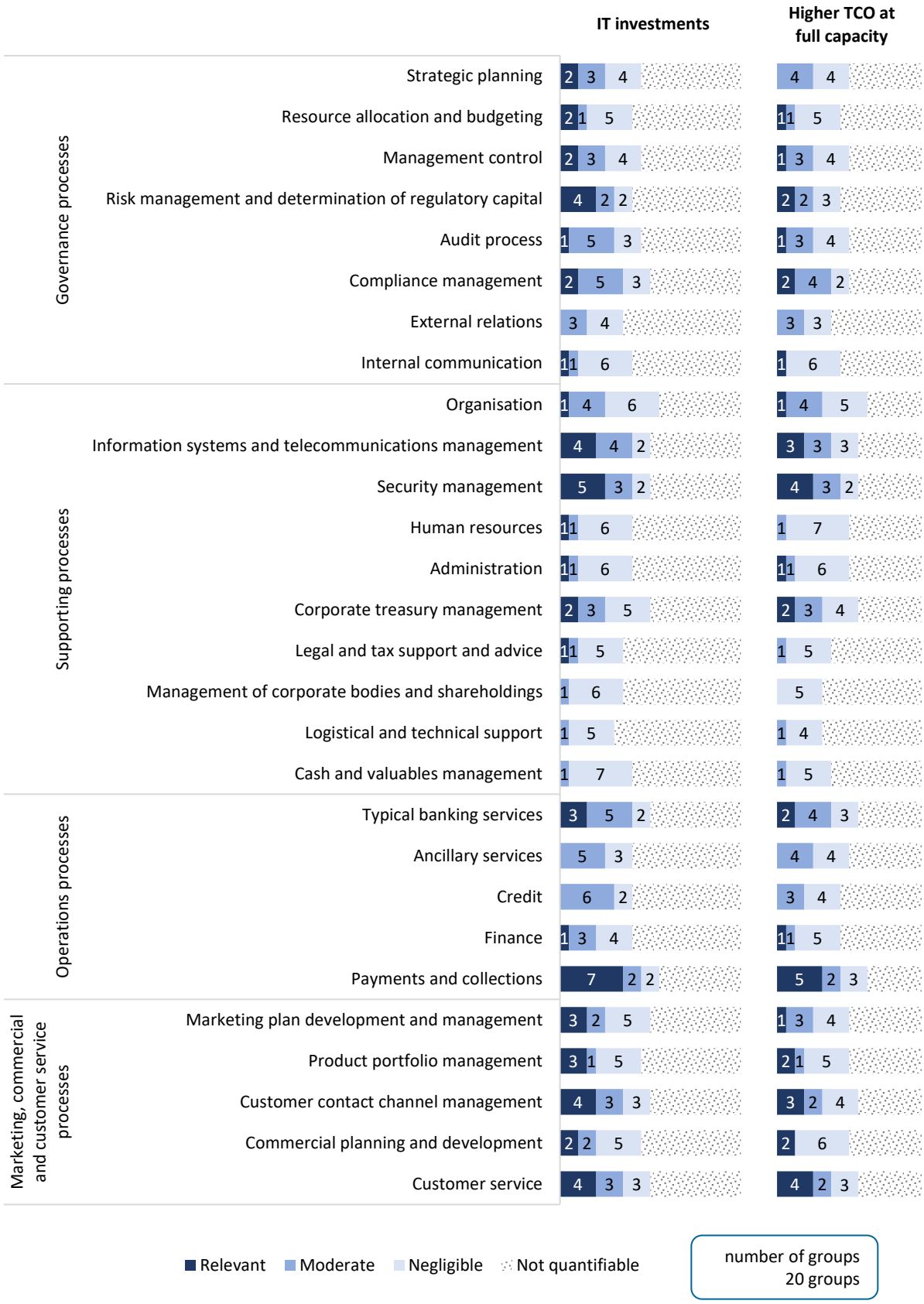
Figure 66 - Collaboration with FinTech and IT investment

2.5 Digital euro

This edition revisits the topic of the digital euro, providing an estimate of financial investments that banking groups are expected to make in order to prepare their business processes for the introduction of the digital euro. It also focuses on the opportunities that groups would like to seize, undertaking initiatives that would lead to an expansion of the range of new services provided or to the review/optimization of their IT systems and infrastructures.

Based on ABI Lab's taxonomy of banking processes, the chart of Figure 67 shows, for each of them, the forecasts on the extent of IT investments necessary to deal with the initial adjustment of the group's IT environment and the higher IT costs (TCO) expected when fully operational for maintenance of banking operations. The analysis focuses exclusively on the minimum adjustments that are expected to be implemented for compliance purposes, excluding any initiatives aimed at introducing new optional services related to the digital euro. Out of 20 respondent groups, 12 contributed to the analysis by quantifying predictions. The financial impacts affect all the mapped areas across the board, in particular Operations processes. From the point of view of initial IT investment, the processes on which the largest number of respondents quantify non-negligible impacts are Collections and payments (9 groups), Typical banking services, Information systems and telecommunications management and Security management (8 groups). With regard to the higher TCO expected when fully operational, at the end of the adjustments aimed at introducing the digital euro, the processes on which non-negligible impacts were most frequently reported are Collections and payments and Security management (7 groups), Typical banking services, Customer service, Information systems and telecommunications management, Compliance management (6 groups).

Figure 67 - Digital euro: IT investment forecast and higher TCO at full capacity



From a strategic point of view, the potential introduction of the digital euro would also open up new opportunities for banks, some of which are shown in Figure 68. Of the 12 respondent groups, all report that they see an opportunity to offer new and optional services to customers and, a minority of them, plan to review and optimize their IT infrastructure. Finally, two groups also point to the opportunity to provide other intermediaries new services related to the digital euro.

Figure 68 - Digital euro: potential opportunities

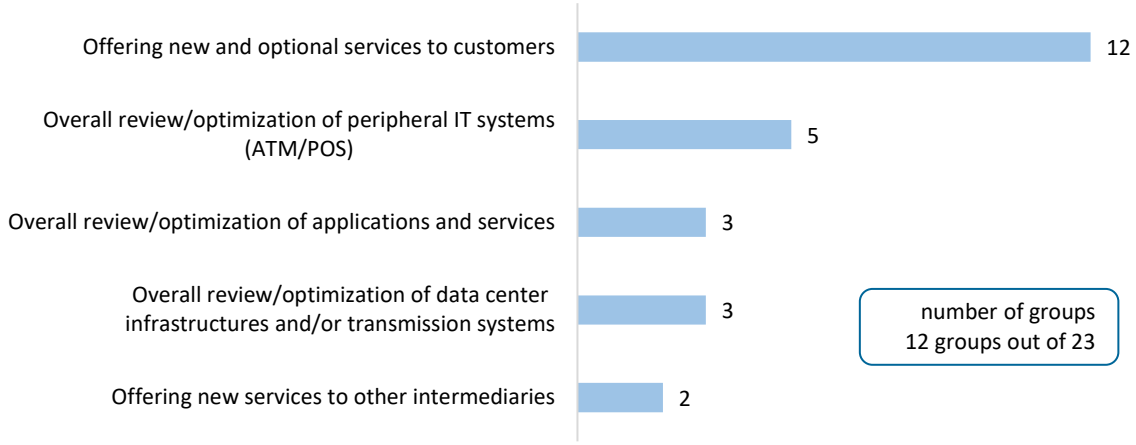
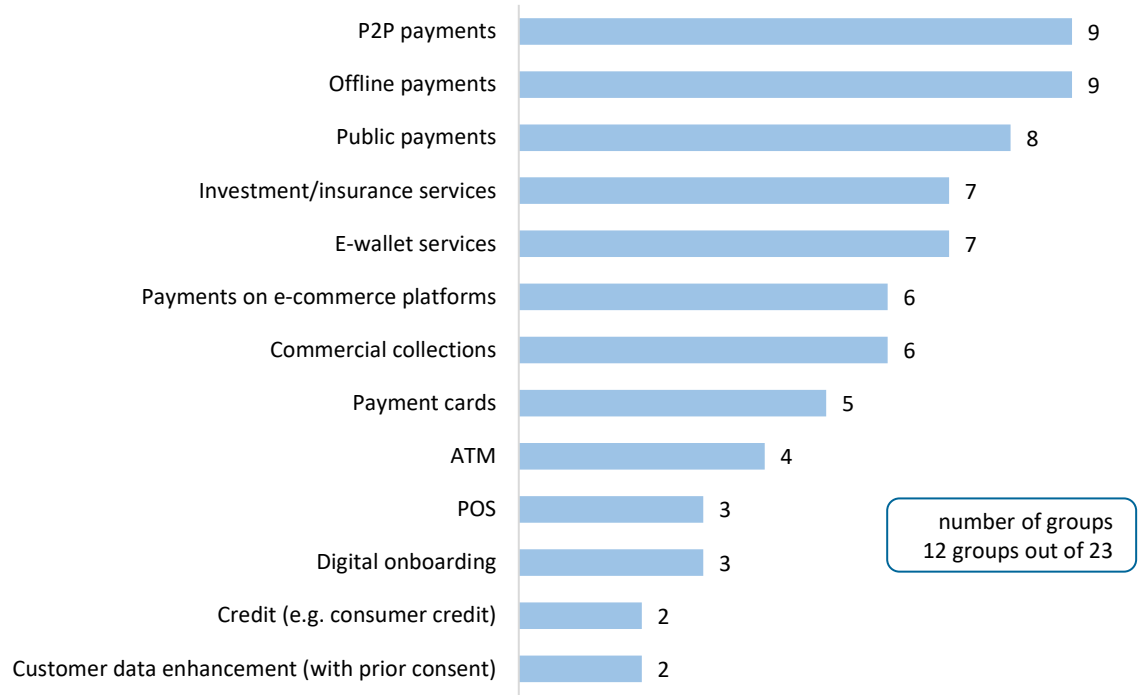


Figure 69 investigates in detail some of the possible areas of offer of the new and optional customer services related to the digital euro indicated in the previous figure. For at least half of the responding groups, the offer revolves around the multiple forms of payment services - primarily P2P, offline and public payments - e-wallet, investment/insurance services and commercial collections. In general, all the services examined are affected by this phenomenon.

Figure 69 - Digital euro: potential areas for offering new services to customers

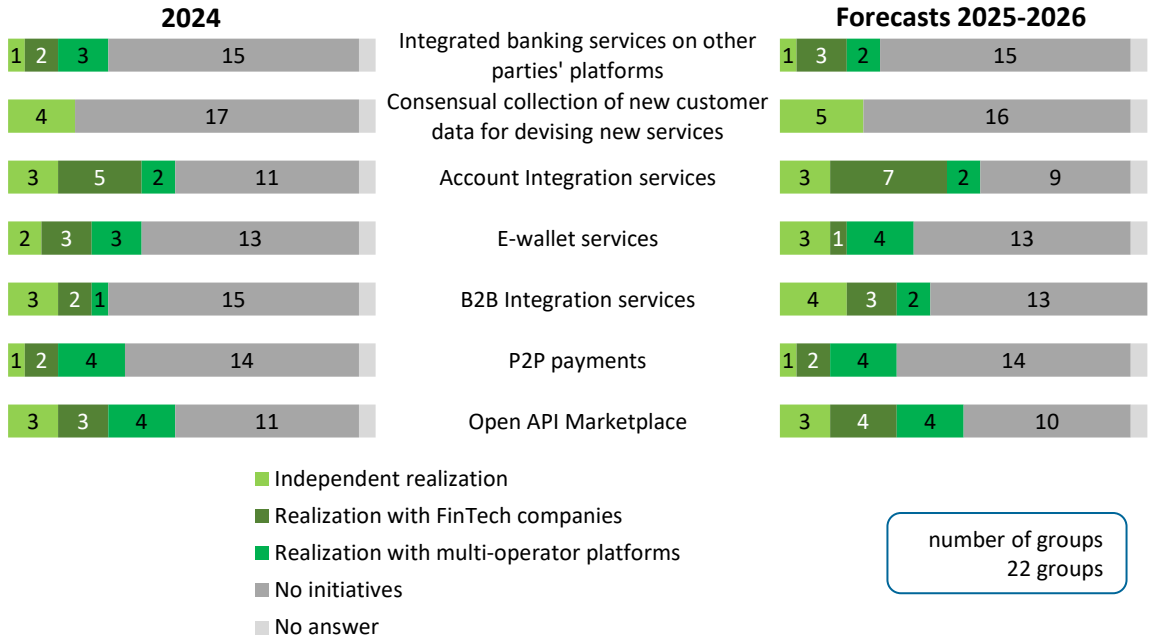


2.6 Open banking

This section focuses on open banking initiatives, under way as of 2024 and planned for 2025-2026, related to the implementation of value-added business services (VAS) and the related implementation methods.

Figure 70 shows that there is a rather limited use of open banking, which takes place mainly to create account integration and services on open API marketplace, a trend also confirmed in the forecast, in 2025-2026.

Figure 70 - Open banking: areas[29] and implementation methods for value-added services



2.7 Technological innovation

Innovation is a constantly evolving process across all technological sectors and is particularly evident in the IT sector, where it affects almost every area.

Figure 71 investigates the most significant IT innovation initiatives undertaken or planned by banking groups, divided by thematic area and by implementation period. As of 2024, all thematic areas are affected by significant innovation initiatives, either under way or completed in the year. Specifically, more than half of the respondents report initiatives involving the Server farm and the field of development and evolutionary maintenance.

[29] Here are some explanatory definitions for the items listed in the graph:

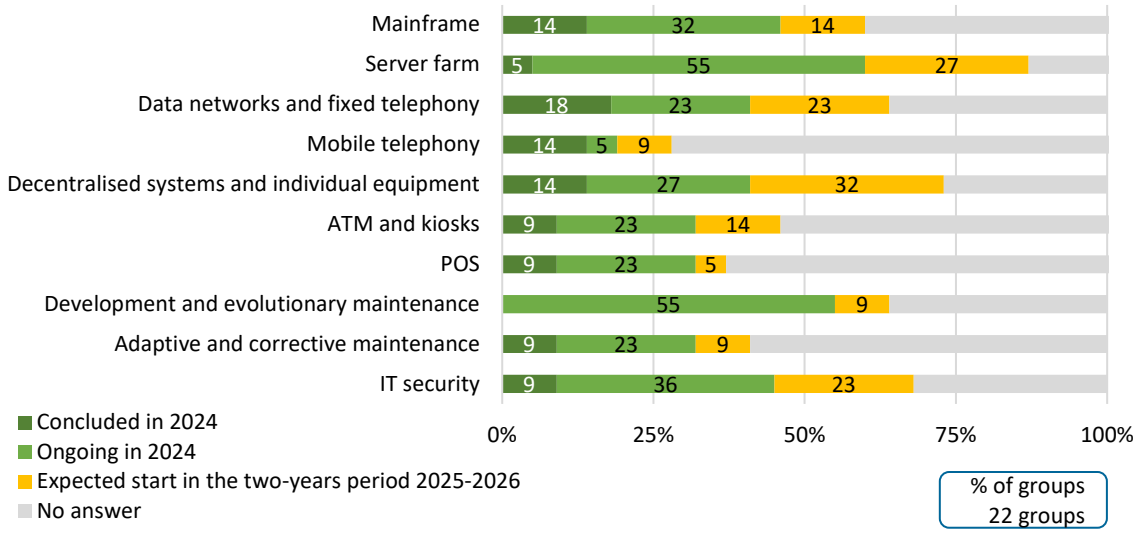
- Account integration: operational integration between bank accounts, including those of different institutions, which allows the customer to carry out operations in a centralized way;
- e-wallet: allows the data of one or more payment instruments to be stored on a customer's mobile device and/or on a remote server (of the wallet operator) to perform payment transactions;
- B2B integration services: e.g. transaction processing services integrated on corporate customers' ERP systems through a secure channel;
- P2P payments: real-time transfer of money between individuals;
- Open API marketplace: platforms for the provision of APIs (application programming interfaces) for the development of value-added services.

For 2025-2026, a fair number of groups report initiatives that will impact decentralized systems and individual equipment, the Server Farm, Data networks and fixed telephony and IT Security.

Below is an excerpt of the main activities reported in the forecast for 2025-2026, divided by thematic area:

- ✓ **Mainframe**: migration of specific workloads to the cloud, technological consolidation and optimization, creation of logical partition for mainframe testing and review of software release processes;
- ✓ **Server farm**: acquisition of new hardware, data center relocation program, migration to the cloud, renewal of primary site infrastructure, adoption of IaaS architectures;
- ✓ **Data networks and fixed telephony**: use of SD-WAN, hybridization of fixed telephony with MS Teams;
- ✓ **Mobile telephony**: adoption of Microsoft Intune, enabling employees to use BYOD (bring your own device), introduction of Samsung Knox and Apple Business Manager;
- ✓ **Decentralized systems and individual equipment**: technological renewal of workstations, introduction of AI tools for productivity, migration of workstations to Windows 11 and Office 365;
- ✓ **ATMs and kiosks**: replacement of traditional ATMs with advanced devices (including cash-in/cash-out), migration to Windows 10;
- ✓ **POS**: connection between cash registers and POS/SoftPOS to comply with the 2025 annual budget law;
- ✓ **Development and evolutionary maintenance**: development of microservices, completion of the development of an AI-based Customer Personal Assistant;
- ✓ **Adaptive and corrective maintenance**: automatic tests, introduction of artificial intelligence tools;
- ✓ **IT security**: increase in first-level safeguards, enhancement of the anti-fraud engine, new Transaction monitoring model.

Figure 71 - Technological innovation initiatives by thematic area

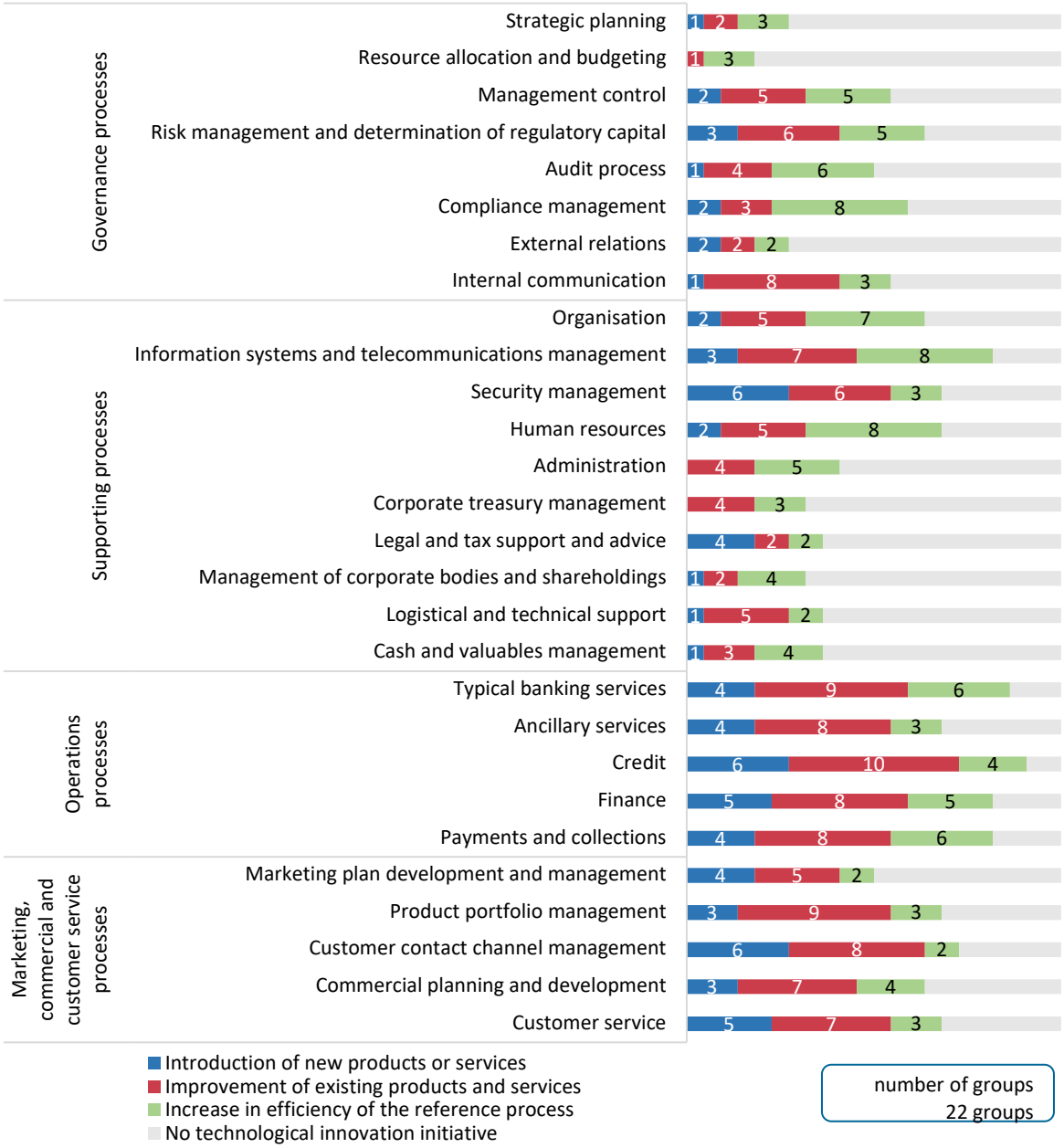


Finally, the Survey focuses on the banking processes affected by technological innovation initiatives launched or under way in 2024 and their prevailing purpose (the taxonomy used for the processes is defined by ABI Lab).

Figure 72 shows that the area most affected by innovation is that of Operations processes. Initiatives aimed at improving existing products and services are the most common across all areas.

The introduction of new products or services concerns in particular the processes of managing security, credit and the management of customer contact channels. The increase in efficiency is particularly important in the management of compliance and information systems and telecommunications. Overall, in addition to Operations processes, also the information systems and telecommunications management process is affected by innovation.

Figure 72 - Purpose of technological innovation initiatives launched or in progress



The Appendix contains the analysis of the purposes of the technological innovation carried out by size class of the groups (from Figure 139 to Figure 141).

2.8 IT staff

At the end of 2024, the 23 participating groups (CIPA perimeter) had a total of 12,887 IT staff members. This section describes the composition of the IT staff and assess the distribution of resources across thematic areas, focusing on acquired technical skills and those requiring development, hiring practices, and the qualification of the training offer.

2.8.1 Distribution and profiles of IT staff

The analysis begins by examining the ratio between the number of IT employees and the total number of employees of the banking group, within the CIPA perimeter. Figure 73 represents this ratio, for the entire sample and by size class, using a box plot[27]. On the entire sample of the 23 groups, the average ratio of percentages is 5.3 per cent. On average, the highest values are attributable to the Medium groups (7.0 per cent) while the lowest are attributable to the Small groups (4.1 per cent), due to the increased use of outsourcing for IT activities. This phenomenon also emerges from Figure 74, which reports the percentage averages by IT sourcing model.

Figure 73 - IT staff / total employees by size class

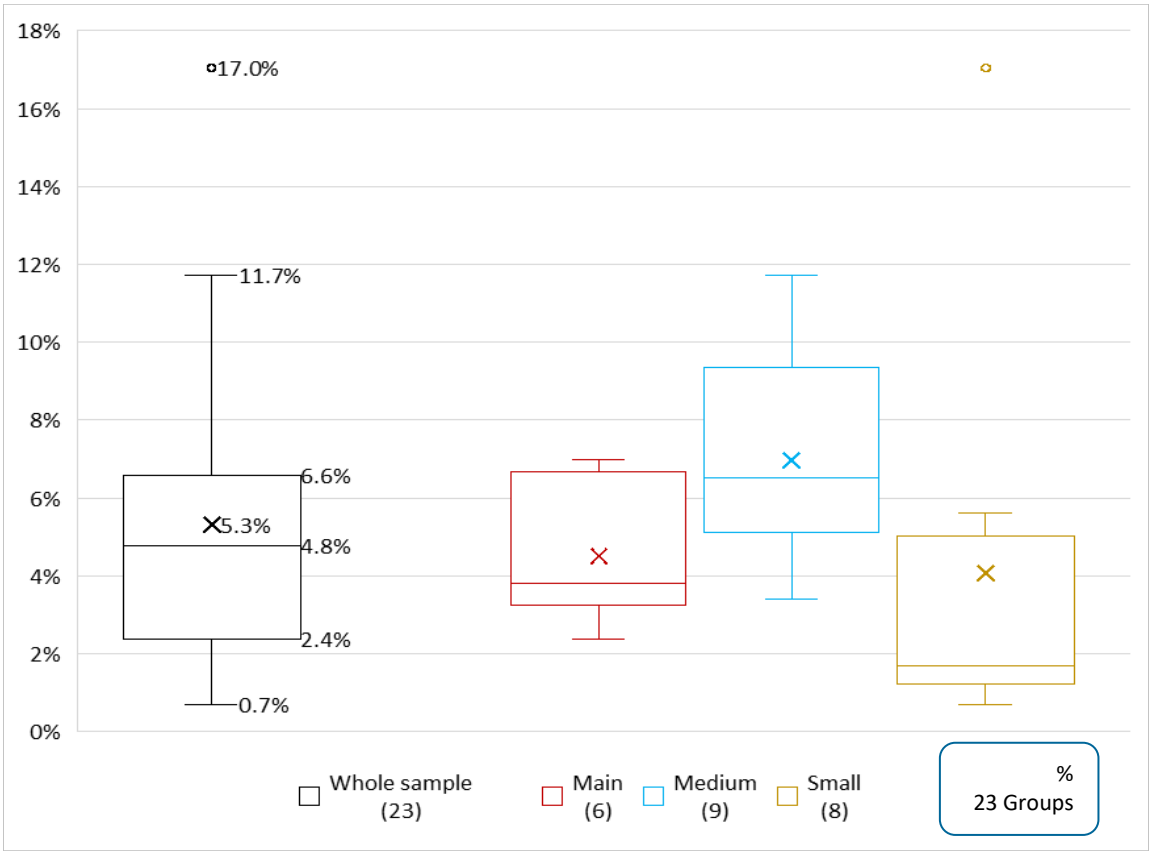
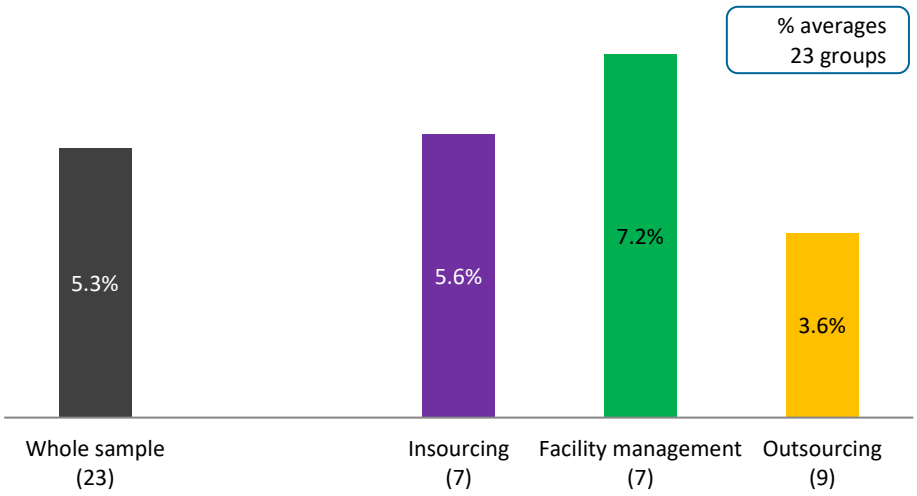
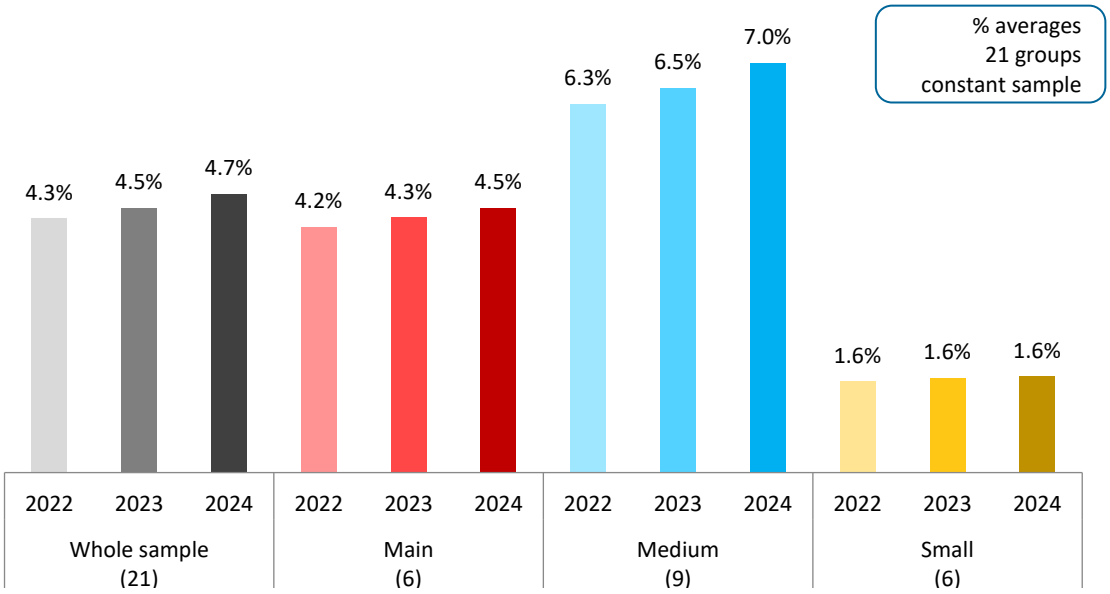


Figure 74 - IT staff / total employees by sourcing model



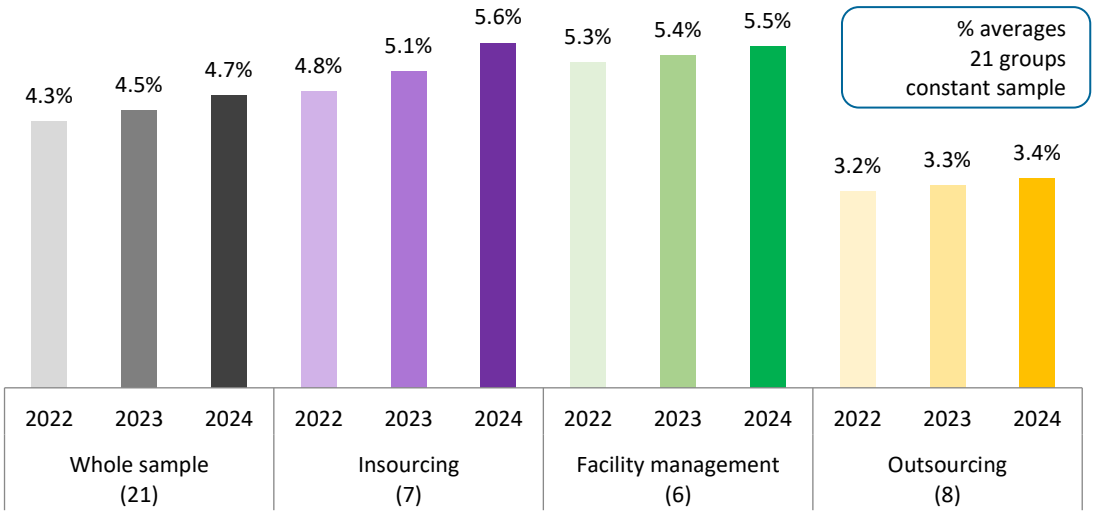
In the years 2022-2024, the trend in the ratio of IT staff to total employees, calculated percentage averages on a constant sample of 21 groups, shows an upward trend, recording an overall average increase of 0.4 per cent (Figure 75). By size class, a constant increase is observed for Main and Medium groups and a stable figure for Small groups.

Figure 75 - IT staff / total employees: 2022-2024 trend by size class



A similar analysis, carried out by sourcing model class (Figure 76), shows a constant increase for each class over the three-year period.

Figure 76 - IT staff / total employees: 2022-2024 trend by sourcing model



The following analyses provide a breakdown of IT employees by gender, age and job category according to the following classification:

- ✓ age, divided into five groups of comparable size: under 30 years, between 30 and 39 years, between 40 and 49 years, between 50 and 59 years, and 60 years and over;
- ✓ job category, divided into three categories: professional areas, managers and executives.

Figure 77, referring to the entire sample and expressed in percentage shares (ratio between the sum of the values of the quantity examined for all respondents and the total), shows that, among IT staff, the largest age group is between 50 and 59 (31.1 per cent), management staff account for 54.5 per cent of the total and men are in a clear majority, while women represent 28.9 per cent of the IT workforce.

Figure 77 - IT staff by age, job category and gender

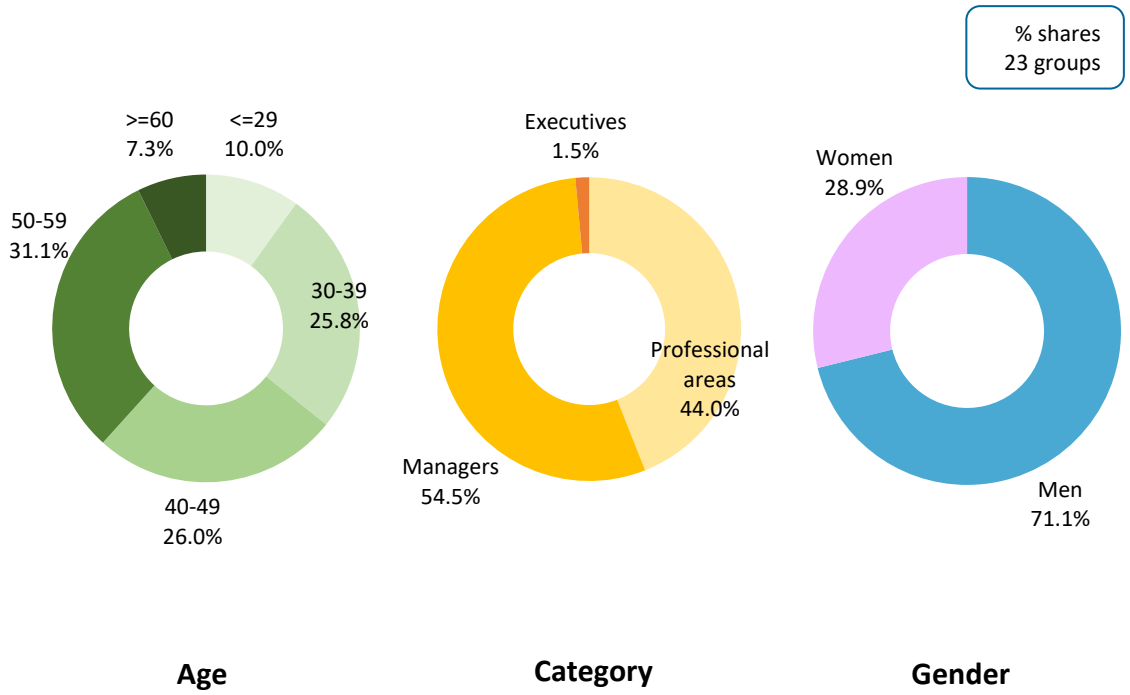
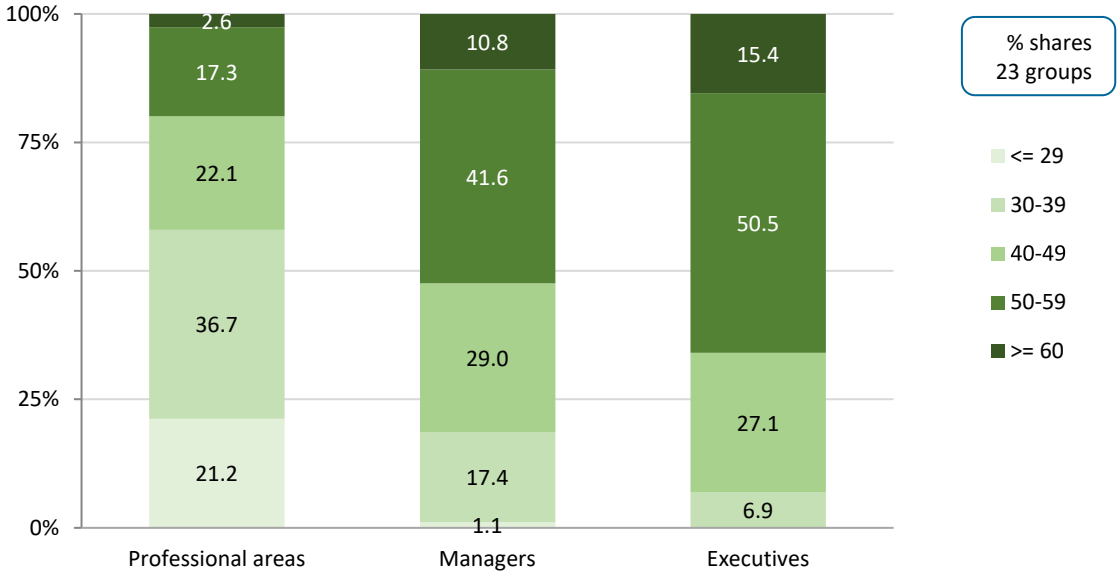


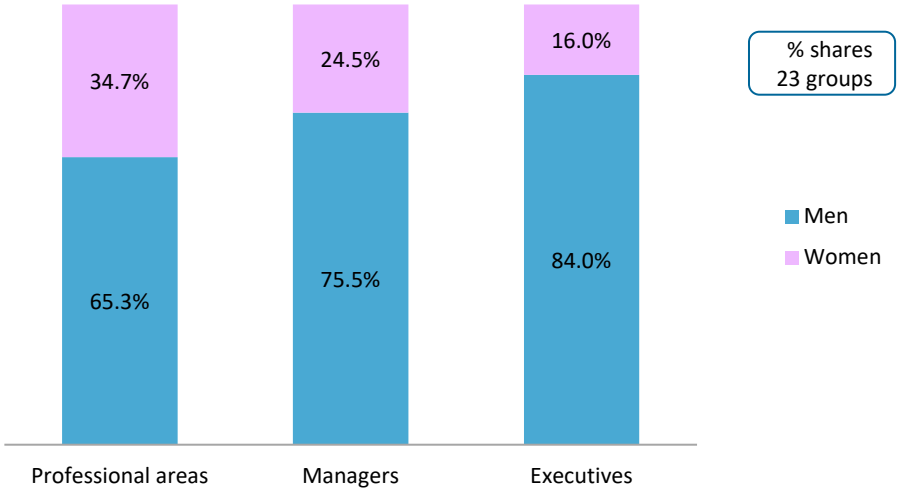
Figure 78 shows the breakdown of IT employees by age and job category. There is a general increase in age as the level increases. IT employees aged under 30 are present almost exclusively in professional areas, where the largest range is between 30 and 39 years and more than half of the staff is under 40. Among managers and executives, the largest group is between 50 and 59 years and, overall, more than half of the employees at these job categories are aged 50 or over.

Figure 78 - IT staff by age and job category



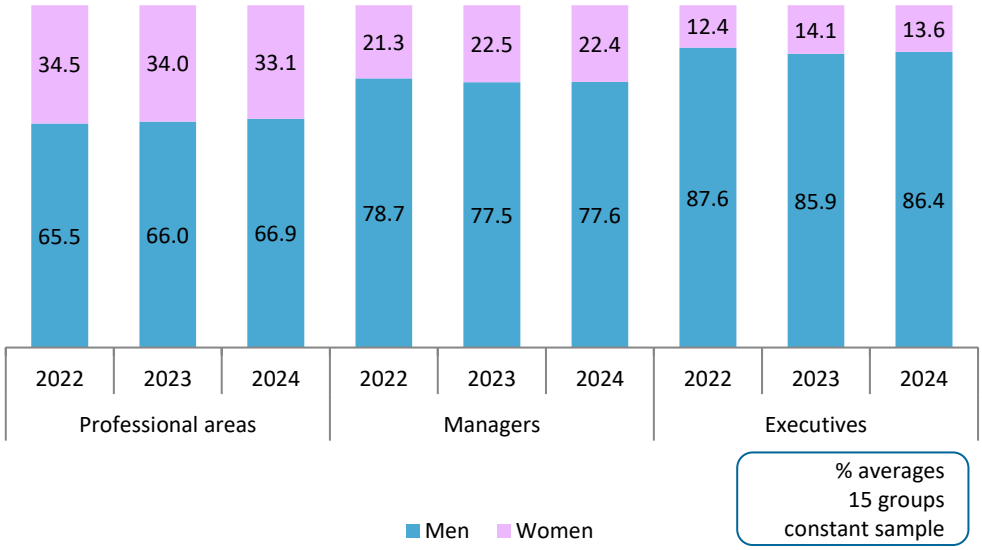
In relation to the composition by gender and job category, the presence of women is lower in all job categoriesand decreases as the level increases, going from 34.7 per cent within professional areas to 16.0 per cent among executives (Figure 79).

Figure 79 - IT staff by gender and job category



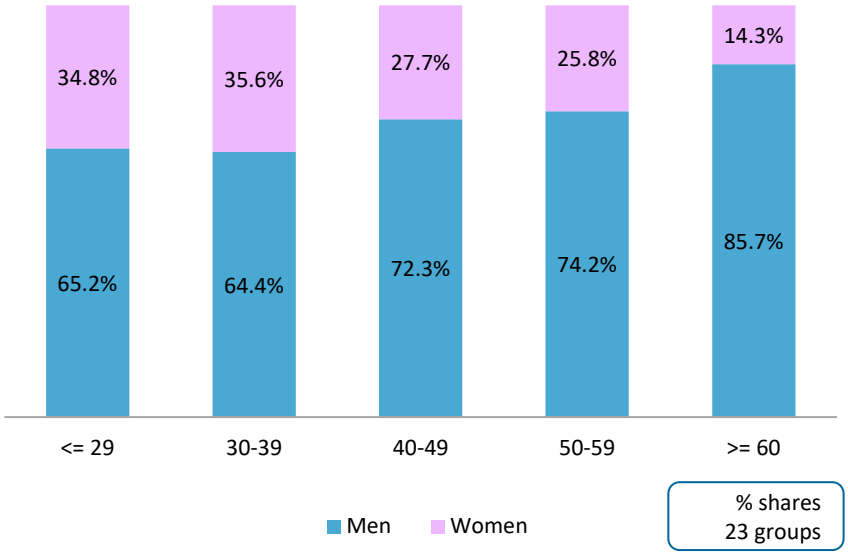
To observe the trend in recent years of the gender ratio, Figure 80 shows a constant sample of 15 groups with at least 50 IT employees and processes the data in percentage averages. Over the years, the percentage of women has decreased slightly in professional areas and, in the last financial year, also among managers and executives.

Figure 80 - IT staff by gender and job category: trend 2022-2024



With regard to the gender and age composition, the female share in IT is higher in the younger age groups, gradually rising from 14.3 per cent of those aged over 60 to about 35 per cent of those under 40 (Figure 81). A higher rate of new female hires in more recent years, a lower age of female employment and a higher rate of early female exit may have contributed to the phenomenon.

Figure 81 - IT staff by gender and age



Charts from Figure 82 to Figure 84 provide a comparison between size classes on the same variables discussed so far.

Figure 82 - IT staff by job category and size class

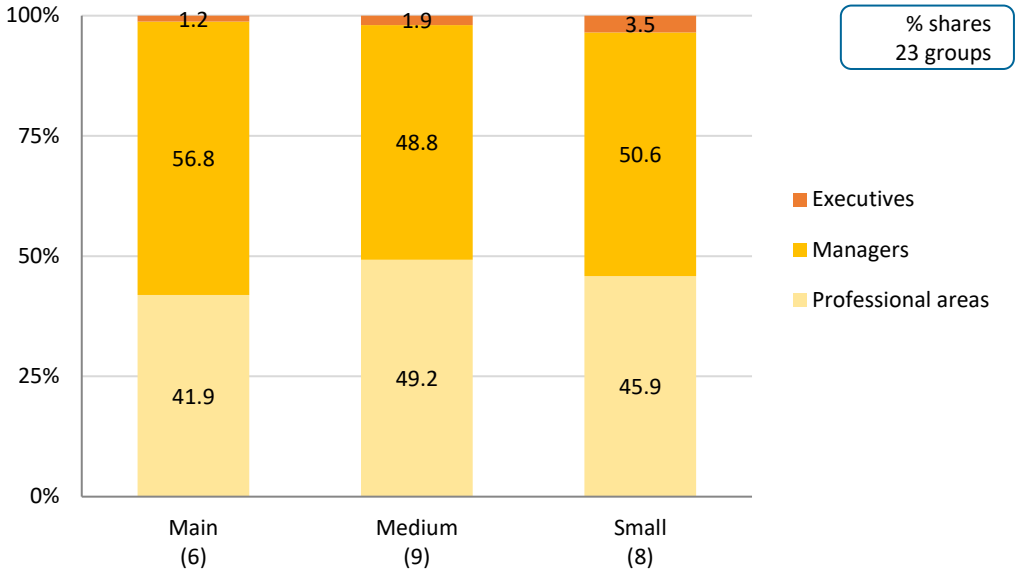


Figure 83 - IT staff by age and size class

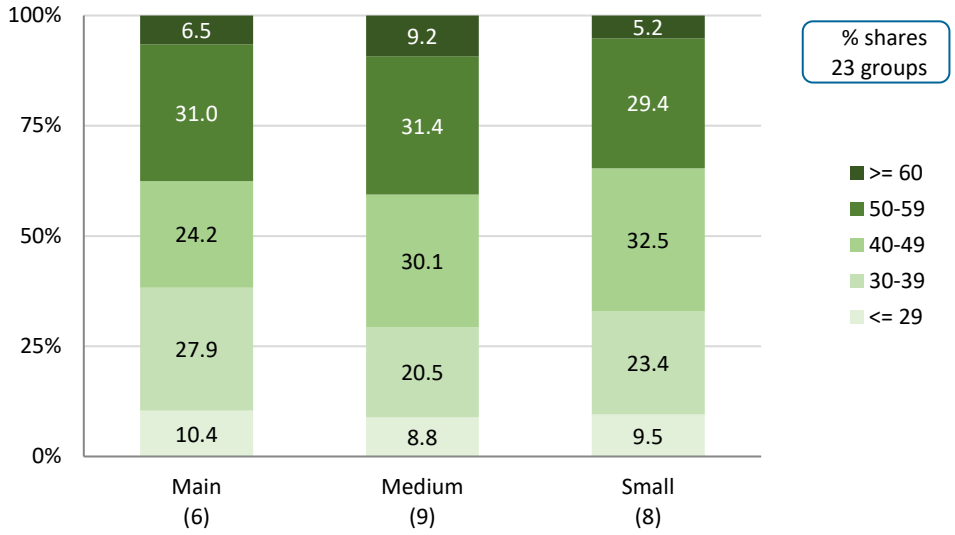
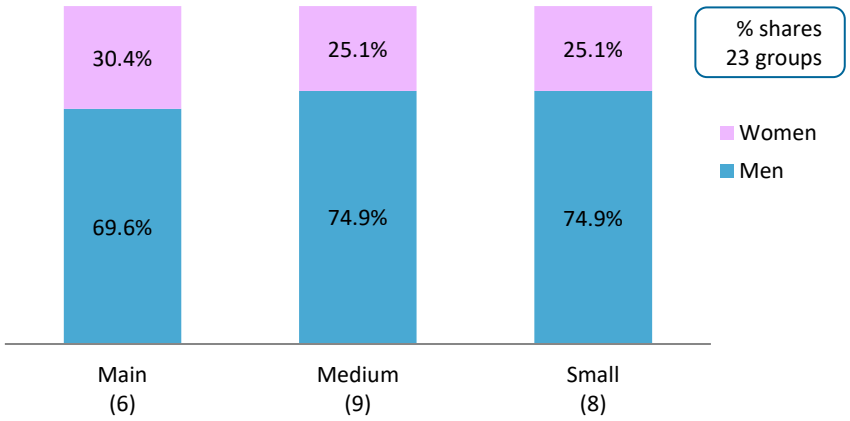


Figure 84 - IT staff by gender and size class



The Table 13 provides a detailed view, dividing the IT population of the entire sample into 30 categories, based on the three dimensions of analysis seen so far: age, job category and gender. Looking at the largest categories, for women the age group between 30 and 39 years is identified, employed in professional areas (6.3 per cent), while for men the largest group is aged 50-59, employed as managers (17.1 per cent).

Table 13 - IT staff: breakdown by gender, age and job category

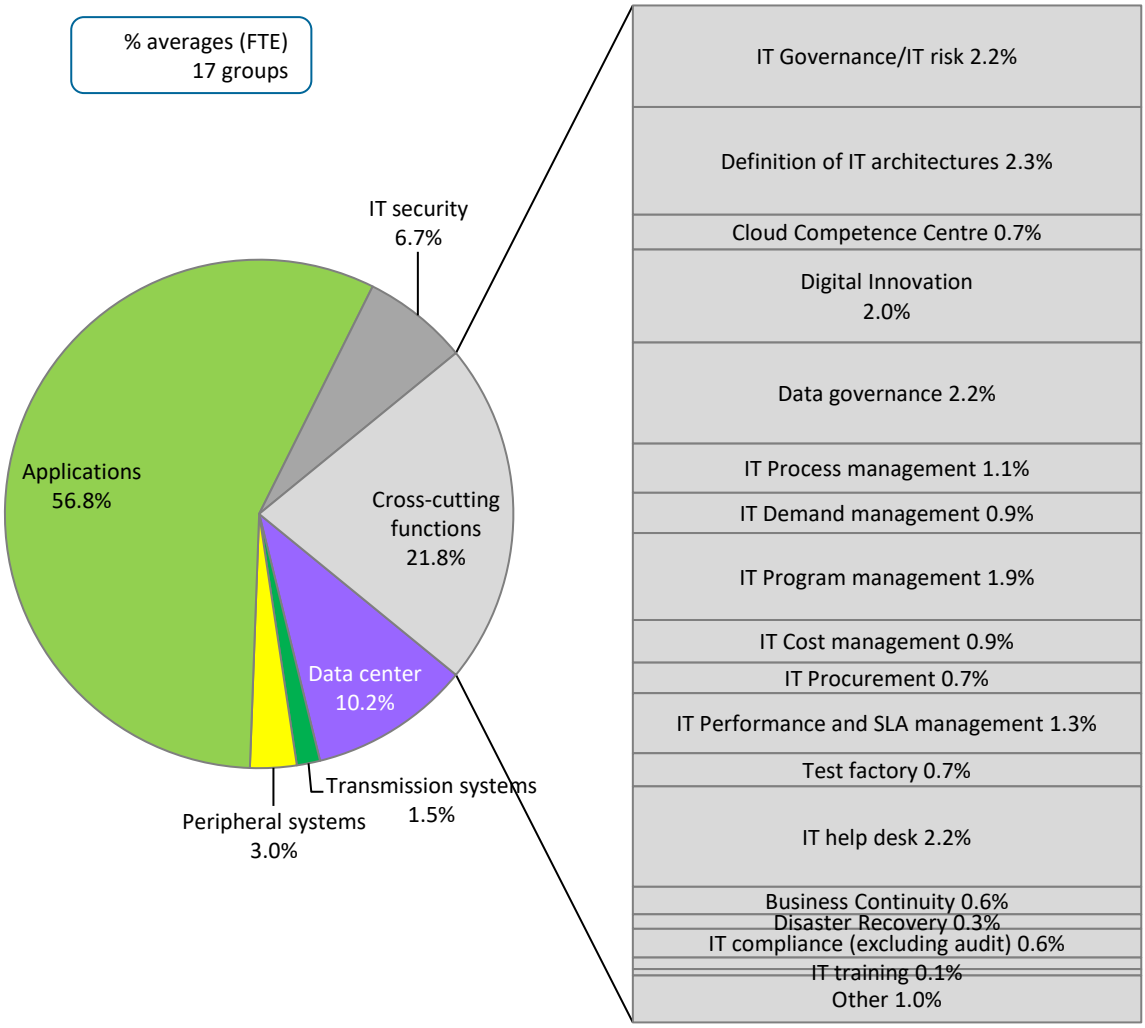
% shares 23 groups	<= 29		30-39		40-49		50-59		>= 60	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Professional areas	**6.1**	**3.2**	**9.9**	**6.3**	**6.5**	**3.2**	**5.3**	**2.3**	**0.9**	**0.2**
Managers	**0.4**	**0.2**	**6.6**	**2.9**	**11.9**	**3.9**	**17.1**	**5.6**	**5.1**	**0.8**
Executives	**0.0**	**0.0**	**0.1**	**0.0**	**0.3**	**0.1**	**0.6**	**0.1**	**0.2**	**0.0**

The Table 15 in the Appendix shows a similar breakdown, expressed as percentage averages calculated over the 16 groups with at least 50 IT employees.

2.8.2 FTE allocation

Figure 85 expresses the allocation of IT staff within the thematic areas, enriched with an additional category that collects the staff assigned to the IT cross-cutting functions. In this analysis, carried out as percentage averages for groups with at least 50 IT employees, the quantification of personnel is determined in terms of FTEs (full-time equivalents) rather than number of employees, to allow the correct differentiation of roles including for personnel who carry out activities in several areas. Some 56.8 per cent of IT resources are allocated to the area of Applications, followed by the Data center (10.2 per cent), the IT Security (6.7 per cent) and smaller shares for peripheral and transmission systems. More than one fifth of FTEs are dedicated to cross-cutting functions, including the definition of IT architectures, IT governance/IT risk, data governance, the IT help desk and digital innovation. The allocation of IT staff in cross-functional units depends on the structure established by the banking group regarding the organizational placement of these units, which may be located within the IT department, outside the IT department, both in IT and non-IT departments, or outsourced.

Figure 85 - FTE of IT staff by thematic area



The Appendix shows the similar breakdown of FTEs by size class (Figure 142), based on the sourcing model (Figure 143) and for groups with less than 50 IT employees (Figure 144).

2.8.3 Technical skills and training

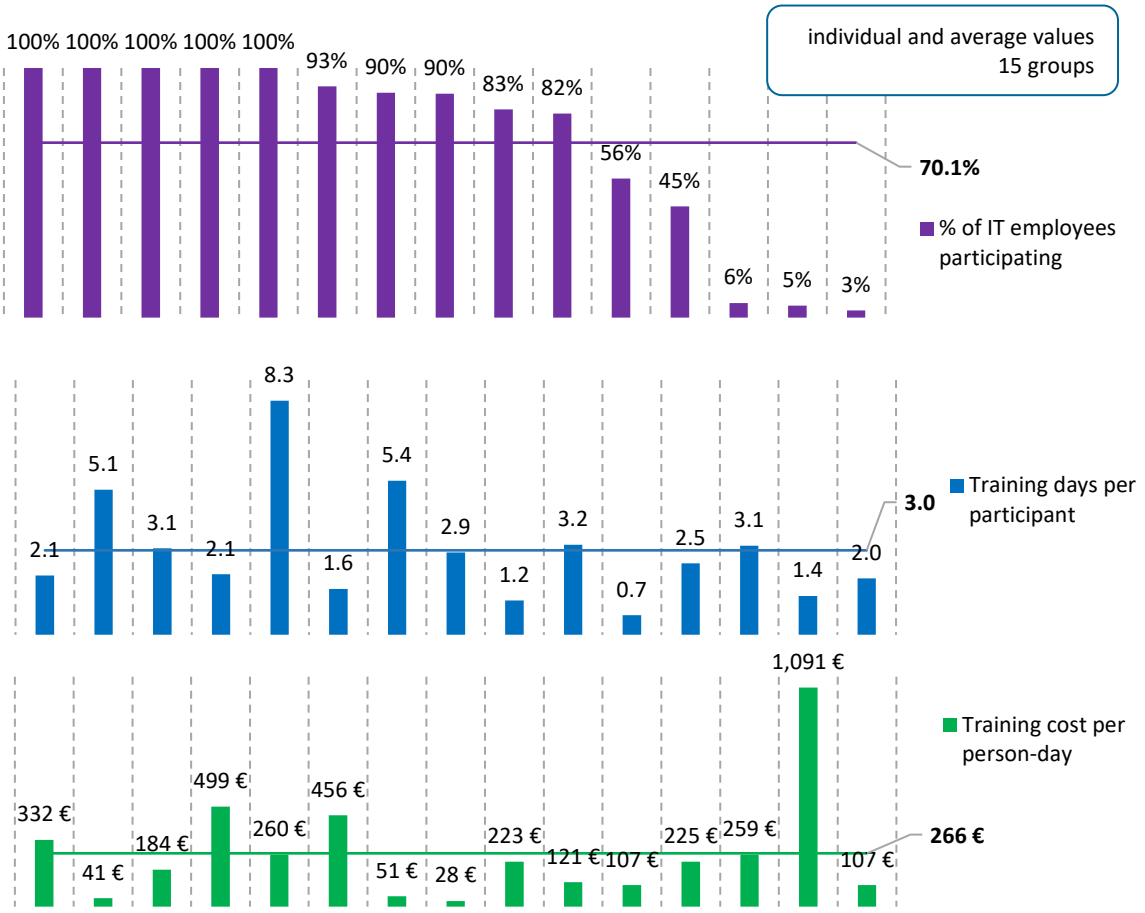
Here the issue of technical training of IT staff is addressed from the point of view of the paid training offer (costs incurred by the banking group for the benefit of its staff) in terms of participating employees, duration and costs of training initiatives. Finally, the analysis addresses the broader issue of technical expertise and the acquisition of skills.

Figure 86 shows data provided by banking groups with at least 30 IT employees in 2024 and does not take into account free training initiatives. Ancillary costs, such as travel, internal staff and logistics costs, are excluded from the cost items for training. The chart shows the individual

positions and averages of some indicators, shown vertically for ease of reading, in which each vertical line corresponds to a group.

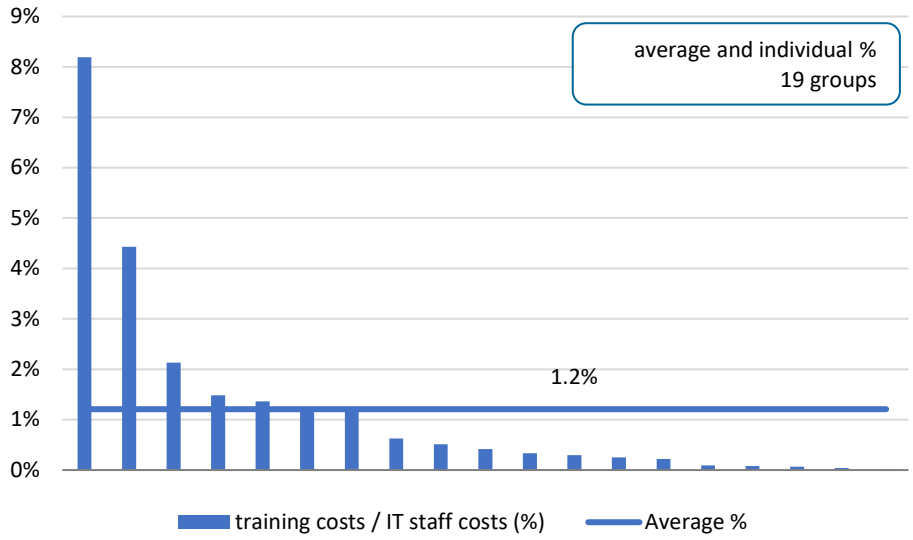
By averaging the values reported by the 15 groups that, among those meeting the criterion described above, provided the relative data, it can be observed that in 2024 70.1 per cent of IT employees participated in company-funded technical training initiatives, each participant followed an average of 3 days of training, with an average cost of €266 per person-day.

Figure 86 - IT training: participants, duration and costs



For the 19 groups that provided data, the ratio of training costs to total IT staff costs ranges up to 8.2 per cent, with an average of 1.2 per cent (Figure 87).

Figure 87 - IT training: training costs / IT staff costs



The Appendix shows the percentage averages by size class and sourcing model (Figure 145).

Figure 88 and Figure 89 examine a series of IT areas/profiles, showing the level of associated competence, for 2024 (as is) and for 2025-2026 (to be). This level is the average of the levels determined subjectively by each banking group, on a scale ranging from a minimum of zero (null value) to a maximum of five.[30] The bars show the number of groups that have reported the corresponding level. Looking at the charts by macro areas, it can be seen that in 2024 the more traditional IT profiles (governance, design and development, management/service delivery) are associated with medium-high levels, with values between 2.9 (IT quality assurance) and 3.9 (IT governance). On the other hand, among the new technological areas, there are significantly lower levels, except for sustainability and green IT (2.9) and AI & data science (3.1). For 2025-2026, there are higher average levels than in 2024, confirming the need to strengthen skills in all IT areas/profiles. The largest gap emerges for AI & data science (Δ = 1.0), cloud management (Δ = 0.7), IT governance and security governance (Δ = 0.6).

[30] The average is calculated only based on the levels explicitly specified by the groups.

Figure 88 - IT skills: levels as is (2024) by IT area and profile

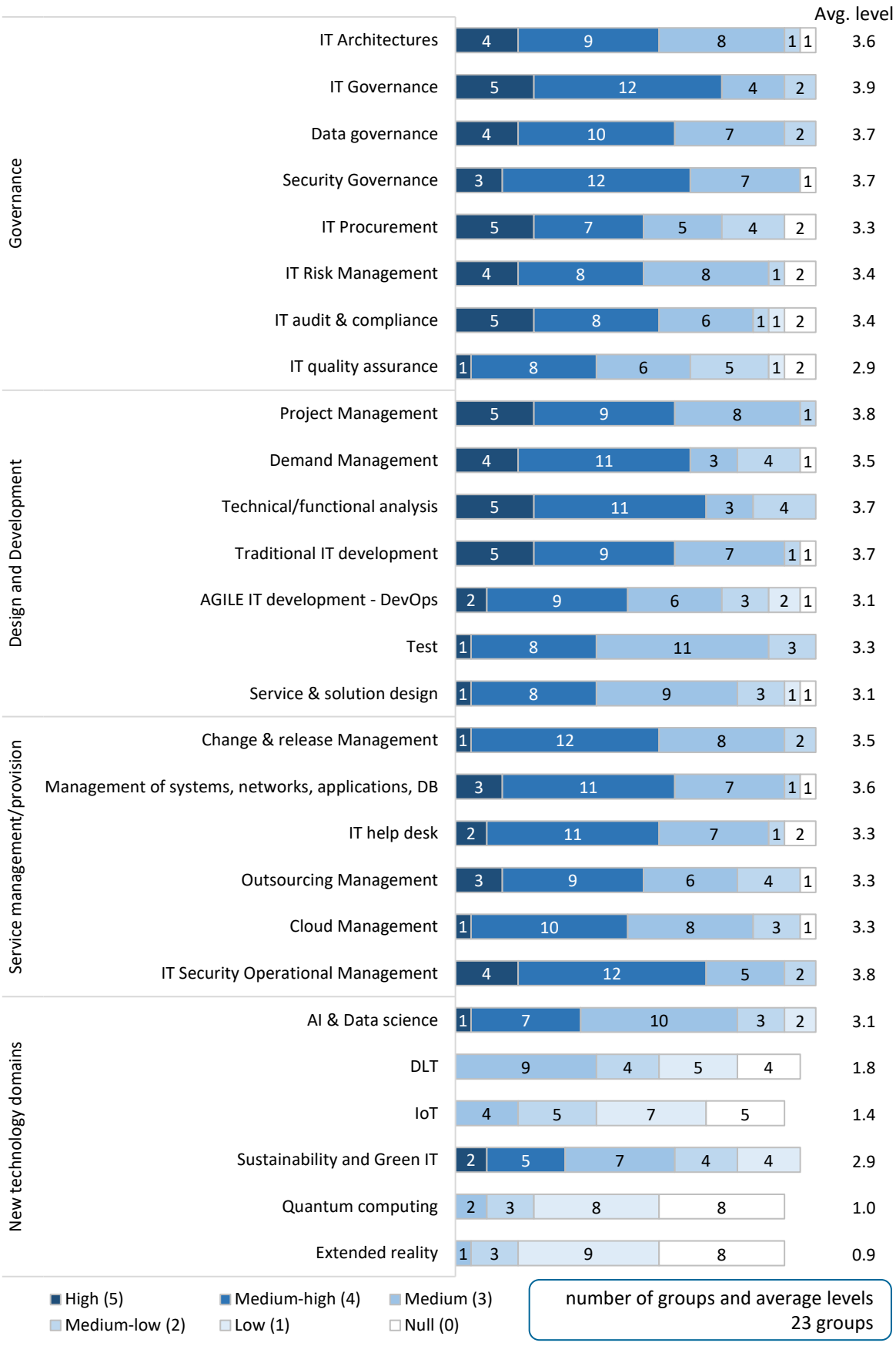


Figure 89 - IT skills: levels to be (2025-2026) by IT area and profile

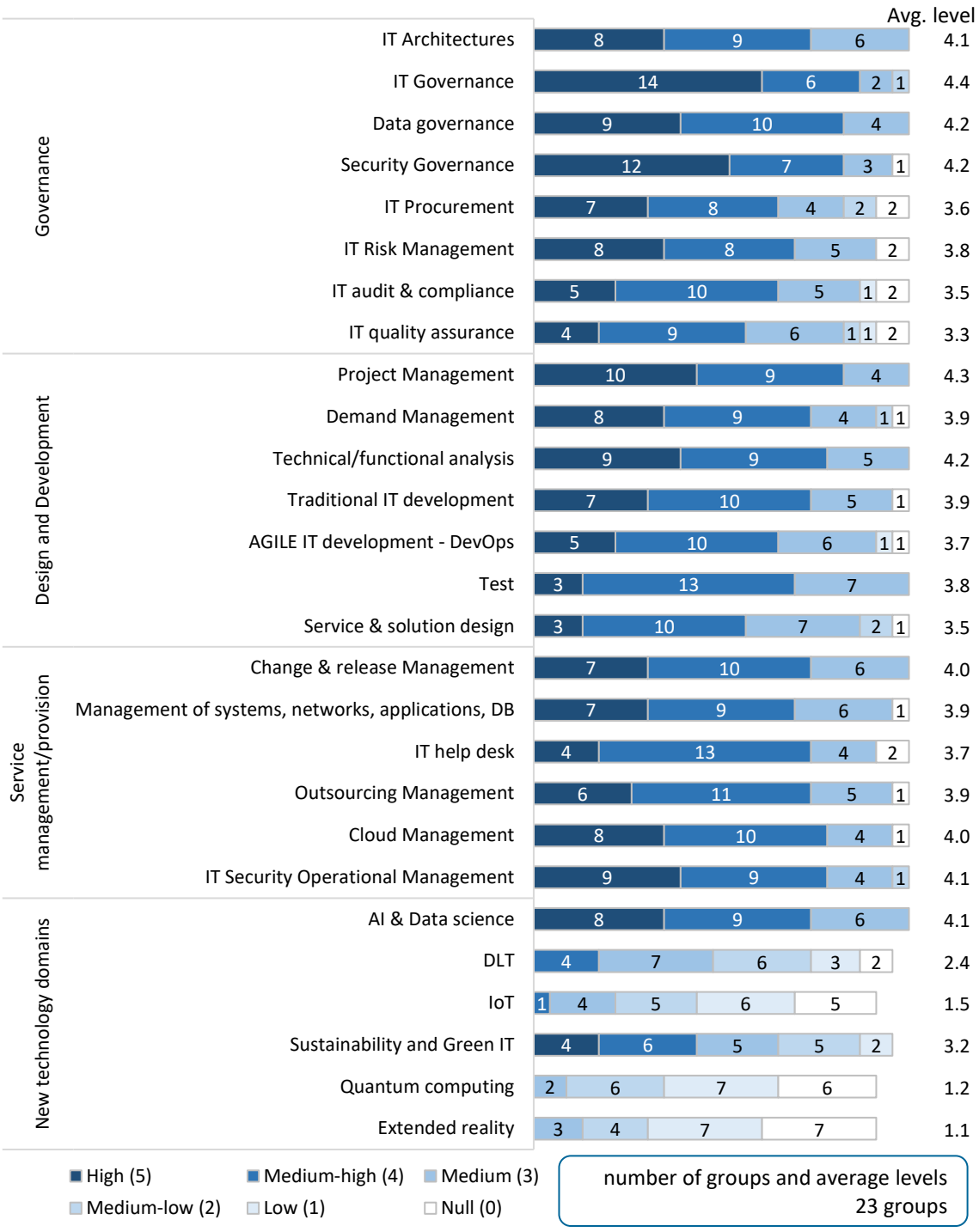
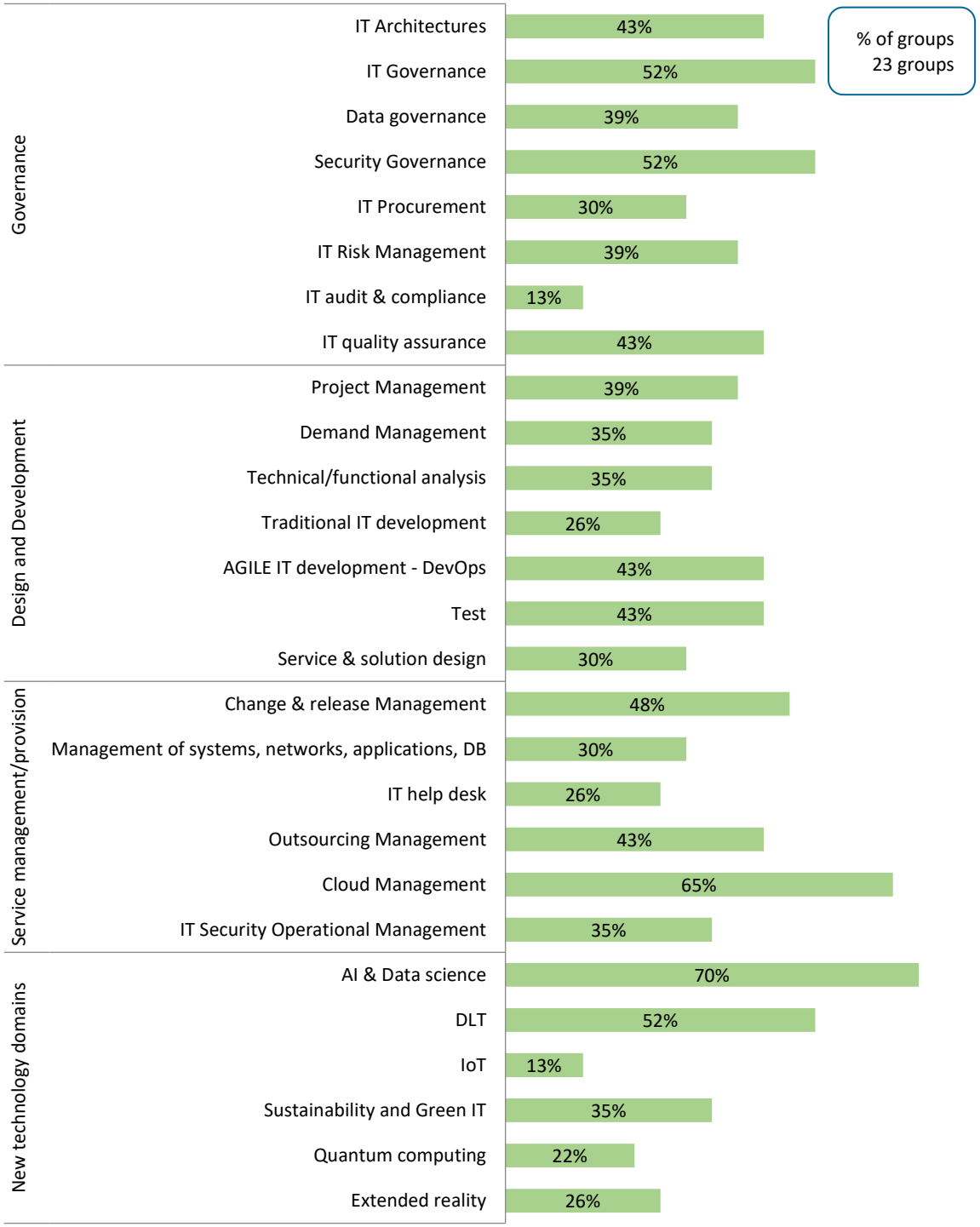


Figure 90 provides, for all areas, a gap analysis on the perception of the need for skills from a forward-looking perspective, indicating the percentage of banking groups that plan to increase their skills in 2025-2026 compared with the year under review.

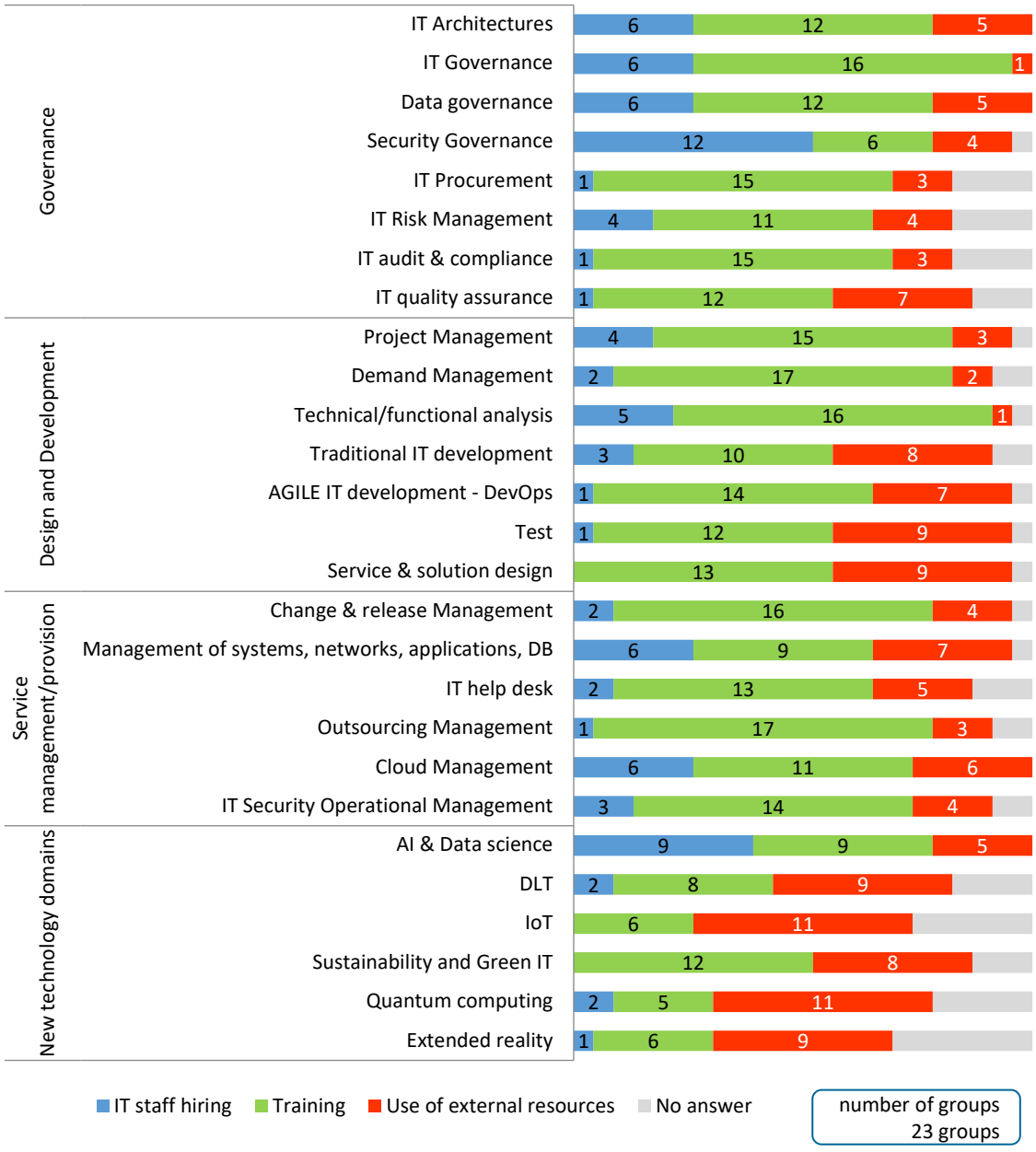
At least half of the sample report the need to increase skills in AI & data science, cloud management, IT governance, security governance and DLT.

Figure 90 - IT skills: gap analysis as is - to be



With regard to the methods of finding skills in the various areas, the trend in 2024 continues to show that groups are more inclined to train their own IT staff rather than hire new employees or rely on external resources. Hiring is more frequent in the areas of security governance and AI & data science, while the use of external resources is mainly in IoT and quantum computing (Figure 91).

Figure 91 - IT skills: how to find them



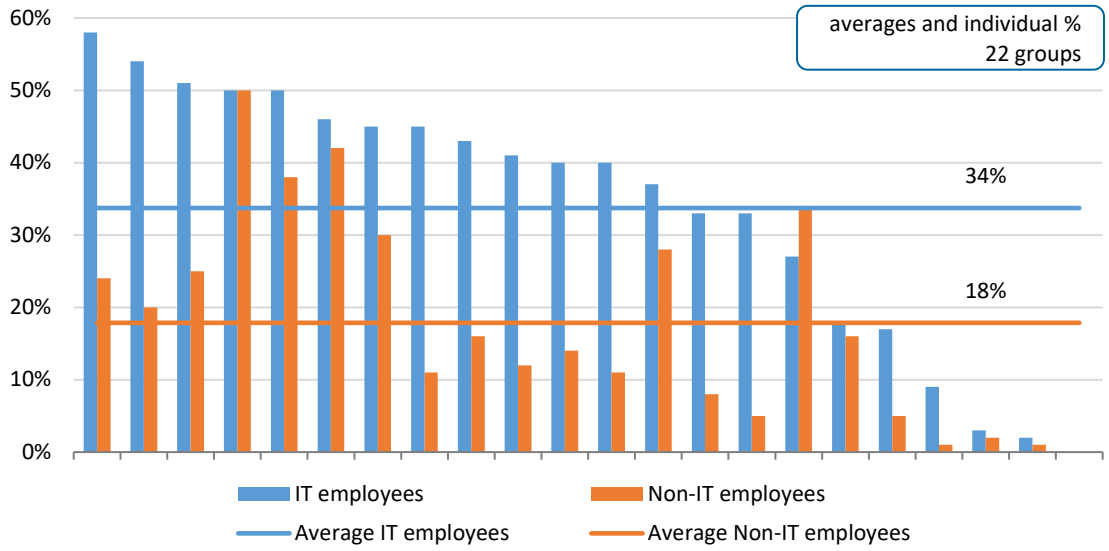
2.9 Remote work

Work models allow employees - depending on their role - to alternate between remote and on-site work, with very different formulas and approaches from group to group. A hybrid working model, remote and on-site, was used in 2024 for 21 out of 22 respondent banking groups.

Figure 92 shows the extent of remote work by representing, for each group, the percentage of days worked remotely out of total working days in 2024. The analysis is conducted separately for employees who perform IT functions (blue bars) and for the remaining employees of the group (orange bars), within the CIPA perimeter. With the exception of one group, 21 report using remote work for both IT and non-IT employees, although the percentages vary widely. The percentage of days worked remotely is typically higher for IT staff than for other employees. Among the 22 groups,

IT staff worked remotely 34 per cent of the days on average, while for other employees the average value drops to 18 per cent.

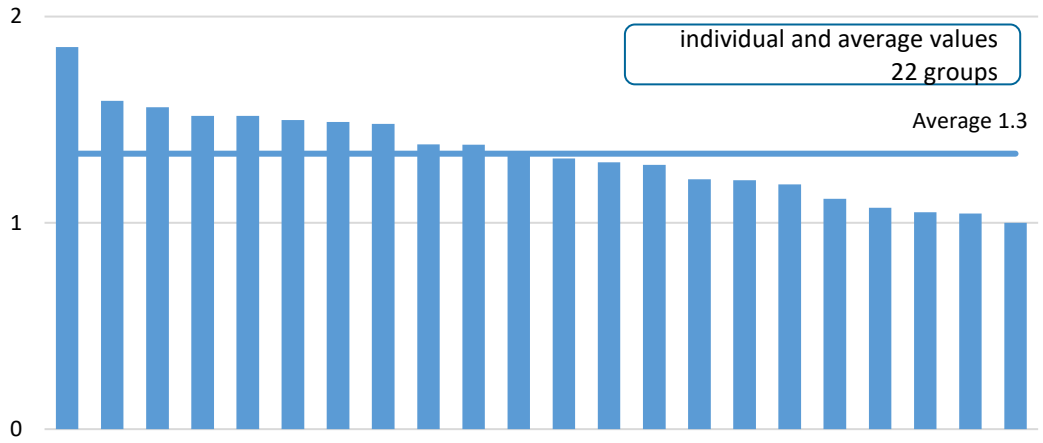
Figure 92 - Days worked remotely in 2024



2.10 Workstations

Regarding workstations provided to staff (IT and non-IT) for 'standard' activities,[31] Figure 93 reports, for each group, the average number of workstations available for each employee, calculated as the ratio between total workstations (ownership + lease) and the total number of employees in the group. This ratio is always at least 1 and amounts to 1.3 workstations each on average.

Figure 93 - Number of standard workstations per employee



[31] In this survey, the workstation (or workplace) has an IT meaning, referring to the set of technological equipment suitable for carrying out the work activity. Those specifically equipped for carrying out particular activities (e.g.: finance, cash processing) are excluded from this analysis.

The survey distinguishes the share of owned workstations from those leased. On percentage averages, 78.5 per cent of workstations are owned by the banking groups (Figure 94).

Figure 94 - Standard workstations: ownership vs lease

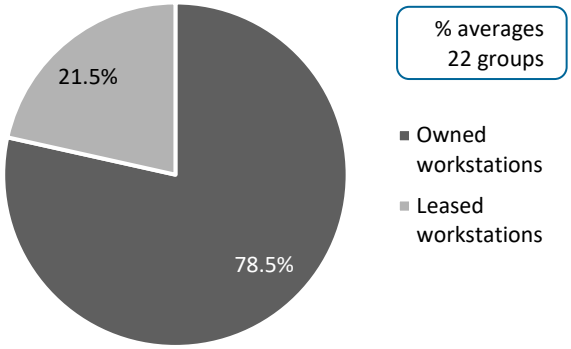
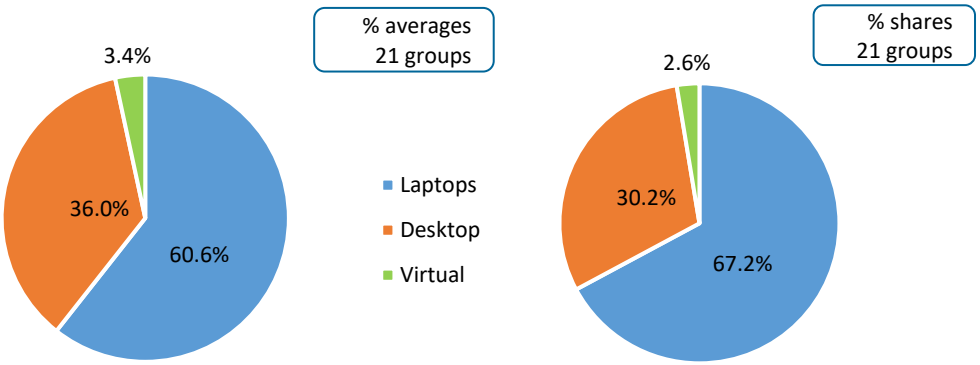


Figure 95 provides a breakdown of workstations by device type (laptop, desktop, and virtual[32] devices) through two charts relating to the same sample of 21 respondent groups, shown as percentage averages and in percentage shares. The graph on the right shows that, if we set the total number of workstations across 21 groups to 100, 67.2 are laptops, 30.2 are desktop and 2.6 are virtual devices. When considering percentage averages, on the other hand, in which each group is weighted equally with the others and contributes to the calculation of the average value regardless of the absolute number of workstations held, it turns out that 60.6 per cent are laptops, 36 per cent are desktop and 3.4 per cent are virtual devices.

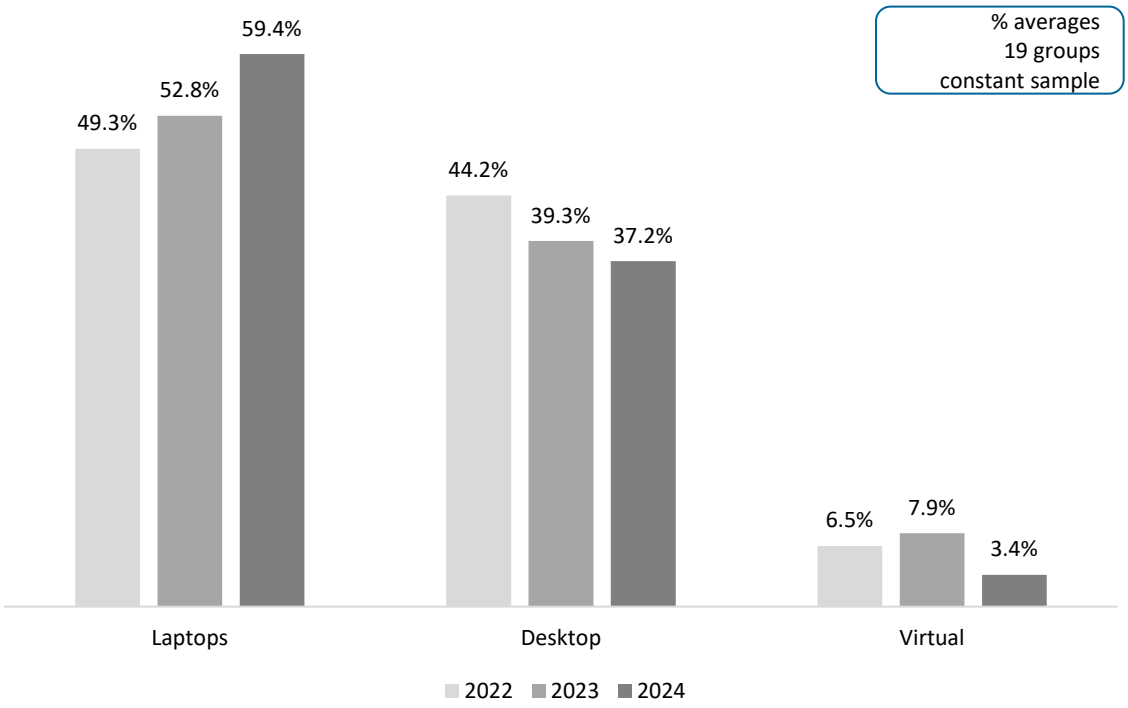
Figure 95 - Standard workstations: types of devices



When analysing the type of standard workstations in terms of percentage averages across a constant sample of 19 groups in 2022-2024, it is clear that the rapid and steady increase in the number of laptops is continuing, which have accounted for more than half of the total since 2023. In 2024, there is a significant decrease in virtual workstations (Figure 96).

[32] Desktop virtualization.

Figure 96 - Standard workstations: types of devices and 2022-2024 trend



Chapter 3. **Banks**

3.1 Financial profiles

The sample of 32 banks participating in the Survey - two of which are not part of any group or belong to groups other than those examined here - accounts for 62.8 per cent of the entire banking sector in terms of intermediated funds.

The total IT figures reported for the FY 2024 by the 32 banks participating in the Survey are:[33]

- ✓ **TCO** (current spending plus depreciation/amortization): €5,606 million;
- ✓ **Cash outflow** (current spending plus investment): €5,766 million;
- ✓ **Current spending**: €3,989 million;
- ✓ **Investment**: €1,776 million;
- ✓ **Depreciation and amortization**: €1,617 million.

As for banking groups, the cost analysis model by thematic area and by production factor is also used for banks.

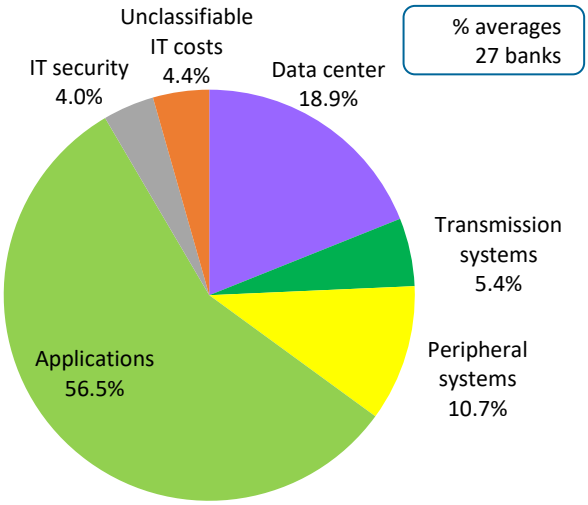
Of the 32 banks, 27 provided a sufficiently detailed breakdown of the TCO by thematic area to provide a meaningful representation of the data. Banks continue their effort to allocate IT costs to individual areas as precisely as possible, which is sometimes made difficult due to the presence of forms of outsourcing that limit visibility of these costs at this level of detail.

In the Appendix, from Table 24 to Table 30, the detailed breakdown of IT costs by thematic area and production factor is shown consistent with the analysis conducted for banking groups. All values are expressed as percentage averages with reference to the entire sample and the various classes of analysis, in relation to the size and operational characteristics. To ensure a meaningful representation of the data, only tables for classes with sufficiently large samples are presented; five banks that allocated more than 30 per cent of their total IT costs to the item 'Unclassifiable IT costs' are excluded from the calculations by thematic area.

On average, 56.5 per cent of the TCO is accounted for by Applications and 18.9 per cent by the Data center; followed by Peripheral Systems (10.7 per cent) and Transmission Systems (5.4 per cent). IT security costs stand at 4 per cent, which is likely underestimated due to the difficulty in accurately isolating these costs (Figure 97).

[33] In group analyses, costs are recognized using the full consolidation method. The amount of IT costs of a group is therefore different from that resulting from the sum of the costs indicated individually by the different banks belonging to the group.

Figure 97 - Banks' TCO by thematic area



The breakdown of the IT cash outflow by thematic area is largely consistent with that of the TCO.

Figure 98 and Figure 99 show the breakdown of TCO and cash outflow by thematic area for banks, broken down by size class. As the size increases, the banks gradually indicate higher percentages for the Data center and the IT Security.

Figure 98 - Banks' TCO by thematic area and size class

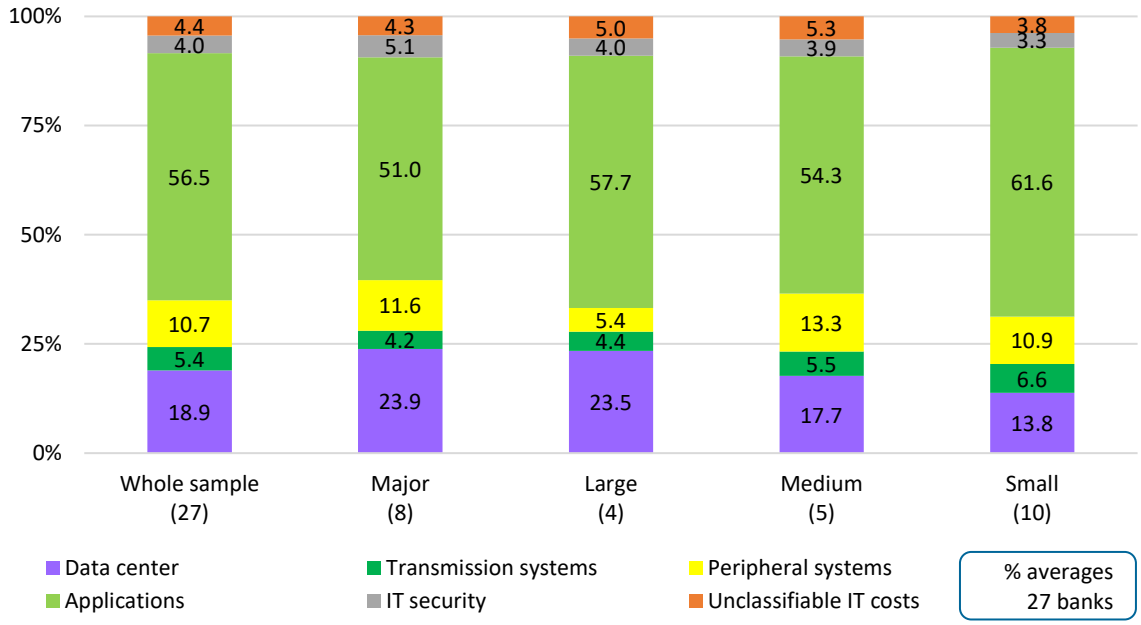
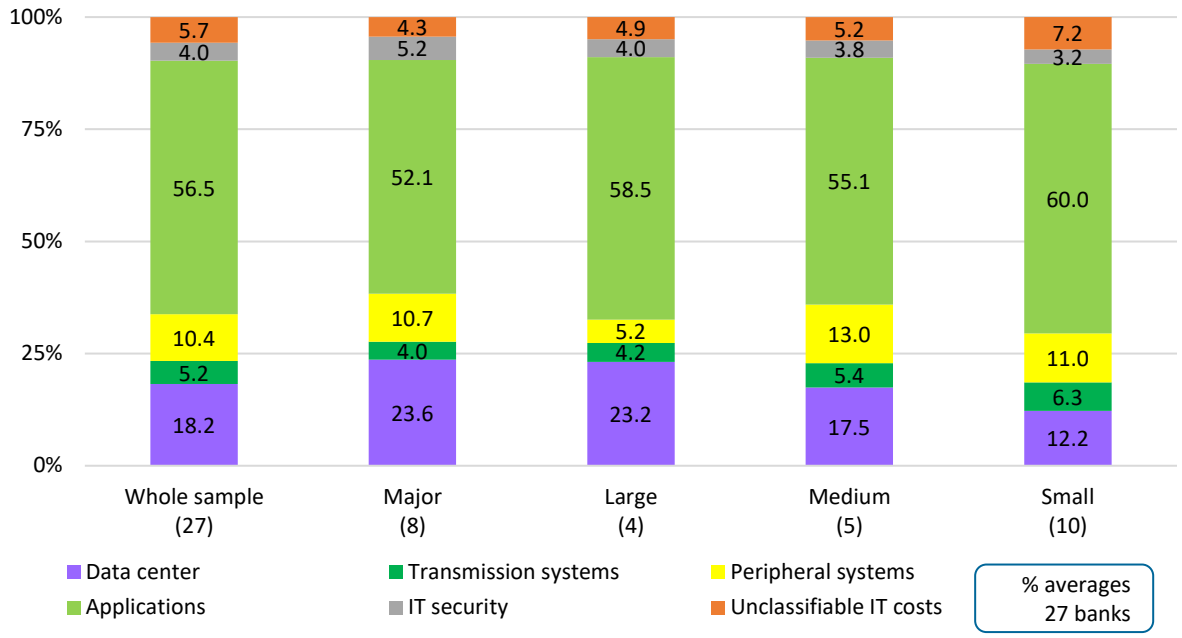


Figure 99 - Banks' IT cash outflow by thematic area and size class



Breaking down the TCO by production factor, the predominant share is allocated to third-party services (66.6 per cent) provided by: i) external staff and consultants; ii) banks or ancillary services undertakings of the banking group to which they belong and within the CIPA perimeter; and (iii) third-party suppliers.[34] Of the costs incurred directly by the bank, an average of 18 per cent is attributed to Software, 10.1 per cent to Internal staff and 4.5 per cent to Hardware (Figure 100).

Figure 100 - Banks' TCO by production factor

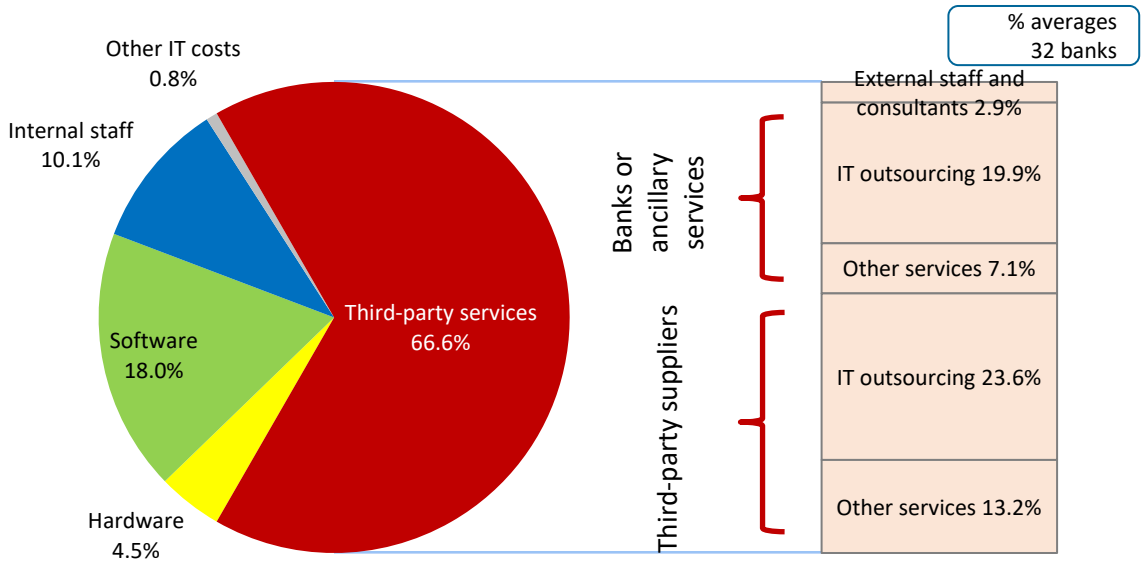


Figure 101 represents a similar breakdown, differentiated by size class.

[34] Third-party supplier (respect to the CIPA perimeter): IT vendor, consortium of banks, other banks or entities of the group outside the perimeter, other banking groups.

Figure 101 - Banks' TCO by production factor and size class

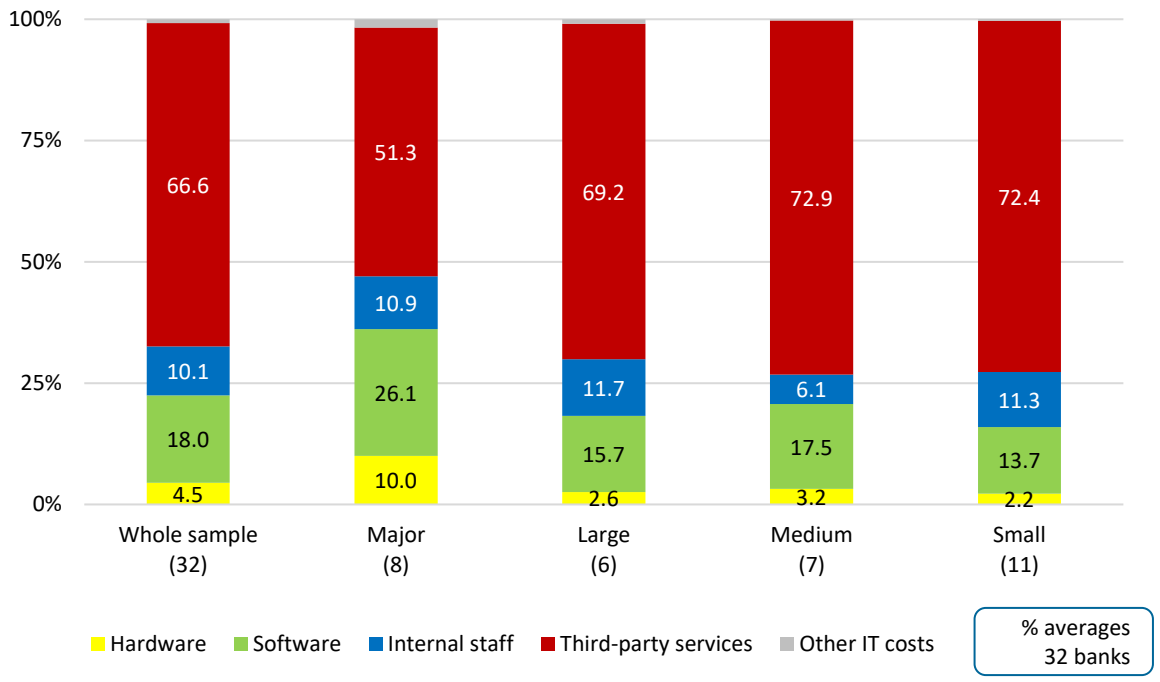


Figure 102 shows a focus on IT Security, representing the averages of TCO and cash outflow percentages for classes that include a significant number of banks. From a size perspective, it is clear that, as the size increases, the banks gradually indicate higher percentages on average.

Figure 102 - Banks' TCO and cash outflow for IT Security

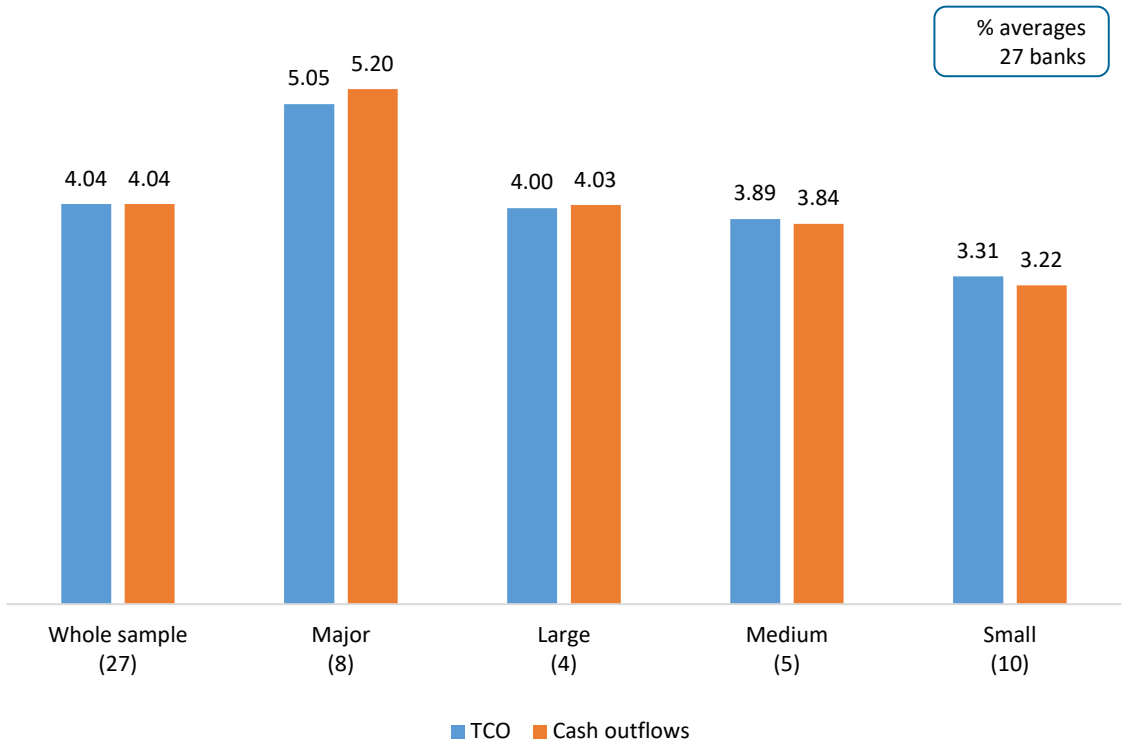
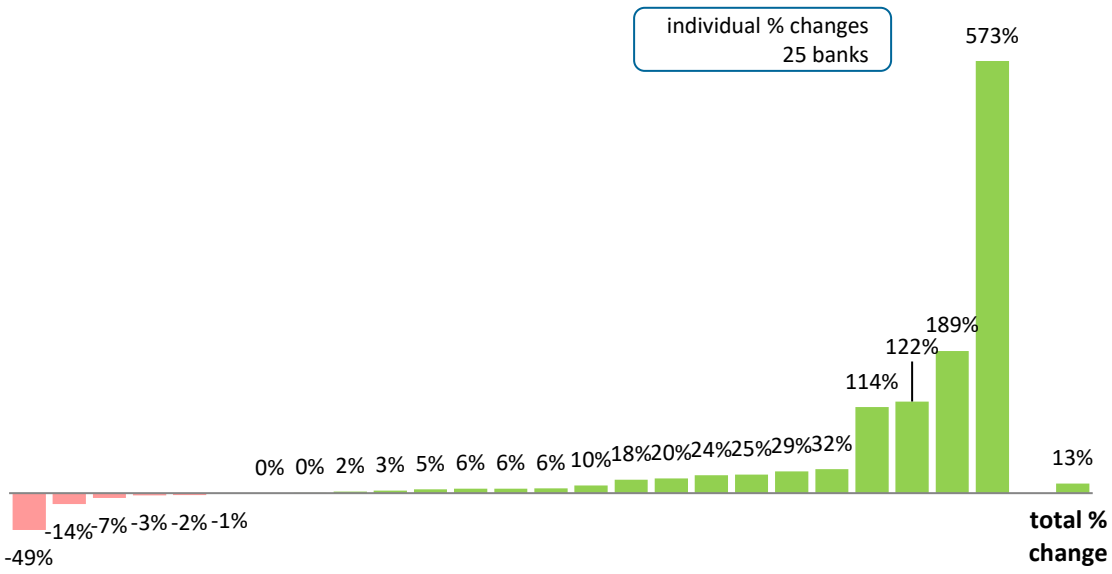


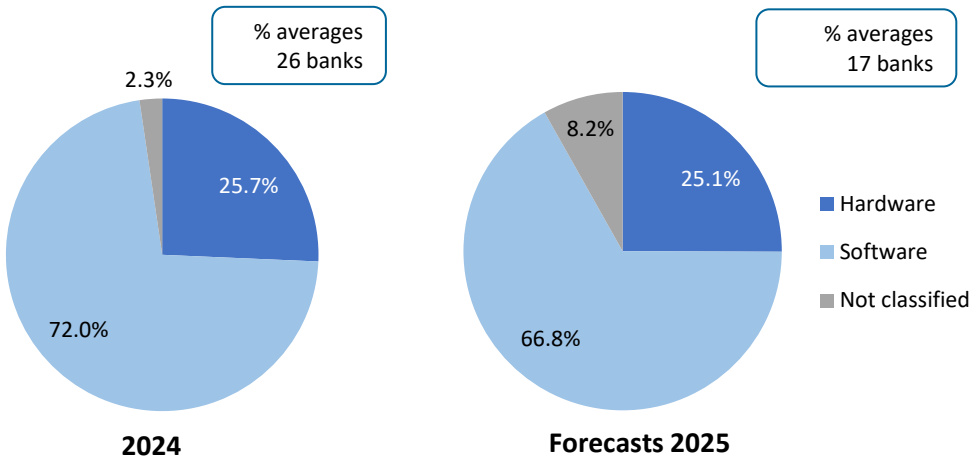
Figure 103 shows the individual percentage change between investments planned for 2025 compared with those implemented in 2024, for the 25 banks that provided both data. These are mostly positive figures, indicating an increase, in some cases a very significant one. Overall, the nominal amount of IT investment planned for 2025 grows by 13 per cent compared with the FY 2024.

Figure 103 - Banks' IT investments: variation in the 2025 forecast compared with the 2024 actuals



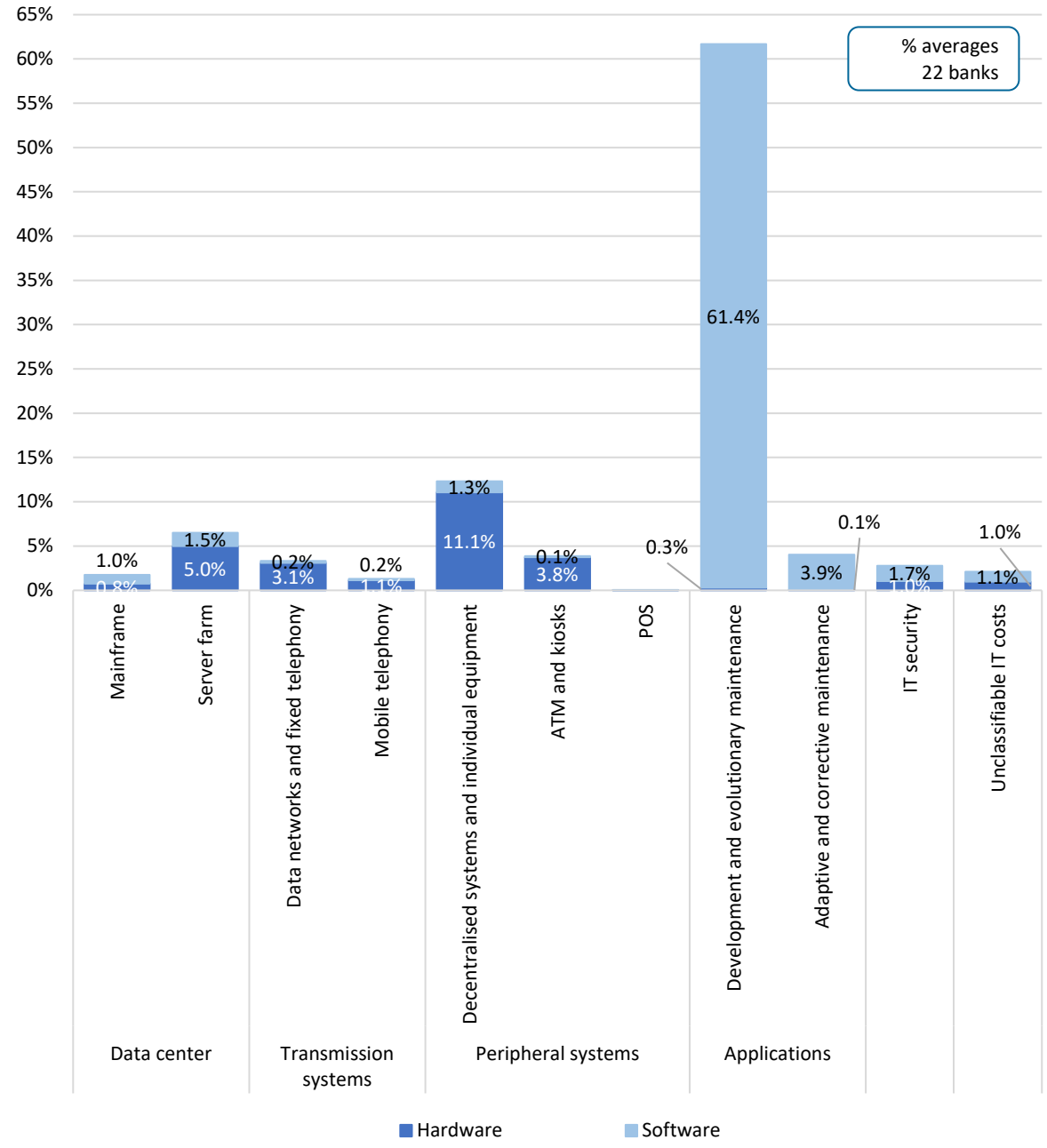
A breakdown of the investment between Hardware and Software shows that, both on an actual and forecast basis, more than two thirds is allocated to Software (Figure 104).

Figure 104 - Banks' IT investment in HW and SW



In Figure 105, the investment in Hardware and Software in 2024 is broken down by thematic area.

Figure 105 - Banks' IT investment in HW and SW by thematic area



3.1.1 Financial indicators

The following are some indicators calculated by comparing key items from the income statement and operating results of the 32 banks participating in the Survey, broken down by class in relation to size (Table 14).

For the items 'IT costs',[35] 'IT cash outflows', 'IT investments',[36] 'IT amortizations',[37] 'total number of employees' and 'number of employees net of IT' (the number of employees is an average of monthly values) the values reported by the individual banks in the questionnaire are used. The items 'intermediated funds',[38] 'number of branches',[39] 'number of loan and deposit accounts',[40] 'gross banking product',[41] 'operating income',[42] 'operating costs'[42] and 'operating margin'[42] are derived from individual bank supervisory reports.

The values of banks with negative operating margin are eliminated from the indicators calculated on the basis of operating margin. In general, outlier values are removed from the measures.

Compared with previous editions, from this year the 'Banks with specialized operations' class, which included banks with very diversified organizational and operational structures, is no longer present and the related banks are now reclassified by size.

The financial indicators reported in the table, which are necessarily dependent on the composition of the sample analysed and the calculation methodology used, are of statistical nature and do not represent an assessment of the merits of IT technical and organizational decisions adopted by the banks.

[35] TCO net of adjusted IT revenues.

[36] It includes investments in hardware and software.

[37] Share of depreciation and amortization based on TCO.

[38] Average of the monthly values of 13 months (reference year plus the month of December of the previous year).

[39] Average of the quarterly values for the year taken from the archives of Banca d'Italia.

[40] Aggregate consisting of the sum of the items "loans: number of accounts" and "deposits: number of accounts".

[41] Aggregate consisting of the sum of the items "direct deposits", "indirect deposits" and "total loans".

[42] Refers to the new EBA reporting rules (see Circular 272 of Banca d'Italia and ECB Regulation no. 1534/2017).

Table 14 - Indicators: 32 banks (entire sample)

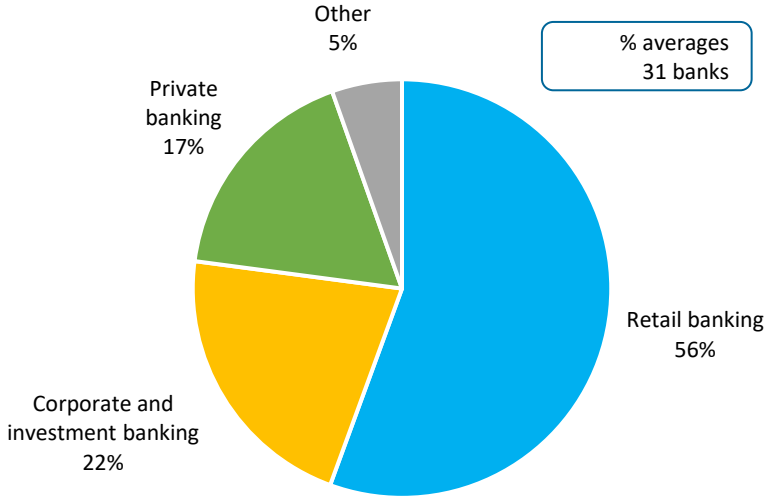
IT cost indicators*	Average 2024					Coefficient of variation 2024					Medians 2024				
	Major (8)	Large (6)	Medium (7)	Small A (5)	Small B (6)	Major (8)	Large (6)	Medium (7)	Small A (5)	Small B (6)	Major (8)	Large (6)	Medium (7)	Small A (5)	Small B (6)
IT Costs/Intermediated funds (per thousand)	2.35	3.11	3.29	2.68	5.80	0.39	0.39	0.44	0.33	0.79	2.04	2.72	2.90	2.35	4.57
IT Costs/Operating income (%)	8.54	12.54	9.47	10.56	10.89	0.36	0.45	0.72	0.48	0.37	7.63	13.04	7.81	8.36	11.81
IT Costs/Operating margin (%)	18.11	17.23	24.24	22.94	40.70	0.31	0.65	0.73	0.58	0.50	16.31	15.13	20.53	26.21	42.57
IT Costs/Operating costs (%)	19.23	23.28	16.14	19.98	22.68	0.43	0.16	0.41	0.51	0.60	15.93	24.31	16.33	15.74	19.54
IT Costs/Number of branches (thousands of euros)	381.93	557.80	199.47	264.38	-	0.44	0.52	0.33	0.59	-	328.41	527.08	180.43	193.36	-
IT Costs/Number of employees net of IT (thousands of euros)	33.82	50.56	41.42	43.52	56.11	0.66	0.33	0.76	0.89	0.77	25.22	50.97	25.94	26.39	26.83
IT Costs/Total number of employees (thousands of euros)	32.61	47.20	39.42	34.94	51.51	0.68	0.30	0.72	0.66	0.75	24.56	47.91	25.09	23.39	26.53
IT Costs/Number of loan and deposit accounts (tens of euros)	9.79	8.36	9.70	8.64	20.56	0.64	0.36	0.43	0.43	1.19	7.79	7.50	8.79	7.73	6.24
IT Costs/Gross banking product (per thousand)	1.49	1.61	1.20	1.49	2.57	0.58	0.49	0.48	0.76	0.86	1.23	1.27	1.13	1.18	1.97
IT investments/IT Depreciations	0.95	1.07	1.26	2.18	25.61	0.39	0.41	0.22	0.60	1.12	1.01	1.21	1.27	1.83	19.34
IT investments/Intermediated funds (per thousand)	0.93	0.61	0.60	1.38	0.47	0.65	0.58	0.92	1.33	0.42	0.83	0.51	0.42	0.76	0.57
IT investments/Operating costs (%)	5.31	4.01	2.58	13.01	3.33	0.66	0.81	0.74	1.31	0.63	5.23	4.15	2.17	7.63	3.94
IT Cash outflows/Operating income (%)	8.78	12.95	9.69	13.54	11.13	0.35	0.42	0.71	0.68	0.32	8.20	13.52	7.86	8.36	11.39
IT Cash outflows/Number of employees net of IT (thousands of euros)	34.53	53.22	42.29	57.28	55.90	0.63	0.34	0.74	1.06	0.70	28.76	50.24	26.08	25.08	35.09
IT Cash outflows/Total number of employees (thousands of euros)	33.28	49.68	40.26	45.08	51.77	0.65	0.31	0.71	0.85	0.70	27.57	47.21	25.23	22.49	34.69
Other indicators*	**Average 2024**					**Coefficient of variation 2024**					**Medians 2024**				
Operating income/Intermediated funds (%)	2.87	2.86	4.29	2.91	5.45	0.30	0.41	0.42	0.39	0.64	2.91	2.80	3.44	2.81	3.74
Operating margin/Intermediated funds (%)	1.14	1.60	1.78	1.40	1.61	0.36	0.84	0.85	0.64	0.71	1.13	1.16	1.46	0.90	1.00
Operating costs/Intermediated funds (%)	1.36	1.32	2.06	1.47	3.21	0.38	0.31	0.20	0.35	0.82	1.42	1.25	1.95	1.49	1.94
Operating costs/Operating income (%)	46.16	52.37	53.84	53.43	53.79	0.21	0.39	0.35	0.25	0.27	49.25	57.38	56.61	53.11	56.56
Operating costs/Number of branches (hundreds of thousands of euros)	22.31	27.12	25.43	19.39	-	0.29	0.66	0.88	0.64	-	19.62	22.87	14.88	14.73	-
Intermediated funds/Number of employees net of IT (millions of euro)	10.78	17.60	12.11	15.11	22.29	0.30	0.44	0.45	0.55	1.22	10.88	16.20	9.94	13.03	11.31
Intermediated funds/Total number of employees (millions of euro)	10.27	16.55	11.63	12.71	21.30	0.29	0.45	0.42	0.41	1.28	10.44	15.13	9.61	11.54	11.22
Intermediated funds/Number of branches (millions of euro)	156.18	209.90	116.07	116.59	-	0.43	0.82	0.79	0.76	-	139.77	133.46	69.03	66.47	-

**** the indicators are calculated by eliminating outliers.***

3.2 Organizational profiles

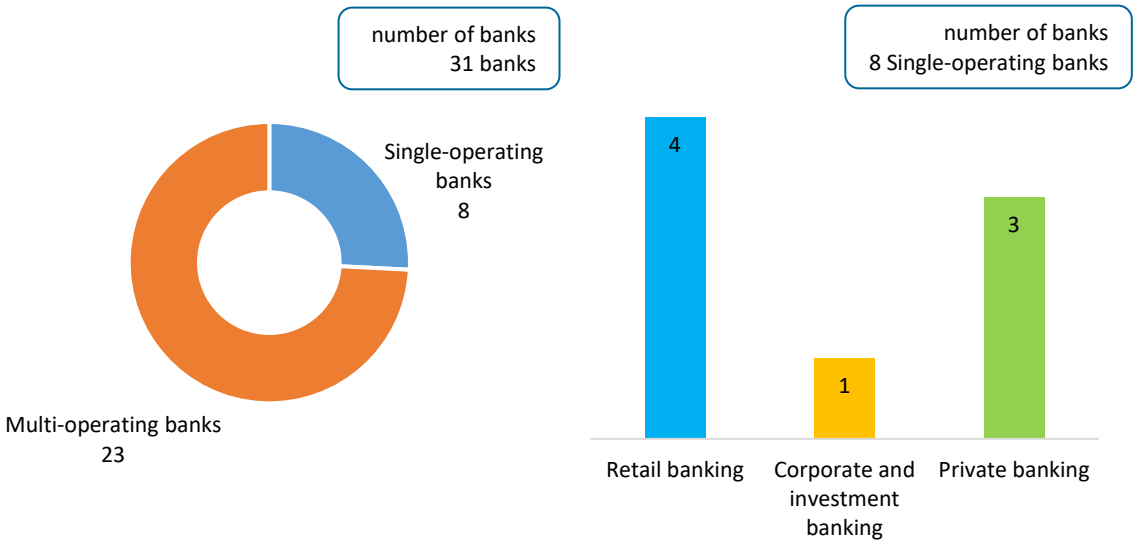
With regard to the business activities of the sample, based on operating income and percentage averages, retail banking is the primary business activity for 31 banks, accounting for 56 per cent; this is followed by corporate and investment banking (22 per cent) and private banking (17 per cent). Other activities account for an average of 5 per cent of their total business activities (Figure 106).

Figure 106 - Business activities of banks



Among 31 participating banks, 23 operate in multiple business activities, while eight operate in a single sector: four in retail banking, three in private banking and one in corporate and investment banking (Figure 107).

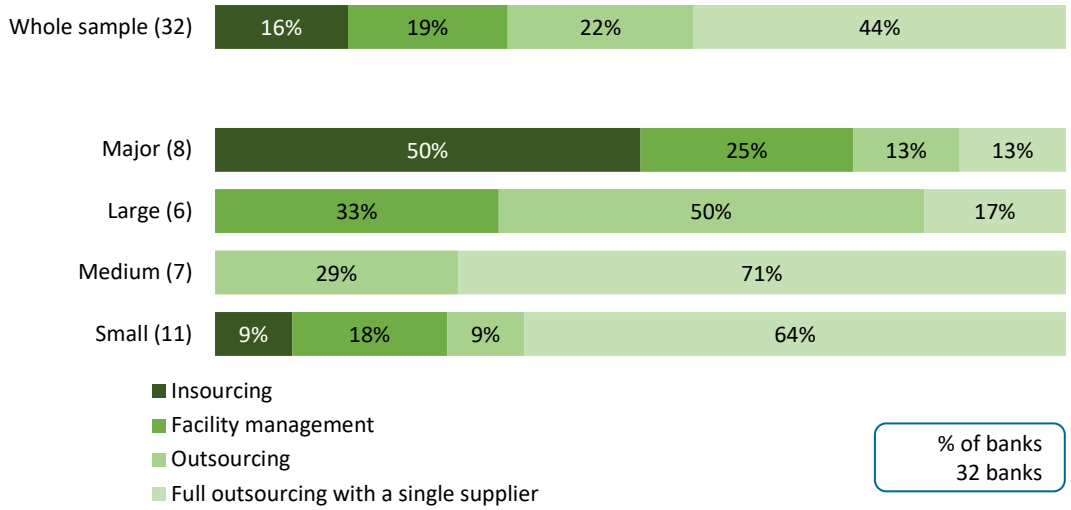
Figure 107 - Multi-operating and single-operating banks



Outsourcing is confirmed as the prevailing model for IT sourcing: 66 per cent of banks entrust the management of the Data center and Applications to one or more external suppliers. 16 per cent adopt an Insourcing model, managing IT resources and Applications internally, regardless of the presence of forms of selective outsourcing for individual initiatives or individual areas. 19 per cent

adopt a 'mixed' model, i.e. they outsource the Data center infrastructures while retaining in-house the management of its Applications (Facility management). Figure 108 analyses sourcing patterns for the entire sample and by size class.

Figure 108 - Banks' prevailing IT sourcing model



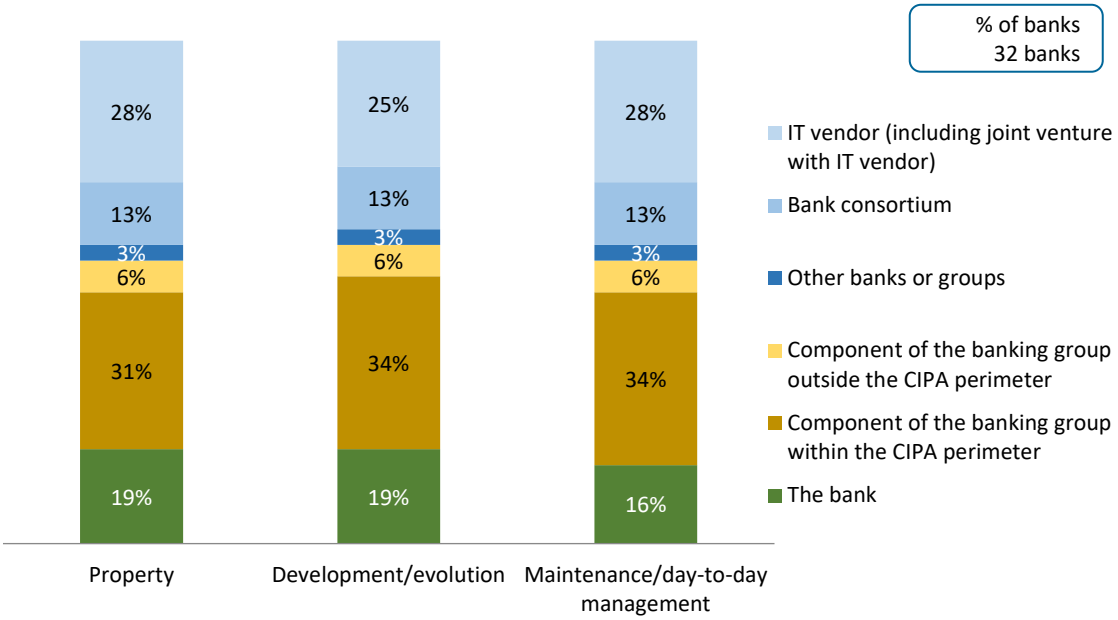
The sourcing decisions made by banks separately for Data center infrastructure (hardware and system software) and Applications are examined in more detail below.

With regard to Data center infrastructure, we analyse - based on a criterion of prevalence and regardless of the presence of selective outsourcing for individual initiatives or areas - who owns the infrastructure (including rental and leasing), who is responsible for its development and evolution, and who handles corrective maintenance and day-to-day management, distinguishing between:

- ✓ the bank itself;
- ✓ entities of the banking group within the CIPA perimeter (other banks or ancillary services undertakings of the group);
- ✓ entities of the banking group outside the CIPA perimeter (including the foreign parent company);
- ✓ other banks or banking groups;
- ✓ consortia of banks;
- ✓ IT vendor (including joint venture with an IT vendor).

The sourcing models are essentially aligned in terms of ownership, development and management of the Data center. A share of banks ranging from 16 per cent to 19 per cent owns the Data center and is directly responsible for its development/evolution and corrective maintenance/day-to-day management. The majority (31-34 per cent) relies on group entities within the CIPA perimeter, another significant share (25-28 per cent) relies on vendors, while 13 per cent use banking consortia (Figure 109).

Figure 109 - Ownership, development and management of the banks' data center



With reference to Applications, the sourcing approach is similar for both development/evolution and maintenance/day-to-day management. Around one quarter of banks directly carry out both activities, 31 per cent entrust them within the CIPA perimeter, while the remainder outsource them, where the choice of IT vendor is predominant (25 per cent) followed by the bank consortium (13 per cent) (Figure 110).

Figure 110 - Development and management of banks' applications

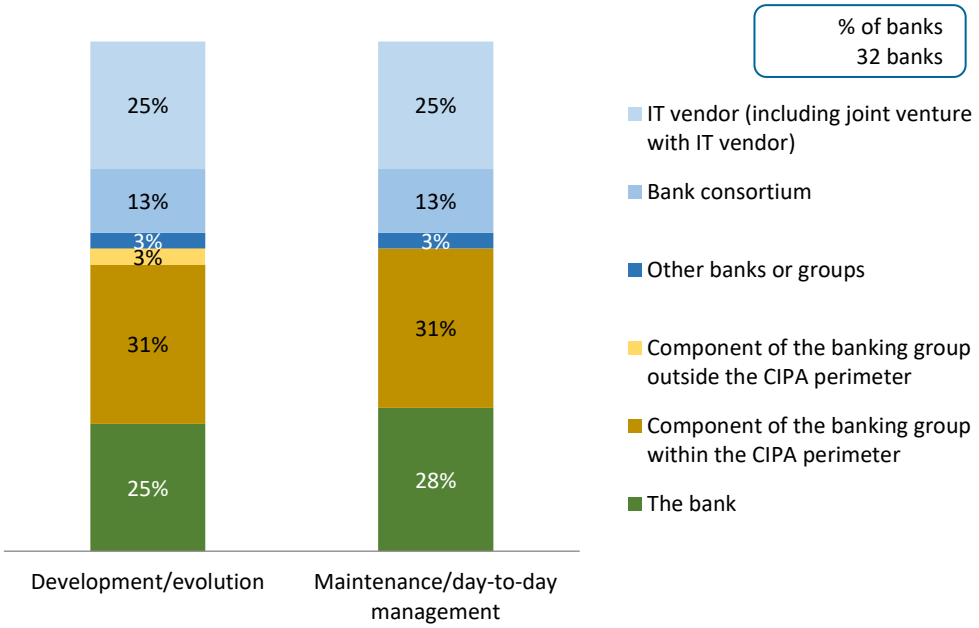
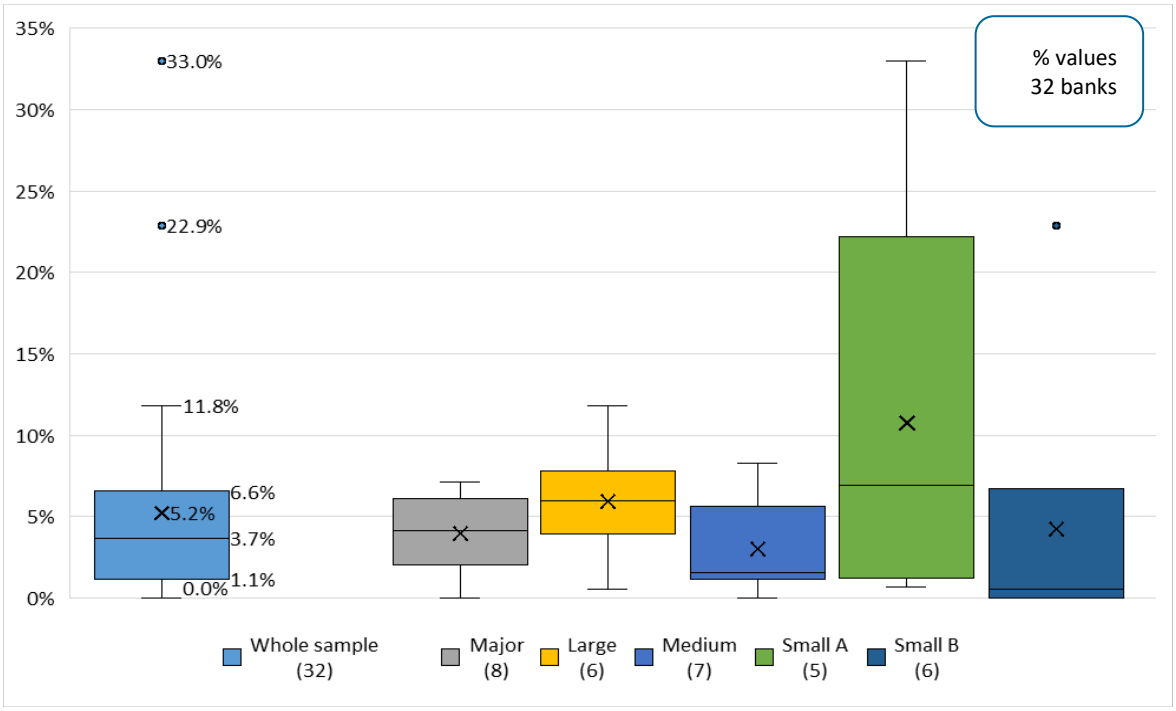


Figure 111[27] shows the percentage ratio between the number of IT employees and the total number of employees of the 32 participating banks, including by size class. IT employees account for an average of 5.2 per cent of the staff of the 32 participating banks.

Figure 111 - IT staff / total bank employees



Appendix

Figure 112 - Representativeness of participating banks by branches and employees

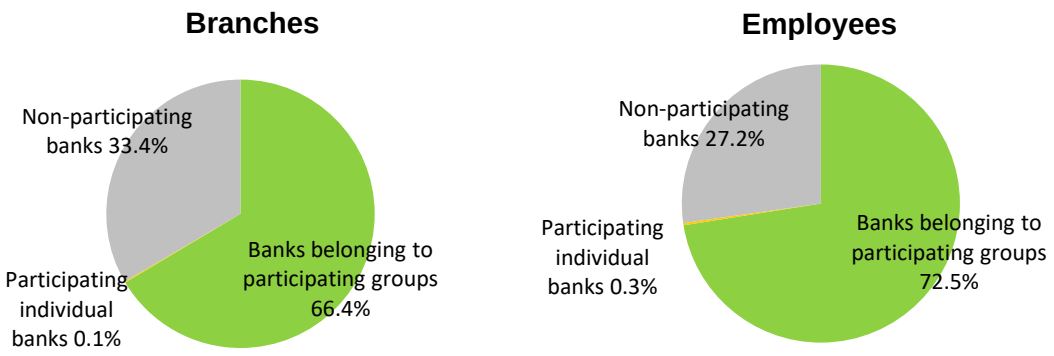


Figure 113 - TCO: comparison between 2024 forecast and 2024 actuals

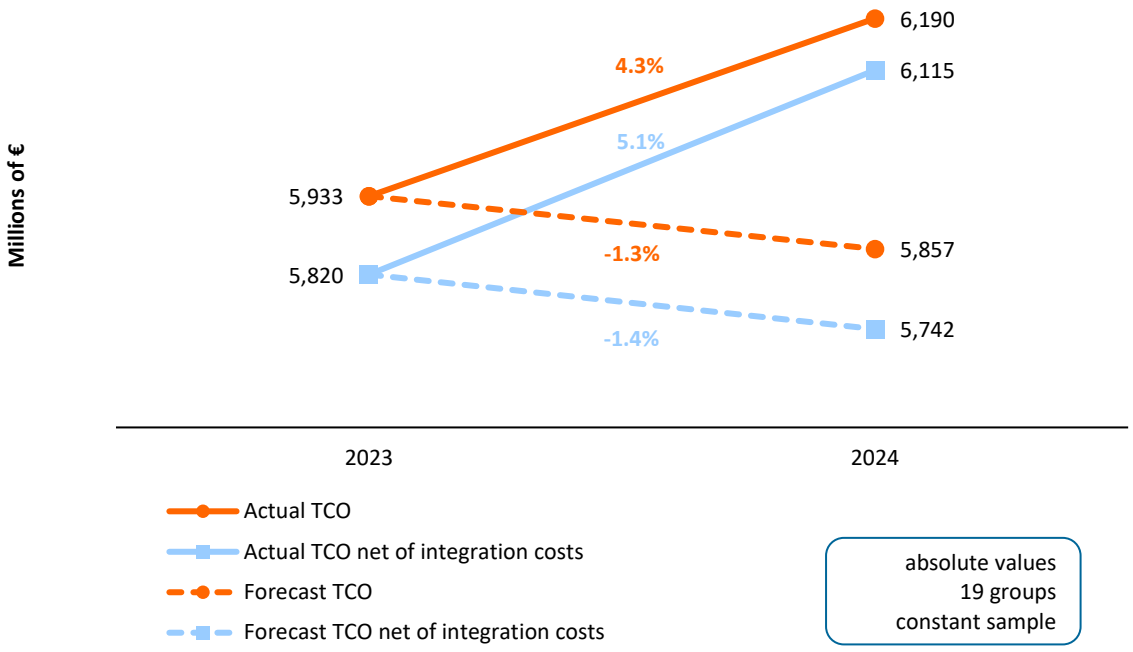


Figure 114 - TCO by thematic area and size class

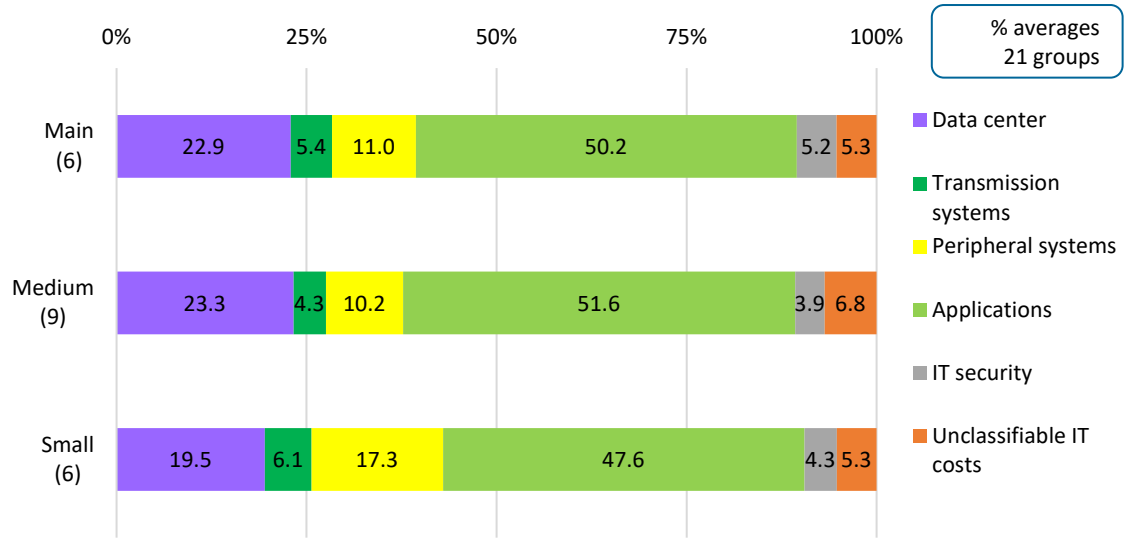


Figure 115 - TCO by thematic area and sourcing model

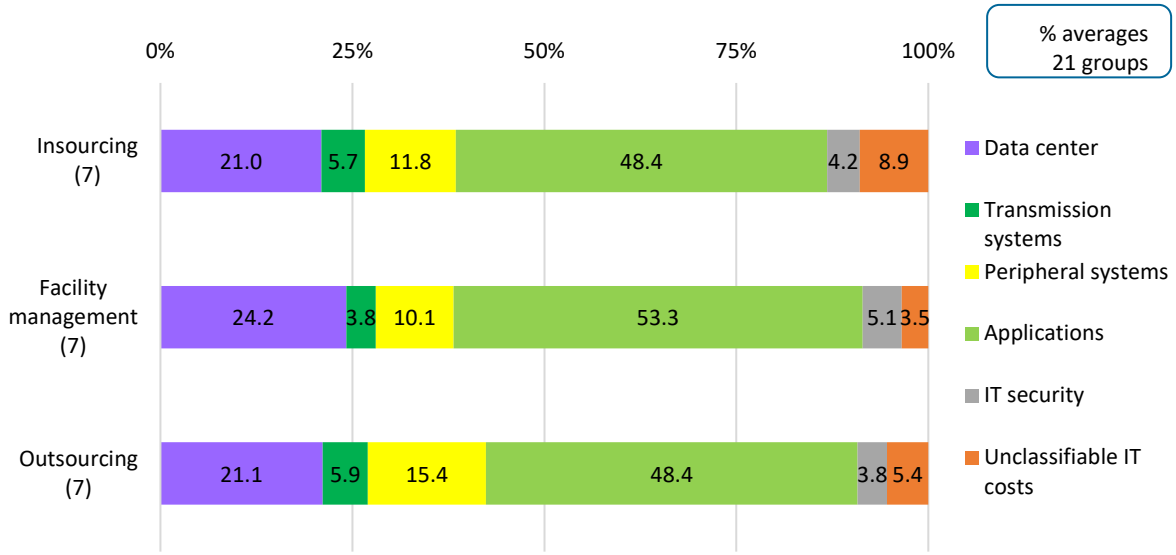


Figure 116 - IT cash outflow by process - Main groups

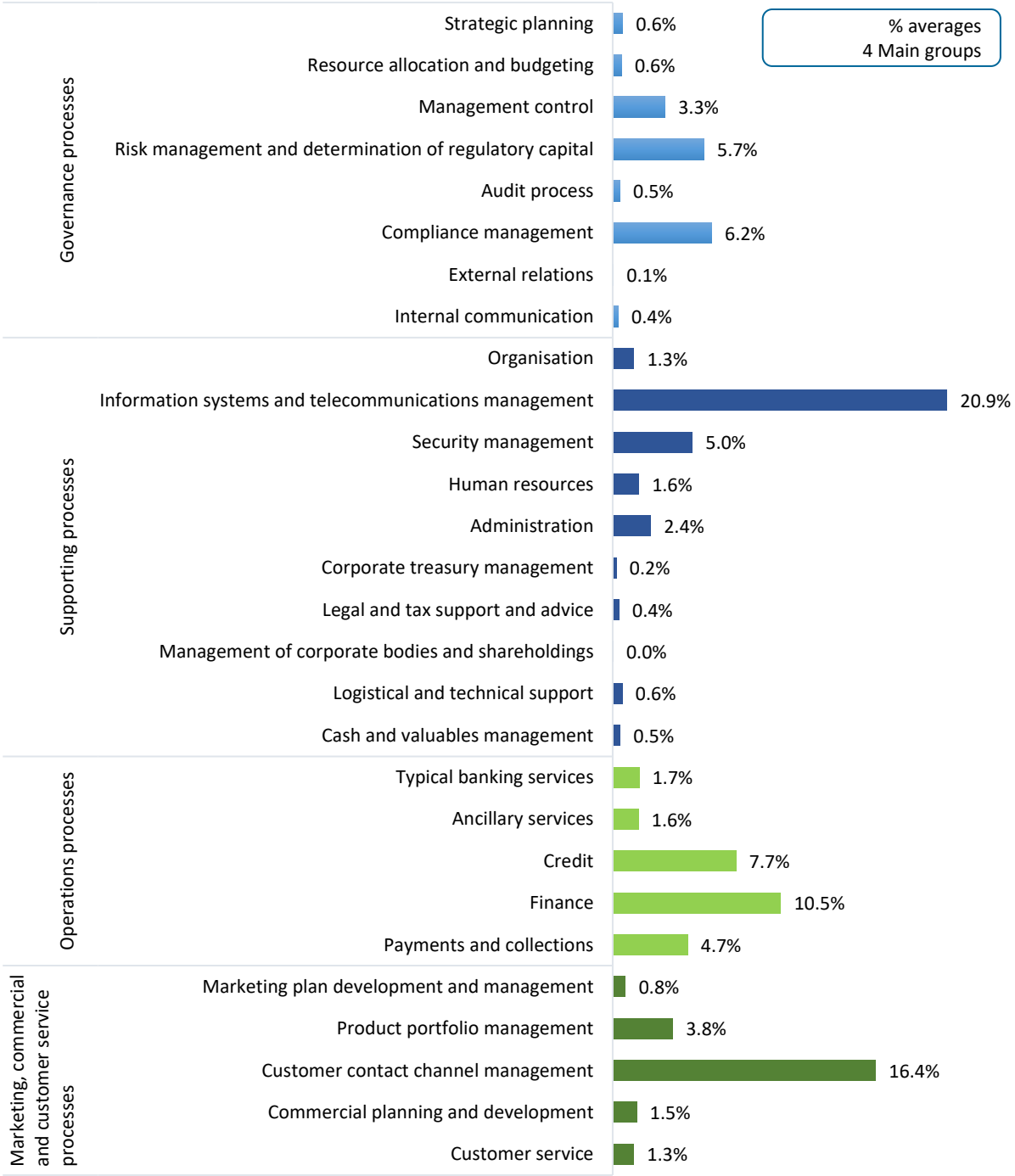


Figure 117 - IT cash outflow by process - Medium groups

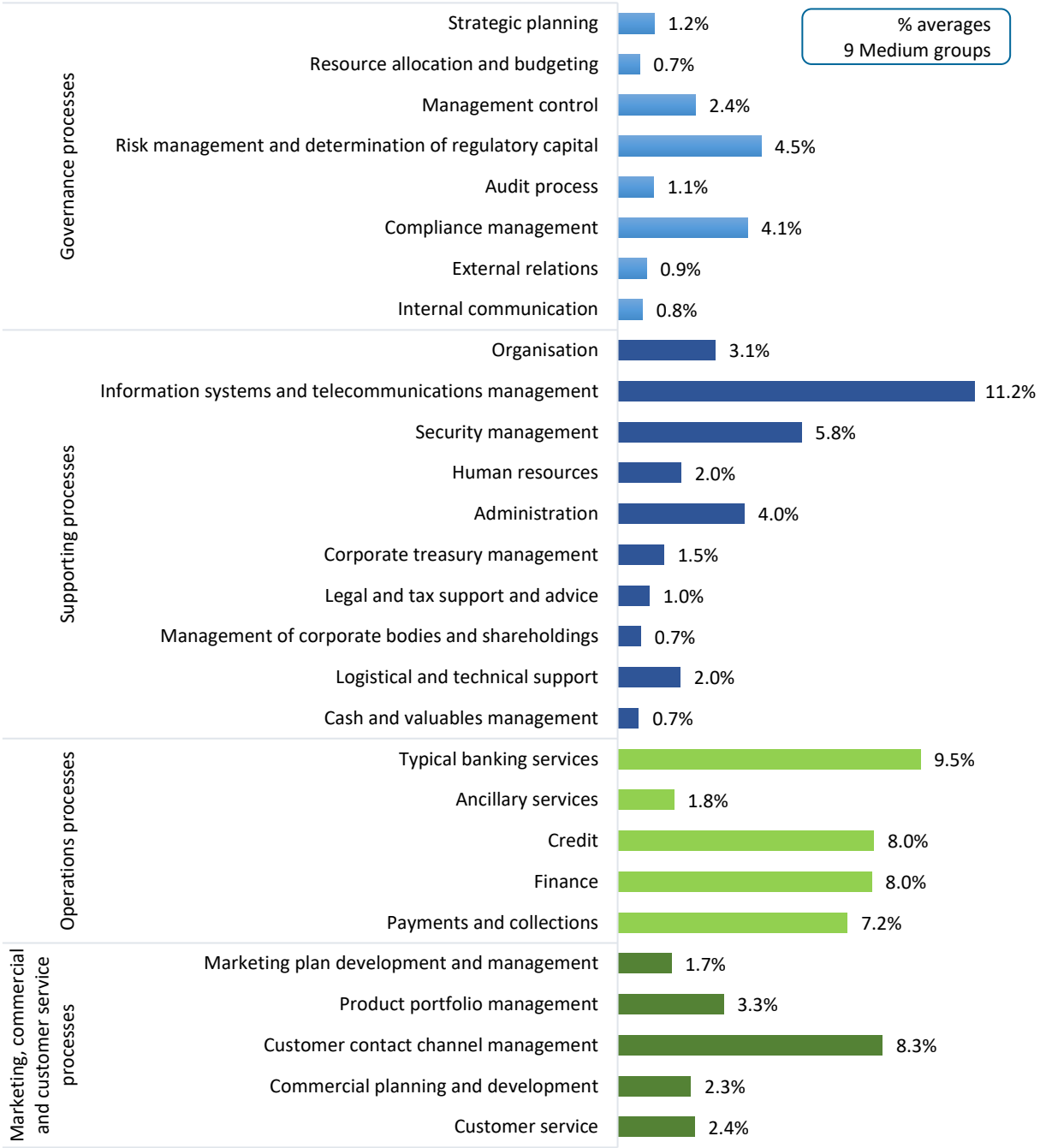


Figure 118 - IT cash outflow by process - Small groups

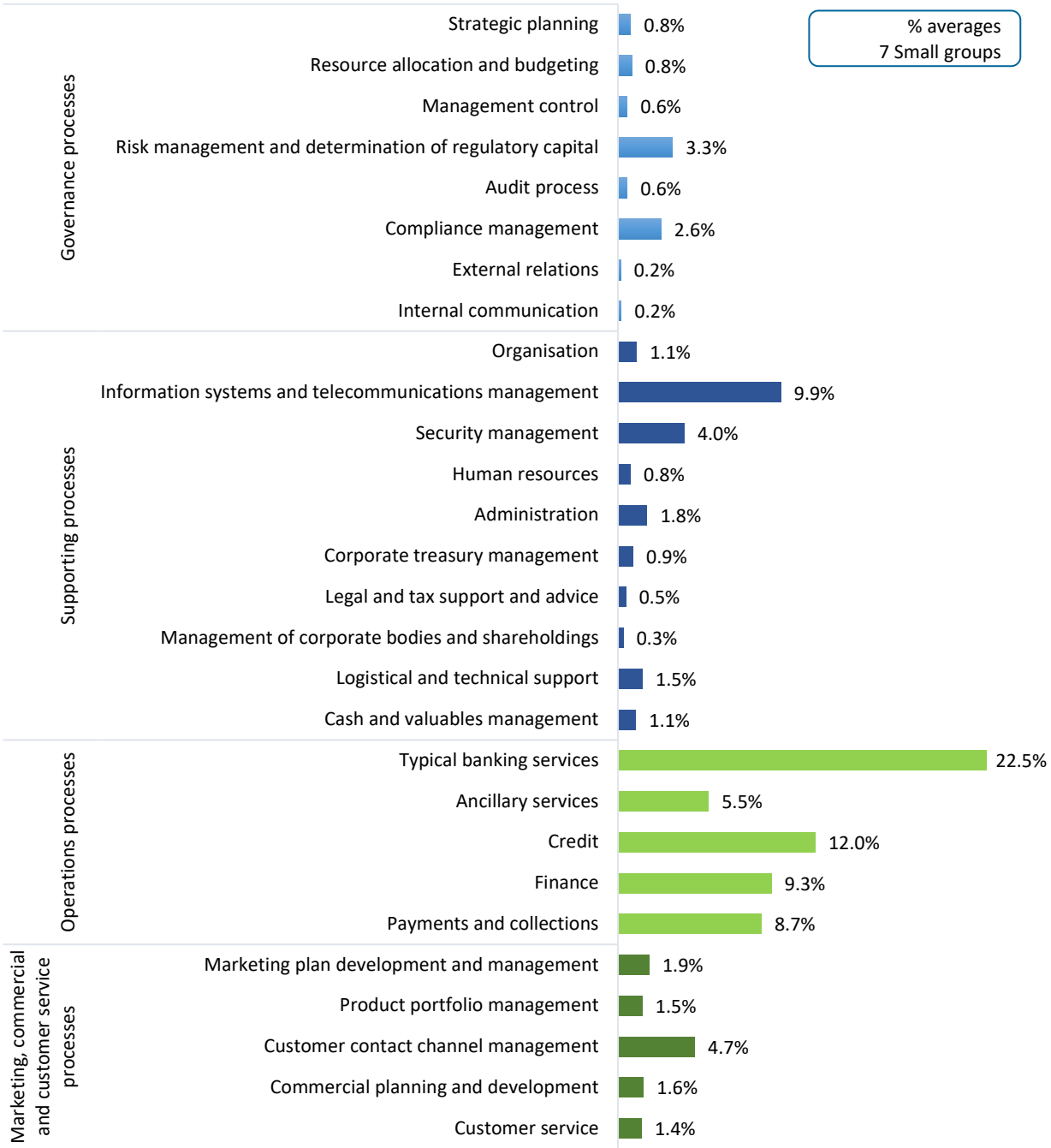


Figure 119 - IT cash outflow for run/change by sourcing model

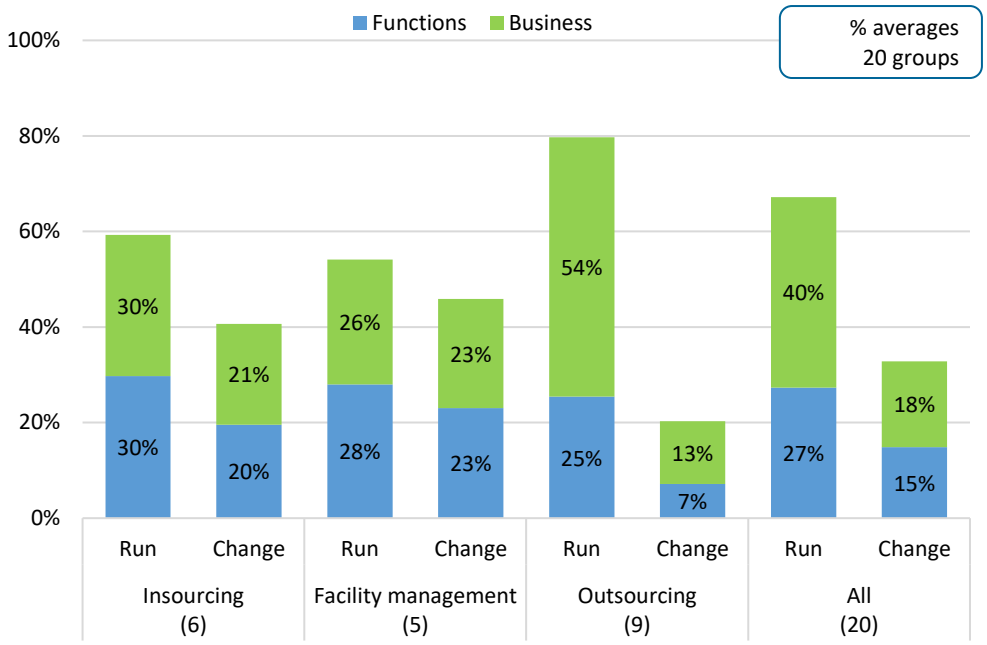


Figure 120 - IT cash outflows for business/functions, run/change: individual and by sourcing model values

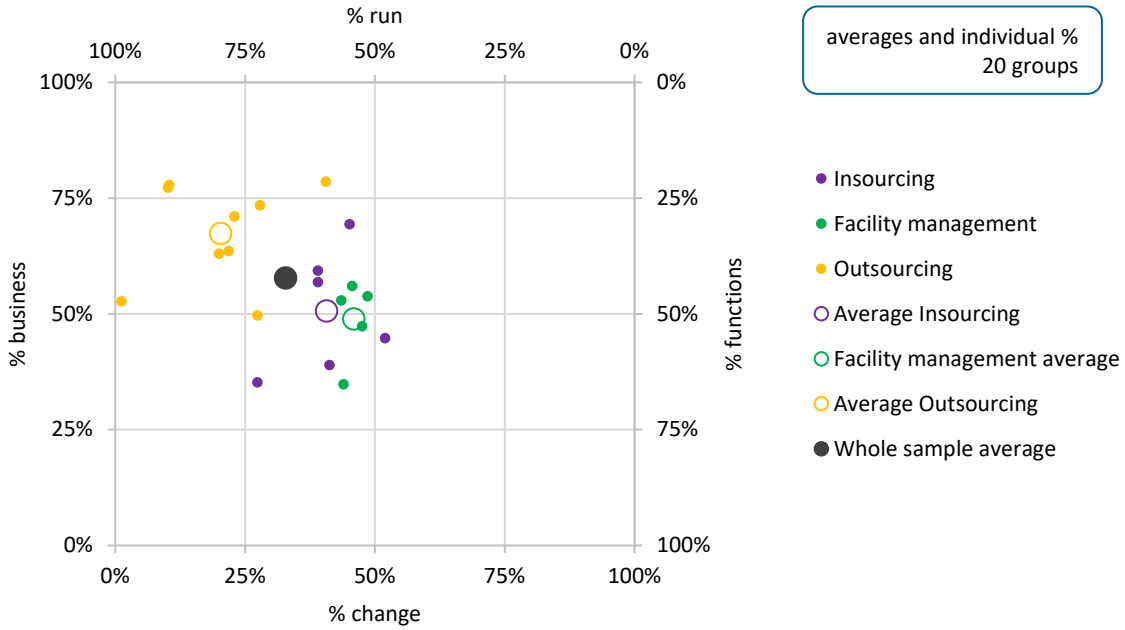


Figure 121 - Compliance IT cash outflow: distribution by scope

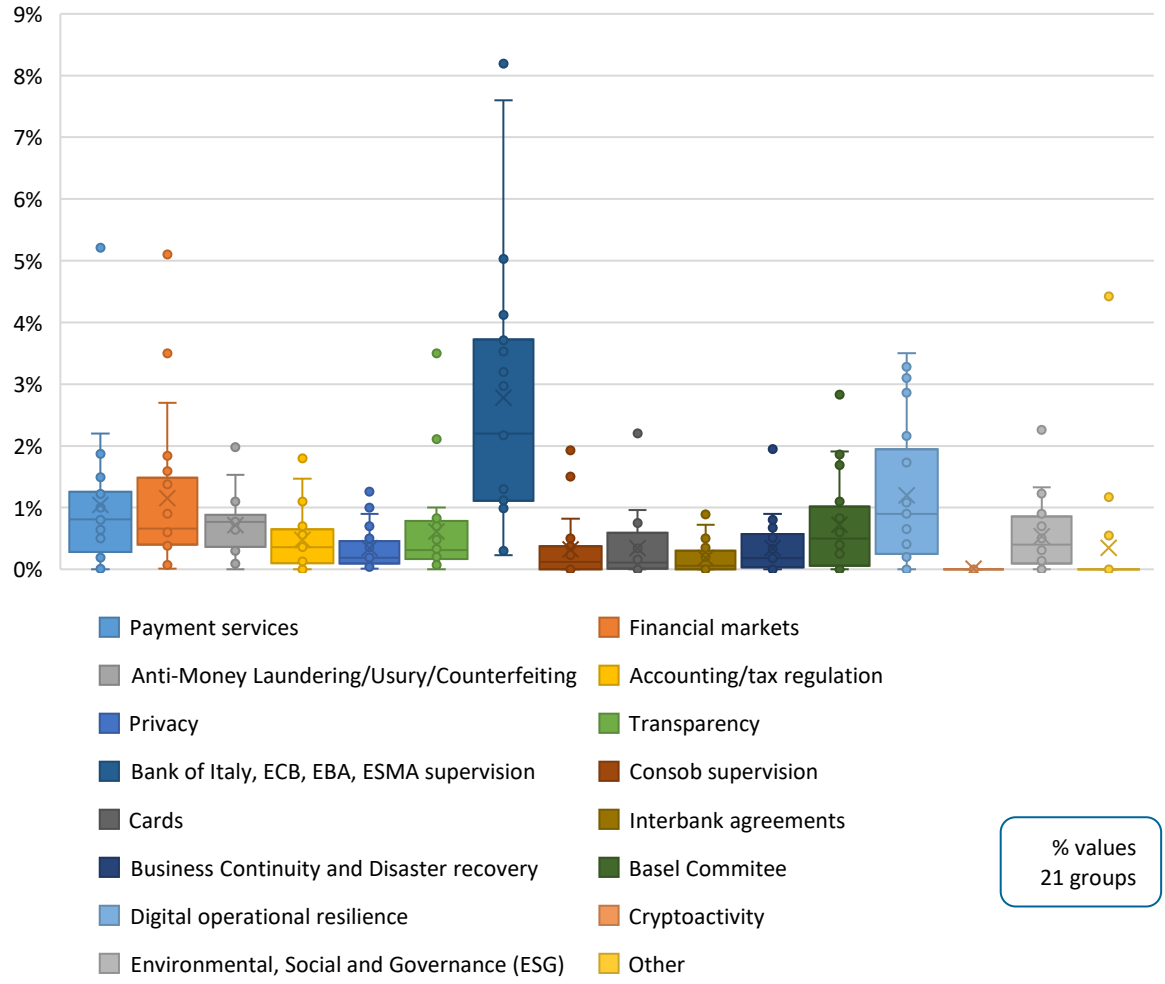


Figure 122 - Compliance initiatives - Main groups

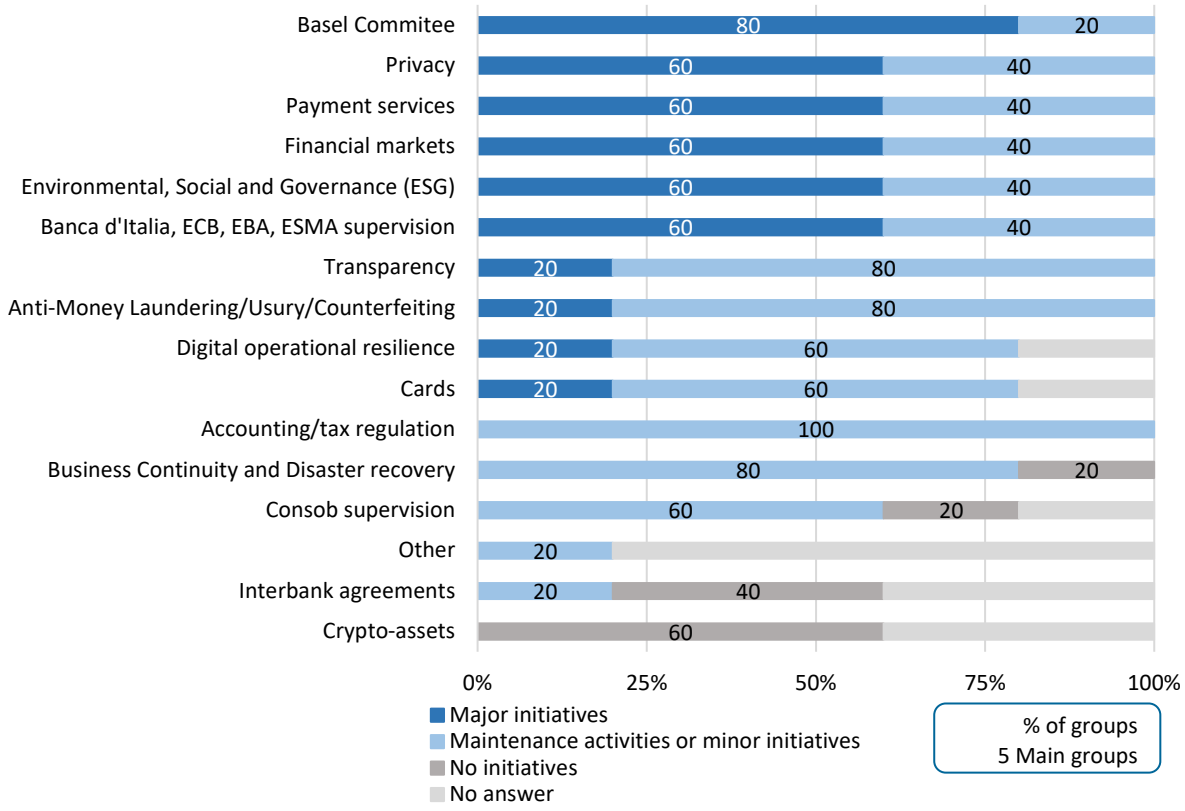


Figure 123 - Compliance initiatives - Medium groups

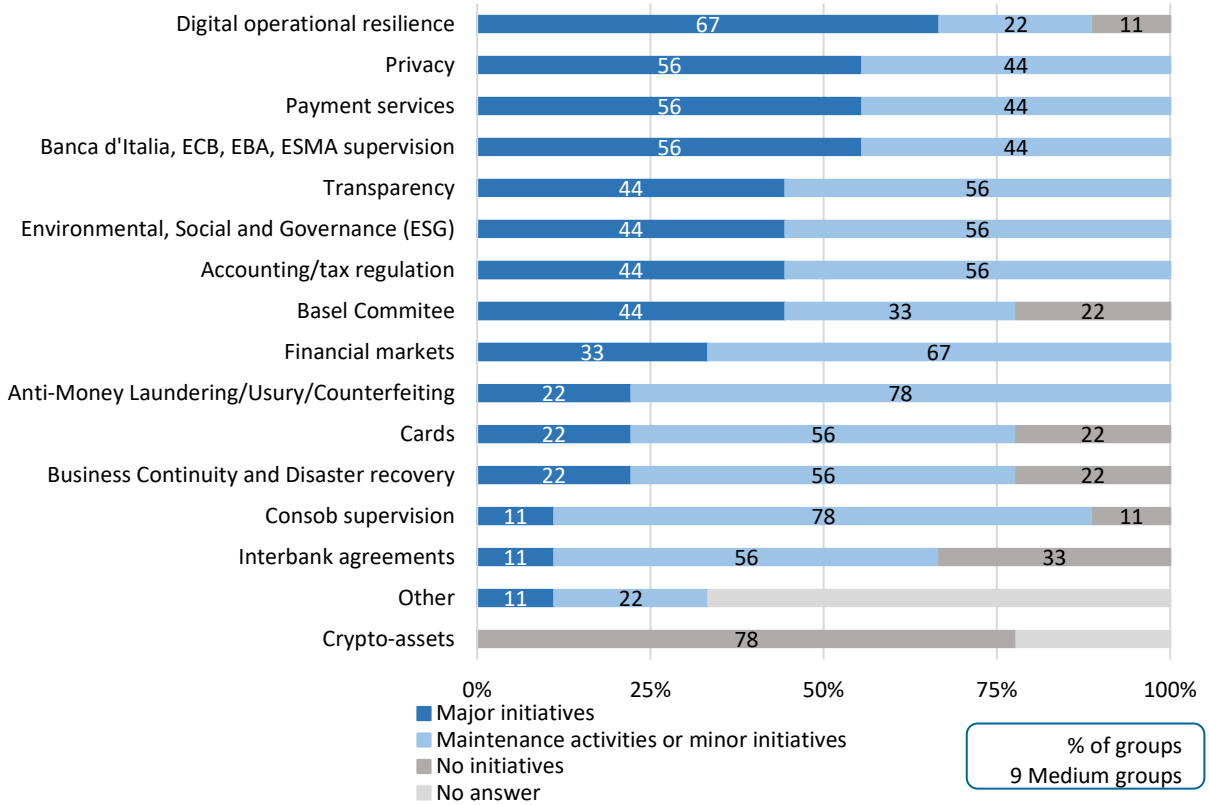


Figure 124 - Compliance initiatives - Small groups

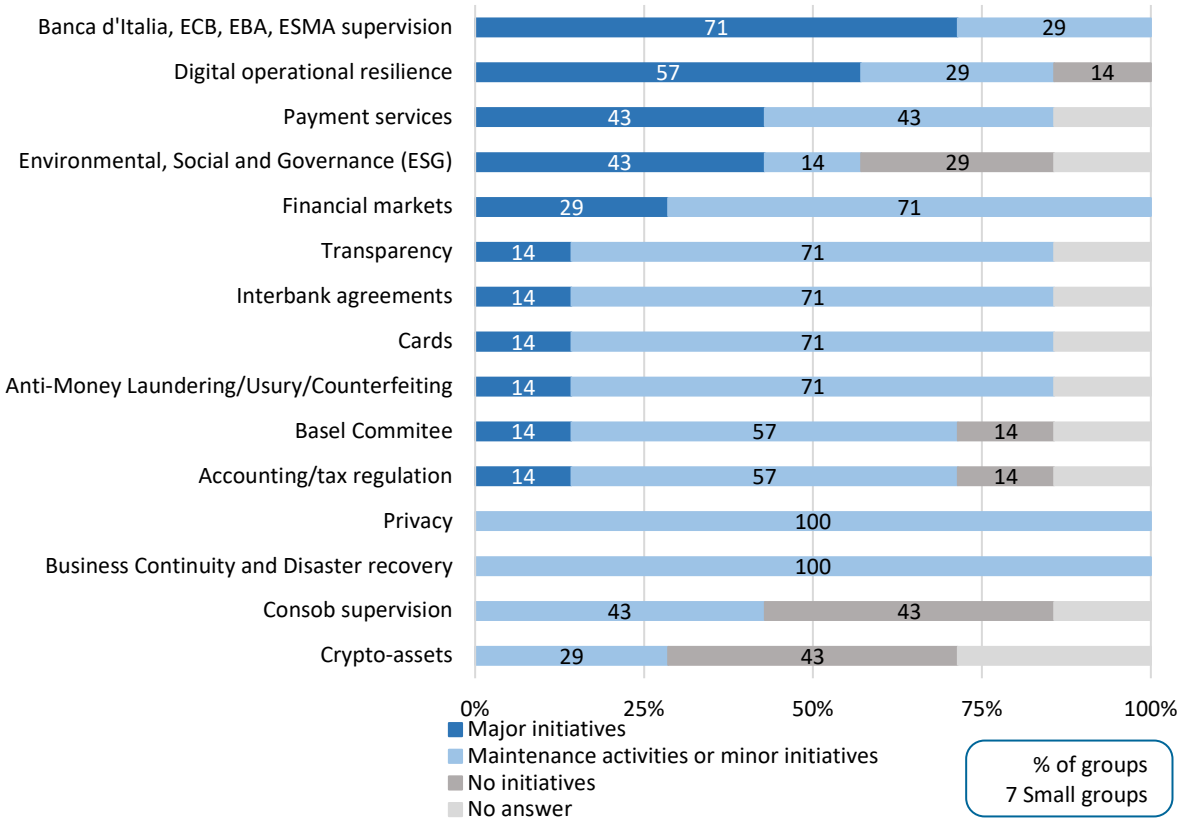


Figure 125 - IT cash outflow for open banking: breakdown by size class and sourcing model

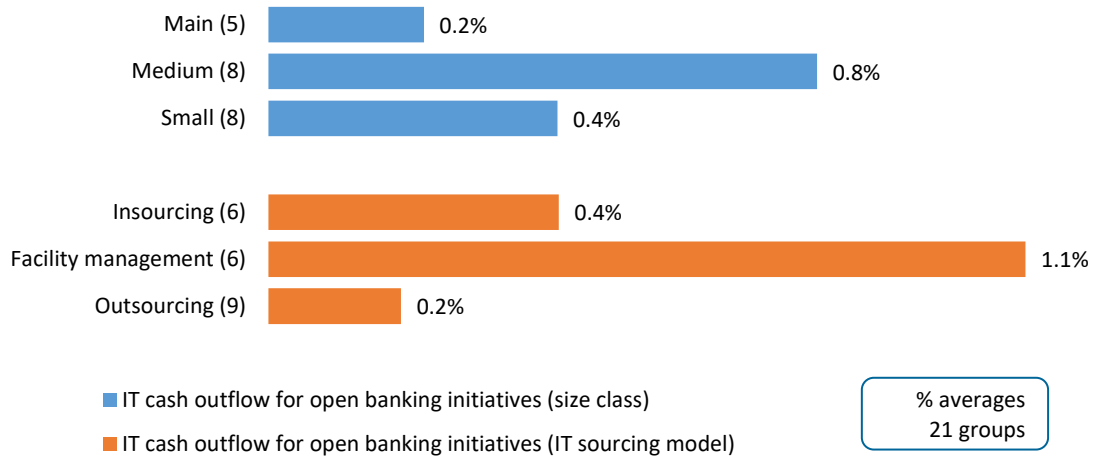


Figure 126 - IT investment in HW and SW - Main groups

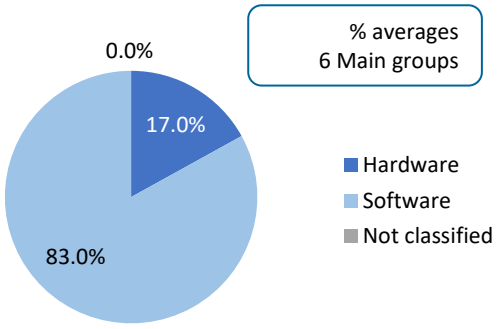


Figure 127 - IT investment in HW and SW by thematic area - Main groups

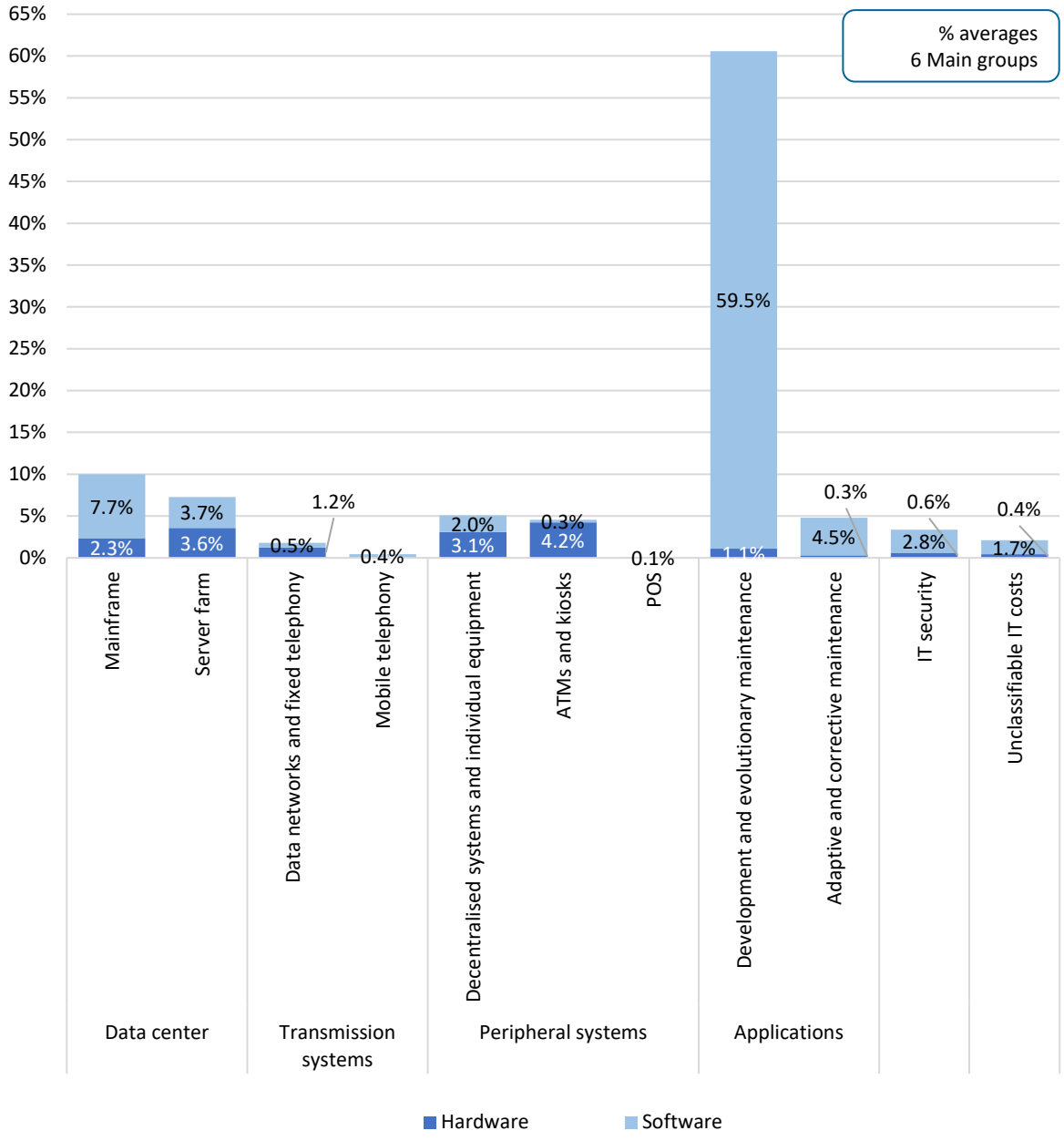


Figure 128 - IT investment in HW and SW - Medium groups

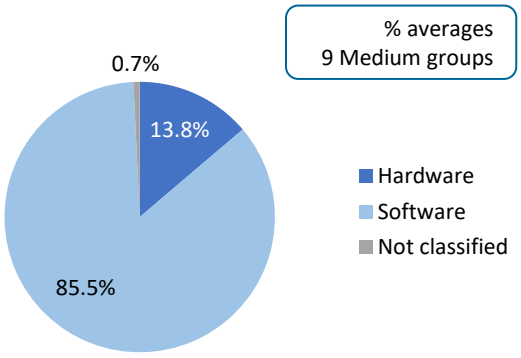


Figure 129 - IT investment in HW and SW by thematic area - Medium groups

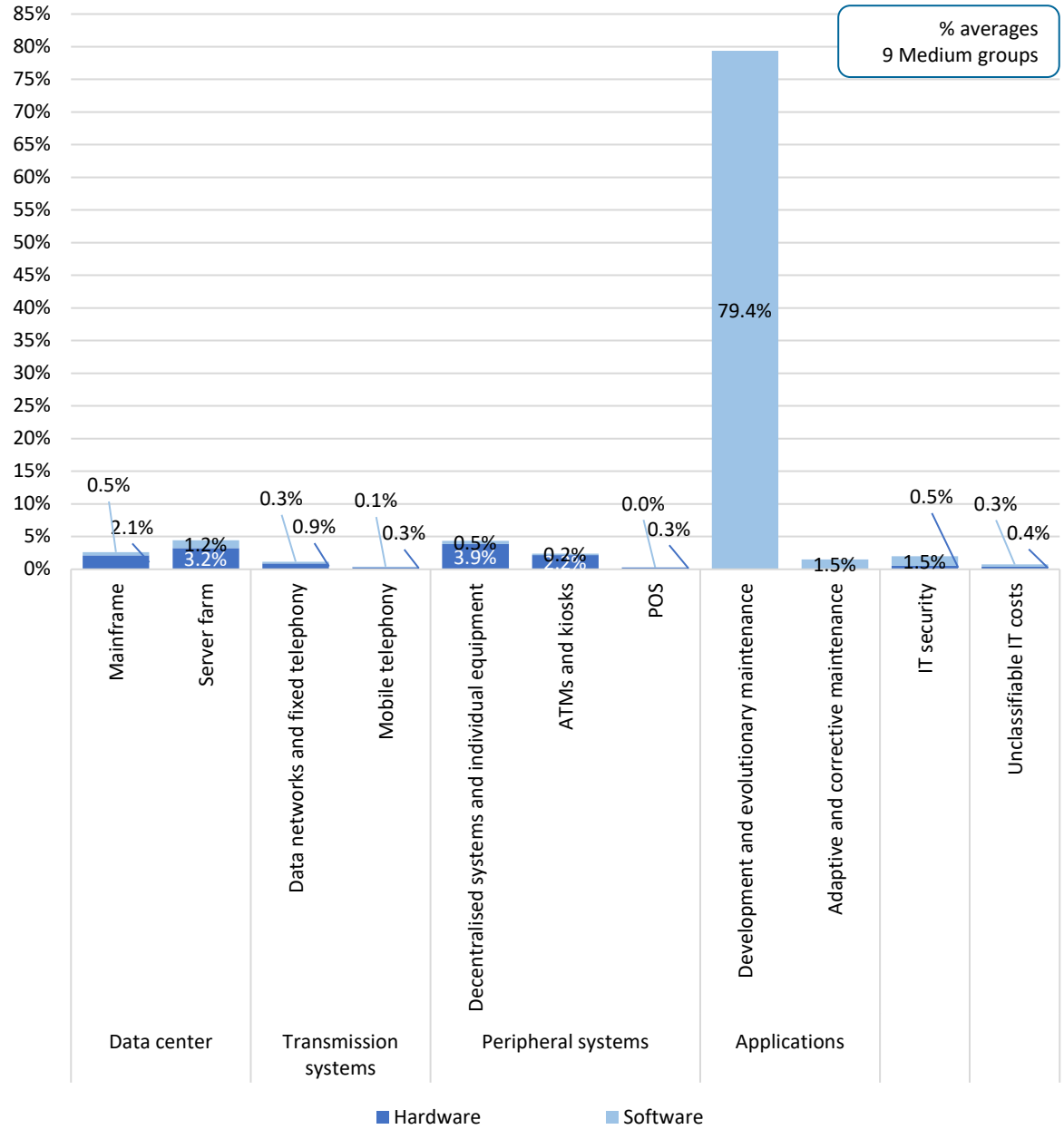


Figure 130 - IT investment in HW and SW - Small groups

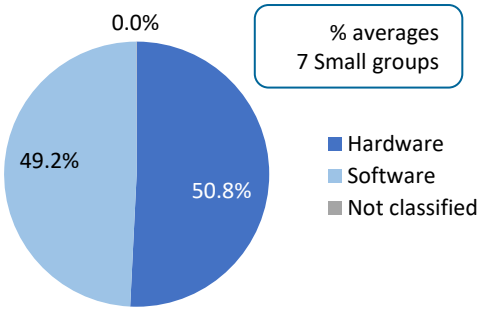


Figure 131 - IT investment in HW and SW by thematic area - Small groups

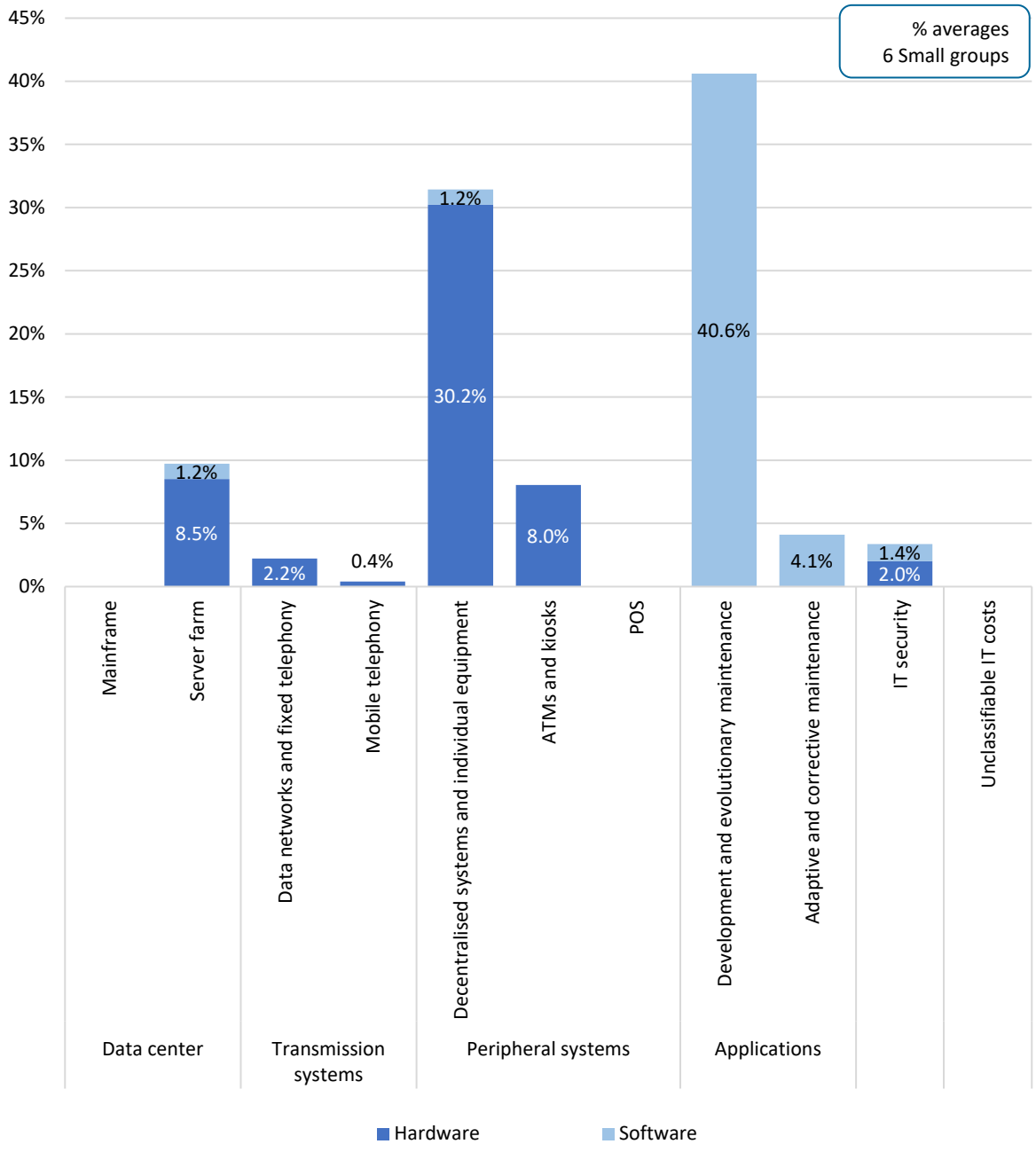


Figure 132 - IT investment in HW and SW - Insourcing groups

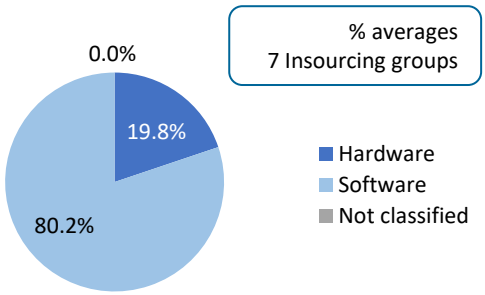


Figure 133 - IT investment in HW and SW by thematic area - Insourcing groups

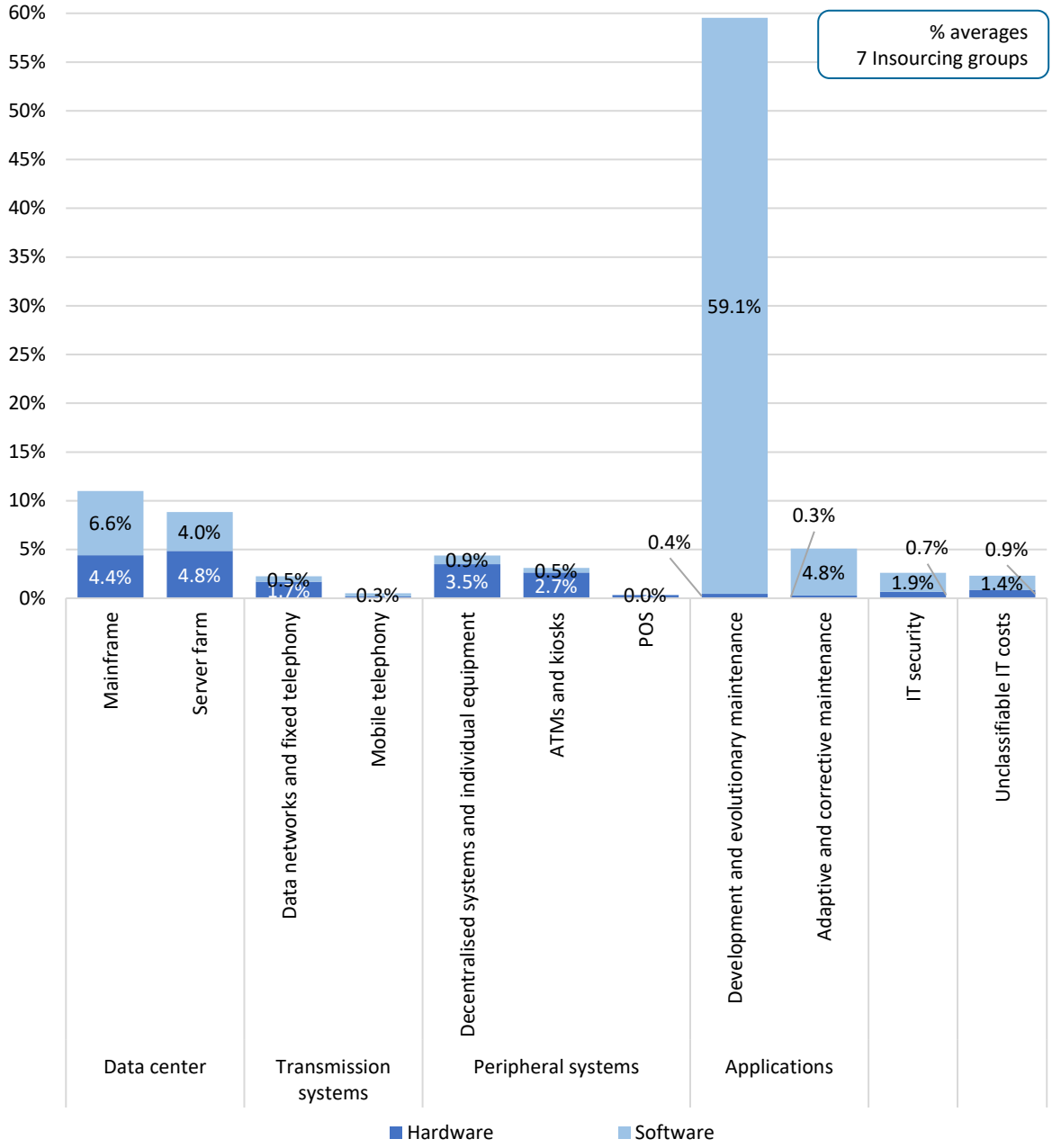


Figure 134 - IT investment in HW and SW - Facility management groups

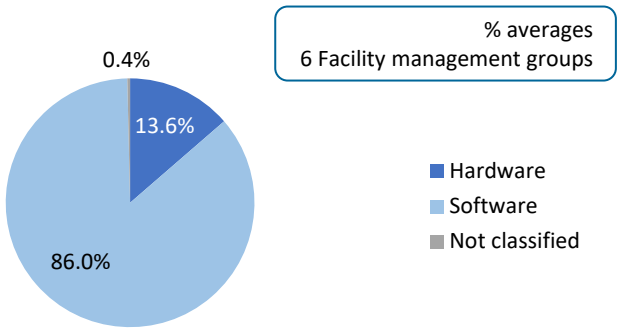


Figure 135 - IT investment in HW and SW by thematic area - Facility management groups

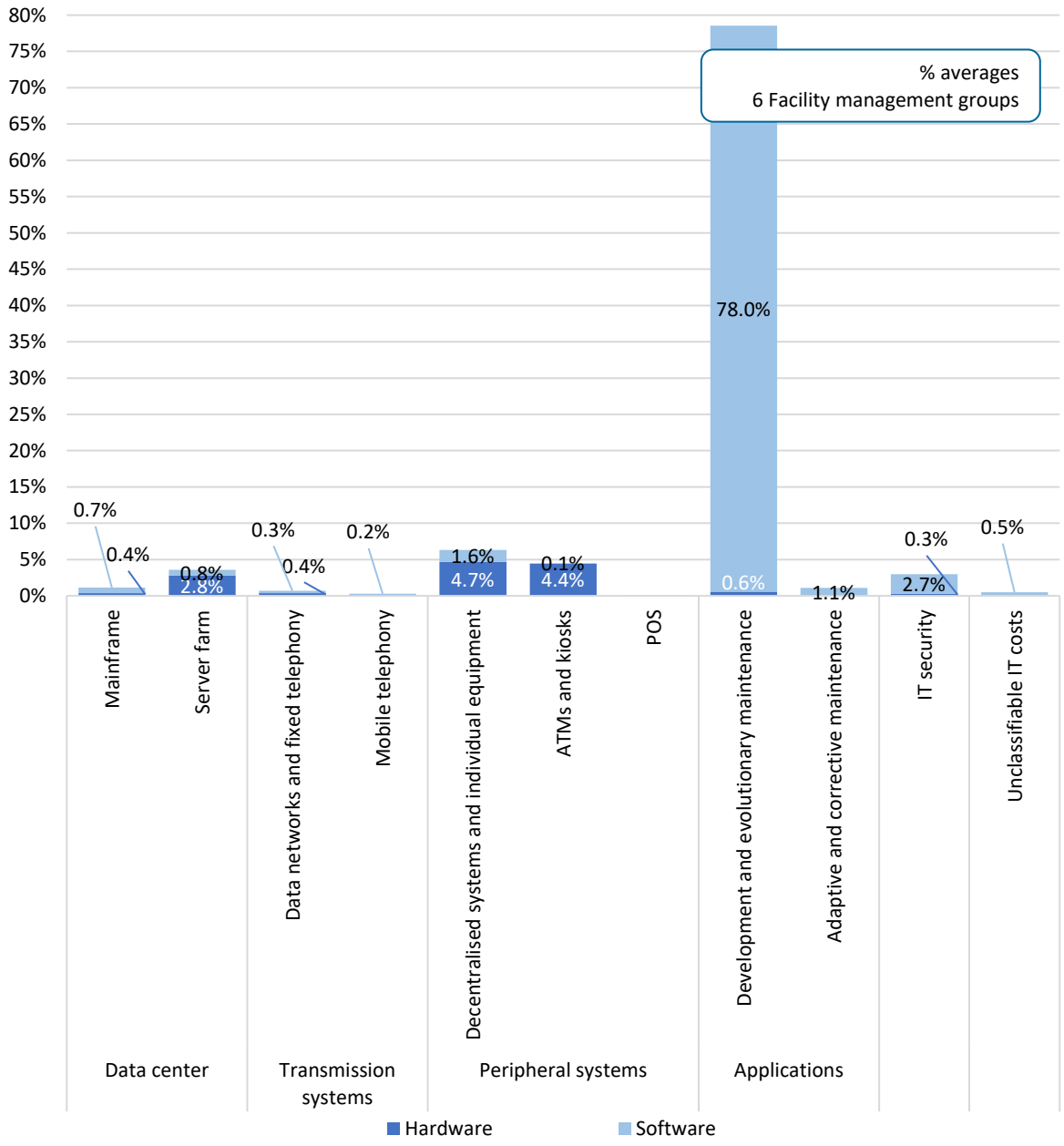


Figure 136 - IT investment in HW and SW - Outsourcing groups

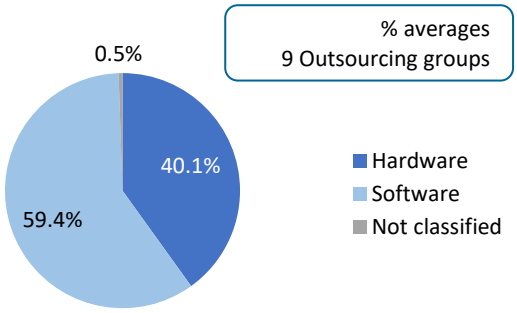


Figure 137 - IT investment in HW and SW by thematic area - Outsourcing groups

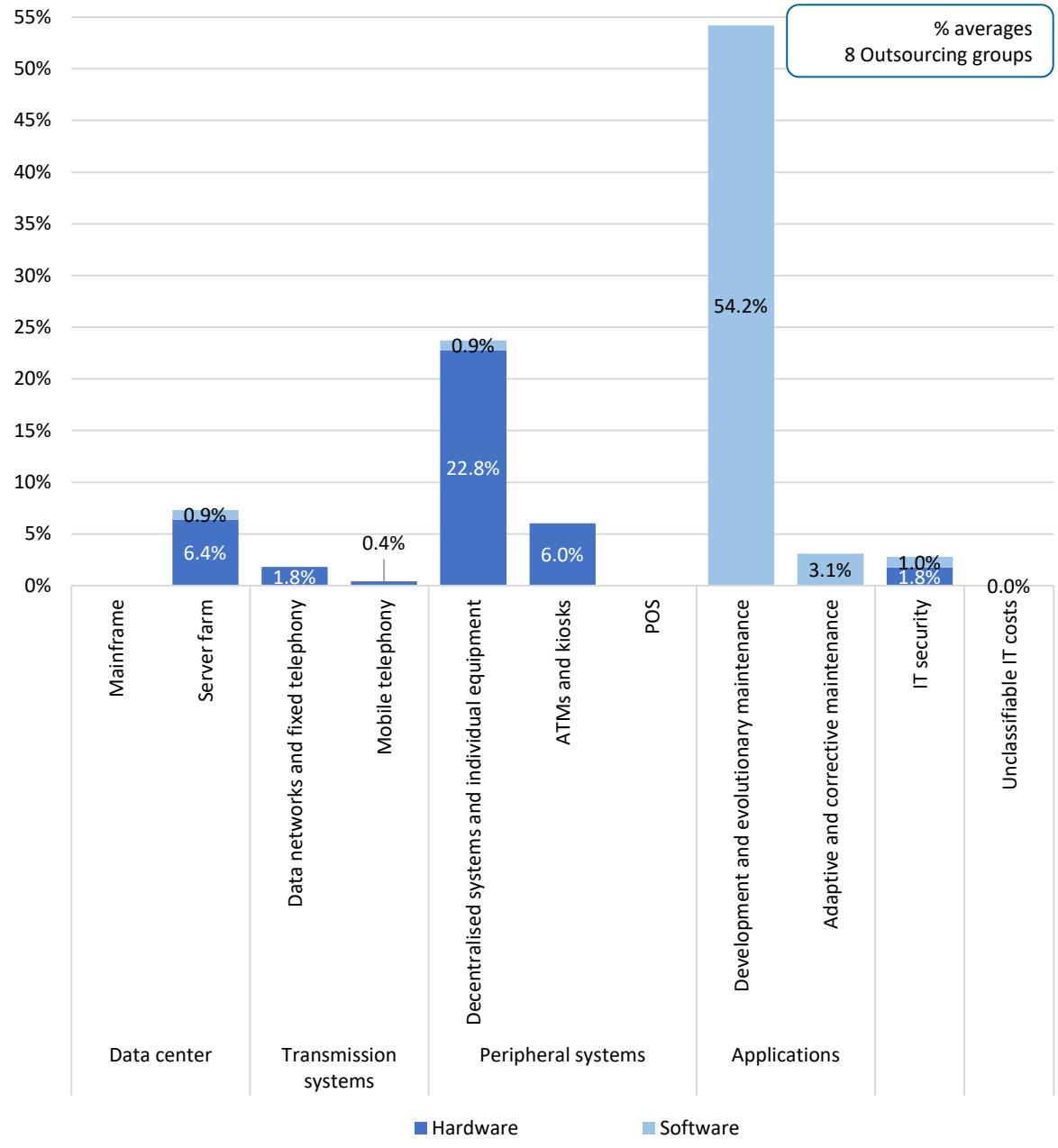


Figure 138 - Business activities of banking groups, by size class

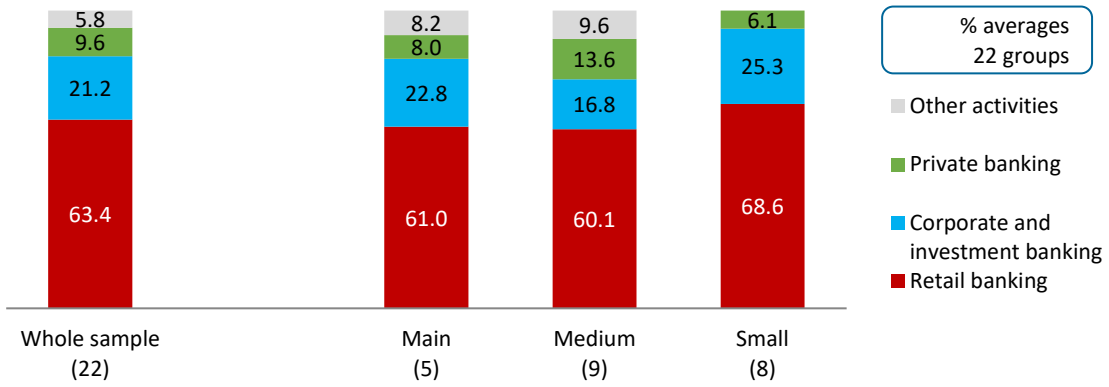


Figure 139 - Purpose of technological innovation initiatives launched or in progress: Main groups

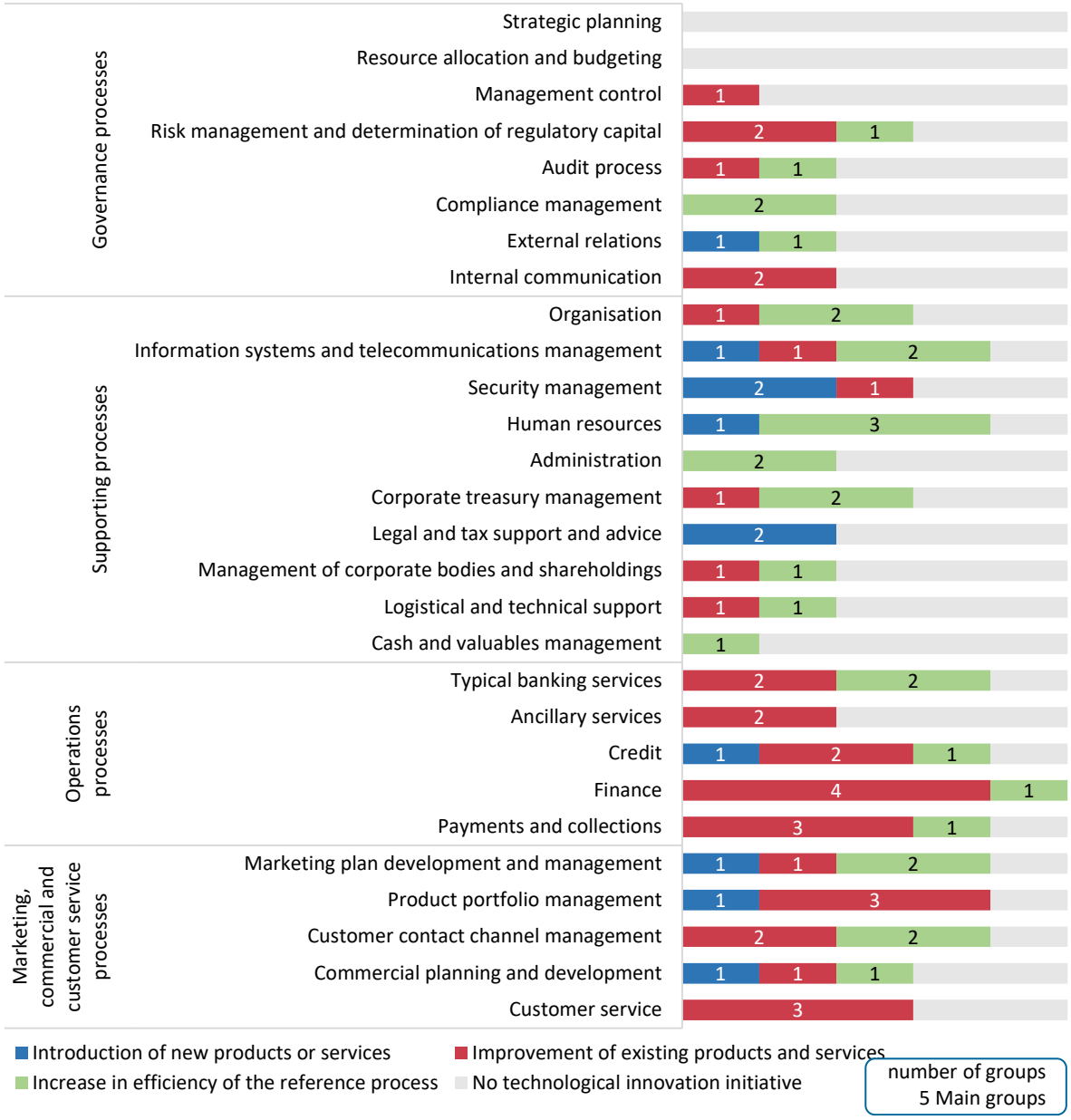


Figure 140 - Purpose of technological innovation initiatives launched or in progress: Medium groups

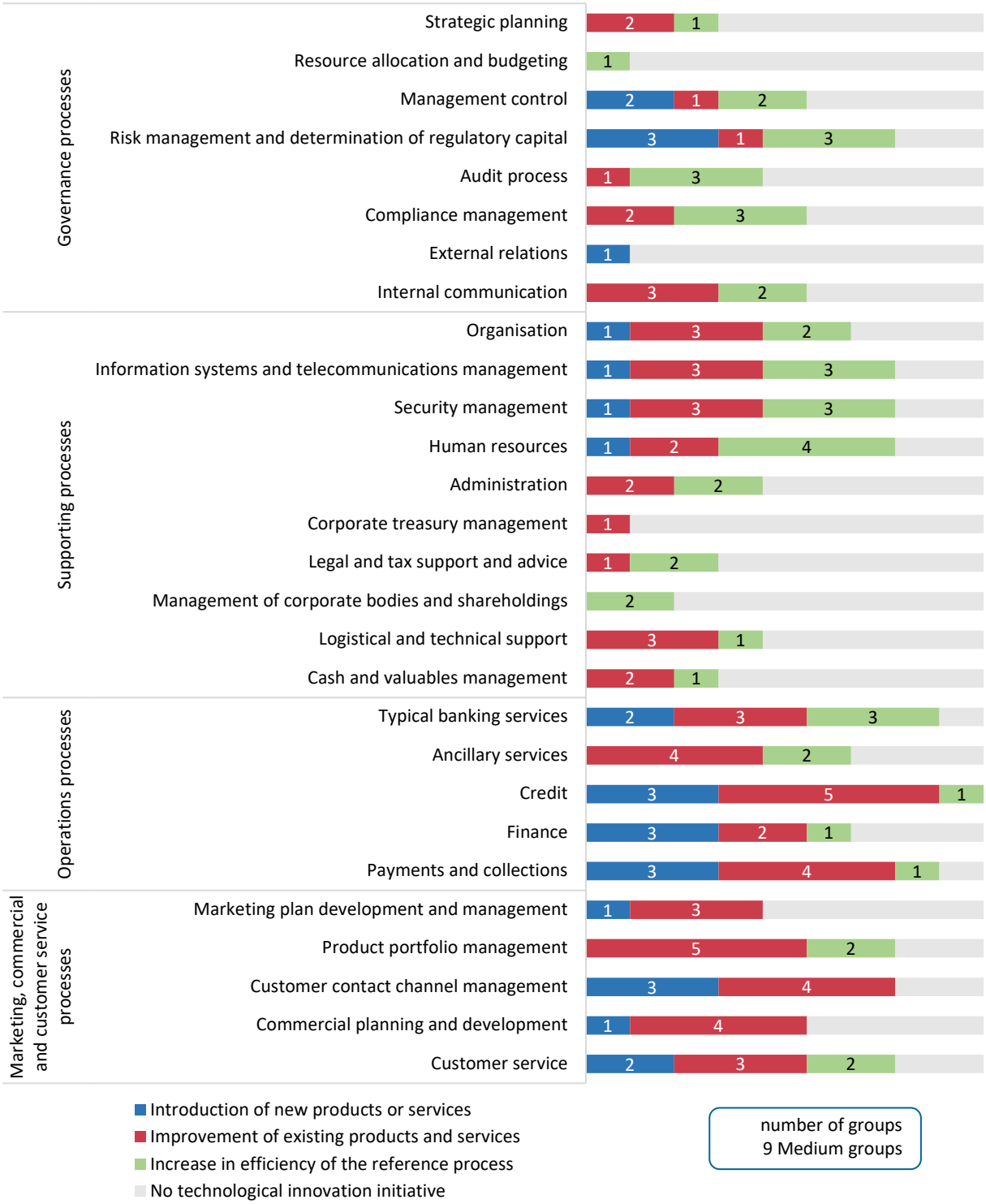


Figure 141 - Purpose of technological innovation initiatives launched or in progress: Small groups

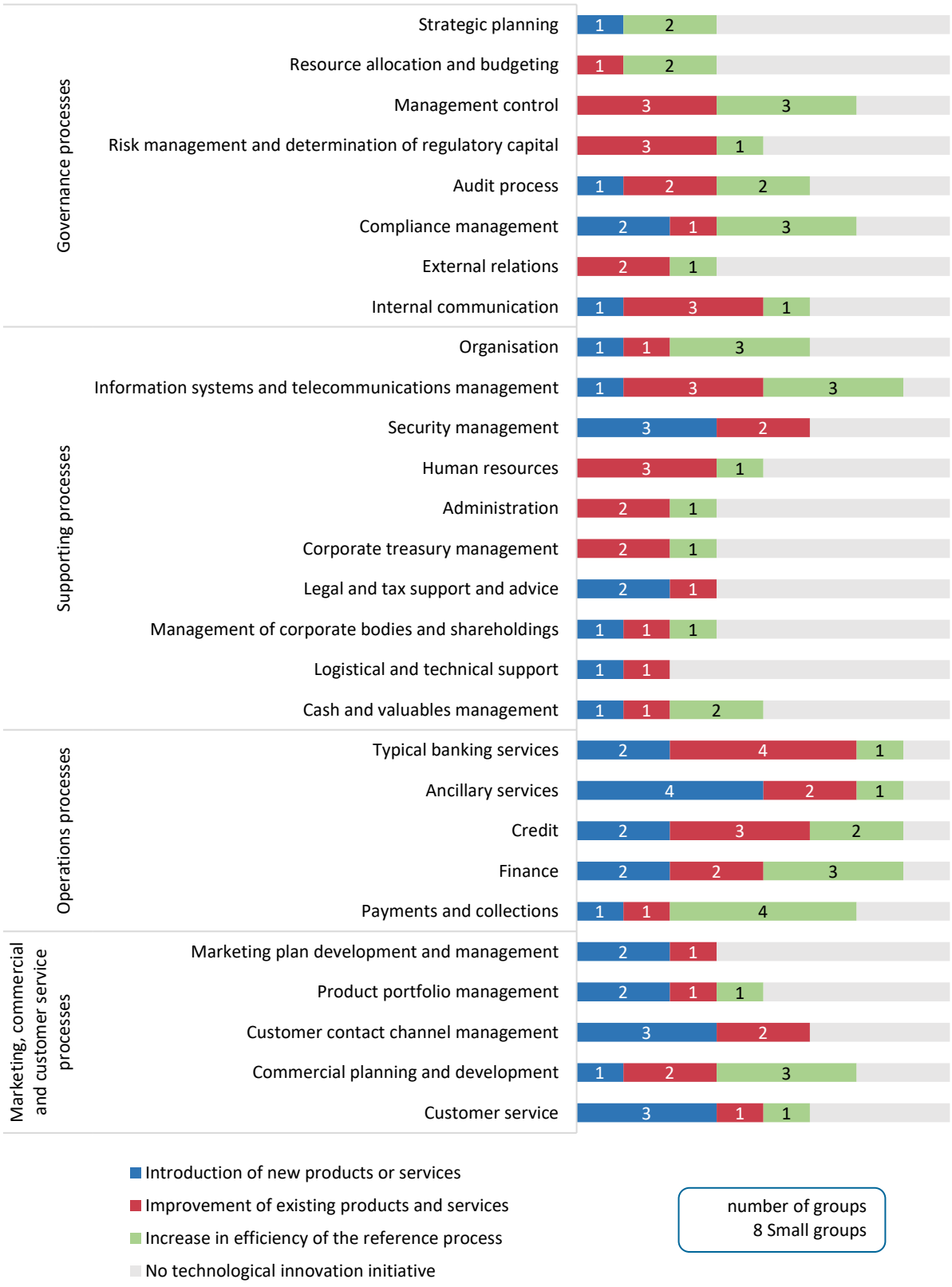


Figure 142 - FTE of IT staff by thematic area and size class

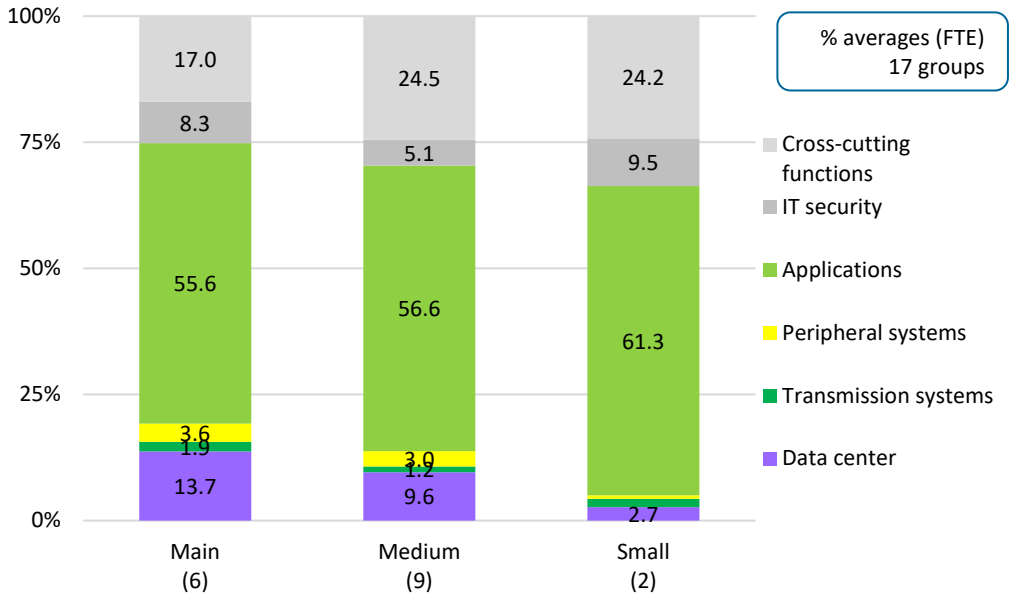


Figure 143 - FTE of IT staff by thematic area and sourcing model

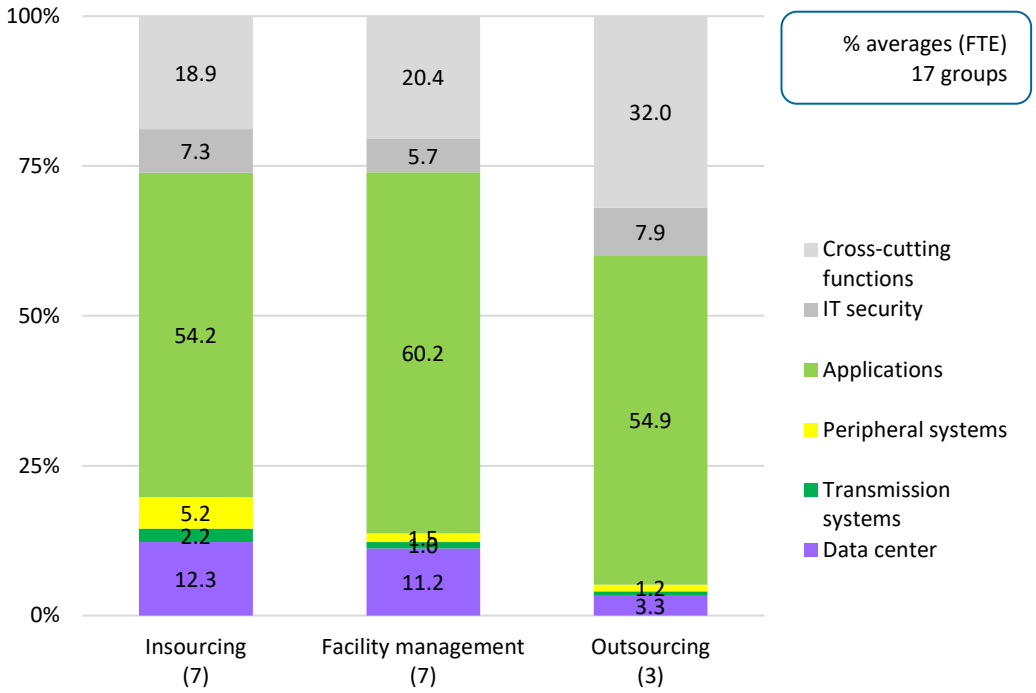


Figure 144 - FTE of IT staff by thematic area - groups with less than 50 IT employees

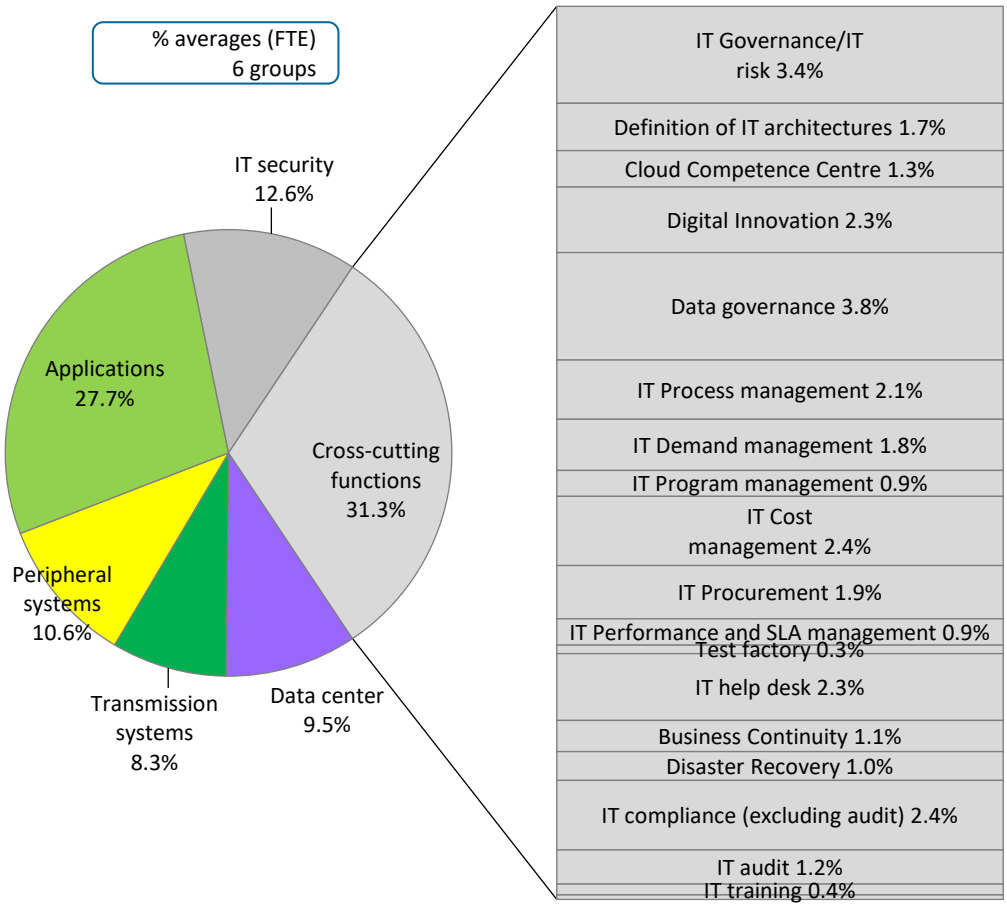


Figure 145 - IT training: training costs / IT staff costs

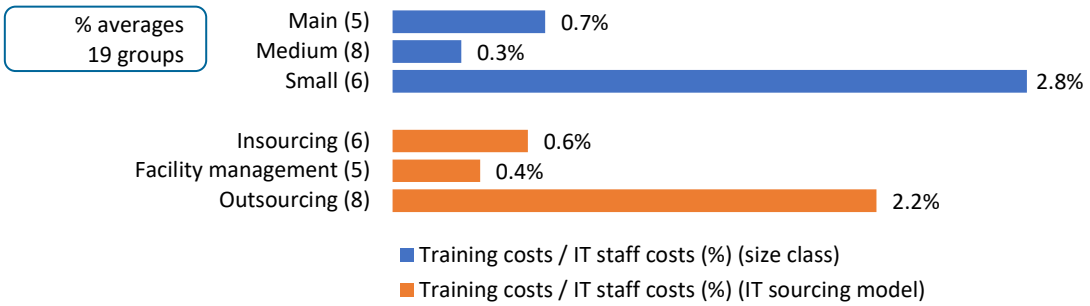


Table 15 - IT staff: breakdown by gender, age and job category (view 2)

% averages
16 groups

	<= 29		30-39		40-49		50-59		>= 60	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Professional areas	**5.0**	**2.2**	**8.5**	**4.1**	**8.5**	**4.5**	**6.9**	**3.0**	**1.2**	**0.3**
Managers	**0.2**	**0.1**	**4.6**	**1.6**	**12.1**	**3.9**	**17.8**	**6.4**	**6.1**	**0.9**
Executives	**0.0**	**0.0**	**0.1**	**0.0**	**0.3**	**0.0**	**1.0**	**0.1**	**0.3**	**0.1**

Table 16 - TCO breakdown: 21* groups

Percentage averages

Production factors			Thematic areas									IT security	Unclassifiable IT costs	Actual total 2024
			Data center		Transmission systems		Peripheral systems			Applications				
			Mainframe	Server farm	Data networks and fixed telephony	Mobile telephony	Decentralised systems and individual equipment	ATM and kiosks	POS	Development and evolutionary maintenance	Adaptive and corrective maintenance			
			A_1	A_2	B_1	B_2	C_1	C_2	C_3	D_1	D_2	E1	E2	F
1.00	Hardware		1.32	1.32	0.44	0.15	1.95	1.67	0.10	0.03	0.01	0.18	0.17	7.35
2.00	Software (operating system, middleware, licensed applications)		1.62	2.62	0.09	0.05	2.23	0.16	0.01	9.95	6.27	1.14	0.15	24.28
3.00	Internal staff		0.39	0.97	0.26	0.11	0.64	0.13	0.05	4.63	3.09	1.03	1.92	13.21
4.11	Third-party services	IT outsourcing	6.24	5.47	1.34	0.05	1.55	1.04	1.37	2.83	10.44	1.14	1.21	32.70
4.12		Other services	0.36	0.90	2.01	0.47	0.61	0.22	0.48	4.05	2.14	0.29	1.24	12.80
4.20		External staff and consultants	0.11	0.38	0.03		0.09	0.03	0.01	4.03	1.76	0.47	0.80	7.70
5.00	Other IT costs		0.14	0.24	0.11		0.06	0.04		0.58	0.22	0.11	0.44	1.96
6.00	Total IT costs (TCO)		10.19	11.92	4.29	0.84	7.14	3.29	2.02	26.10	23.92	4.37	5.93	100
7.00	Adjusted revenues		0.01	0.23	0.02		0.03	0.01	0.01	0.38	0.02		0.40	1.13
8.00	Total net IT costs (TCO)		10.18	11.69	4.28	0.83	7.10	3.28	2.00	25.72	23.89	4.37	5.53	98.87
9.00	Integration costs included in TCO (row 6.00)		0.11	0.10	0.02	0.01	0.06	0.04	0.01	0.14	0.31	0.02	0.01	0.82
10.00	Depreciation/amortization included in TCO (row 6.00)		0.67	1.50	0.33	0.08	1.49	0.76	0.03	14.72	0.87	0.49	0.26	21.20
11.00	IT Investments		3.99	6.40	1.07	0.41	11.21	4.29	0.13	66.84	2.01	2.56	1.08	100
12.00	IT cash outflows (current spending + investments)		10.42	11.30	4.09	0.81	6.68	3.31	1.91	28.55	23.05	4.26	5.60	100

* excluding two groups that attributed more than 30 per cent of their IT costs to the item ‘Unclassifiable IT costs’.

Table 17 - TCO breakdown: 6 Main groups

Percentage averages

Production factors			Thematic areas									IT security	Unclassifiable IT costs	Actual total 2024
			Data center		Transmission systems		Peripheral systems			Applications				
			Mainframe	Server farm	Data networks and fixed telephony	Mobile telephony	Decentralised systems and individual equipment	ATM and kiosks	POS	Development and evolutionary maintenance	Adaptive and corrective maintenance			
			A_1	A_2	B_1	B_2	C_1	C_2	C_3	D_1	D_2	E1	E2	F
1.00	Hardware		4.05	2.71	1.04	0.24	2.36	2.46		0.10	0.02	0.29	0.39	13.67
2.00	Software (operating system, middleware, licensed applications)		3.14	4.70	0.17	0.02	2.00	0.27	0.01	14.38	9.05	1.91	0.19	35.84
3.00	Internal staff		0.64	1.34	0.29	0.09	0.58	0.08		5.22	3.55	1.31	1.83	14.94
4.11	Third-party services	IT outsourcing	1.64	2.54	1.41		0.46	0.44	1.06	0.54	4.53	0.64	1.30	14.57
4.12		Other services	0.05	0.15	1.14	0.54	0.12	0.08	0.56	4.59	1.41	0.11	0.33	9.08
4.20		External staff and consultants	0.19	0.54	0.09		0.17	0.08	0.02	1.50	2.93	0.68	0.61	6.82
5.00	Other IT costs		0.48	0.75	0.39	0.01	0.12	0.13		1.87	0.45	0.25	0.63	5.09
6.00	Total IT costs (TCO)		10.20	12.73	4.52	0.91	5.81	3.54	1.66	28.20	21.95	5.19	5.29	100
7.00	Adjusted revenues		0.04	0.02	0.01	0.01	0.03	0.02		0.07	0.04	0.01	0.98	1.22
8.00	Total net IT costs (TCO)		10.16	12.71	4.51	0.90	5.79	3.52	1.66	28.13	21.91	5.18	4.31	98.78
9.00	Integration costs included in TCO (row 6.00)		0.03	0.10	0.02		0.02	0.01		0.21	0.12	0.03	0.03	0.59
10.00	Depreciation/amortization included in TCO (row 6.00)		1.86	3.48	0.75	0.14	2.82	0.91	0.01	18.08	2.16	0.88	0.70	31.78
11.00	IT Investments		10.01	7.26	1.78	0.43	5.07	4.56	0.05	60.58	4.80	3.37	2.10	100
12.00	IT cash outflows (current spending + investments)		10.97	11.66	4.18	0.91	4.67	3.94	1.61	30.85	20.87	5.28	5.06	100

Table 18 - TCO breakdown: 15 Main and Medium groups

Percentage averages

Production factors			Thematic areas									IT security	Unclassifiable IT costs	Actual total 2024
			Data center		Transmission systems		Peripheral systems			Applications				
			Mainframe	Server farm	Data networks and fixed telephony	Mobile telephony	Decentralised systems and individual equipment	ATM and kiosks	POS	Development and evolutionary maintenance	Adaptive and corrective maintenance			
			A_1	A_2	B_1	B_2	C_1	C_2	C_3	D_1	D_2	E1	E2	F
1.00	Hardware		1.85	1.82	0.62	0.14	1.81	1.80	0.14	0.04	0.01	0.16	0.24	8.64
2.00	Software (operating system, middleware, licensed applications)		1.46	3.59	0.10	0.01	1.64	0.22	0.01	11.33	7.64	1.27	0.19	27.46
3.00	Internal staff		0.54	1.04	0.26	0.09	0.67	0.13	0.05	5.29	3.70	1.02	1.91	14.69
4.11	Third-party services	IT outsourcing	4.66	5.37	0.94	0.08	1.21	0.45	0.65	1.72	5.41	0.85	1.67	23.00
4.12		Other services	0.51	1.06	1.76	0.53	0.64	0.12	0.68	5.24	1.53	0.38	0.62	13.06
4.20		External staff and consultants	0.16	0.53	0.04		0.11	0.04	0.01	5.53	2.46	0.59	1.09	10.56
5.00	Other IT costs		0.20	0.34	0.16	0.01	0.07	0.05		0.81	0.30	0.16	0.50	2.60
6.00	Total IT costs (TCO)		9.39	13.75	3.89	0.85	6.14	2.81	1.54	29.97	21.04	4.42	6.20	100
7.00	Adjusted revenues		0.02	0.32	0.02		0.05	0.01	0.02	0.54	0.03	0.01	0.56	1.58
8.00	Total net IT costs (TCO)		9.37	13.44	3.87	0.84	6.10	2.79	1.52	29.43	21.00	4.41	5.64	98.42
9.00	Integration costs included in TCO (row 6.00)		0.06	0.11	0.02	0.01	0.05	0.01		0.18	0.05	0.01	0.01	0.51
10.00	Depreciation/amortization included in TCO (row 6.00)		0.94	2.08	0.46	0.09	1.75	0.85	0.05	15.82	1.21	0.60	0.36	24.21
11.00	IT Investments		5.59	5.59	1.41	0.42	4.68	3.40	0.18	71.86	2.82	2.54	1.51	100
12.00	IT cash outflows (current spending + investments)		9.80	12.94	3.65	0.84	5.46	2.88	1.42	32.69	20.12	4.39	5.82	100

Table 19 - TCO breakdown: 9 Medium groups

Percentage averages

Production factors			Thematic areas									IT security	Unclassifiable IT costs	Actual total 2024
			Data center		Transmission systems		Peripheral systems			Applications				
			Mainframe A_1	Server farm A_2	Data networks and fixed telephony B_1	Mobile telephony B_2	Decentralised systems and individual equipment C_1	ATM and kiosks C_2	POS C_3	Development and evolutionary maintenance D_1	Adaptive and corrective maintenance D_2	E1	E2	F
1.00	Hardware		0.38	1.23	0.34	0.08	1.44	1.36	0.24			0.08	0.14	5.28
2.00	Software (operating system, middleware, licensed applications)		0.35	2.86	0.06		1.40	0.19	0.01	9.30	6.69	0.84	0.18	21.87
3.00	Internal staff		0.48	0.84	0.24	0.08	0.73	0.16	0.09	5.34	3.79	0.82	1.95	14.53
4.11	Third-party services	IT outsourcing	6.67	7.25	0.63	0.13	1.71	0.45	0.38	2.51	5.99	0.98	1.91	28.62
4.12		Other services	0.82	1.67	2.18	0.52	0.99	0.15	0.76	5.67	1.61	0.55	0.81	15.71
4.20		External staff and consultants	0.14	0.52			0.06	0.01		8.22	2.14	0.54	1.41	13.05
5.00	Other IT costs		0.01	0.07	0.01		0.03			0.11	0.21	0.09	0.41	0.94
6.00	Total IT costs (TCO)		8.84	14.44	3.47	0.80	6.36	2.32	1.47	31.15	20.43	3.91	6.81	100
7.00	Adjusted revenues			0.52	0.03		0.06	0.01	0.03	0.85	0.03	0.01	0.29	1.82
8.00	Total net IT costs (TCO)		8.84	13.92	3.44	0.80	6.30	2.31	1.43	30.30	20.40	3.90	6.53	98.18
9.00	Integration costs included in TCO (row 6.00)		0.08	0.11	0.02	0.02	0.07			0.16				0.46
10.00	Depreciation/amortization included in TCO (row 6.00)		0.32	1.15	0.27	0.05	1.03	0.82	0.07	14.32	0.59	0.41	0.14	19.16
11.00	IT Investments		2.64	4.48	1.16	0.41	4.43	2.63	0.26	79.38	1.50	1.98	1.12	100
12.00	IT cash outflows (current spending + investments)		9.01	13.79	3.29	0.79	5.98	2.17	1.30	33.91	19.62	3.80	6.33	100

Table 20 - TCO breakdown: 6* Small groups

Percentage averages

Production factors			Thematic areas											
			Data center		Transmission systems		Peripheral systems			Applications		IT security	Unclassifiable IT costs	Actual total 2024
			Mainframe A_1	Server farm A_2	Data networks and fixed telephony B_1	Mobile telephony B_2	Decentralised systems and individual equipment C_1	ATM and kiosks C_2	POS C_3	Development and evolutionary maintenance D_1	Adaptive and corrective maintenance D_2	E1	E2	F
1.00	Hardware			0.09		0.18	2.31	1.34				0.22		4.14
2.00	Software (operating system, middleware, licensed applications)		2.00	0.19	0.07	0.14	3.70			6.48	2.86	0.82	0.06	16.32
3.00	Internal staff			0.79	0.27	0.16	0.57	0.13	0.02	2.97	1.56	1.08	1.94	9.50
4.11	Third-party services	IT outsourcing	10.20	5.73	2.32		2.40	2.54	3.18	5.61	23.04	1.89	0.07	56.96
4.12		Other services		0.51	2.64	0.34	0.54	0.49		1.09	3.66	0.09	2.81	12.15
4.20		External staff and consultants		0.02			0.04			0.28		0.15	0.07	0.55
5.00	Other IT costs						0.06						0.31	0.37
6.00	Total IT costs (TCO)		12.20	7.32	5.30	0.82	9.62	4.49	3.20	16.43	31.12	4.25	5.25	100
7.00	Adjusted revenues													
8.00	Total net IT costs (TCO)		12.20	7.32	5.30	0.82	9.62	4.49	3.20	16.43	31.12	4.25	5.25	100.00
9.00	Integration costs included in TCO (row 6.00)		0.24	0.08	0.02		0.10	0.11	0.03	0.03	0.97	0.02		1.60
10.00	Depreciation/amortization included in TCO (row 6.00)			0.04		0.08	0.85	0.52		11.96		0.24		13.69
11.00	IT Investments			8.43	0.23	0.39	27.52	6.50		54.30		2.63		100
12.00	IT cash outflows (current spending + investments)		11.98	7.21	5.21	0.75	9.75	4.38	3.13	18.20	30.39	3.94	5.06	100

* excluding two groups that attributed more than 30 per cent of their IT costs to the item 'Unclassifiable IT costs'.

Table 21 - TCO breakdown: 7 Insourcing groups

Percentage averages

Production factors			Thematic areas									IT security	Unclassifiable IT costs	Actual total 2024
			Data center		Transmission systems		Peripheral systems			Applications				
			Mainframe A_1	Server farm A_2	Data networks and fixed telephony B_1	Mobile telephony B_2	Decentralised systems and individual equipment C_1	ATM and kiosks C_2	POS C_3	Development and evolutionary maintenance D_1	Adaptive and corrective maintenance D_2	E1	E2	F
1.00	Hardware		3.77	3.07	1.15	0.23	2.54	2.07	0.31	0.01		0.27	0.49	13.91
2.00	Software (operating system, middleware, licensed applications)		2.95	4.71	0.18	0.02	1.94	0.33	0.02	15.46	8.66	1.30	0.36	35.93
3.00	Internal staff		0.71	1.44	0.39	0.10	0.93	0.23	0.11	6.44	3.22	1.03	2.22	16.82
4.11	Third-party services	IT outsourcing	0.44	2.08	0.82		0.49	0.30	0.23	0.45	2.92	0.74	2.70	11.17
4.12		Other services	0.04	0.15	1.84	0.71	0.58	0.06	1.34	4.03	1.47	0.18	0.67	11.07
4.20		External staff and consultants	0.17	0.45	0.07		0.09	0.08		1.17	2.82	0.58	1.78	7.20
5.00	Other IT costs		0.36	0.63	0.14	0.01	0.07	0.11		1.45	0.27	0.14	0.71	3.89
6.00	Total IT costs (TCO)		8.43	12.54	4.59	1.07	6.64	3.18	2.01	29.01	19.36	4.23	8.94	100
7.00	Adjusted revenues		0.03	0.64	0.04	0.01	0.08	0.03	0.04	1.02	0.05	0.01	1.20	3.14
8.00	Total net IT costs (TCO)		8.39	11.91	4.55	1.07	6.56	3.15	1.97	27.99	19.31	4.22	7.74	96.86
9.00	Integration costs included in TCO (row 6.00)		0.03	0.09	0.02		0.02	0.01		0.18	0.10	0.03	0.03	0.50
10.00	Depreciation/amortization included in TCO (row 6.00)		1.82	3.58	0.83	0.14	2.62	0.73	0.10	17.72	2.25	0.71	0.75	31.25
11.00	IT Investments		11.00	8.85	2.24	0.50	4.38	3.11	0.37	59.54	5.10	2.60	2.31	100
12.00	IT cash outflows (current spending + investments)		9.39	11.45	4.18	1.05	5.29	3.39	1.76	33.23	17.98	4.18	8.11	100

Table 22 - TCO breakdown: 7 Facility management groups

Percentage averages

Production factors			Thematic areas											
			Data center		Transmission systems		Peripheral systems			Applications		IT security	Unclassifiable IT costs	Actual total 2024
			Mainframe	Server farm	Data networks and fixed telephony	Mobile telephony	Decentralised systems and individual equipment	ATM and kiosks	POS	Development and evolutionary maintenance	Adaptive and corrective maintenance			
			A_1	A_2	B_1	B_2	C_1	C_2	C_3	D_1	D_2	E1	E2	F
1.00	Hardware		0.20	0.83	0.15	0.06	1.38	1.78		0.07	0.02	0.09	0.02	4.60
2.00	Software (operating system, middleware, licensed applications)		0.19	2.53	0.04	0.13	1.58	0.03		11.14	7.89	1.66	0.08	25.26
3.00	Internal staff		0.37	0.88	0.13	0.08	0.42	0.04		5.75	3.77	1.45	1.17	14.07
4.11	Third-party services	IT outsourcing	8.58	7.81	0.97	0.03	1.95	0.66	1.16	4.33	3.91	0.77	0.91	31.09
4.12		Other services	0.65	1.42	1.73	0.31	0.72	0.16		3.89	0.91	0.43	0.75	10.97
4.20		External staff and consultants	0.18	0.43	0.01		0.14		0.02	9.11	2.05	0.55	0.32	12.82
5.00	Other IT costs		0.07	0.09	0.20		0.06			0.25	0.19	0.10	0.22	1.19
6.00	Total IT costs (TCO)		10.24	13.98	3.22	0.61	6.25	2.68	1.19	34.55	18.75	5.07	3.47	100
7.00	Adjusted revenues			0.05	0.01		0.02			0.14	0.02	0.01	0.01	0.25
8.00	Total net IT costs (TCO)		10.24	13.94	3.22	0.61	6.23	2.68	1.19	34.41	18.72	5.06	3.46	99.75
9.00	Integration costs included in TCO (row 6.00)		0.10	0.14	0.02	0.02	0.09			0.21				0.59
10.00	Depreciation/amortization included in TCO (row 6.00)		0.19	0.79	0.14	0.03	0.83	1.10		21.47	0.35	0.62	0.03	25.54
11.00	IT Investments		0.97	3.07	0.60	0.25	5.40	4.19	0.01	81.60	0.94	2.56	0.42	100
12.00	IT cash outflows (current spending + investments)		10.08	13.24	3.11	0.62	6.33	2.61	1.17	36.72	17.72	4.95	3.43	100

Table 23 - TCO breakdown: 7* Outsourcing groups

Percentage averages

Production factors			Thematic areas											
			Data center		Transmission systems		Peripheral systems			Applications		IT security	Unclassifiable IT costs	Actual total 2024
			Mainframe	Server farm	Data networks and fixed telephony	Mobile telephony	Decentralised systems and individual equipment	ATM and kiosks	POS	Development and evolutionary maintenance	Adaptive and corrective maintenance			
			A_1	A_2	B_1	B_2	C_1	C_2	C_3	D_1	D_2	E1	E2	F
1.00	Hardware			0.07	0.03	0.16	1.94	1.15				0.19		3.54
2.00	Software (operating system, middleware, licensed applications)		1.72	0.63	0.06		3.17	0.12		3.24	2.26	0.45		11.64
3.00	Internal staff		0.08	0.58	0.27	0.14	0.58	0.12	0.02	1.68	2.28	0.62	2.36	8.73
4.11	Third-party services	IT outsourcing	9.71	6.52	2.22	0.13	2.21	2.17	2.73	3.72	24.49	1.92	0.02	55.84
4.12		Other services	0.40	1.15	2.48	0.39	0.54	0.45	0.11	4.24	4.03	0.27	2.30	16.36
4.20		External staff and consultants		0.27			0.04			1.82	0.39	0.27	0.29	3.08
5.00	Other IT costs				0.01		0.06			0.05	0.19	0.09	0.40	0.81
6.00	Total IT costs (TCO)		11.90	9.22	5.06	0.83	8.52	4.01	2.85	14.75	33.65	3.82	5.38	100
7.00	Adjusted revenues													
8.00	Total net IT costs (TCO)		11.90	9.22	5.06	0.83	8.52	4.01	2.85	14.75	33.65	3.82	5.38	100.00
9.00	Integration costs included in TCO (row 6.00)		0.21	0.07	0.02		0.08	0.10	0.03	0.03	0.83	0.02		1.37
10.00	Depreciation/amortization included in TCO (row 6.00)			0.11	0.03	0.08	1.02	0.45		4.98		0.15		6.82
11.00	IT Investments			7.29	0.38	0.48	23.84	5.57		59.38		2.54	0.52	100
12.00	IT cash outflows (current spending + investments)		11.79	9.23	4.99	0.77	8.43	3.93	2.79	15.69	33.46	3.65	5.27	100

* excluding two groups that attributed more than 30 per cent of their IT costs to the item 'Unclassifiable IT costs'.

Table 24 - TCO breakdown: 27* banks

Percentage averages

Production factors				Thematic areas									IT security	Unclassifiable IT costs	Actual total 2024
				Data center		Transmission systems		Peripheral systems			Applications				
				Mainframe	Server farm	Data networks and fixed telephony	Mobile telephony	Decentralised systems and individual equipment	ATM and kiosks	POS	Development and evolutionary maintenance	Adaptive and corrective maintenance			
				A_1	A_2	B_1	B_2	C_1	C_2	C_3	D_1	D_2	E_1	E_2	F
1.00	Hardware			0.89	0.73	0.30	0.26	1.52	0.99		0.02		0.16	0.01	4.88
2.00	Software (operating system, middleware, licensed applications)			1.29	1.62	0.05	0.01	1.63	0.07		9.18	4.42	0.83	0.05	19.15
3.00	Internal staff			0.35	0.77	0.19	0.09	0.50	0.08	0.01	4.69	2.11	0.82	1.42	11.04
4.01	Third-party services	Banks or ancillary services undertakings of the group	IT outsourcing	0.65	2.27	0.56	0.01	0.96	0.09		6.55	5.11	0.63	1.36	18.20
4.02			Other services		0.08	0.29	0.05	0.35	0.06		4.14	0.79	0.28	0.14	6.19
4.11		Third-party suppliers	IT outsourcing	6.13	2.82	0.95	0.03	0.85	0.72	1.11	2.25	7.83	0.78	0.17	23.64
4.12			Other services	0.29	0.61	1.91	0.45	0.96	0.14	0.49	4.68	2.01	0.17	0.86	12.56
4.20		External staff and consultants		0.06	0.25	0.01		0.15		0.01	1.80	0.63	0.30	0.21	3.42
5.00	Other IT costs			0.05	0.07	0.19		0.05	0.01		0.14	0.15	0.07	0.19	0.92
6.00	Total IT costs (TCO)			9.72	9.22	4.45	0.91	6.95	2.16	1.62	33.46	23.06	4.04	4.42	100
7.00	Adjusted revenues			0.01	0.01	0.02		0.03	0.01	0.01	0.36	0.68	0.01	0.01	1.14
8.00	Total net IT costs (TCO)			9.71	9.22	4.43	0.91	6.92	2.15	1.60	33.10	22.38	4.03	4.40	98.86
10.00	Depreciation/amortization included in TCO (row 6.00)			0.42	0.94	0.23	0.11	1.21	0.52		11.47	0.79	0.36	0.10	16.15
11.00	IT Investments			1.75	6.17	2.79	1.30	11.24	3.56	0.03	60.87	2.91	2.57	6.80	100
12.00	Investments			9.27	8.92	4.28	0.87	6.72	2.15	1.55	33.50	23.02	4.04	5.66	100

* excluding five banks that attributed more than 30 per cent of their IT costs to 'Unclassifiable IT costs'.

** Values calculated on 22 banks (five reported no investments).

Table 25 - TCO breakdown: 8 Major banks

Percentage averages

Production factors				Thematic areas									IT security	Unclassifiable IT costs	Actual total 2024
				Data center		Transmission systems		Peripheral systems			Applications				
				Mainframe	Server farm	Data networks and fixed telephony	Mobile telephony	Decentralised systems and individual equipment	ATM and kiosks	POS	Development and evolutionary maintenance	Adaptive and corrective maintenance			
				A_1	A_2	B_1	B_2	C_1	C_2	C_3	D_1	D_2	E_1	E_2	F
1.00	Hardware			3.02	1.72	0.68	0.21	1.93	2.20		0.08	0.02	0.13	0.02	10.01
2.00	Software (operating system, middleware, licensed applications)			2.11	3.11	0.12	0.02	1.80	0.08	0.01	10.76	6.53	1.51	0.09	26.13
3.00	Internal staff			0.57	1.08	0.21	0.11	0.59	0.07		3.41	2.37	1.24	1.23	10.87
4.01	Third-party services	Banks or ancillary services undertakings of the group	IT outsourcing	1.21	3.76	0.34	0.05	1.17	0.29		6.11	6.24	0.97	2.36	22.50
4.02			Other services			0.10	0.02	0.21	0.21						0.54
4.11		Third-party suppliers	IT outsourcing	3.10	1.96	0.60		0.57	0.32	0.99	0.60	3.25	0.36	0.14	11.89
4.12			Other services	0.62	0.58	0.98	0.50	0.40	0.03	0.42	5.33	1.08	0.13	0.07	10.14
4.20		External staff and consultants		0.20	0.44	0.01		0.13	0.01	0.02	3.51	1.10	0.55	0.21	6.20
5.00	Other IT costs			0.17	0.24	0.19	0.01	0.09	0.03		0.34	0.27	0.15	0.22	1.72
6.00	Total IT costs (TCO)			10.99	12.90	3.24	0.92	6.90	3.24	1.44	30.13	20.85	5.05	4.34	100
7.00	Adjusted revenues			0.04	0.02	0.04	0.01	0.06	0.01		0.37	0.35	0.03	0.05	0.97
8.00	Total net IT costs (TCO)			10.95	12.88	3.20	0.91	6.84	3.23	1.44	29.77	20.50	5.02	4.30	99.03
10.00	Depreciation/amortization included in TCO (row 6.00)			1.39	2.52	0.52	0.13	2.28	0.85	0.01	15.04	1.90	0.78	0.09	25.51
11.00	IT Investments			5.48	6.90	1.30	0.55	4.55	3.60	0.04	69.48	4.33	3.45	0.32	100
12.00	Investments			10.98	12.66	3.07	0.93	5.95	3.35	1.41	31.53	20.57	5.20	4.34	100

* Values calculated on seven banks (one reported no investments).

Table 26 - TCO breakdown: 4* Large banks

Percentage averages

Production factors				Thematic areas									IT security	Unclassifiable IT costs	Actual total 2024
				Data center		Transmission systems		Peripheral systems			Applications				
				Mainframe	Server farm	Data networks and fixed telephony	Mobile telephony	Decentralised systems and individual equipment	ATM and kiosks	POS	Development and evolutionary maintenance	Adaptive and corrective maintenance			
				A_1	A_2	B_1	B_2	C_1	C_2	C_3	D_1	D_2	E_1	E_2	F
1.00	Hardware				0.81	0.22	0.02	0.96	0.87				0.09		2.97
2.00	Software (operating system, middleware, licensed applications)			0.27	3.34	0.01	0.01	1.50	0.23		9.29	4.18	0.52	0.06	19.40
3.00	Internal staff			0.38	0.51	0.18	0.05	0.26	0.06		5.68	4.41	0.71	1.92	14.15
4.01	Third-party services	Banks or ancillary services undertakings of the group	IT outsourcing												
4.02			Other services												
4.11		Third-party suppliers	IT outsourcing	8.28	6.22	0.47	0.22	0.29	0.14	0.05	2.58	8.68	1.46	0.70	29.08
4.12			Other services	0.70	2.15	2.82	0.35	0.66	0.12	0.19	10.27	5.26	0.43	1.11	24.07
4.20		External staff and consultants		0.04	0.71	0.01		0.07			4.84	1.83	0.60	0.90	9.01
5.00	Other IT costs			0.03	0.02	0.02		0.04	0.01		0.25	0.46	0.18	0.33	1.32
6.00	Total IT costs (TCO)			9.69	13.76	3.74	0.65	3.76	1.43	0.24	32.89	24.82	4.00	5.01	100
7.00	Adjusted revenues					0.02		0.07			1.67	0.24	0.01		2.01
8.00	Total net IT costs (TCO)			9.69	13.76	3.72	0.65	3.69	1.43	0.24	31.23	24.58	3.99	5.01	97.99
10.00	Depreciation/amortization included in TCO (row 6.00)			0.03	0.70	0.21	0.04	0.93	0.53		12.74	0.27	0.14	0.02	15.62
11.00	IT Investments			0.03	3.61	0.80	0.38	3.56	2.12		85.76	1.25	1.54	0.94	100
12.00	Investments			9.51	13.65	3.57	0.66	3.54	1.37	0.25	33.60	24.90	4.03	4.93	100

* excluding two banks that attributed more than 30 per cent of their IT costs to 'Unclassifiable IT costs'.

Table 27 - TCO breakdown: 5* Medium banks

Percentage averages

Production factors				Thematic areas									IT security	Unclassifiable IT costs	Actual total 2024
				Data center		Transmission systems		Peripheral systems			Applications				
				Mainframe	Server farm	Data networks and fixed telephony	Mobile telephony	Decentralised systems and individual equipment	ATM and kiosks	POS	Development and evolutionary maintenance	Adaptive and corrective maintenance			
				A_1	A_2	B_1	B_2	C_1	C_2	C_3	D_1	D_2	E_1	E_2	F
1.00	Hardware					0.08	0.20	1.73	1.03					0.02	3.06
2.00	Software (operating system, middleware, licensed applications)			2.41	0.12			2.58	0.02		7.95	2.37	0.45		15.89
3.00	Internal staff				0.40	0.16	0.11	0.21	0.08	0.03	0.92	0.67	0.57	2.85	6.01
4.01	Third-party services	Banks or ancillary services undertakings of the group	IT outsourcing	0.57	4.12	0.50		0.41			7.27		0.31	1.01	14.19
4.02			Other services		0.43	1.41	0.26	1.56			22.37	4.27	1.52	0.74	32.56
4.11		Third-party suppliers	IT outsourcing	6.36	3.16	0.23		2.03	0.16	0.48	2.44	5.49	0.94	0.05	21.34
4.12			Other services		0.13	1.92	0.66	0.56	0.58	1.82		0.54	0.09	0.12	6.42
4.20		External staff and consultants			0.02						0.01	0.02	0.01	0.08	0.14
5.00	Other IT costs							0.01						0.37	0.38
6.00	Total IT costs (TCO)			9.34	8.37	4.30	1.23	9.09	1.87	2.33	40.97	13.36	3.89	5.25	100
7.00	Adjusted revenues								0.01	0.06	0.03				0.10
8.00	Total net IT costs (TCO)			9.34	8.37	4.30	1.23	9.09	1.87	2.27	40.94	13.36	3.89	5.24	99.90
10.00	Depreciation/amortization included in TCO (row 6.00)					0.10	0.14	1.21	0.88		7.04			0.03	9.39
11.00	IT Investments				0.41	12.00	5.64	18.46	11.16	0.09	46.51			5.74	100
12.00	Investments			9.23	8.24	4.26	1.13	9.03	1.89	2.12	41.95	13.10	3.84	5.21	100

* excluding two banks that attributed more than 30 per cent of their IT costs to 'Unclassifiable IT costs'.

** Values calculated on four banks (one reported no investments).

Table 28 - TCO breakdown: 10* Small A and B banks

Percentage averages

Production factors				Thematic areas									IT security	Unclassifiable IT costs	Actual total 2024
				Data center		Transmission systems		Peripheral systems			Applications				
				Mainframe	Server farm	Data networks and fixed telephony	Mobile telephony	Decentralised systems and individual equipment	ATM and kiosks	POS	Development and evolutionary maintenance	Adaptive and corrective maintenance			
				A_1	A_2	B_1	B_2	C_1	C_2	C_3	D_1	D_2	E_1	E_2	F
1.00	Hardware				0.26	0.12	0.42	1.31	0.04				0.30	0.01	2.45
2.00	Software (operating system, middleware, licensed applications)			0.48	0.49	0.04		1.06	0.03		8.49	3.87	0.61	0.04	15.10
3.00	Internal staff			0.33	0.82	0.20	0.09	0.67	0.10		7.21	1.71	0.65	0.65	12.44
4.01	Third-party services	Banks or ancillary services undertakings of the group	IT outsourcing	0.51	1.05	1.00		1.44	0.01		9.17	8.82	0.77	1.29	24.04
4.02			Other services												
4.11		Third-party suppliers	IT outsourcing	7.58	1.98	1.78		0.71	1.55	1.95	3.35	12.32	0.75	0.05	32.03
4.12			Other services		0.26	2.29	0.35	1.72			4.26	2.19	0.12	1.77	12.96
4.20		External staff and consultants			0.03			0.27			0.13	0.07	0.11		0.60
5.00	Other IT costs					0.34		0.03						0.01	0.38
6.00	Total IT costs (TCO)			8.90	4.89	5.76	0.86	7.20	1.73	1.95	32.60	28.97	3.31	3.82	100
7.00	Adjusted revenues											1.46			1.46
8.00	Total net IT costs (TCO)			8.90	4.89	5.76	0.86	7.20	1.73	1.95	32.60	27.51	3.31	3.82	98.54
10.00	Depreciation/amortization included in TCO (row 6.00)				0.24	0.08	0.12	0.46	0.07		10.31	0.50	0.30	0.17	12.24
11.00	IT Investments				10.19	0.16	0.11	18.20			46.25	4.10	3.75	17.24	100
12.00	Investments			7.83	4.38	5.55	0.79	7.46	1.62	1.90	30.82	29.20	3.22	7.24	100

* excluding a bank that has allocated more than 30 per cent of its IT costs to 'Unclassifiable IT costs'.

** Values calculated on seven banks (three reported no investments).

Table 29 - TCO breakdown: 5 Small A banks

Percentage averages

Production factors				Thematic areas									IT security	Unclassifiable IT costs	Actual total 2024
				Data center		Transmission systems		Peripheral systems			Applications				
				Mainframe	Server farm	Data networks and fixed telephony	Mobile telephony	Decentralised systems and individual equipment	ATM and kiosks	POS	Development and evolutionary maintenance	Adaptive and corrective maintenance			
				A_1	A_2	B_1	B_2	C_1	C_2	C_3	D_1	D_2	E_1	E_2	F
1.00	Hardware				0.45	0.19	0.25	2.19	0.08				0.60	0.01	3.77
2.00	Software (operating system, middleware, licensed applications)			0.96	0.99	0.08		2.13	0.05		9.83	6.56	1.09	0.07	21.76
3.00	Internal staff			0.67	1.64	0.33	0.19	1.21	0.14		8.12	3.30	1.24	0.69	17.53
4.01	Third-party services	Banks or ancillary services undertakings of the group	IT outsourcing		1.07	0.17		0.47			1.87		0.29	0.45	4.31
4.02			Other services												
4.11		Third-party suppliers	IT outsourcing	3.80	3.24	2.39		0.88	2.14	2.52	4.52	16.69	1.26	0.09	37.54
4.12			Other services	0.01	0.52	3.72	0.50	3.43			1.23	4.37	0.25	0.37	14.39
4.20		External staff and consultants			0.06			0.05			0.25	0.13	0.11		0.61
5.00	Other IT costs							0.06						0.02	0.09
6.00	Total IT costs (TCO)			5.43	7.96	6.88	0.94	10.43	2.42	2.52	25.82	31.06	4.83	1.71	100
7.00	Adjusted revenues											2.92			2.92
8.00	Total net IT costs (TCO)			5.43	7.96	6.88	0.94	10.43	2.42	2.52	25.82	28.14	4.83	1.71	97.08
10.00	Depreciation/amortization included in TCO (row 6.00)				0.48	0.16	0.24	0.51	0.13		15.79	0.99	0.60		18.90
11.00	IT Investments				17.84	0.29	0.19	20.66			42.12	7.17	6.57	5.17	100
12.00	Investments			5.48	6.92	6.56	0.73	9.95	2.26	2.50	24.96	31.83	4.66	4.16	100

* values calculated on four banks (one reported no investments).

Table 30 - TCO breakdown: 5* Small B banks

Percentage averages

Production factors				Thematic areas									IT security	Unclassifiable IT costs	Actual total 2024
				Data center		Transmission systems		Peripheral systems			Applications				
				Mainframe	Server farm	Data networks and fixed telephony	Mobile telephony	Decentralised systems and individual equipment	ATM and kiosks	POS	Development and evolutionary maintenance	Adaptive and corrective maintenance			
				A_1	A_2	B_1	B_2	C_1	C_2	C_3	D_1	D_2	E_1	E_2	F
1.00	Hardware				0.06	0.06	0.58	0.42							1.13
2.00	Software (operating system, middleware, licensed applications)										7.14	1.18	0.12		8.44
3.00	Internal staff					0.06		0.13	0.06		6.29	0.13	0.06	0.62	7.35
4.01	Third-party services	Banks or ancillary services undertakings of the group	IT outsourcing	1.01	1.03	1.82		2.41	0.01		16.48	17.63	1.25	2.12	43.77
4.02			Other services												
4.11		Third-party suppliers	IT outsourcing	11.36	0.73	1.16		0.54	0.95	1.37	2.18	7.95	0.25	0.02	26.52
4.12			Other services			0.86	0.20				7.29			3.18	11.52
4.20		External staff and consultants						0.48					0.11		0.59
5.00	Other IT costs					0.68									0.68
6.00	Total IT costs (TCO)			12.37	1.83	4.65	0.78	3.98	1.03	1.37	39.38	26.88	1.79	5.93	100
7.00	Adjusted revenues														
8.00	Total net IT costs (TCO)			12.37	1.83	4.65	0.78	3.98	1.03	1.37	39.38	26.88	1.79	5.93	100.00
10.00	Depreciation/amortization included in TCO (row 6.00)							0.40			4.84			0.34	5.58
11.00	IT Investments							14.92			51.74			33.33	100
12.00	Investments			10.18	1.84	4.54	0.84	4.98	0.97	1.30	36.68	26.57	1.79	10.31	100

* excluding a bank that has allocated more than 30 per cent of its IT costs to 'Unclassifiable IT costs'.

** Values calculated on three banks (two reported no investments).

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