

## Survey on IT in the Italian banking sector

Economic and organizational profiles

Cost trends

Spending addresses

Organizational structures

CIPA Interbank Agreement  
for Automation

**ABI** Associazione  
Bancaria  
Italiana

## **Survey on IT in the Italian banking sector**

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Economic and organizational profiles

Financial Year 2024

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# Presentation

The "Survey on IT in the Italian Banking Sector," conducted annually by CIPA (Interbank Convention for Automation) and ABI (Italian Banking Association), offers an analysis of the economic, organizational, and technological aspects of Information and Communication Technology in the banking sector. It aims to provide banking operators with useful comparisons and references for evaluating IT decisions.

The survey is aimed at anyone who, for whatever reason, is interested in learning about the evolution of IT in the credit sector.

The survey is divided into two separate investigations published separately.

The first, to which this report refers, is dedicated to examining the economic and organizational profiles of IT and analyzes 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 personnel.

The second, each edition focusing on a specific topic, focuses on technological and security aspects and analyzes IT choices regarding innovative methodologies, tools, and technologies used in customer relations, supporting internal processes, and examining related cybersecurity aspects.

The investigation reports are published on the CIPA website ([www.cipa.it](http://www.cipa.it)).

The CIPA Presidency expresses its appreciation for the contribution provided by the banking groups and banks participating in the Survey and thanks the members of the working group that conducted the survey and drafted this report.

THE PRESIDENT OF CIPA

(Bank of Italy)

Joseph Zingrillo

THE VICE PRESIDENT OF CIPA

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Infografica1

# IL QUESTIONARIO



## I RISPONDENTI



**23 GRUPPI BANCARI**  
92% del totale attivo dei gruppi

**32 BANCHE**  
63% dei fondi intermediati del settore bancario

L'indagine riguarda la realtà nazionale di banche e gruppi, limitatamente alle componenti bancarie e società strumentali a supporto dell'attività bancaria



# I DATI DEI 23 GRUPPI BANCARI

Infographic2



**€6,3 mld** COSTI IT (TCO)



**€2,1 mld**

## INVESTIMENTI IT

- €1,8 mld per software
- €290 mln per hardware



**€366 mln**

## SICUREZZA IT (cash out)



**247.587**

## DIPENDENTI

- 12.887 nell'IT

## CLOUD COMPUTING

3,4% degli FTE IT

### Modelli prevalenti



## EURO DIGITALE

### AMBITI DI MAGGIOR IMPEGNO ECONOMICO

Incassi e pagamenti  
Servizi bancari tipici  
Gestione sicurezza  
Gestione sistemi informativi



### OPPORTUNITÀ

Nuovi servizi alla clientela  
Revisione dei sistemi IT periferici  
Revisione/ottimizzazione di infrastrutture e applicazioni



## Synthesis

The group of participants in the "Survey on IT in the Italian Banking Sector – Economic and Organizational Profiles – 2024 Financial Year" consists of 23 banking groups and 32 banks, two of which do not belong to groups or belong to groups other than the participating ones.

### Banking groups

The participating groups represent a total of 92% of all Italian banking groups in terms of total consolidated assets and are classified by size into six Large, nine Medium, and eight Small groups. Operationally, most of them are primarily engaged in retail banking, which on average accounts for 63.4% of total assets.

**TCO** In 2024, the total cost of ownership - TCO (current expenses plus depreciation) incurred overall for the IT sector by the 23 banking groups participants amounted to 6,334 million euros.

Analyzing the performance of a consistent sample of 19 groups, the overall TCO for 2024 increased by 4.3% compared to the previous year. For most groups, the increase in TCO is due to the launch of new projects and the increase in the cost of IT products, services, and consumption. The main factors contributing to its reduction are the suspension or deferral of IT activities and savings on IT products, services, and consumption. A 1.8% decrease in TCO is expected for 2025.

The breakdown of TCO by production factors shows that third-party services absorb more than half of IT costs (54.5%); the remaining share is mainly divided between licensed software.

(24%), Internal Staff (12.6%), and Hardware (7%). The analysis of the evolution of TCO over the five-year period 2020-2024, and forecast for the 2025 financial year, records significant growth for licensed software in 2023 and an even more significant leap in 2024. The forecasts for 2025 call for a decrease or substantial stability in costs for all production factors.

The breakdown of TCO by thematic area confirms that the majority of IT costs are concentrated in application development and maintenance (50%) and the data center (22.1%). In the latter area, server farm costs (56%) prevail over mainframe costs (44%). Analyzing their trends, significant changes can be seen in the 2024 financial year for adaptive and corrective maintenance and server farms, with an increasing trend, and for mainframes, with a decreasing trend.

**Cash out IT** IT cash out (current expenses plus investments) has a very similar breakdown by thematic area to that of TCO. In all areas, current IT expenses prevail over investments.

Cybersecurity accounts for an average of 4.9% of IT cash outlay. This percentage includes an estimated 0.7% reported by those groups that have difficulty breaking down these costs analytically. The consistent trend in TCO and cash outlay for IT security has been increasing since 2022.

In absolute terms, the total IT cash outlay for compliance initiatives by 21 groups amounts to €780.9 million. IT initiatives dedicated to compliance absorb an average of 11.1% of the IT cash outlay. The largest percentages of this expenditure are allocated to compliance.

for the Bank of Italy/ECB/EBA/ESMA supervision, to the regulations for digital operational resilience, financial markets, and payment services. Since 2022, a growing trend has been observed, with a constant sample size.

Breaking down IT cash outflows by functional area, the largest portion is used in Operations processes (41.1%), followed by support processes (28.6%), marketing, sales, and customer service (16.7%), and governance (13.7%). 67.2% of IT cash outflows are used to maintain current operations (run), and the remaining portion (32.8%) is dedicated to initiatives aimed at improving/innovating banking operations (change). Typically, the share of IT cash outflows dedicated to change increases as the size of the groups increases.

On average, IT cash outflows for public cloud services are 4.1%, in line with the 2023 figure. The forecast trend for the two-year period 2025-2026 is increasing for 16 groups.

The average percentage of total IT cash outlays dedicated to open banking appears modest, at 0.5%. Looking at forecast trends, nine groups, especially those already active in this area, expect their share to increase in the two-year period 2025-2026.

**IT investments and technological innovation** IT investments, which total €2,140 million in 2024, are primarily concentrated in Applications (67.7%), followed by Peripheral Systems (16.4%) and Data Centers (10.3%). Software accounts for 73.3% of these investments, while hardware accounts for 26.4%. For 2025, the 23 groups expect a 12% increase in overall IT investments compared to 2024. On average, in 2024, 20 groups allocated 3.9% of their IT investments, equal to €2.1 million in absolute value, to initiatives related to innovative technologies (artificial intelligence, application programming interfaces (APIs), robotic process automation (RPA), distributed ledger technology (DLT), quantum computing).

**Indicators cheap** The chapter on economic profiles concludes with a variety of indicators, calculated by comparing the main income statement and operating figures of banking groups. These indicators are presented in three-year time series, with a constant sample, by size class and IT sourcing model. In the three-year period 2022-2024, among the main indicators, there is an increase in the ratio of IT costs to total assets, IT cash outflows to number of employees, net operating profit to IT costs, and IT costs to the number of loans and deposits. Conversely, the ratio of operating costs to net banking income is gradually decreasing.

**Sourcing IT** The analysis of organizational profiles shows that seven groups maintain internal management of infrastructure and applications, identifying themselves with the insourcing model; seven follow the facility management model—which involves direct management of applications and outsourcing of data center infrastructure—and nine outsource data centers and applications. The Large groups are predominantly insourcing, while the Medium groups are predominantly facility management, while the Small groups largely rely on outsourcing IT management. In most cases, the supplier is an IT vendor.

Decentralized systems, individual equipment, and applications are primarily handled internally. POS, data and voice networks, and ATMs/kiosks are the areas where IT activities are primarily outsourced.

**Cloud computing** Cloud computing, especially the public model, is most frequently adopted for infrastructure applications, personnel management, procurement, and telephone banking. In the public cloud, the SaaS model is prevalent, with 18 groups reporting its use; 12 use IaaS/PaaS models. The private cloud, adopted by a limited number of groups, is used across all services.

Applications, including Operations services, are characterized by a higher level of criticality; the use of private cloud is essentially equal between on-premises and off-premises solutions. The use of hybrid cloud is present, although generally to a lesser extent, with the exception of ICT governance. Finally, it emerges that, overall, 11 groups adopt only the public cloud, only one the private cloud, and the remainder use more than one model, including public, private, and hybrid.

Groups employ an average of 3.37% of their total IT full-time equivalent (FTE) staff in the cloud, in various capacities (governance, competence center, infrastructure, development, management, etc.); the highest percentage is recorded for outsourcing groups (5.2%).

On the contractual issue, regarding the possibility of negotiating ad hoc contractual clauses when drafting contracts with cloud service providers (CSPs), four groups believe they have always had it (or have had it), four believe they do not have it (or have not had it). One group reports having had the possibility of negotiating them in most cases, while the majority of groups (11) reports having negotiated such clauses only in some cases. The liability model defined in the contracts is considered substantially adequate in terms of balancing responsibilities between provider and group, even in cases of limited negotiating capacity.

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

The CSPs reported by the groups are around 30 and, among these, the most frequent ones concern hyperscalers. With respect to concentration risk, using the public cloud to provide IT services requires 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% of their IT FTEs to cybersecurity.

This average rises to 7.6% when including technical staff dedicated to Business Continuity and Disaster Recovery. A higher percentage of technical staff assigned to IT security emerges, almost double, for groups with few IT and outsourced employees compared to those with a larger number. This data demonstrates the banking industry's strong focus on cybersecurity. In the area of security governance, the average skill level (self-assessment score, ranging from zero to five) recorded in 2024 is 3.7, and for the two-year period 2025-2026, the need to increase this level to 4.2 is perceived, with 52% of groups reporting a skills gap that needs to be filled.

There is a smaller skills gap in operational security management than in security governance. Regarding technological innovation applied to IT security, nearly half of the groups report significant innovation initiatives in 2024, and five plan to launch them in 2025-2026.

**FinTech** By 2024, all participating groups will collaborate in various capacities with FinTech companies. Payment services, personal financial management, and account aggregation are the most popular, with over 60% of the groups active. Among the technologies in use, artificial intelligence, RPA, and open APIs stand out. The largest IT investments in this area are primarily in payment services, credit, regulatory management, and investment services.

**Digital Euro** This edition aims to provide a qualitative forecast of the financial commitment that banking groups will need to make to prepare their information systems for the introduction of the digital euro and its full operation. It also focuses on the IT opportunities that the groups foresee.

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

From a strategic perspective, the 12 groups indicate they see opportunities to offer new and optional services to customers; for over half of them, the offering revolves around multiple payment services—primarily P2P, offline, and public payments—investment/insurance services, and e-wallets. Some groups also plan to review and optimize their IT infrastructure.

### Open banking

period 2025-2026.

The use of open banking is rather limited and occurs mainly to create account integration services and services on the open API marketplace, a fact also confirmed in the forecast for the two-year

### Innovation

#### technological

affected by innovation is Operations processes. Initiatives aimed at improving existing products and services prevail across the board.

All thematic areas are affected by significant technological innovation initiatives, either ongoing or completed during 2024. Specifically, over half of respondents reported initiatives regarding the server farm and development and evolutionary maintenance. Within banking processes, the area most

For the two-year period 2025-2026, over a fifth of the groups report initiatives that will concern decentralized systems and individual equipment, the Server Farm, data and fixed telephone networks, and IT security.

### IT Staff

IT employees represent an average of 5.3% of the entire workforce, a figure that has steadily increased in recent years. The lowest figures are found in small groups (4.1%), a figure attributable to their greater reliance on outsourcing IT activities.

The largest age group among IT personnel is between 50 and 59; the majority of IT professionals are at the executive and management level (54.5%), and men clearly outnumber women, who represent 28.9% of the entire IT workforce. The female share is higher among younger age groups, gradually increasing from 14.3% of those over 60 to approximately 35% of those under 40.

56.8% of IT resources are allocated to the Applications area, followed by cross-functional functions (21.8%), the Data Center (10.2%), IT Security (6.7%) and residual shares for peripheral and transmission systems.

### IT skills and training

per person-day.

Regarding technical training, averaging the values declared by 15 groups with at least 30 IT employees, we observe that in 2024, 70.1% of IT employees participated in paid training initiatives, attending an average of 3 days of courses per year, at an average cost, for the groups, of 266 euros

In terms of skills, more traditional IT profiles are associated with medium-high levels, which decline considerably for new technological fields, except for sustainability and green IT and AI & data science. For the 2025-2026 two-year period, there is a perceived need to strengthen skills levels in all IT fields/profiles, particularly AI & data science, cloud management, IT governance, security governance, and DLT. To strengthen IT skills, groups are also increasingly inclined to train their own staff rather than hire or outsource resources in 2024. Hiring is more frequent in the areas of security governance and AI & data science.

<b>I work from remote</b>	A mixed working model, both remote and in-person, will be in place by 2024 for 21 out of 22 responding banking groups, with different formulas and approaches from group to group. For most of them, the percentage of days worked remotely compared to the total number of days worked is higher for IT staff than for other employees. This percentage, on average 34% for IT employees, drops to 18% for the rest of the workforce.
<b>Stations of Work</b>	Data reported by 22 groups shows that, on average, each employee has 1.3 standard workstations (WPs). On average, 78.5% of the WPs are owned by the banking group and 21.5% are leased. Approximately two-thirds of the PDLs in 21 groups are portable devices, approximately 30% are fixed workstations, and a residual share is made up of virtualized workstations. The increasing trend in the share of portable devices has continued over the last three years.

## Banks

The 32 banks participating in the Survey, analyzed individually without other group components, represent 62.8% of the banking sector in terms of intermediated funds.

The analysis of the TCO distribution by thematic areas highlights that on average 56.5% of the costs is absorbed by Applications and 18.9% by the Data Center; followed by Peripheral Systems (10.7%), Transmission Systems (5.4%), and IT Security (4%). As banks grow in size, they indicate increasingly higher average percentages for the Data Center and IT Security.

Analyzing the TCO by production factors, on average the largest share of it is allocated to third-party services (66.6%).

72% of banks' IT investments in 2024 are earmarked for software and 25.7% for hardware. The overall amount of investments planned for 2025 is up 13% compared to 2024.

Regarding banking operations, retail banking represents the dominant activity (56%), followed by corporate and investment banking and private banking. Approximately three-quarters of the responding banks perform multiple activities, while the others operate within a single segment.

The prevailing IT sourcing model is outsourcing: 66% of banks outsource data center and application management to one or more vendors. Sixteen percent of banks adopt the insourcing model, while 19% rely on a mixed model, outsourcing data center infrastructure while maintaining application management in-house (facility management).

In relation to the Data Center, almost a fifth of the banks own it and take care of its development/evolution and corrective maintenance/current management. The predominant share (31-34%) relies on group components within the CIPA perimeter, another significant portion (25-28%) uses vendors and 13% uses bank consortia.

With regard to Applications, approximately a quarter of banks directly handle both development and management, 31% outsource them within the CIPA perimeter, followed by a significant portion that uses external parties, mainly IT vendors.

On average, the ratio of IT staff to total bank employees is 5.2%.



## Evolution of the Italian banking sector<sup>1</sup>

In 2024, credit growth in Italy remained weak, albeit with signs of recovery supported by the gradual easing of monetary policy. Loans to businesses continued to contract, decreasing by 2.6%, primarily due to weak demand, attributable to reduced investment financing needs and still-high interest rates. Loans to households, however, returned to growth (+1.1% in December compared to a year earlier), driven primarily by the increase in financing for home purchases (+1.3%), attributable to the reduction in the general level of interest rates. In the last quarter of 2024, the flow of new non-performing loans as a ratio to the stock of performing loans increased slightly (+1.4%), driven by the increase in loans to businesses (+2.4%).

Banks' total funding decreased by 2.6% in 2024, primarily due to the decline in liabilities to the Eurosystem. Wholesale funding increased through recourse to the foreign interbank market and bond issuance; retail funding returned to growth, driven by the increase in resident deposits (+1.8%). The average cost of existing funding decreased to 1.4%, reflecting the reduction in interest rates. Interest rates on deposits decreased slightly, to 0.7% (0.8% in 2023), while those on bonds increased slightly, to 2.8% (from 2.7%).

Bank profitability further improved in 2024, with Italian banks' annualized return on equity (ROE) rising to 12.8%. This increase was primarily due to the increase in commissions (+9.5%), particularly those from asset management, and, to a lesser extent, the further increase in net interest income (+3.7%). Net banking income increased by 7.2%, operating costs increased by 2.5%, and personnel expenses by 5.1% due to the labor contract renewal. The cost-income ratio fell to 53.2% (from 55.6% in 2023). The decline in net loan loss provisions (-6.4%) also contributed, albeit marginally, to the improvement in profitability.

The Italian banking sector's digital transformation continues, with efficiency continuing to improve thanks to growing investments in innovation. The use of online transfers has reached 93% of total transfers, with a higher share among businesses (96%) than among households (91%). The share of customers with online banking contracts has also gradually increased to 73 customers per 100 inhabitants (68 in 2023). Furthermore, the use of new technologies—including artificial intelligence—for credit assessments is observed, albeit by a limited number of banks, with potential benefits for access to credit for smaller and more innovative businesses.

<sup>1</sup> Source: Bank of Italy, Annual Report for 2024.



# Sample and methodological notes

Twenty-three banking groups and 32 banks participated in the "Survey on IT in the Italian Banking Sector – Economic and Organizational Profiles – 2024 Financial Year," two of which did not belong to groups or belonged to groups other than those participating.

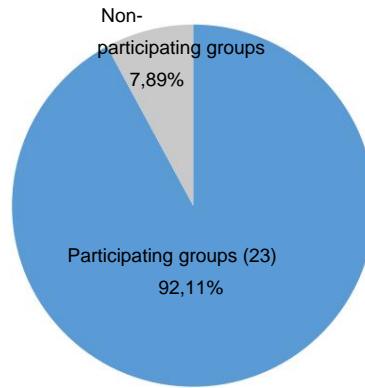
The analyses contained in the Survey, unless otherwise indicated, refer to the so-called **CIPA<sup>2</sup> perimeter**.

Two samples are used for the survey: one referring to banking groups (Chapters 1 and 2) and one relating to banks (Chapter 3).

## Sample of banking groups

The 23 participating groups represent 92.11% of all Italian banking groups in terms of total assets<sup>3</sup> (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 operational size and by IT sourcing model.

The classification by operating size is based on the total assets of the group, including all its components (banking and non-banking) subject to prudential regulation, reported in the

<sup>2</sup> The CIPA scope covers the national reality of banks and groups, for the latter limited to the banking components and the instrumental companies, both IT and non-IT, that operate in support of banking activity.

<sup>3</sup> The total assets considered as of December 31 of the financial year under review refer to the banking group, including all its banking and non-banking components subject to prudential regulations (e.g., banks, instrumental companies, financial companies, investment firms, foreign branches) according to consolidated supervisory reporting.

## Sample and methodological notes

consolidated supervisory matrix. According to this criterion<sup>4</sup> divided into six Main groups, nine Medium groups and eight Small groups (Table 1).

the sample for the 2024 financial year is

**Table 1 - Classification of groups by size**

		Main	Medi	Small
01005	Banca Nazionale del Lavoro Banking Group		x	
01030	Monte dei Paschi di Siena Group	x		
02008	UniCredit Group	x		
03032	Credito Emiliano Group – CREDEM		x	
03062	Mediolanum Banking Group		x	
03069	Intesa Sanpaolo Banking Group	x		
03075	Banca Generali Banking Group			x
03104	Deutsche Bank Group		x	
03311	Sella Group		x	
03395	Illimity Bank Group			x
03440	Desio and Brianza Bank Group			x
03599	Central Bank Cashier		x	
05034	Banco BPM Group	x		
05036	Banca Agricola Popolare di Sicilia Banking Group			x
05262	Banca Popolare Pugliese Group			x
05387	BPER Banca Group	x		
05696	Sondrio Popular Bank Group		x	
05856	Alto Adige Popular Bank Group			x
06085	Asti Savings Bank Group			x
06230	Crédit Agricole Italia Banking Group		x	
06270	The Ravenna Bank Group			x
08000	ICCREA Bank	x		
10631	Mediobanca Banking Group		x	
To.		6	9	8

The classification by IT sourcing model is based on the indications provided by the parent company on prevalent method of managing the group's infrastructure and applications<sup>5</sup>. According to this criterion, the sample for the 2024 financial year is composed of seven insourcing groups, seven in Facility Management e nove in Outsourcing (Tabella 2).

<sup>4</sup> The size classes of the groups are defined as follows:

- ÿ Main      total assets > 120 billion euros;
- ÿ Medium      total assets >20 and ÿ 120 billion euros;
- ÿ Small      total assets ÿ 5 and ÿ 20 billion euros.

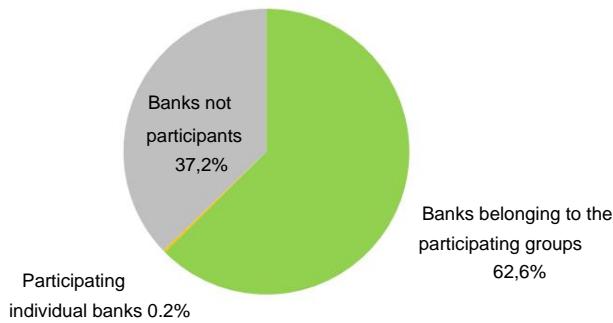
<sup>5</sup> The structure is independent of any possible recourse to forms of selective outsourcing for individual initiatives or areas.

**Table 2 - Classification of groups by IT sourcing model**

		Insourcing	Facility management	Outsourcing
01005	Banca Nazionale del Lavoro Banking Group		x	
01030	Monte dei Paschi di Siena Group	x		
02008	UniCredit Group		x	
03032	Credito Emiliano Group – CREDEM		x	
03062	Mediolanum Banking Group			x
03069	Intesa Sanpaolo Banking Group	x		
03075	Banca Generali Banking Group			x
03104	Deutsche Bank Group			x
03311	Sella Group	x		
03395	Illymity Bank Group		x	
03440	Desio and Brianza Bank Group			x
03599	Central Bank Cashier	x		
05034	Banco BPM Group	x		
05036	Banca Agricola Popolare di Sicilia Banking Group			x
05262	Banca Popolare Pugliese Group			x
05387	BPB PER Banca Group	x		
05696	Banca Popolare di Sondrio Group		x	
05856	Alto Adige Popular Bank Group			x
06085	Asti Savings Bank Group			x
06230	Crédit Agricole Italia Banking Group		x	
06270	The Ravenna Bank Group			x
08000	ICCREA Bank	x		
10631	Mediobanca Banking Group		x	
To.		7	7	9

## Champion of banks

The 32 banks (joint-stock and cooperative companies) participating in the Survey represent 62.8% of the Italian banking sector in terms of intermediated funds<sup>6</sup> (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).

<sup>6</sup> Intermediated funds (total assets on banks' balance sheets net of expenses, losses, and outstanding items) refer to the arithmetic average over thirteen months: the reference year plus the month of December of the previous year.

## Sample and methodological notes

The 32 banks are classified according to their operational size, taking as a reference the average intermediated funds present in the supervisory matrix. According to this criterion<sup>7</sup> they are divided into the following classes: Major (8), Large (6), Medium (7), Small A (5) and Small B (6) (Table 3). Compared to previous editions, from this year the "Particular Operations" class, which included banks with highly diversified organizational and operational structures, is no longer present and the relevant banks are classified on the basis of the size parameter.

**Table 3 - Classification of banks**

		Largest	Large	Medium	Small A	Small B
01005	National Bank of Labor	x				
01030	Monte dei Paschi di Siena Bank	x				
02008	UniCredit	x				
03032	Emilian Credit		x			
03045	Akros Bank					x
03062	Mediolanum Bank		x			
03069	Intesa Sanpaolo	x				
03075	Generali Bank			x		
03102	Aletti Bank					x
03104	Deutsche Bank		x			
03239	Intesa Sanpaolo Private Banking			x		
03268	Sella Bank			x		
03296	Fideuram Bank		x			
03311	Banca Sella Holding				x	
03332	Passadore & C. Bank				x	
03385	isybank					x
03395	illimity Bank				x	
03440	Bank of Desio and Brianza			x		
03442	Banca Wise Dialog Bank - Widiba					x
03493	Raiffeisen Central Bank of South Tyrol					x
03599	Cassa Centrale Banca – Credito Coop. Italiano			x		
05034	BPM Bank	x				
05036	Popular Agricultural Bank of Sicily				x	
05262	Popular Bank of Puglia					x
05387	BPER Bank	x				
05696	Sondrio People's Bank		x			
05856	Alto Adige People's Bank			x		
06085	Savings Bank of Asti			x		
06230	Crédit Agricole Italia	x				
06270	The Ravenna Fund					x
08000	ICCREA Bank – Central Institute of Cooperative Credit.		x			
10631	Mediobanca – Financial Credit Bank	x				
	To.	8	6	7	5	6

<sup>7</sup> The size classes of banks are defined on the basis of intermediated funds (fi) as follows:

- ÿ Major ÿ for over 90 billion euros;
- Large ÿ between 30 and 90 billion euros;
- Medium ÿ between 12 and 30 billion euros;
- Small A ÿ between 5 and 12 billion euros;
- Small B between 1 and 5 billion euros.

## Methodological notes

The survey is based on the questionnaire for the 2024 financial year published on the CIPA website<sup>8</sup> whose data are acquired through INFOSTAT, the Bank of Italy's Internet data collection infrastructure.

The analyses reported in the Survey refer, unless otherwise indicated, to the CIPA2 perimeter .

The aggregates provided as percentage averages relating to the distribution of IT costs (e.g., by thematic area and by production factor) are calculated by comparing the various components to the total IT costs incurred by each bank or banking group and then averaging the results. In general, unless otherwise specified, in this report the term "average" or "average of %" should be understood as the arithmetic mean of the values of individual respondents. In some analyses, reference is made to the term "% share" of a quantity compared 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 economic variables (TCO, investments, cash out), for an effective representation of the phenomena, respondents who provide a sufficiently detailed distribution of the variable among the various areas are usually included and those who attribute more than 30% of the total of that variable to column E2 ("Unclassifiable IT costs" in tables 2.1 and 4.1 of the questionnaire) are excluded.

The calculation of the economic indicators, referring to the main economic figures of the group or bank reported in the questionnaire or obtained from the respective supervisory matrices 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 between the respondents (means, coefficients of variation and medians).

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

In the case of analyses involving too small a sample of banks or groups, which could allow the aggregated data to be traced back to the respondents, the results may not be made available.

Please note that in the titles of the figures and tables, where these refer to banks and not to banking groups, this is expressly indicated.

For the sake of completeness, in the graphs that refer to questions that can be filled in using flags/checkmarks, the label reports both the number of groups that actually answered the question and the total number of groups to whom the question was administered (e.g., "18 out of 23 respondents").

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

Participating groups and banks are provided with "feedback flows," including customized ones, which allow each institution to evaluate its positioning in relation to multiple metrics and indicators, both compared to the entire sample and to its peer group.

### IT Cost Tracking

The methodology adopted for the analysis of IT economic profiles allows us to detect:

- ÿ the total cost of ownership (TCO), gross and net of any I got it;

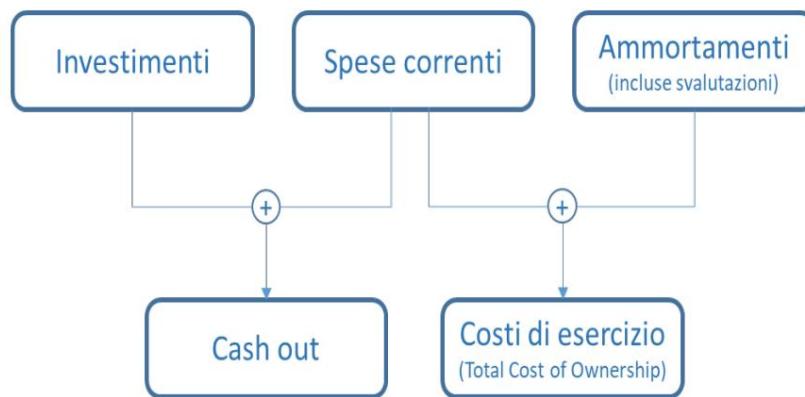
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<sup>8</sup> [www.cipa.it/rilevazioni/economiche/2024/QUEST\\_A\\_2024.pdf](http://www.cipa.it/rilevazioni/economiche/2024/QUEST_A_2024.pdf)

- ÿ he cashes out;
- ÿ current expenses;
- ÿ investments;
- ÿ depreciation.

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

The following diagram illustrates the relationships between the economic quantities discussed:



The detection 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).

Cash out is calculated as the sum of investments and current expenses, obtained by subtracting depreciation from the TCO.

### Production factors and thematic areas

The production factors considered and their related costs are:

- ÿ **Hardware:** TCO for purchase, rental, leasing and maintenance of equipment;
- ÿ **Software:** costs of core software, middleware and licensed application software of use;
- ÿ **Internal staff:** all costs incurred for IT employees (e.g., skills, social security contributions, accruals, IT training at external companies), including amortization;
- ÿ **Services received from third parties:** Facility management costs (software owned by the institution managed by the supplier on its own computers), outsourcing, external personnel and professional consultancy;
- ÿ **Other IT costs:** IT costs not attributable to the previous categories (e.g. those incurred for various reasons for properties used exclusively for IT activities, for consumables, for insurance coverage on equipment and to guarantee against IT fraud).

The thematic areas considered are:

- ÿ **Data center:** includes Mainframes (centralized computers and centralized input/output units) and Server farms (centralized servers and equipment with specialized functions not typical of branch offices and not directly dependent on Mainframes);
- ÿ **Transmission systems:** includes data networks (connection between bank offices/branches, between central subsystem and peripheral subsystem and with the outside of the bank), fixed telephony (VoIP and analog) and mobile telephony;

ÿ **Peripheral systems:** includes decentralized systems and individual equipment (e.g. personal computers, printers, tablets, graphometric tablets), ATMs (automatic teller machines, such as cash dispensers and multifunction kiosks) and POS;

ÿ **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 farms are considered sub-areas of the Data Center area).

The **“IT Security”** item includes all IT security costs related to the following areas: perimeter security, identity management, anti-fraud systems, server farm security, endpoint security, security analytics, code/application security, data security, security awareness initiatives, and participation in security/infosharing communities. Costs related to security process management (e.g., security incident management, vulnerability and patch management, CERTFin) are also included. Costs related to physical security, business continuity, and disaster recovery are not included.



# Chapter 1. Banking groups: economic profiles

This paragraph analyses the overall trend of IT costs with a focus on integration costs<sup>9</sup>. The overall IT economic figures reported for the 2024 financial year by the 23 groups participating in the survey are:

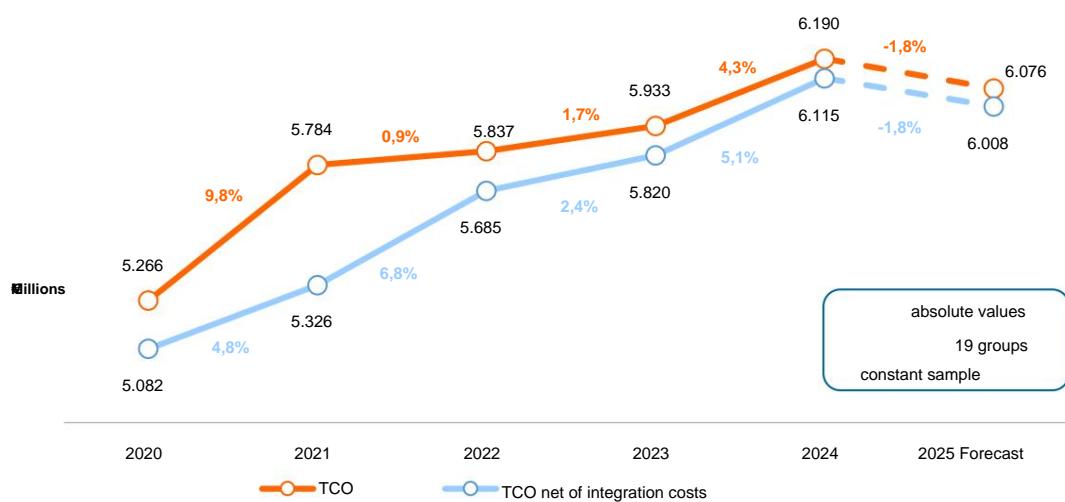
- ÿ **Gross TCO** (current expenses plus depreciation): 6,334 million euros;
- ÿ **Cash out** (current expenses plus investments): 6,618 million euros;
- ÿ **Current expenditure**: 4,478 million euros;
- ÿ **Investments**: 2,140 million euros;
- ÿ **Depreciation**: 1,857 million euros.

## 1.1 Total cost of ownership (TCO)

### 1.1.1 Overall trends and individual variations

Figure 3 shows the trend of the TCO, overall and net of integration costs, with reference to a constant sample of 19 banking groups<sup>10</sup>, for which, in the 2024 financial year, An increase in overall TCO of 4.3% compared to the previous year, for a total of €6,190 million. Net of integration costs, TCO stands at €6,115 million, an increase of 5.1%. A 1.8% decrease is forecast for 2025, again based on a constant sample.

**Figure 3 - TCO: 2020-2024 trend and forecast**



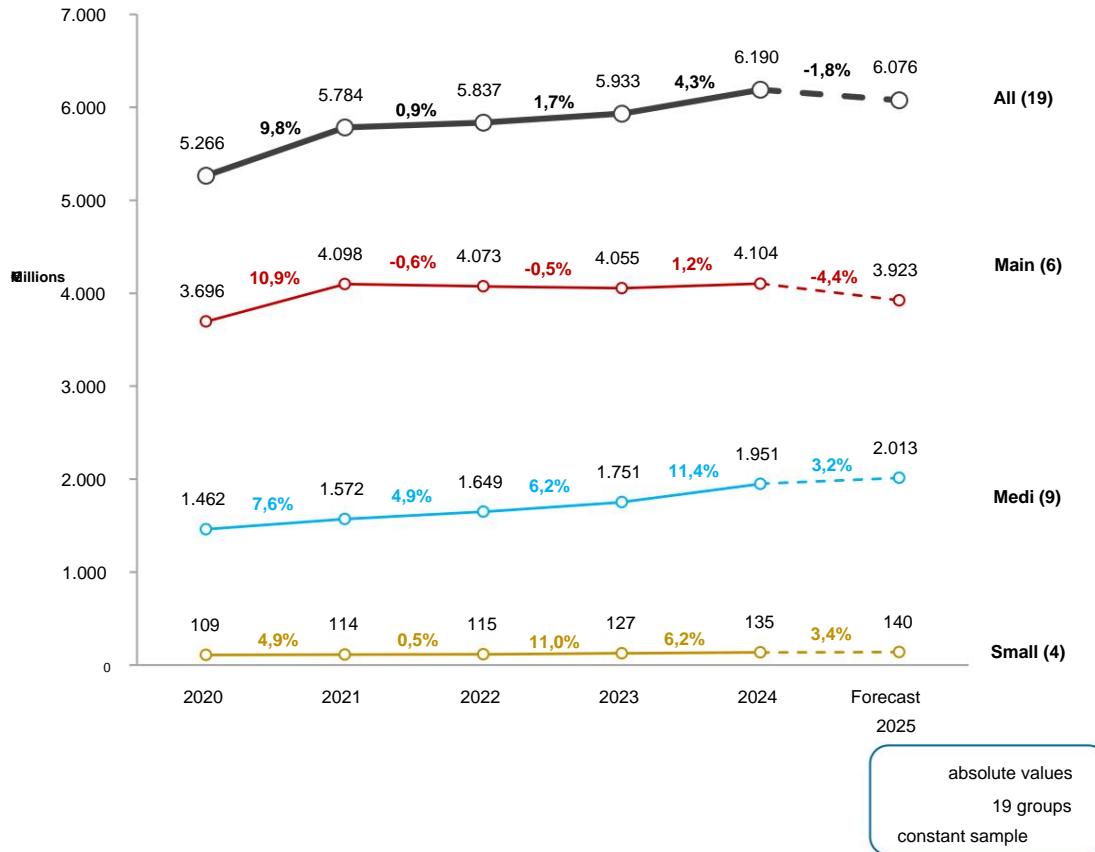
<sup>9</sup> IT costs incurred for integration/restructuring needs of company information systems connected with integration operations with other entities (mergers, acquisitions, acquisition of business units and/or branches).

<sup>10</sup> Groups that provided TCO for all years from 2020 to 2024.

In the Appendix, Figure 113 compares the overall TCO for the 2024 financial year recorded in the final balance (solid line) to the corresponding forecast made the previous year (dashed line), with a constant sample.

From the constant sample trend of the TCO by size class reported in Figure 4, it is evident that for the Main groups, which absorb approximately two thirds of total costs, a lower percentage growth in recent years (1.2% in the 2024 financial year after two years of negative variation) is highlighted compared to the Medium and Small groups (11.4% and 6.2% respectively in the 2024 financial year).

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



The analogous analysis, performed net of integration costs, is shown in Figure 5.

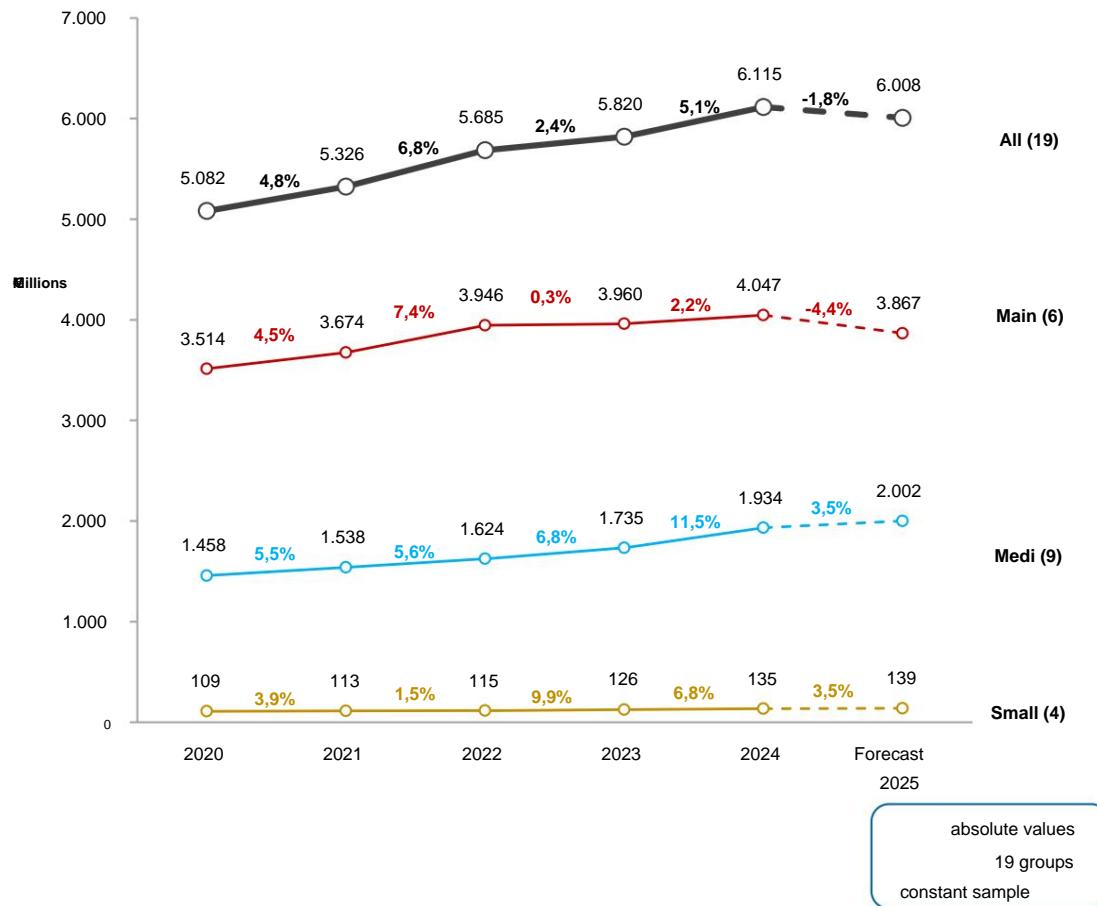
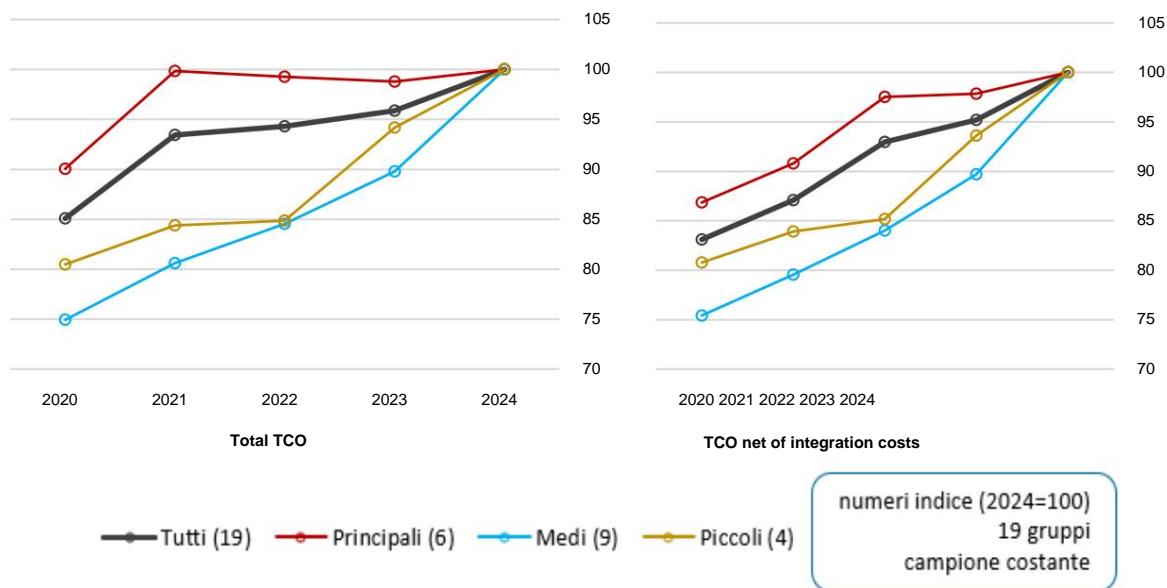
**Figure 5 - TCO net of integration costs, by size class: 2020-2024 trend and forecast**

Figure 6 provides another view of the TCO trend by size class, using the Index numbers for the same constant sample and same observation period. The reference year is 2024, in which the total TCO for each class is set to 100. The values for previous years are obtained as the percentage ratio between the relevant TCO and that of the reference year for the same class. The constant growth in costs for the Medium and Small classes is evident, albeit at different intensities. For the Main groups, the 2021 peak is attributable to integration costs.

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

With reference to the 22 banking groups participating in the Survey in both the 2023 and 2024 financial years, the percentage variations in TCO 2024 compared to TCO 2023 fall within a range from -16.7% to +25.7% and over three-quarters of the groups recorded an increase in IT costs greater than 1% (Figure 7).

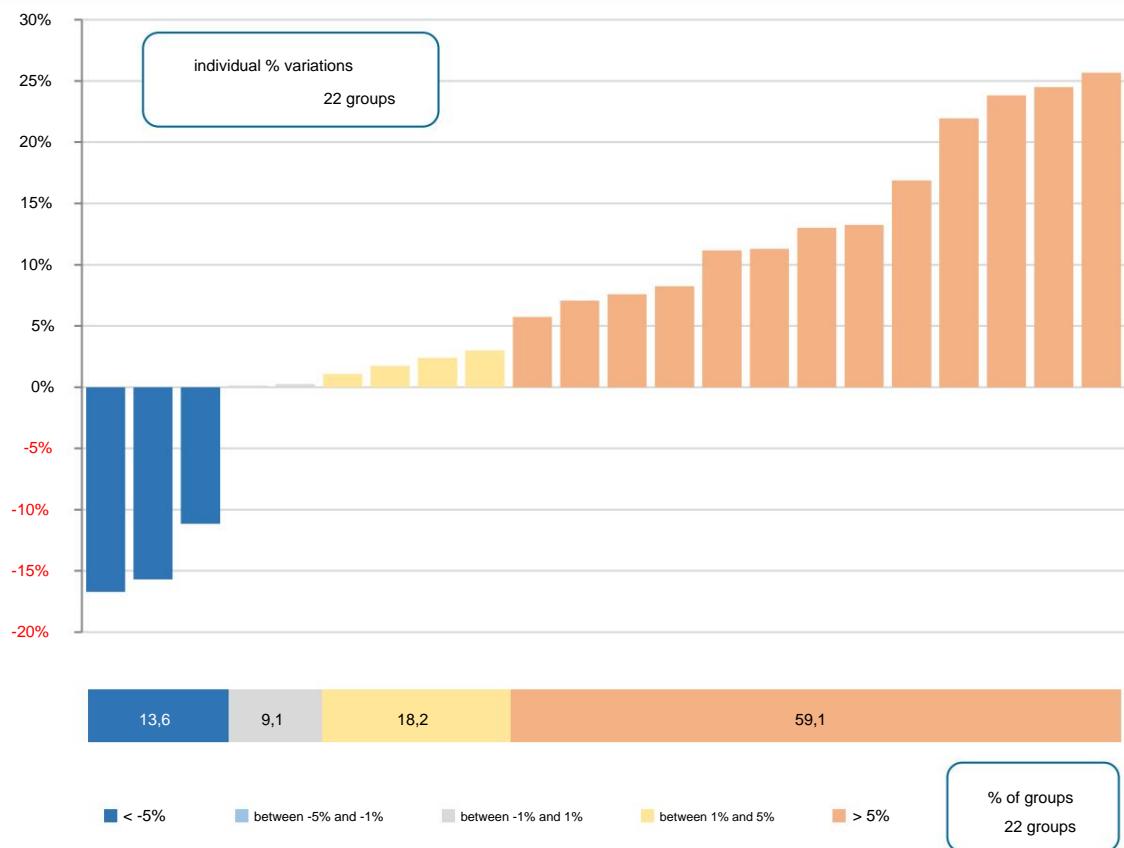
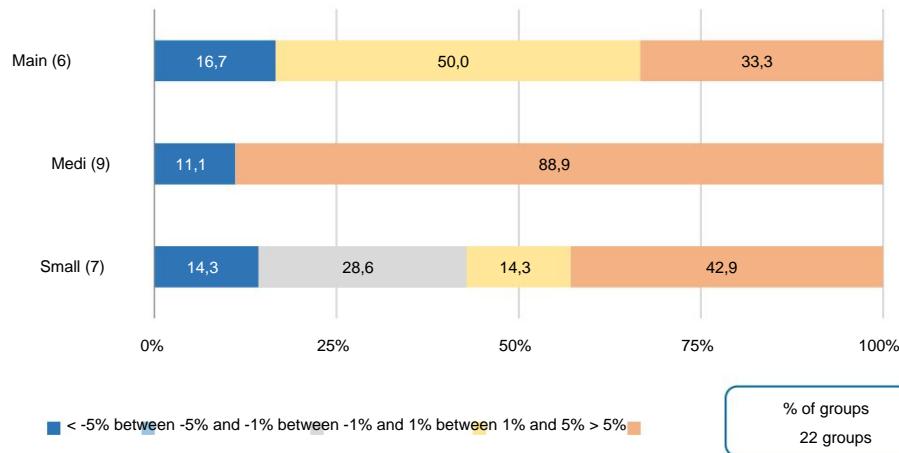
**Figure 7 - Individual variation of TCO 2024/2023**

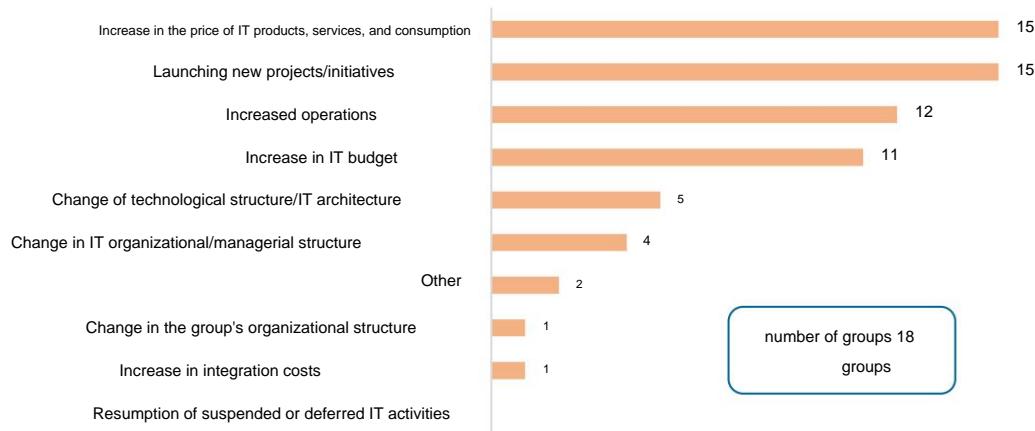
Figure 8 analyses the variation bands by size class.

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



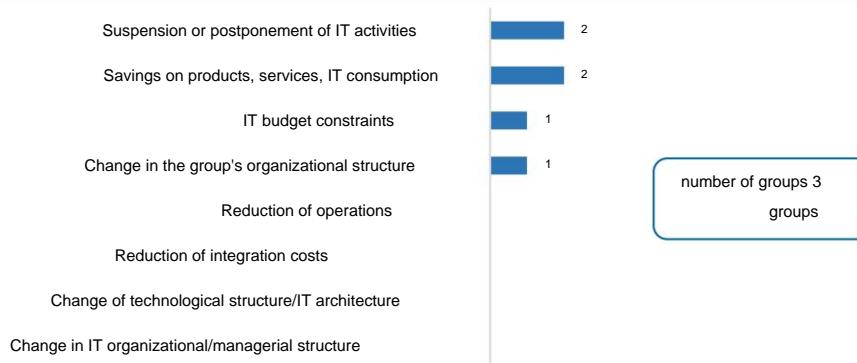
The following is an analysis of the main causes of increases and decreases in total TCO reported by the groups. The increase in TCO is mainly connected to the launch of new initiatives and the increase in the price of IT products and services (15 out of 18 groups) (Figure 9).

### Figure 9 - Causes of increased TCO



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

### Figure 10 - Causes of TCO reduction

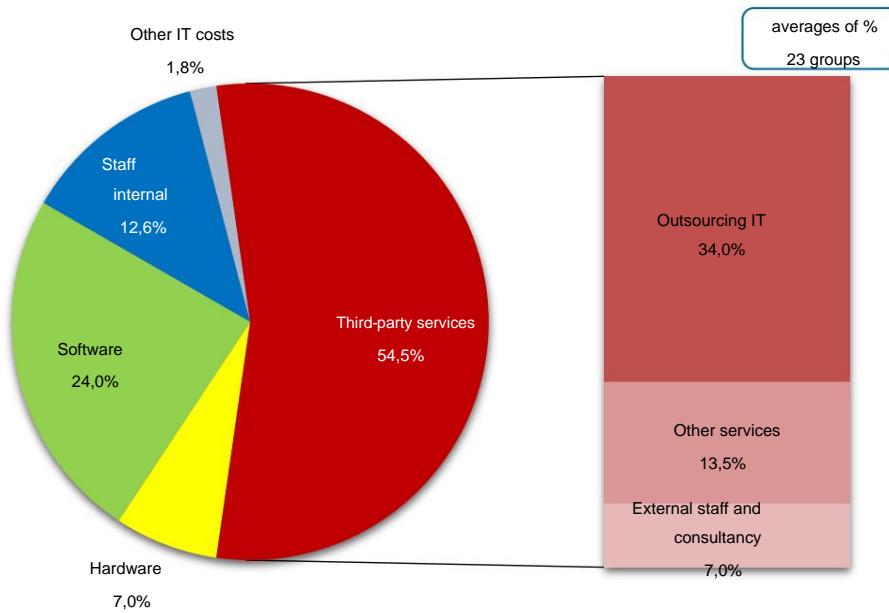


### 1.1.2 Production factors

The analysis model adopted provides for 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 supporting banking activities.

The TCO of the 23 participating groups, equal to 6,334 million euros, broken down by production factors in average percentages, is 54.5% dedicated to services received from third parties, divided between IT outsourcing (34%), external personnel and consultancy (7%), and other services<sup>11</sup> (13.5%). Looking at the IT costs incurred directly by the groups, software absorbs the largest share, equal to 24% of the TCO. overall, internal staff 12.6% and hardware 7% (Figure 11).

**Figure 11 - TCO for production factors**



The TCO breakdown by size class (Figure 12) shows that the share of costs for third-party services (shades of red), equal to 30.5% for Large groups, rises to 57.4% for Medium and over 69% for Small groups, progressively eroding all other costs. This phenomenon can be explained by the greater tendency of groups to resort to outsourcing as their size decreases. Similar results, analyzed from the perspective of the IT sourcing model, are shown in Figure 13.

<sup>11</sup> The "Other services" item includes fees for network services, voice traffic, turnkey projects, outsourced technological help desk services, and Disaster Recovery services.

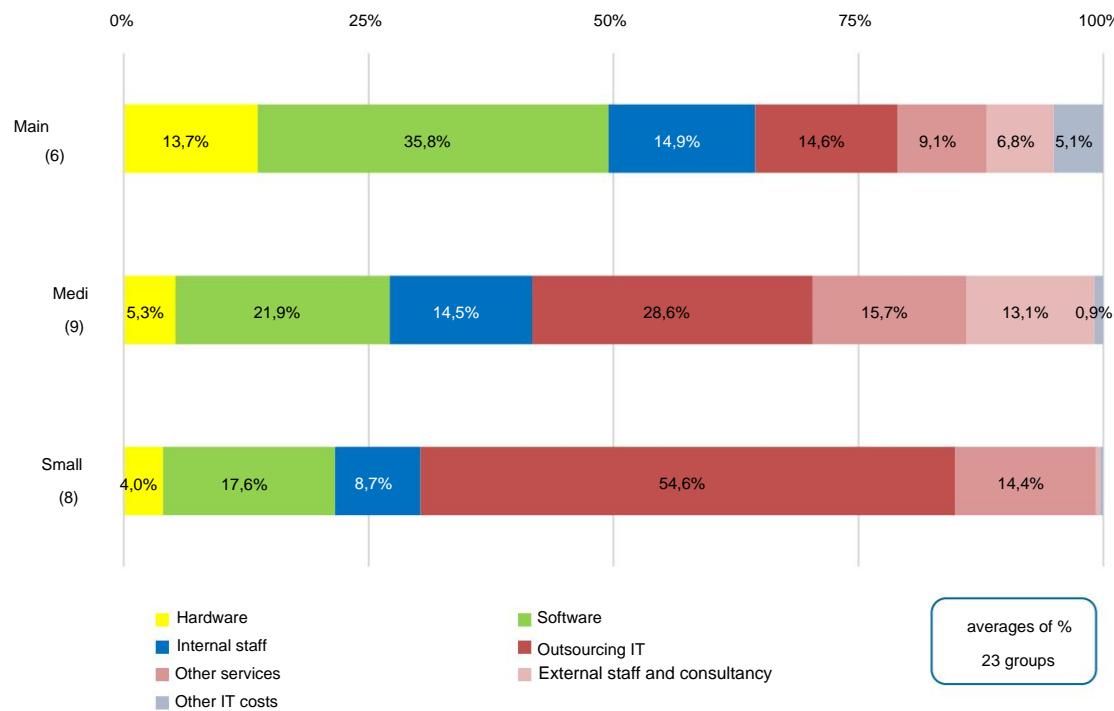
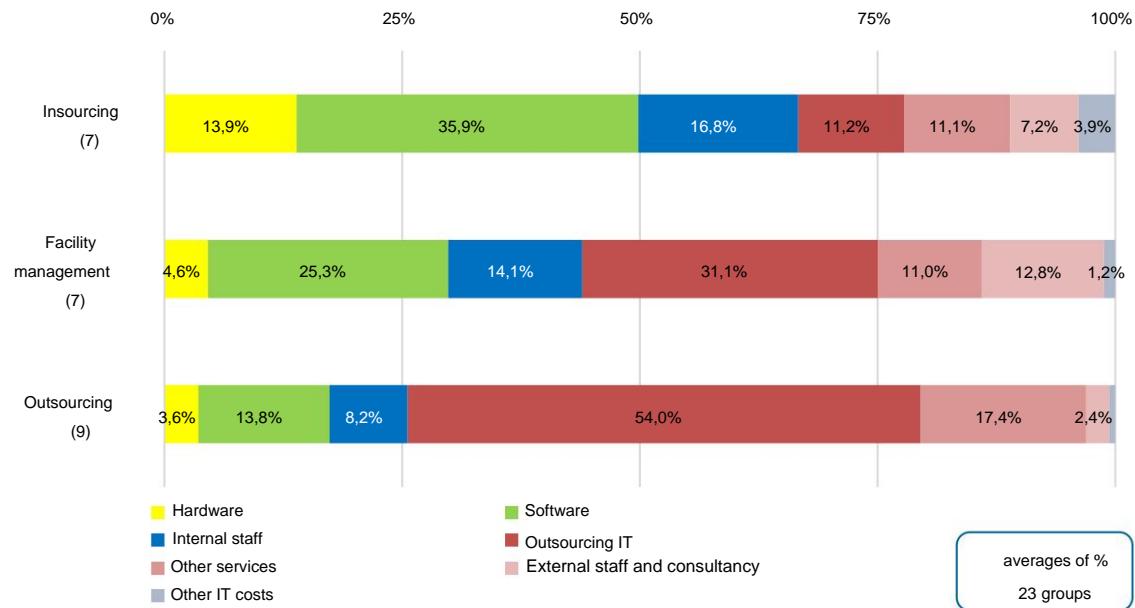
**Figure 12 - TCO by production factors and size class****Figure 13 - TCO by production factors and sourcing model**

Figure 14 represents, in final and absolute values, the evolution of the TCO for production factors in the five-year period 2020-2024 and in forecast for the 2025 financial year, for a constant sample of 19 Banking groups. Software revenues are experiencing significant growth, rising 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 TCO for hardware continues, albeit very slightly. Forecasts for 2025 predict a decrease or substantial stability in costs for all production factors.

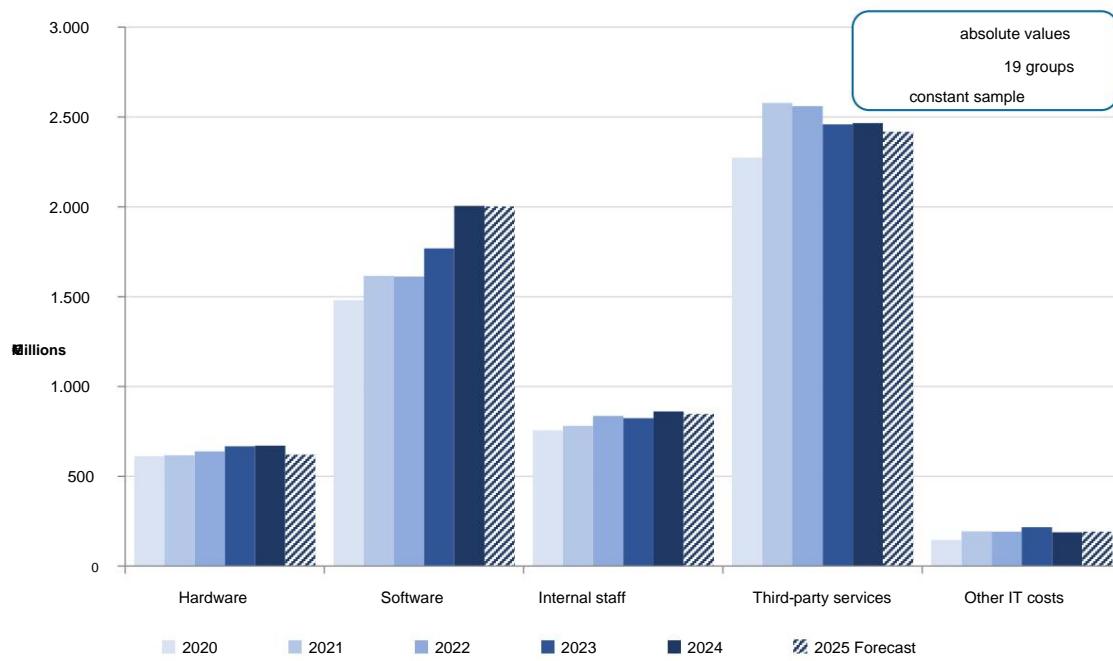
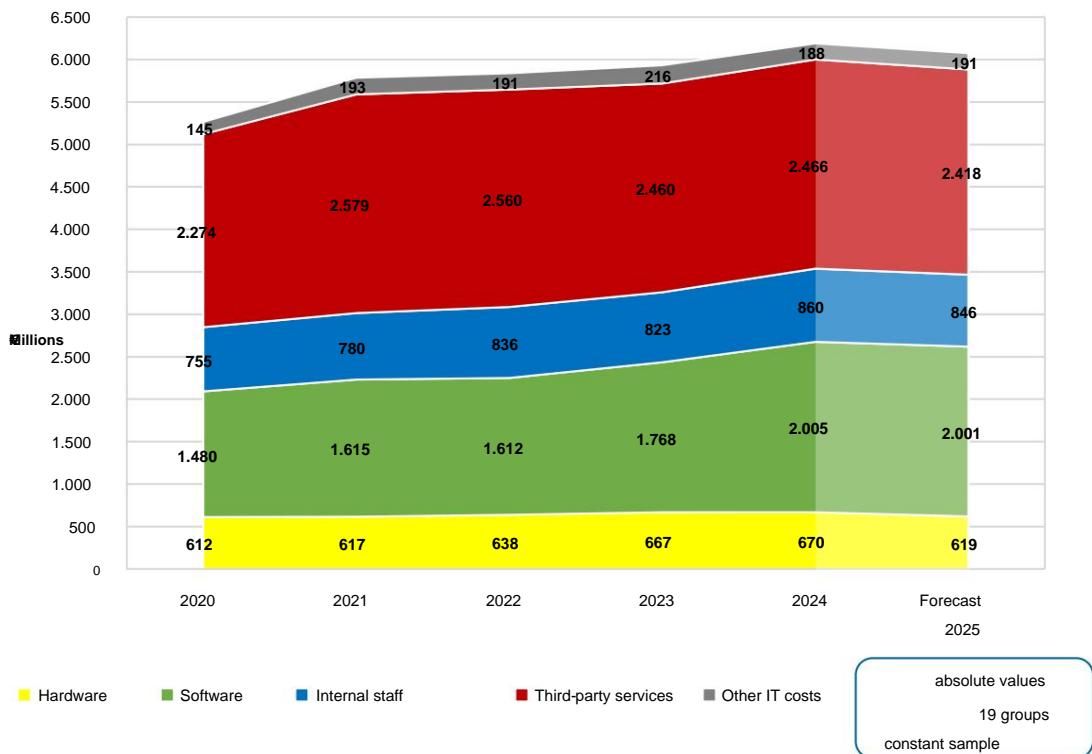
**Figure 14 - TCO by production factors: 2020-2024 trend and forecast - absolute values**

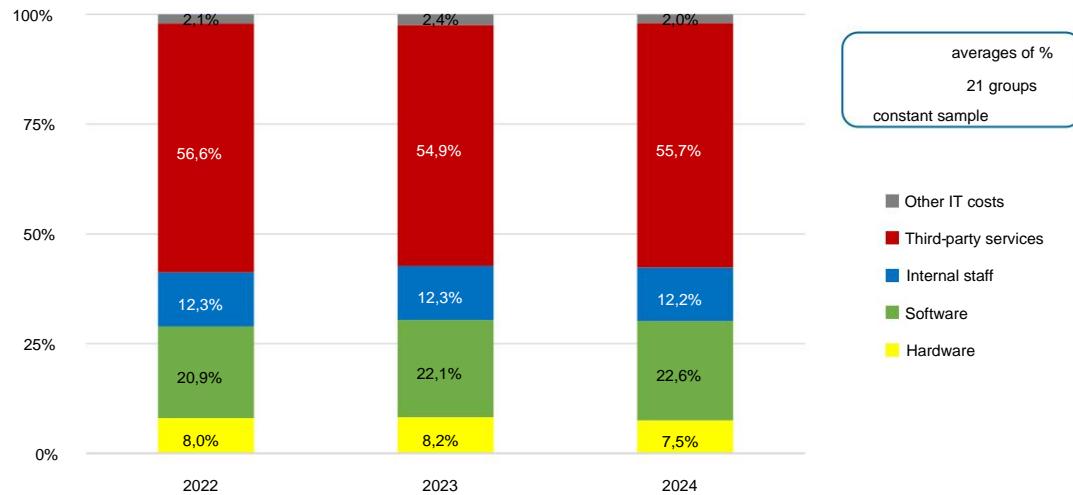
Figure 15 shows the trend of TCO in absolute value over the same time horizon and with the same sample of 19 groups, overlaying the production factors in a cumulative view for each financial year analyzed.

**Figure 15 - TCO by production factors: 2020-2024 trend and forecast - absolute values (vista 2)**

A similar analysis, conducted in percentage over the three-year period 2022-2024, allows us to highlight the factors

production whose TCO becomes more or less significant for a constant sample of 21 groups (Figure 16).

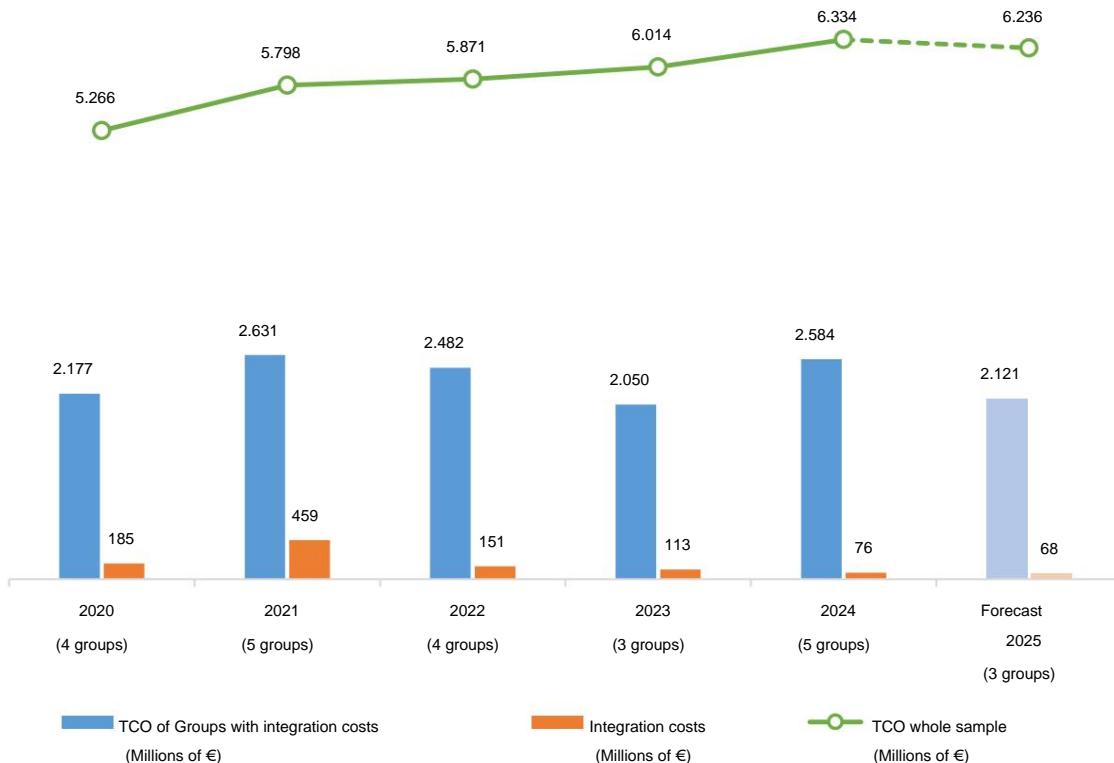
**Figure 16 - TCO by production factors: 2022-2024 trend - % values**



### 1.1.3 Integration costs

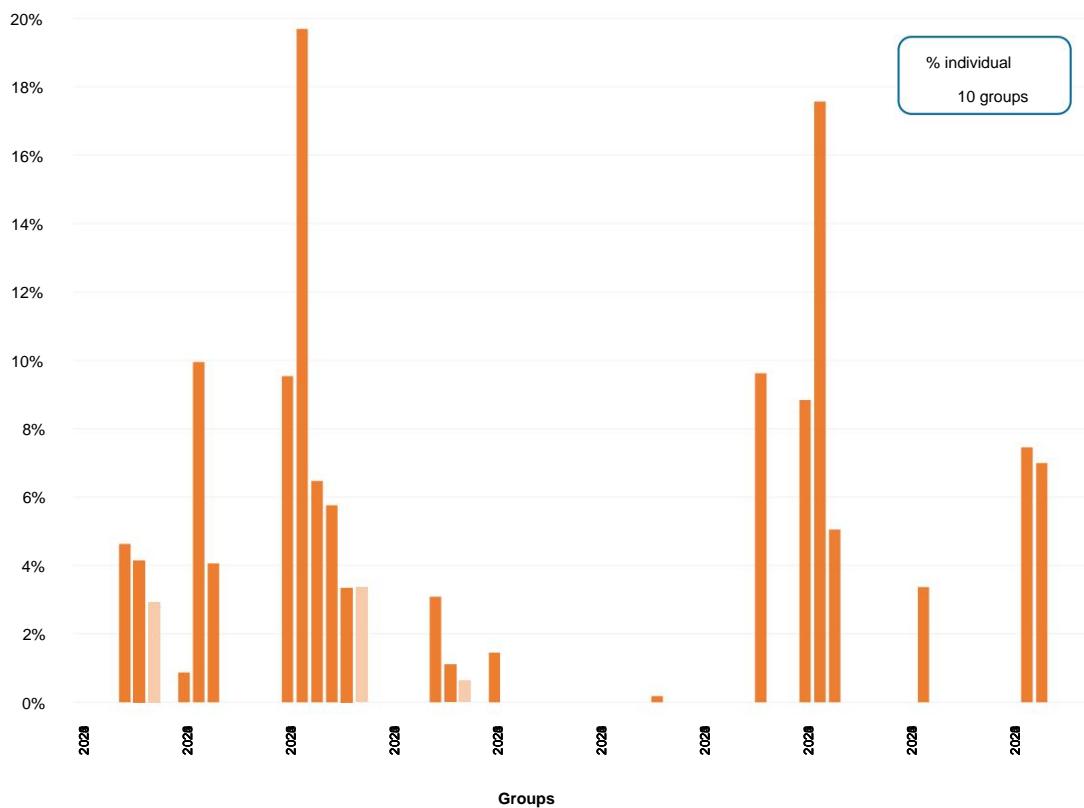
The graph in Figure 17 shows, over a five-year time horizon, the actual integration costs<sup>9</sup> (orange bar) for those banking groups that declared them, together with the overall TCO of these groups (blue bar). The x-axis shows, for each year, the number of groups that declared having incurred IT integration costs. The total costs of all groups that participated in the Survey, year by year, are also shown (green line). For the aforementioned figures, forecast values for the 2025 financial year are also provided.

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



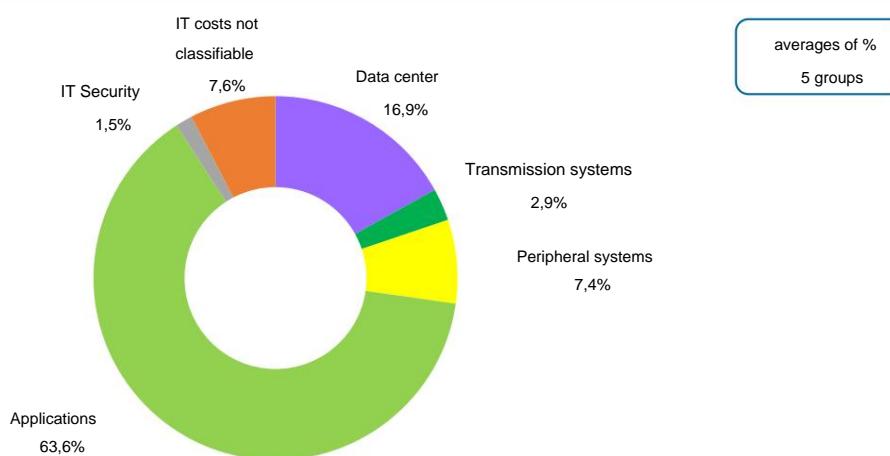
With reference to the same time interval, Figure 18 reports, in percentage terms with respect to the individual TCO, the trend of integration costs for the ten groups that reported this type of cost at least once in the period under examination.

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



Breaking down the integration costs for the 2024 financial year by thematic area and expressing them in percentage averages, we observe that the five groups that incurred them allocated the largest share to the Applications area (63.6%) (Figure 19).

**Figure 19 - Integration costs by thematic areas**

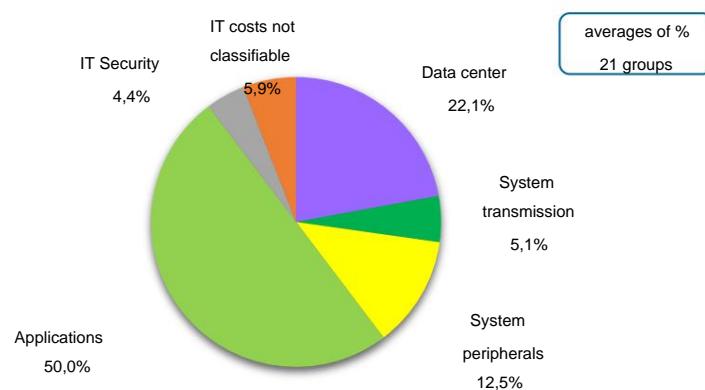


## 1.2 TCO e cash out IT

### 1.2.1 Thematic areas

This section analyzes TCO and IT cash outlay (current expenses plus investments) from a thematic perspective. These analyses concern costs incurred by groups both directly and with third parties and are developed with reference to a sample of 21 groups.<sup>12</sup> As can be seen from Figure 20, the Applications and Data Center areas absorb the largest shares of IT costs, accounting for 50% and 22.1% of the TCO, respectively. IT security costs stand at 4.4%, a figure that may be underrepresented due to the difficulty of isolating this type of cost.

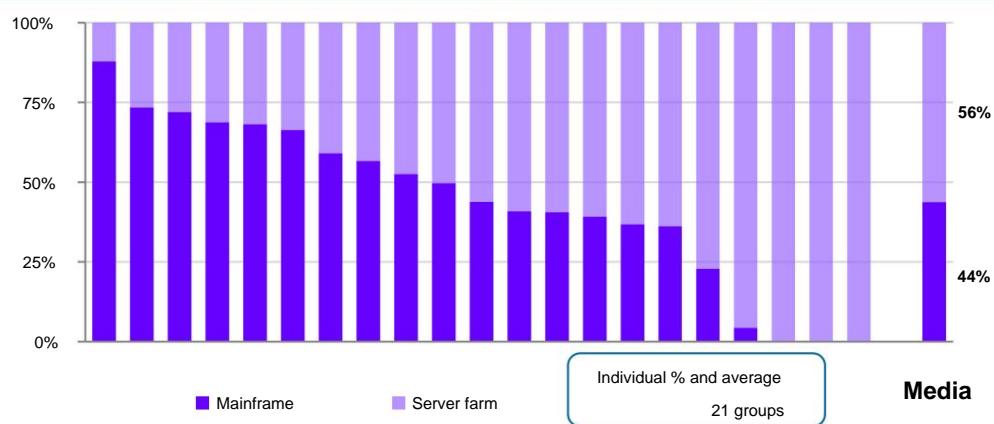
**Figure 20 - TCO by thematic areas**



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

Figure 21 focuses on the TCO of the Data Center, showing, for each group, the percentage split between the share for the Mainframe and that for the Server farm. A completely heterogeneous situation is observed, with 18 groups incurring costs for both types of systems and three that only declare costs for the server farm. In average percentages, the largest share of data center costs is dedicated to the server farm (56%).

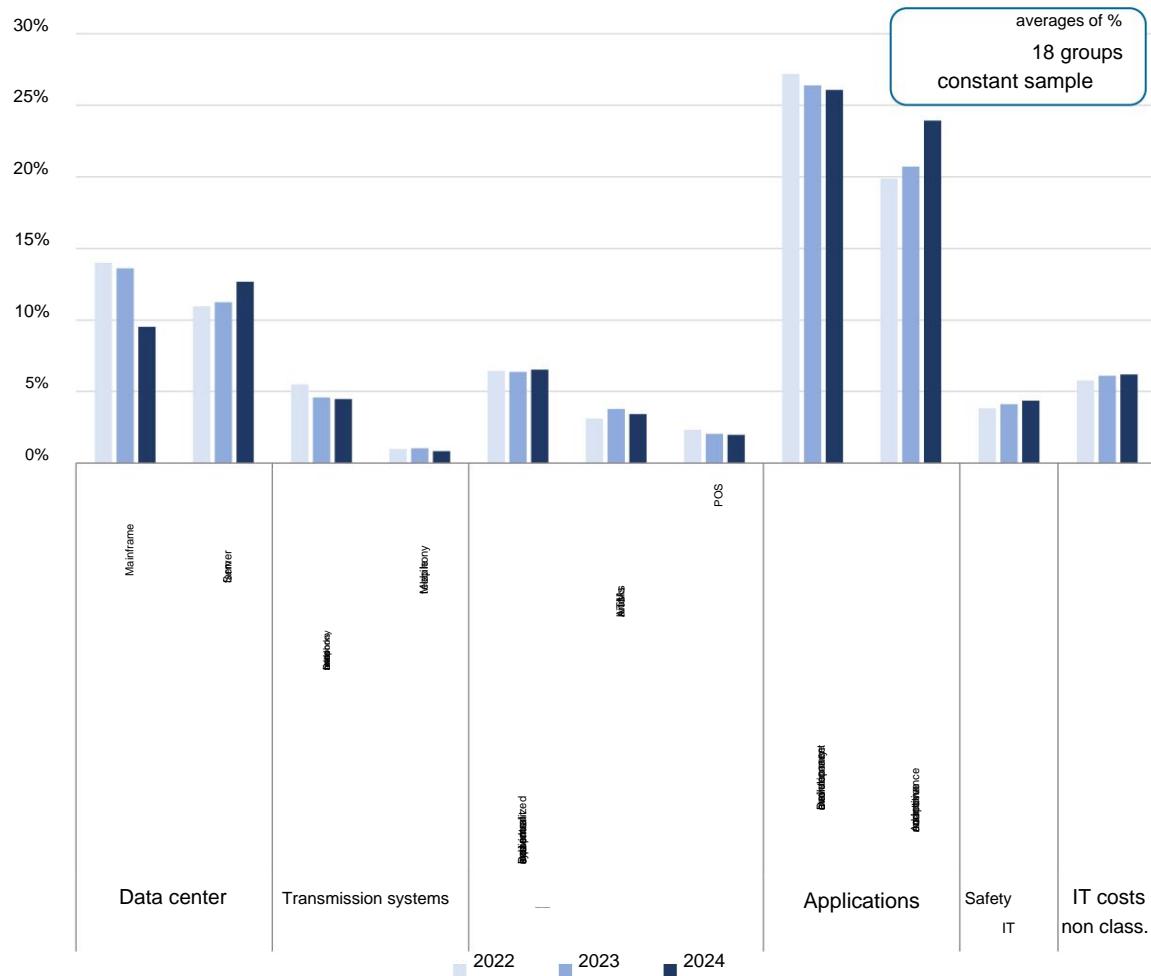
**Figure 21 - Data Center TCO: Individual Distribution between Mainframe and Server Farm**



<sup>12</sup> For a significant representation of the phenomena, the analyses by thematic areas in percentage averages exclude the groups - usually in Outsourcing - that have attributed to the item "Non-classifiable IT costs" more than 30% of the total TCO.

Figure 22 shows the TCO trend by thematic area as percentage averages for a constant sample of 18 groups that allocated costs with sufficient granularity over the 2022-2024 period. In particular, in the 2024 financial year, significant variations can be noted for Adaptive and Corrective Maintenance and Server Farms, with an increasing trend, and for Mainframes, with a decreasing trend.

**Figure 22 - TCO by thematic areas: 2022-2024 trend**



The cash outIT by thematic area, expressed as average percentages across the 21 groups that break it down in sufficient detail (Figure 23), presents a breakdown very similar to that of the TCO.

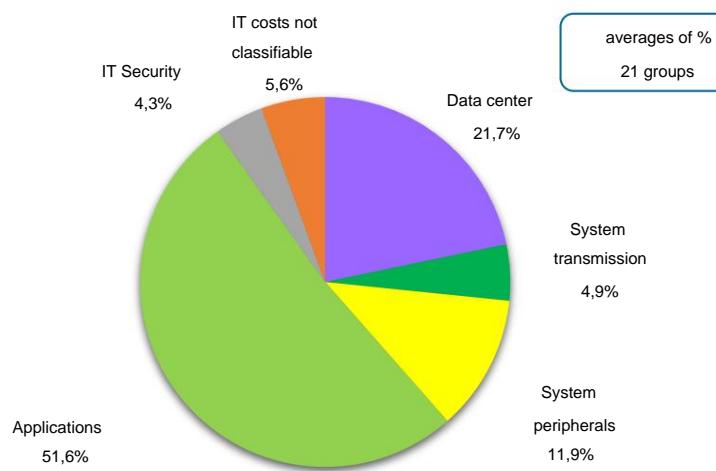
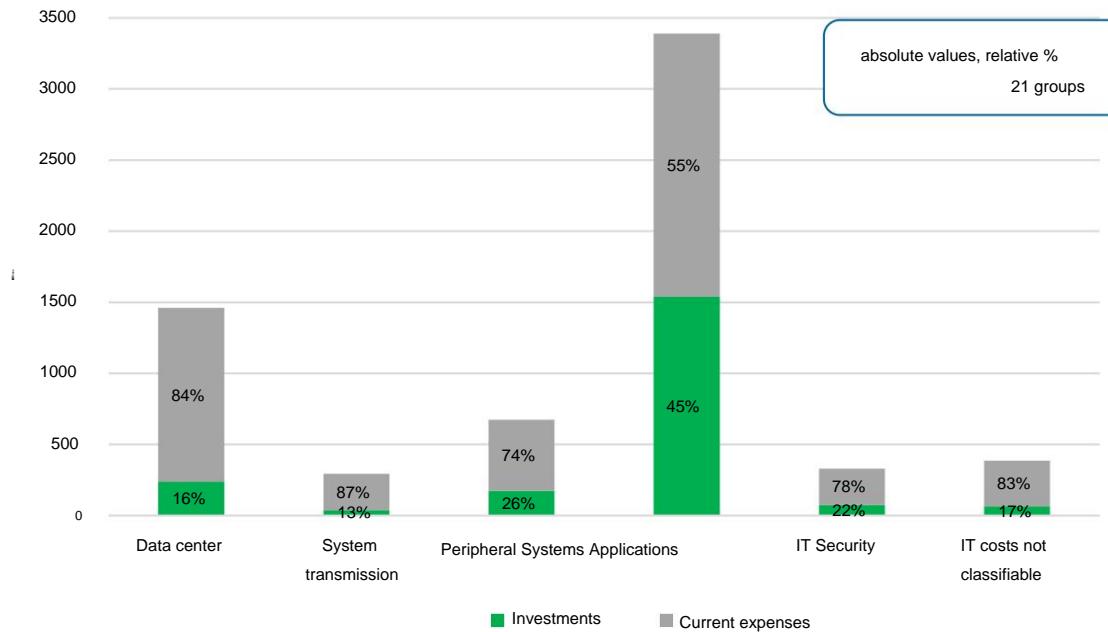
**Figure 23 - IT cash out by thematic area**

Figure 24 shows the absolute distribution of IT cash outlays among the thematic areas—for the 21 groups that provided it with sufficient granularity—along with its breakdown, within each area, between investments and current expenditures, the two components of the cash outlay. This breakdown can be compared with the overall breakdown for the entire IT cash outlay of the 23 groups, whose current expenditure and investment shares are 67.7% and 32.3%, respectively.

**Figure 24 - IT cash out by thematic area: current expenses vs. investments**

The Appendix, Tables 16 to 23, show the distribution of the above-mentioned economic variables by thematic area and production factor, for the 21 groups that provide sufficient detail regarding TCO. All values are expressed as average percentages, also with reference to the different IT sourcing models and size classes.

### 1.2.2 IT Security

The economic variables relating to **IT Security**<sup>13</sup> are detected and represented separately from the thematic areas, therefore the shares attributed to the various areas should be considered, in general and except in cases where the groups have difficulty isolating them, net of this component.

Figure 25 shows the individual percentages of cash outlay dedicated to IT security, values that vary between 0.3% and 8.4% and which, on average, are equal to 4.2%. Eight groups integrated the provided value with a percentage estimate relating to IT security expenses that cannot be analytically detected (the estimated shares are represented in the graph by the shaded areas). Including the estimated values, the average rises to 4.9%.

In absolute terms, the total cash outlay that the 23 groups allocated to IT security in the 2024 financial year amounts to 365.7 million euros, including estimated components.

**Figure 25 - Individual Cash Out for IT Security**

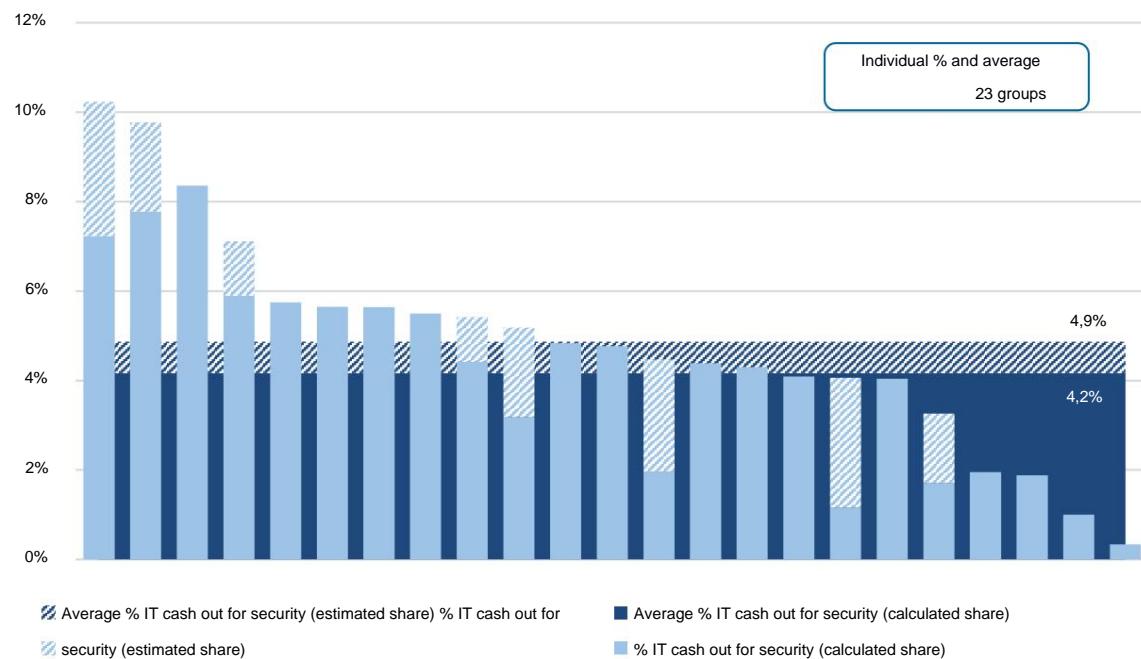


Figure 26 shows the trend of cash out for IT Security, as an average percentage of total IT cash out, in the five-year period 2020-2024 for a constant sample (19 groups), documenting an ever-increasing economic commitment starting from 2021.

<sup>13</sup> The list of cost items included in IT Security is reported in the paragraph "Productive factors and thematic areas" of the Chapter "Sample and methodological notes".

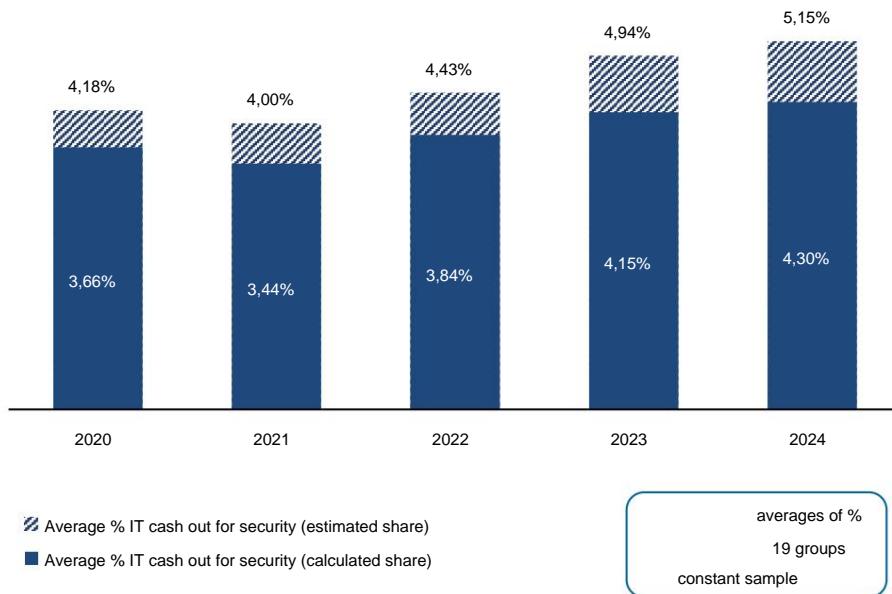
**Figure 26 - Cash out for IT Security: 2020-2024 trend**

Figure 27 compares the absolute value trends of TCO and cash out, the latter both net and inclusive of estimated portions, allocated to IT security for the same period and sample. A general upward trend is evident for both curves, with cash out consistently above TCO.

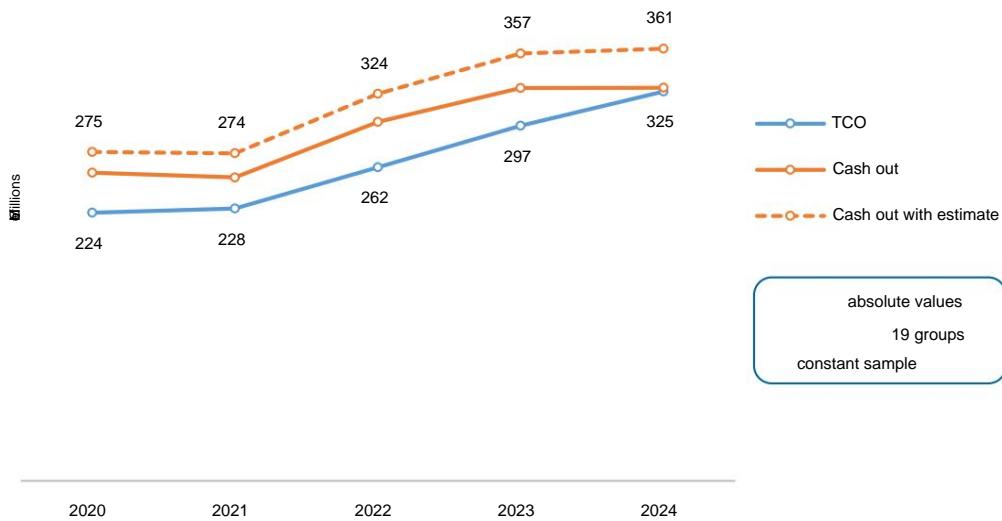
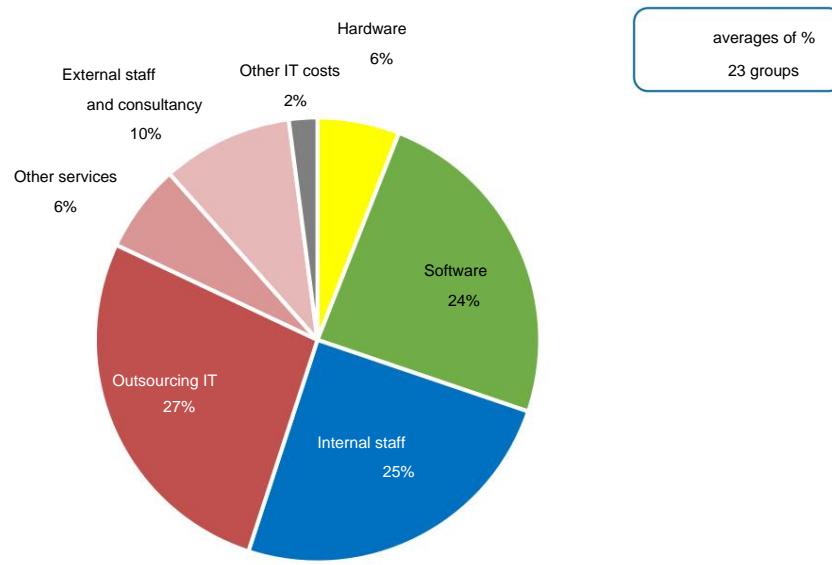
**Figure 27 - TCO and cash out for IT Security: 2020-2024 trend**

Figure 28 analyzes the TCO for IT security divided among production factors. It is observed that these costs are mainly intended for Services from third parties (segments with shades of red, 43%), followed by Internal staff (25%), Software (24%) and Hardware (6%).

**Figure 28 - TCO for IT Security, by production factors**

## 1.3 Cash out IT

### 1.3.1 Compliance

This paragraph reports the expenditure incurred in 2024 for compliance, i.e. for IT interventions carried out to meet the requirements of national and European regulations, as well as international reference principles and standards, which impose mandatory interventions for the banking group (excluding interventions arising from internal regulations or policies and recurring costs for compliance interventions carried out in previous years). In absolute value, the overall IT cash out allocated to compliance interventions by the 21 responding groups amounts to 780.9 million euros.

Figure 29 shows the individual percentages of IT cash outlays allocated by each group to compliance measures, ranging from 3.1% to 20%, with an average of 11.1%. The variability between individual values, also observed in previous financial years, appears to be partly attributable to the different methods of allocating compliance costs adopted by the groups, the different time periods for implementing the measures, and, more generally, the difficulties encountered in isolating compliance costs within overall IT spending.

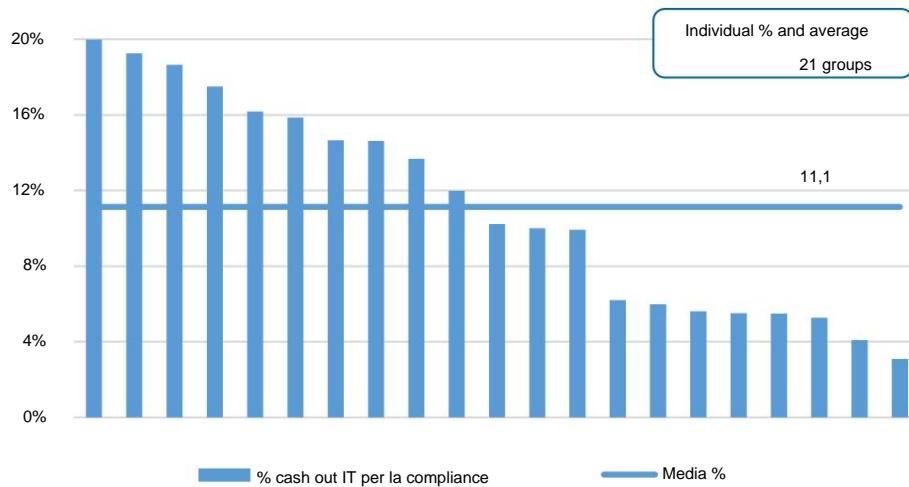
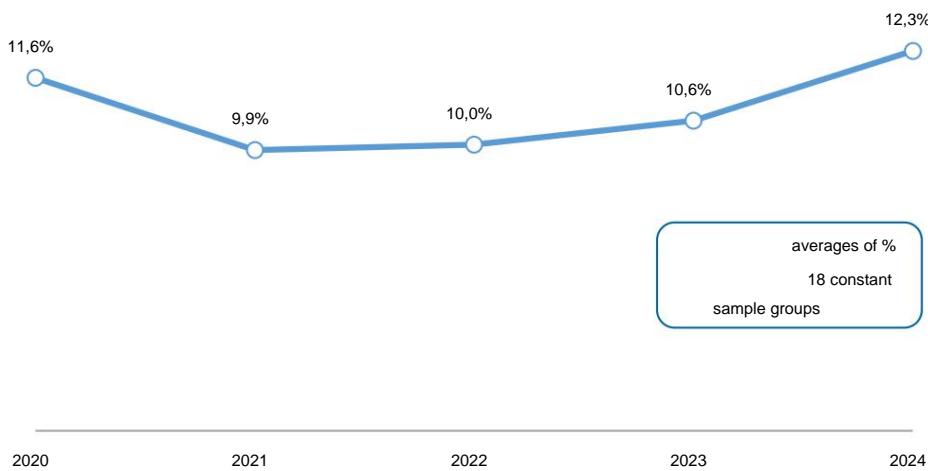
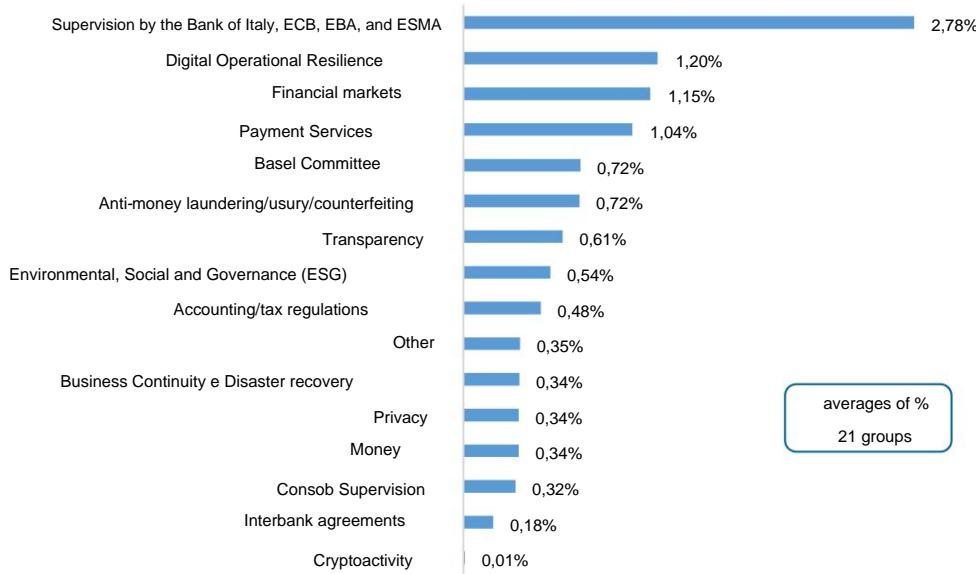
**Figure 29 - Individual IT cash out for compliance**

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

**Figure 30 - IT cash out for compliance: 2020-2024 trend**

Returning to the sample of 21 groups, the areas that on average required the greatest financial commitment for regulatory compliance, again in 2024, are Bank of Italy/ECB/EBA/ESMA supervision (2.78% of total IT cash out), financial market regulation (1.15%), and payment services (1.04%), to which is added digital operational resilience (1.2%); the other areas all stand at values below 1% (Figure 31).

**Figure 31 - IT cash out for compliance: average by area**

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

Table 4 reports the areas of the previous figure with the average percentage values of the groups divided into size classes.

**Table 4 - IT cash out for compliance: breakdown by area and size class**

Scope	Main(5)	Medi(9)	Small(7)
Supervision by the Bank of Italy, ECB, EBA, and ESMA	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 Committee	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 regulations	0,58	0,64	0,20
Other	0,11	0,75	0,00
Business Continuity e Disaster recovery	0,19	0,39	0,40
Privacy	0,50	0,32	0,26
Money	0,22	0,34	0,42
Consob Supervision	0,48	0,38	0,13
Interbank agreements	0,01	0,19	0,30
Cryptoactivity	0,00	0,00	0,03
To.	<b>13,2%</b>	<b>11,9%</b>	<b>8,7%</b>

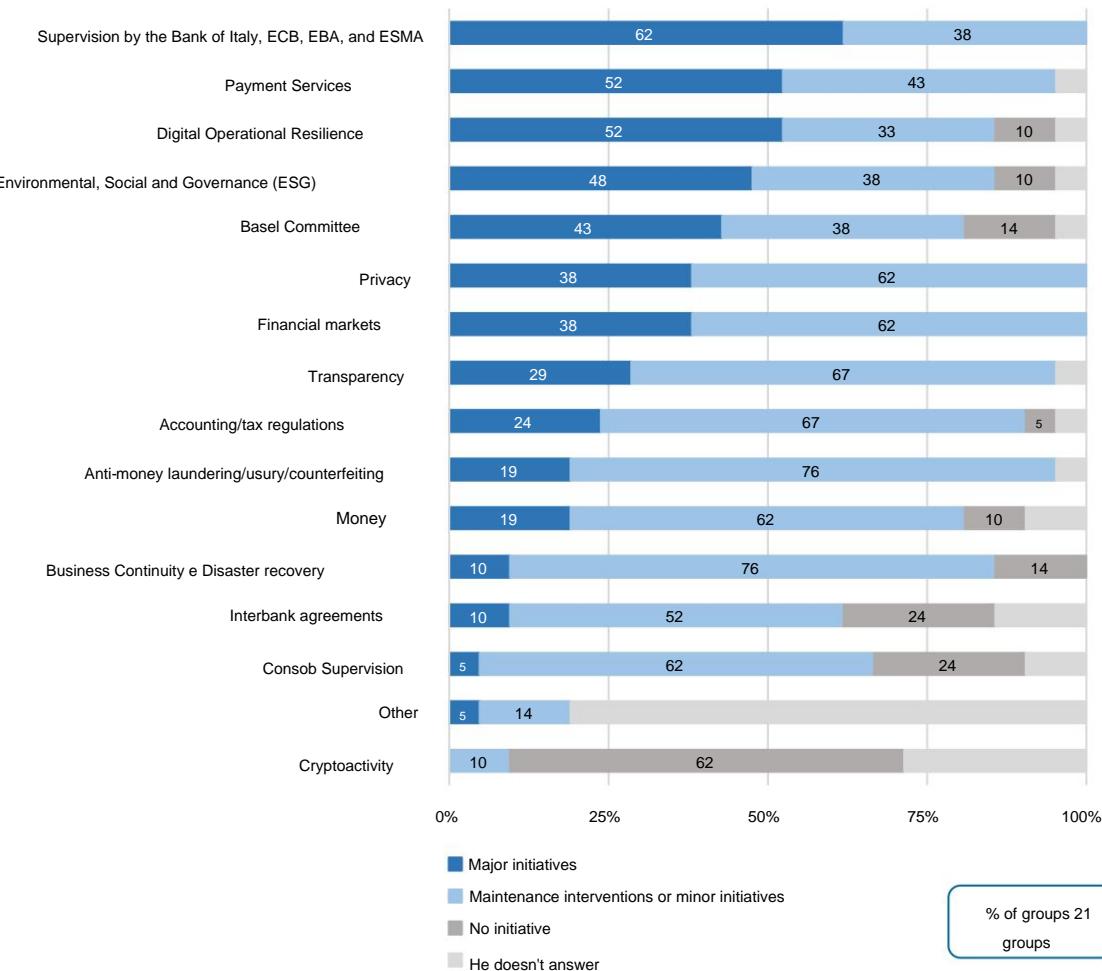
To complete the compliance analysis, the scope of IT project initiatives undertaken in 2024 in the same regulatory areas is identified. These are classified into major initiatives.

project-related (e.g. initiation or continuation of significant projects following new or substantially modified regulations) and maintenance interventions or minor project initiatives (e.g. limited interventions on existing applications, projects with little impact on IT).

Over half of the sample has led major IT project initiatives in areas such as supervisory and payment services regulations, digital operational resilience, and cybersecurity.

The areas in which at least 90% of the responding groups are involved in IT interventions (of any size) concern regulations on supervision, financial markets and payment services, privacy, transparency and anti-money laundering/usury/counterfeiting (Figure 32).

**Figure 32 - Compliance project initiatives**



The analyses of the project initiatives for compliance interventions relating to the groups divided into size classes are reported in the Appendix (from Figure 122 to Figure 124).

### 1.3.2 Processes and functional areas

The analysis of the distribution of IT spending by functional areas and processes refers to the ABI Lab banking process taxonomy, which provides for a composition of processes divided into four functional areas: governance processes, support processes, operations processes, marketing, commercial and customer service processes<sup>14</sup>.

<sup>14</sup> The list of processes included in the four functional areas is shown in Figure 34.

With reference to IT cash out, Figure 33 shows that, for 20 responding groups, Operations processes absorb an average of 41.1% of spending, followed by support processes (28.6%), marketing, sales and customer service (16.7%), and governance (13.7%). Business-oriented activities absorb a total of 57.8% of IT cash out, and those dedicated to functional support, referred to as functions<sup>15</sup>, account for 42.2%. The ratio between business and functions shares in 2024 is 1.37, lower than the previous year (1.42). The figure also breaks down these shares by size class.

**Figure 33 - IT cash out by functional area**

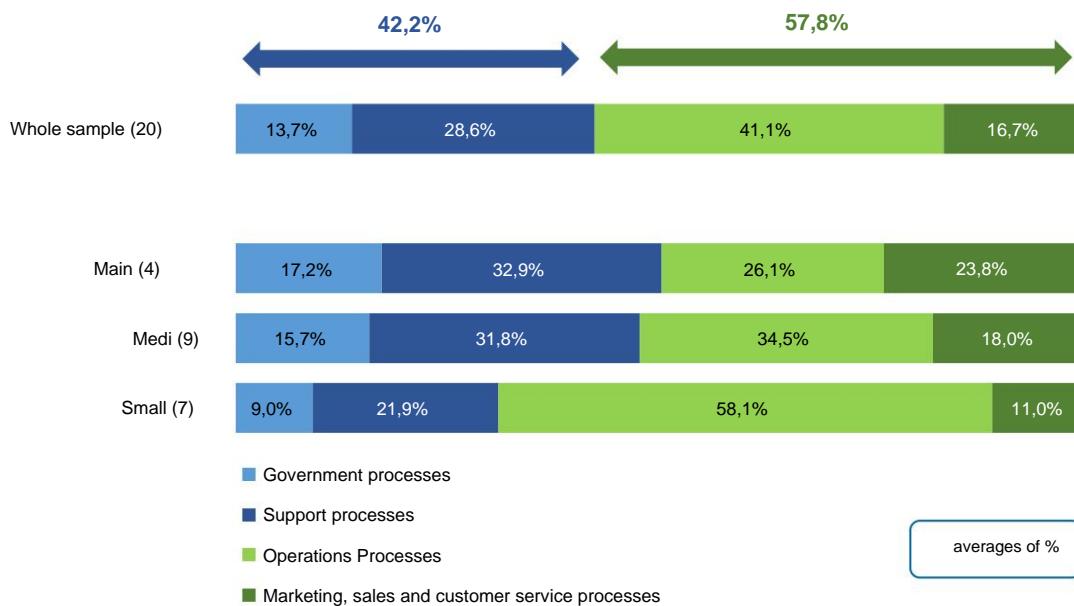
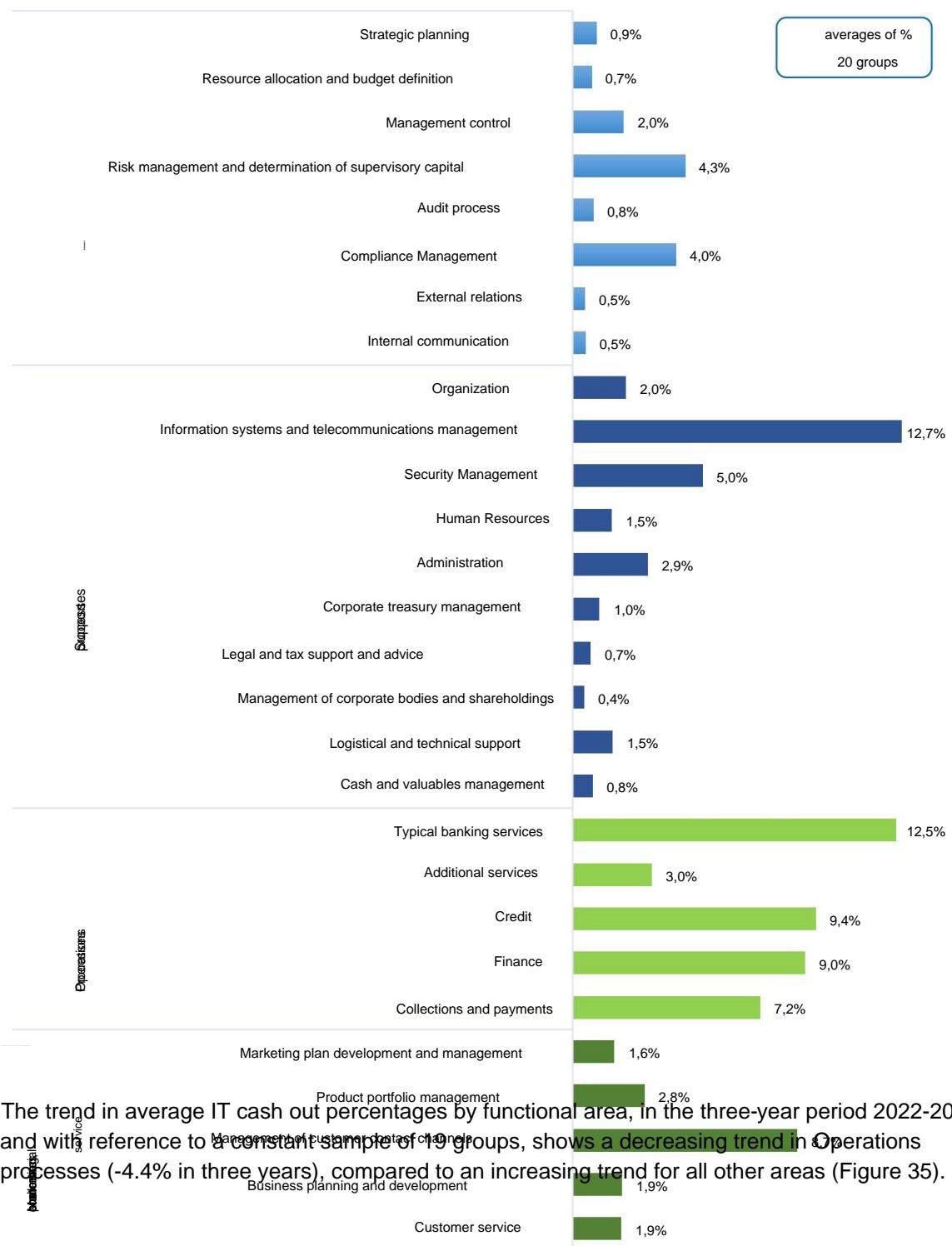


Figure 34 analyzes in detail, for the same sample, the distribution of IT cash outflows in average percentages within the individual processes pertaining to the four functional areas. In the governance processes area, the largest shares are absorbed by risk management and determination of regulatory capital (4.3%) and compliance management (4%). In the support processes, the greatest weight is represented by information systems and telecommunications management (12.7%), followed by security management (5%). The core processes of the Operations area account for the largest shares, ranging from 7.2% for collections and payments to 12.5% for typical banking services. In the marketing, commercial, and customer service processes area, the management of customer contact channels has the greatest impact on total IT cash outflows (8.7%).

<sup>15</sup> The Business area is composed of the functional areas "Operations Processes" and "Marketing, Sales, and Customer Service Processes." The Functions area is composed of the functional areas "Governance Processes" and "Support Processes."

**Figure 34 - IT cash out for processes**

The trend in average IT cash out percentages by functional area, in the three-year period 2022-2024 and with reference to a constant sample of 19 groups, shows a decreasing trend in Operations processes (-4.4% in three years), compared to an increasing trend for all other areas (Figure 35).

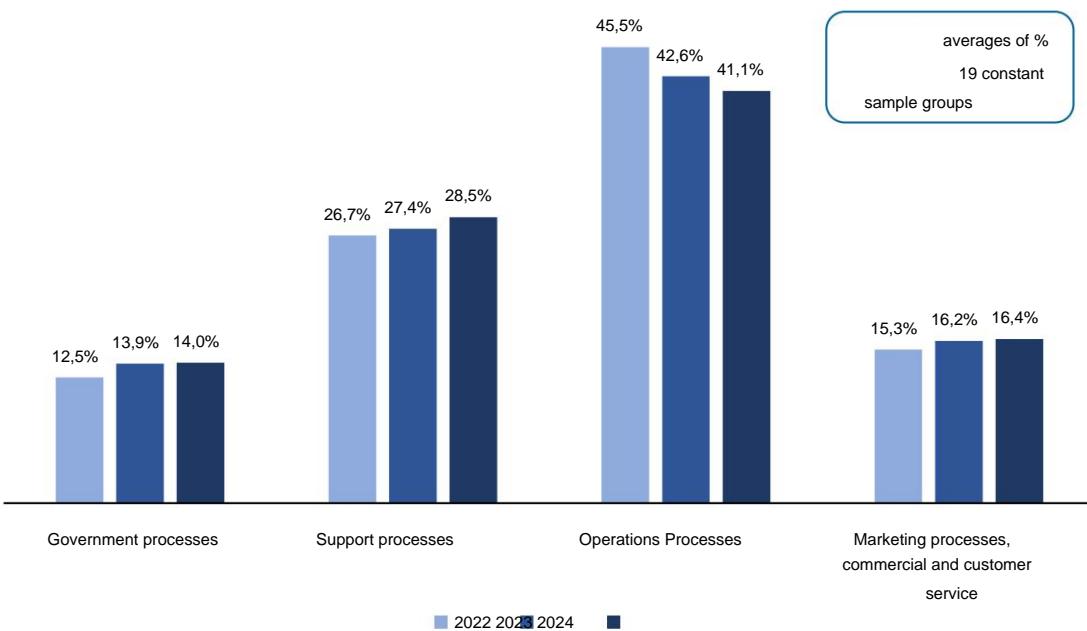
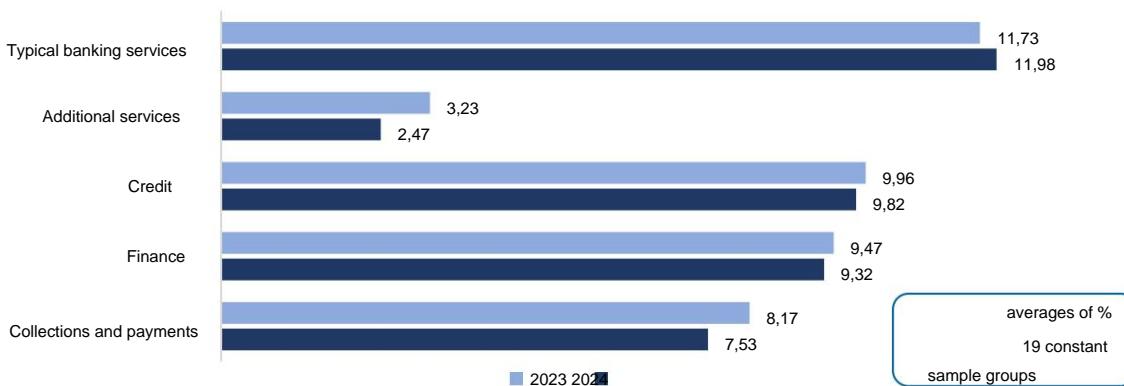
**Figure 35 - IT cash out by functional area: trend 2022-2024**

Figure 36 offers an in-depth look at the phenomenon mentioned above: the analysis refers to the same constant sample as in the previous figure and compares the cash outflow dedicated to the individual processes of the Operations area over the last two financial years.

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

### 1.3.3 Run e change

The IT cash out is analyzed below separately between two components, distinguished according to the purpose and independently of the accounting regime:

**Ȫ Run:** IT cash out (e.g. purchases, fees, internal/external personnel, outsourcing) employed for maintaining current operations (run the business), including corrective/adaptive maintenance and regulatory and organizational adjustments of limited scope.

**Ȫ Change:** IT cash out (e.g. purchases, fees, internal/external personnel, outsourcing) intended projects or initiatives aimed at improving and/or innovating banking operations (change the business), including far-reaching regulatory and organizational adjustments and evolutionary maintenance.

For the 20 groups that provided the breakdown for 2024, on average 67.2% of the IT cash out is dedicated to run and 32.8% to change (Table 5). Overall, the IT cash out allocated by them to run and change is equal to 3,138 and 2,101 million euros, respectively. Starting from the share dedicated to change, it may be interesting to redetermine its net of expenses related to interventions deriving from regulatory obligations (compliance), obtaining, for the 20 groups in question, an IT cash out equal to 1,376 million euros (possible indirect indication of the expenditure allocated to implement business innovation strategies).

When analyzed within functional areas, change spending has a greater impact on governance processes (5.6% out of 13.7%). Conversely, ongoing management weighs more heavily on Operations processes (29.5% out of 41.1%).

**Table 5 - IT cash out by functional areas and run/change**

	% del cash out IT	Run	Change	medie di % 20 gruppi
Processi di governo	13,7%	=	8,0% + 5,6%	Functions 42,2%
Processi di supporto	28,6%	=	19,3% + 9,2%	
Processi di Operations	41,1%	=	29,5% + 11,6%	Business 57,8%
Processi di marketing, commerciali e customer service	16,7%	=	10,4% + 6,4%	
Total	100,0%	=	67,2% + 32,8%	

Figure 37 shows, for each size category, the IT cash out bar dedicated to run operations alongside the change bar (each pair of bars represents 100% of the total), further broken down into functions and business components. The share of IT cash out dedicated to change operations increases with the operating size of banking groups, rising from 18% for small groups to 43% for large groups.

**Figure 37 - IT cash out by run/change and size class**



It is interesting to position banking groups individually, differentiated by size class, in a diagram whose horizontal sides represent the percentages of run and change and the vertical sides those of business and functions (Figure 38).

All the groups examined, with the exception of one of the Main ones, are positioned in the middle. The left side of the square is characterized by a prevalence of run over change. Of the 20 groups, 14 are in the upper half, where business spending predominates. Groups tend to cluster based on size, with average values roughly along a diagonal: larger groups tend to allocate greater portions of IT cash outlays to change and functional support areas compared to smaller groups, which, conversely, direct spending primarily to run and business areas.

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



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

#### 1.3.4 Public cloud

This section analyzes banking groups' spending on public cloud services, as a proportion of their overall IT cash outlay. In absolute terms, the total cash outlay allocated to the public cloud by 22 groups in the 2024 financial year amounts to €239.9 million.

The graph in Figure 39 shows, in the gray bars, the individual percentages for 2024, which range up to a maximum of 14.5%. On average, the share of IT cash outlay allocated to the public cloud is 4.1%, in line with the 2023 figure. The forecast trend for the two-year period 2025-2026 is increasing for 16 out of 22 groups.

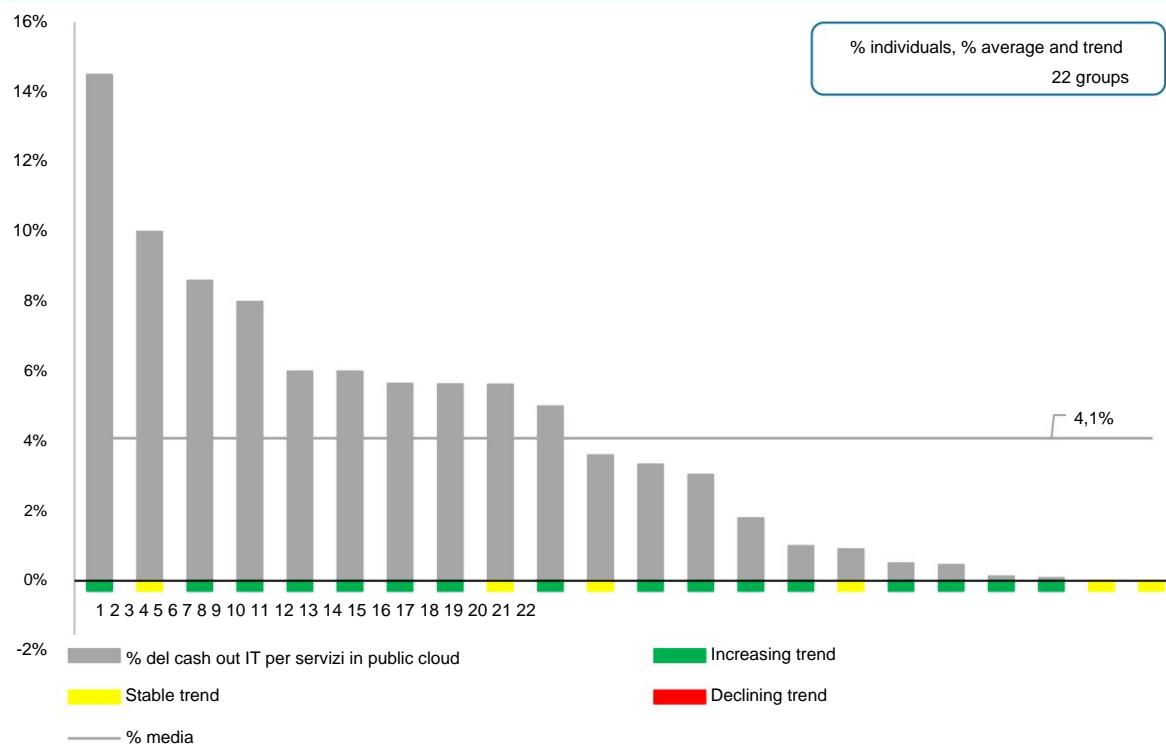
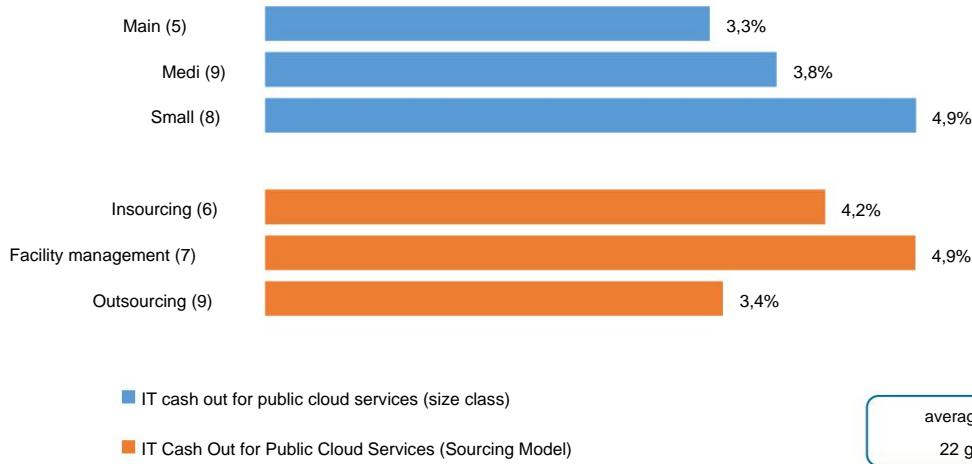
**Figure 39 - Individual IT cash out for public cloud services**

Figure 40 aggregates the above percentages by size class and by group's IT sourcing model. The averages by size class confirm the same phenomenon as the previous year, where the class with the lowest percentage is that of the Large groups (3.3%), while the Small groups are those with the highest percentage (4.9%).

**Figure 40 - IT cash out for public cloud services: breakdown 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 to open banking initiatives in the 2024 financial year and which, in absolute value, amounts to a total of 24.7 million euros.

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

**Figure 41 - Individual IT cash out for open banking**

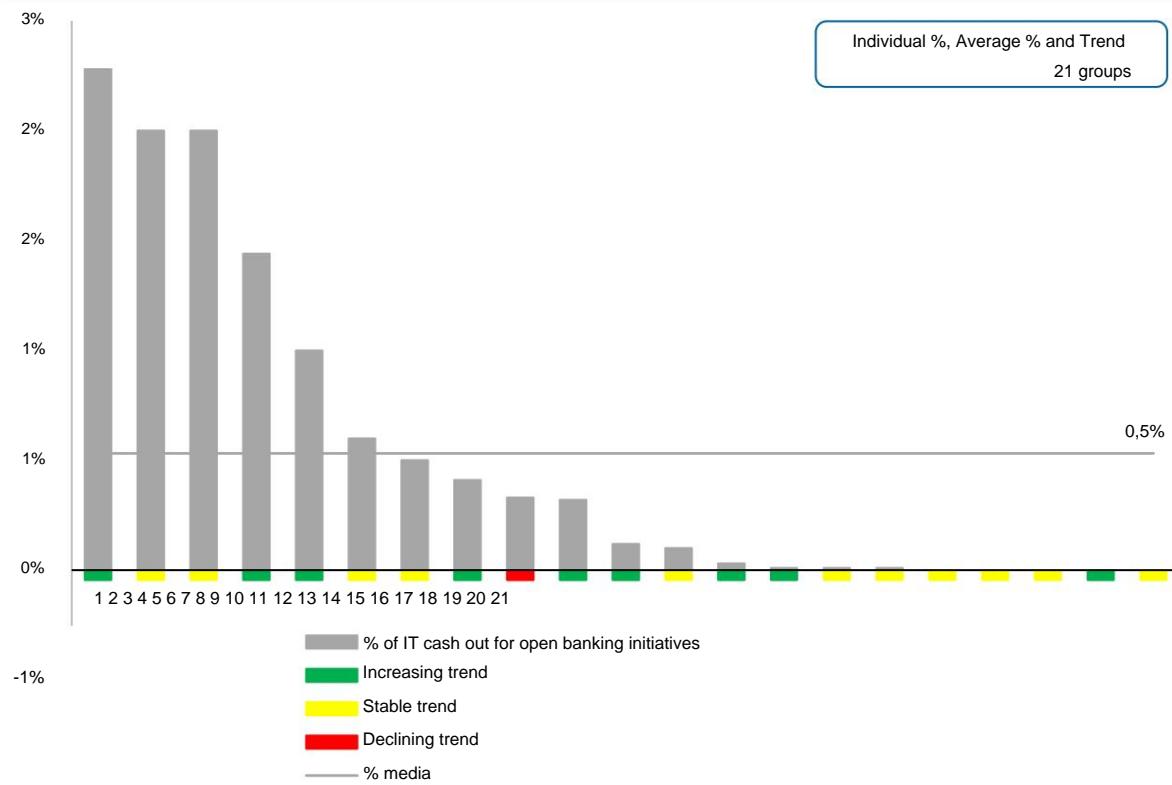


Figure 125 in the Appendix aggregates the above percentages by size class and by model. in IT sourcing.

## 1.4 IT investments and technological innovation

This paragraph provides a focus on the IT investments of the 23 banking groups which, in 2024, amount to a total of 2,140 million euros.

Figure 42 shows the trend in total IT investments recorded by a constant sample of 19 groups in the five-year period 2020-2024, together with the forecast total indicated for 2025.

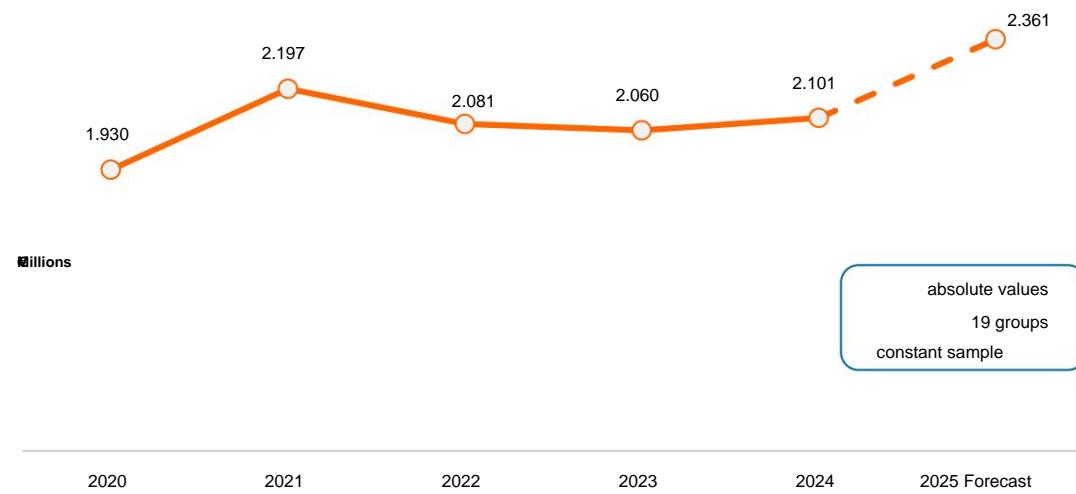
**Figure 42 - IT investments: 2020-2024 trend and forecast**

Figure 43 shows the percentage changes, by individual groups, between IT investments recorded in the 2024 financial year and those planned for 2025, compared to the 2024 figures. Of all the groups, only three foresee a reduction; in some cases, the percentage increases are significant. Nominally, the amount of IT investments planned for 2025 by the 23 groups is 12% higher than that recorded in the 2024 financial statements.

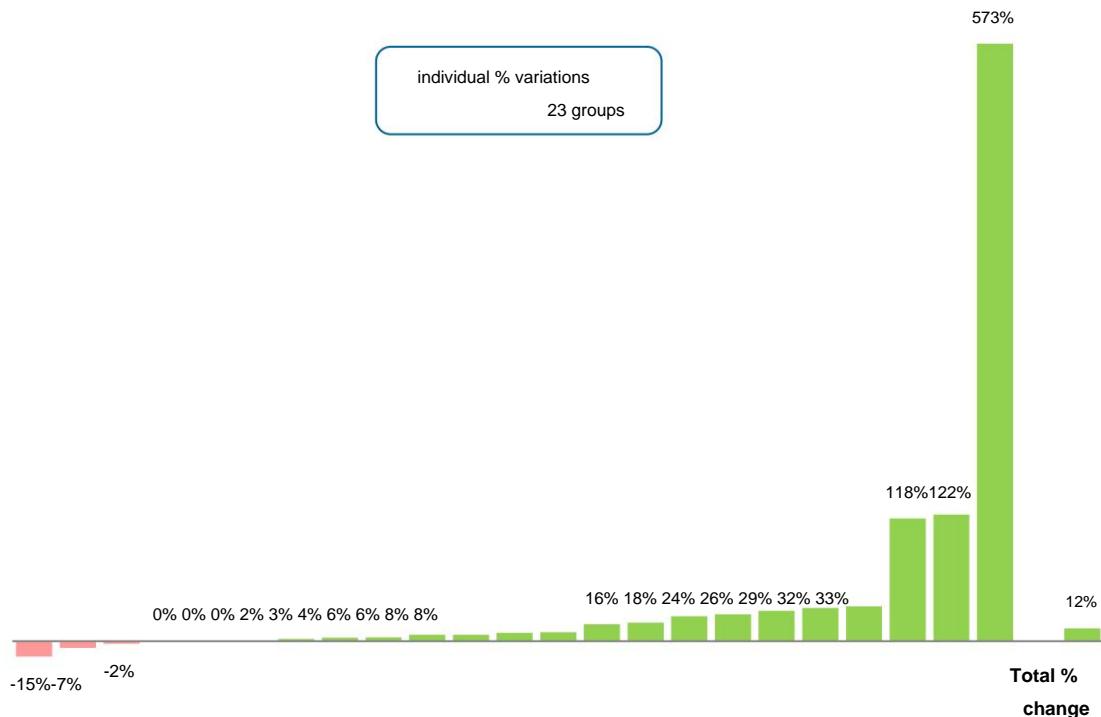
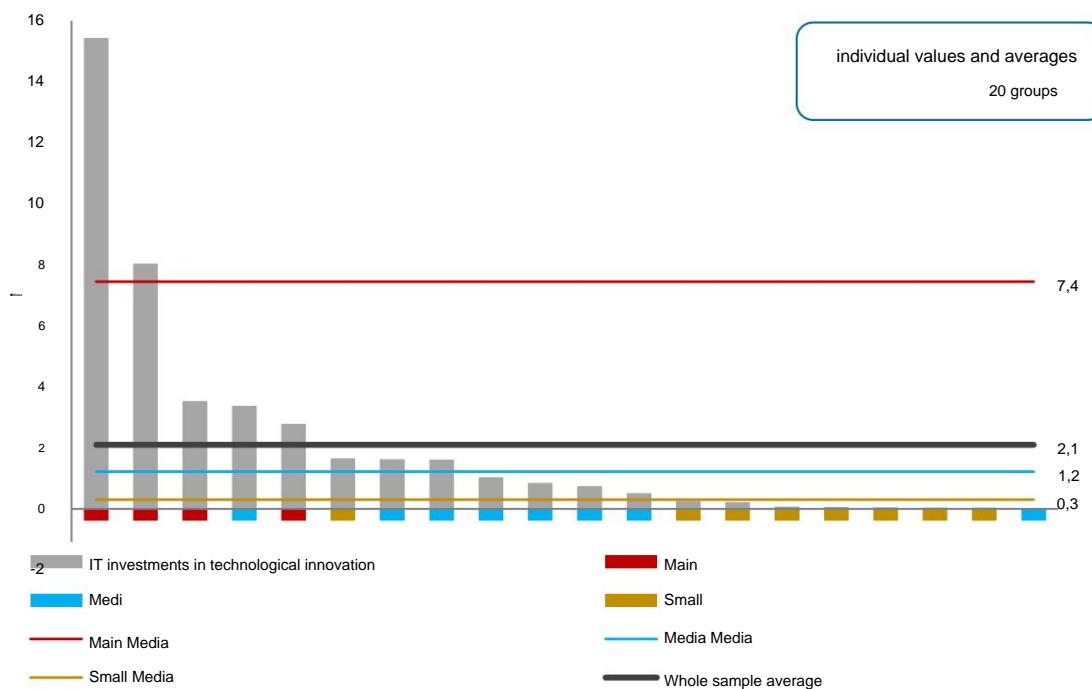
**Figure 43 - IT investments: change in 2025 forecast compared to 2024 actual**

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

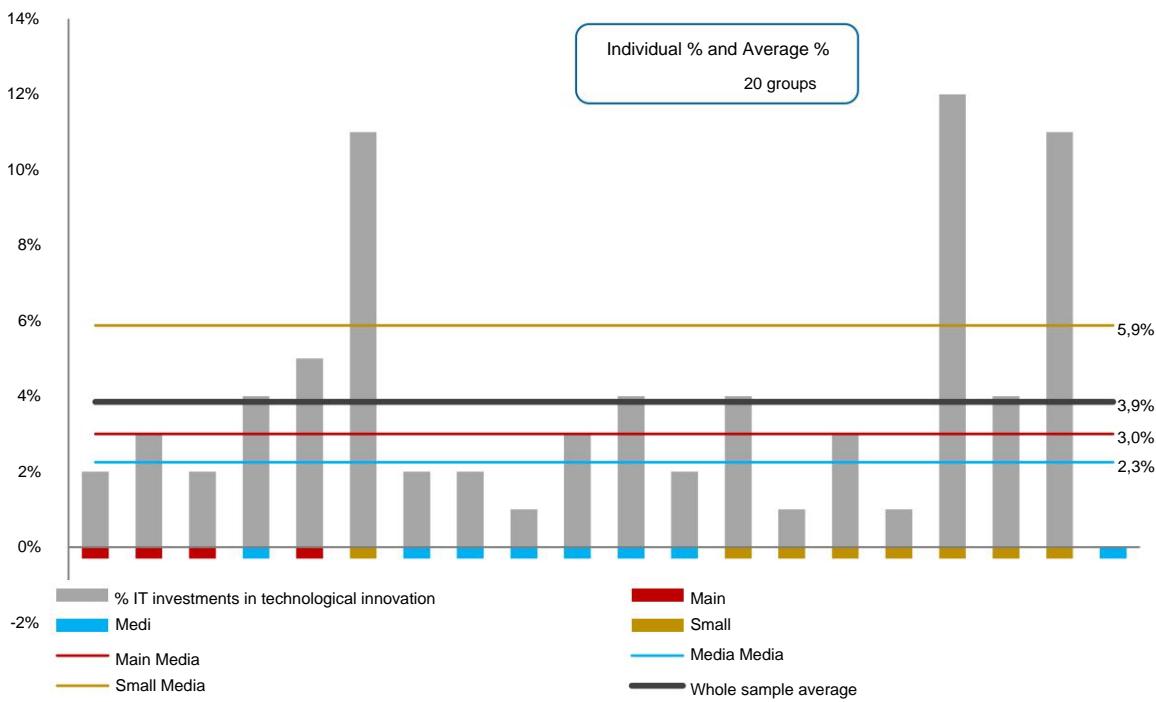
- ÿ Artificial intelligence (including generative AI and machine learning);
- ÿ API - application programming interface (net of compliance interventions);
- ÿ RPA - robotic process automation;
- ÿ DLT - distributed ledger technology (inclusa Spunta);
- ÿ Quantum computing.

In addition to the individual values, which are color-coded to indicate the size class to which they belong, the graph shows the average values for the individual classes and for the entire sample. On average, 20 groups invest €2.1 million in these innovative areas, which rises to 7.4 million euros for the main groups.

**Figure 44 - IT investments in innovative technological areas - absolute values**

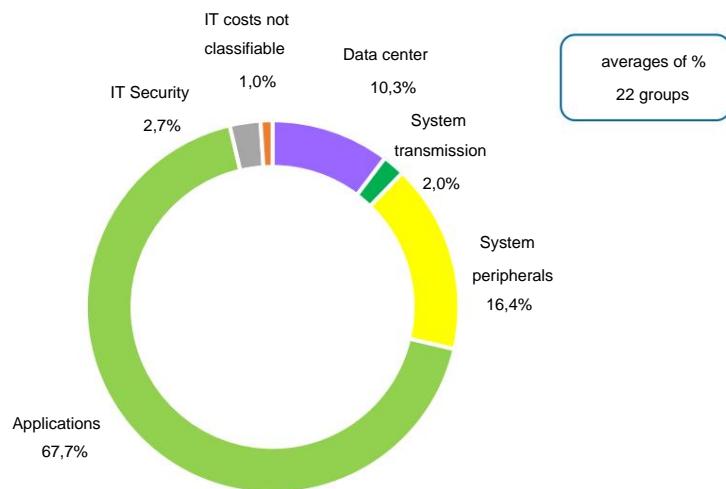


Completing the previous analysis, Figure 45 shows the percentages of IT investments dedicated by groups to the innovative technological areas listed above, along with the averages by size class and the entire sample. To allow for individual comparisons between absolute and relative amounts, the order of the groups represented in the vertical bars is the same as that shown in the previous figure. On average, in 2024, the 20 responding groups allocated 3.9% of their IT investments to initiatives related to these innovative technologies. The higher average percentage for Small groups (5.9%) takes into account the outsourcing phenomenon, with some of them benefiting indirectly from the IT investments made by the supplier and investing resources directly, primarily in experimental initiatives or innovative areas.

**Figure 45 - IT investments allocated to innovative technological areas - % values**

Taking Figure 24 reported in the previous sections as a reference, relating to a sample of 21 groups that divide the IT cash out between the thematic areas with sufficient granularity, it Within each area, it distinguishes the percentage of cash outlays related to current expenses from that for investments. Investments are lower than current expenses in all areas. In the Applications area (development and maintenance), investments are higher than those in other areas, both in absolute value (around 1,500 million) and as a relative share (45%).

The average percentage breakdown of IT investments by thematic area, calculated on a sample of 22 groups with sufficient detail, also shows in Figure 46 a prevalence of the share dedicated to Applications (67.7%). Drawing a parallel with the TCO broken down by thematic area (see Figure 20, with a slightly different sample), it is interesting to note that the share of investments for Applications is also significantly higher than the analogous share for TCO (50%).

**Figure 46 - IT investments by thematic areas**

Analyzing IT investments by thematic area over the three-year period 2022-2024 of a sample of 19 groups which indicates them stably with sufficient granularity, it is observed that the percentage dedicated to Applications remains the majority and growing over the years, followed by investments in peripheral systems and the Data center (Figure 47).

**Figure 47 - IT investments by thematic areas: trend 2022-2024**

Figure 48 shows IT investments divided between Hardware and Software in average percentages across 22 groups. Investments in Software are overall strongly predominant (73.3%).

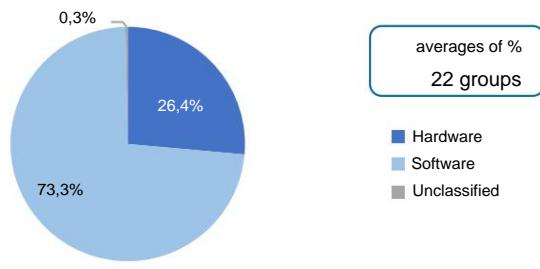
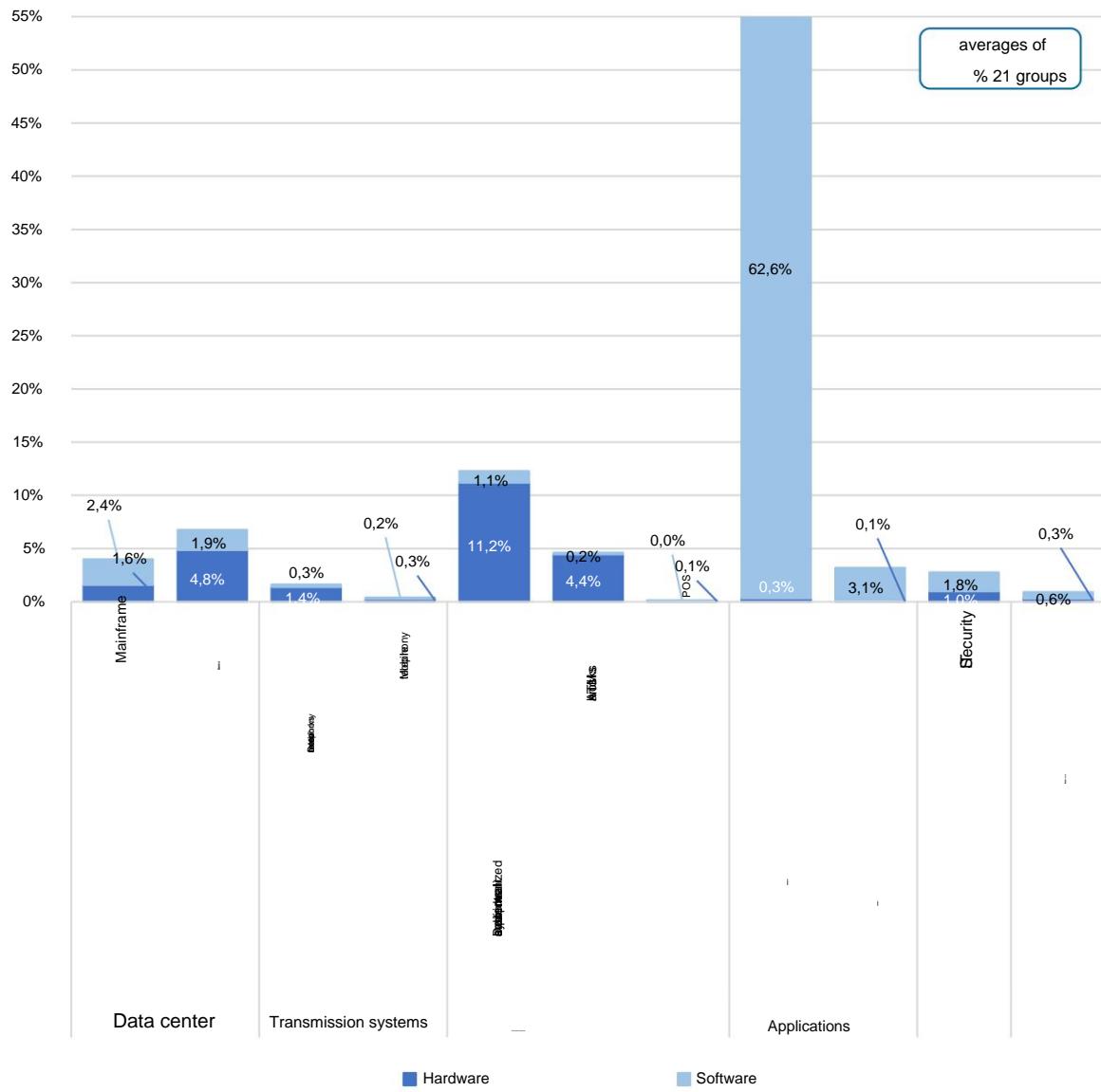
**Figure 48 - IT Investments in HW and SW**

Figure 49 shows a similar breakdown, within thematic areas, for the 21 groups that distribute investments with sufficient detail.

**Figure 49 - IT investments in HW and SW by thematic areas**

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

## 1.5 Economic indicators

Below are some indicators calculated by comparing the main income statement and operating figures. They were developed for a constant sample of 21 groups that participated in the Survey over the last three years (Table 6), by size class (Tables 7 to 9), and by IT sourcing model (Tables 10 to 12).

For the items "IT costs"<sup>16</sup>, "IT cash out", "IT investments"<sup>17</sup>, "IT depreciation"<sup>18</sup>, "number of employees total" and "number of employees net of IT" (the number of employees is calculated as the average of monthly values) are used as the values reported by the groups in the questionnaire; also the values "total assets", "operating costs", "intermediation margin", "net profit" and "operating result"<sup>19</sup> are reported by the groups in the questionnaire and refer to the reclassified balance sheet values Consolidated. All figures mentioned refer to the CIPA perimeter.

The items "number of branches"<sup>20</sup>, "number of loan and deposit relationships"<sup>21</sup> and "gross banking product"<sup>22</sup> are obtained from the individual account matrix reports carried out by the banking components of the group resident in Italy.

When determining indicators calculated from net profit or operating profit, the values of groups with negative operating profit or net profit are eliminated. In general, outliers are eliminated from indicators.

The economic indicators reported in the tables, necessarily dependent on the composition of the sample examined and the calculation methodology used, have a statistical value and do not represent a merit assessment of the technical and organizational IT choices adopted by the groups.

Figure 50 contains the graphic representation of some indicators (averages) among those included in Table 6. It is interesting to note the presence of some constant trends in the three-year period 2022-2024.

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<sup>16</sup> TCO net of adjusted IT revenues.

<sup>17</sup> Includes investments in hardware and software.

<sup>18</sup> Amount of depreciation charged to TCO.

<sup>19</sup> Difference between brokerage margin and operating costs.

<sup>20</sup> Average of quarterly values for the year taken from the Bank of Italy archives.

<sup>21</sup> Aggregate consisting of the sum of the items "loans: number of accounts" and "deposits: number of accounts".

<sup>22</sup> Aggregate consisting of the sum of the items "direct collections", "indirect collections" and "total uses".

**Figure 50 - Trend of some indicators at constant sample (extract from Table 6)**

**Table 6 - Indicators with reclassified balance sheet data: constant sample of 21 groups**

IT Cost Indicators*	Average			Coefficients of variation			Midlands			
	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/Intermediation margin (%)	11,27		9,81	10,03	0,44	0,36	0,34	10,24	8,48	9,00
IT costs/Operating result (%)	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 (thousands 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 relationships (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 Depreciation		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
Cashout IT/Intermediation margin (%)	11,95		10,51	10,63	0,43	0,37	0,36	10,39	9,53	9,36
IT Cashout/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 Cashout/Total 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			Coefficients of variation			Midlands			
	2022	2023	2024	2022	2023	2024	2022	2023	2024	
	Brokerage margin/Total assets (%)	2,48	3,02	3,16	0,22	0,17	0,16	2,38	3,03	3,20
Operating profit/Total assets (%)		0,88	1,26	1,33	0,30	0,27	0,30	0,82	1,26	1,24
Net profit for the year/IT costs		2,32	3,38	3,39	0,62	0,61	0,60	1,99	2,89	3,12
Net income/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/Intermediation margin ( <i>cost income</i> ) (%)	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 euros)	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 euros)	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 euros)	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 with reclassified balance sheet data: 6 Main groups**

IT Cost Indicators*	Average			Coefficients of variation			Midlands		
	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/Intermediation margin (%)	9,73	7,72	7,62	0,30	0,20	0,17	9,35	7,53	8,21
IT costs/Operating result (%)	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 (thousands 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 relationships (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 Depreciation	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
Cashout IT/Intermediation margin (%)	10,34	8,43	8,11	0,35	0,20	0,19	10,50	8,86	8,56
IT Cashout/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 Cashout/Total 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			Coefficients of variation			Midlands		
	2022	2023	2024	2022	2023	2024	2022	2023	2024
Net interest income/Total assets (%)	2,37	2,96	3,17	0,13	0,11	0,10	2,31	2,91	3,10
Operating profit/Total assets (%)	0,86	1,40	1,55	0,30	0,17	0,18	0,79	1,40	1,63
Net profit for the year/IT costs	2,96	4,68	4,80	0,70	0,48	0,36	2,77	4,19	4,27
Net income/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/Intermediation margin (cost income) (%)	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 euros)	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 euros)	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 euros)	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 with reclassified balance sheet data: 9 Medium groups**

IT Cost Indicators*	Average			Coefficients of variation			Midlands			
	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/Intermediation margin (%)	13.34		11,65	12,00	0,50	0,40	0,34	11,50	9,28	10,69
IT costs/Operating result (%)	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 (thousands 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 relationships (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 Depreciation	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
Cashout IT/Intermediation margin (%)	14.40		12,63	12,95	0,46	0,40	0,36	12,72	10,15	11,80
IT Cashout/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 Cashout/Total 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			Coefficients of variation			Midlands			
	2022	2023	2024	2022	2023	2024	2022	2023	2024	
	Brokerage margin/Total assets (%)	2,54	2,99	3,16	0,32	0,24	0,22	2,59	2,97	2,97
Operating profit/Total assets (%)	0,89	1,15	1,26	0,40	0,41	0,40	0,82	1,13	1,08	
Net profit for the year/IT costs	2,32	2,89	3,17	0,58	0,67	0,73	2,07	2,79	2,98	
Net income/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/Intermediation margin ( <i>cost income</i> ) (%)	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 euros)	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 euros)	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 euros)	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 with reclassified balance sheet data: Small groups**

IT Cost Indicators*	Average			Coefficients of variation			Midlands		
	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/Intermediation margin (%)	9,71	10,22	9,49	0,19	0,31	0,17	9,56	9,64	9,51
IT costs/Operating result (%) 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 (thousands 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 relationships (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 Depreciation	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 Cashout/Intermediation Margin (%)	9,90	11,20	9,77	0,21	0,44	0,19	9,51	9,53	9,52
IT Cashout/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 Cashout/Total 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			Coefficients of variation			Midlands		
	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)
Brokerage margin/Total assets (%)	2,52	3,23	3,52	0,10	0,14	0,25	2,51	3,11	3,29
Operating profit/Total assets (%)	0,87	1,26	1,50	0,16	0,08	0,45	0,89	1,25	1,25
Net profit for the year/IT costs	1,78	2,74	2,83	0,47	0,58	0,61	1,71	2,27	2,79
Net income/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/Intermediation margin ( <i>cost income</i> ) (%) 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 euros)	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 euros)	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 euros) 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 with reclassified balance sheet data: 7 Insourcing groups**

IT Cost Indicators*	Average			Coefficients of variation			Midlands		
	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/Intermediation margin (%)	9,43	8,36	8,98	0,30	0,32	0,36	8,68	8,05	8,46
IT costs/Operating result (%) 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 (thousands 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 relationships (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 Depreciation	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
Cashout IT/Intermediation margin (%) 10,97		9,88	10,39	0,43	0,42	0,48	9,65	9,53	9,03
IT Cashout/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 Cashout/Total 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			Coefficients of variation			Midlands		
	2022	2023	2024	2022	2023	2024	2022	2023	2024
Brokerage margin/Total assets (%)	2,68	3,20	3,44	0,24	0,18	0,17	2,38	3,10	3,25
Operating profit/Total assets (%)	0,82	1,27	1,37	0,24	0,17	0,22	0,79	1,26	1,34
Net profit for the year/IT costs	2,52	4,08	4,07	0,79	0,62	0,54	1,97	3,24	3,53
Net income/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/Intermediation margin ( <i>cost income</i> ) (%) 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 euros)	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 euros)	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 euros) 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 with reclassified balance sheet data: Facility management groups**

IT Cost Indicators*	Average			Coefficients of variation			Midlands		
	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/Intermediation margin (%) 10.64		10,51	9,89	0,22	0,38	0,30	10,99	9,28	9,00
IT costs/Operating result (%) 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 (thousands 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 relationships (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 Depreciation	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
Cashout IT/Intermediation margin (%) 11,21		11,37	10,29	0,23	0,47	0,28	11,73	9,79	9,36
IT Cashout/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 Cashout/Total 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			Coefficients of variation			Midlands		
	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)
Brokerage margin/Total assets (%)	2,34	2,96	3,18	0,24	0,20	0,16	2,19	2,69	2,97
Operating profit/Total assets (%)	1,02	1,37	1,59	0,37	0,35	0,26	0,91	1,46	1,61
Net profit for the year/IT costs	2,57	3,00	3,45	0,55	0,51	0,50	2,13	2,79	3,38
Net income/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/Intermediation margin (cost income) (%) 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 euros) 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 euros) 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 euros) 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 with reclassified balance sheet data: Outsourcing groups**

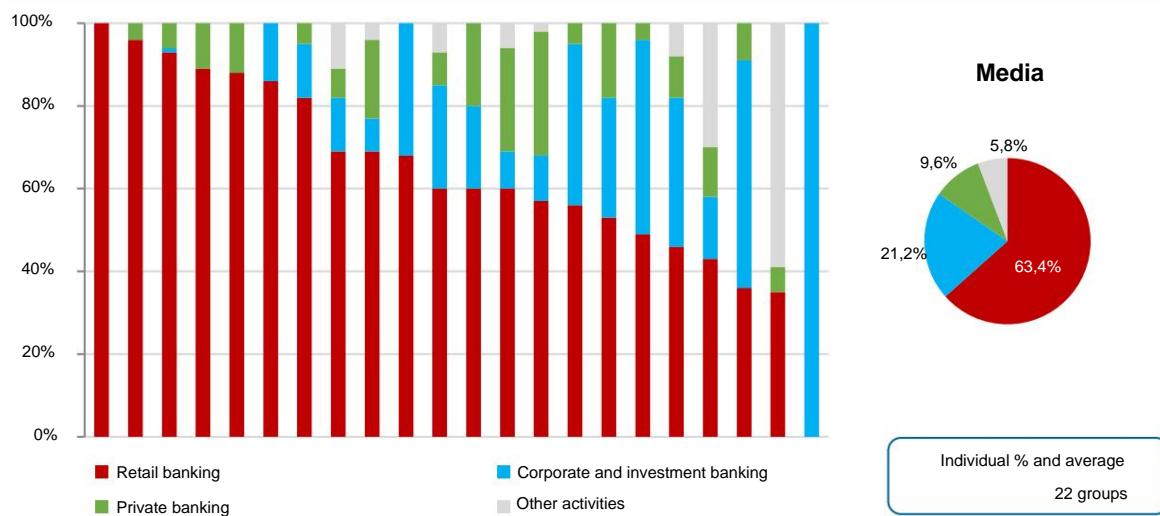
IT Cost Indicators*	Average			Coefficients of variation			Midlands		
	2022 (8 groups)	2023 (8 groups)	2024 (9 groups)	2022 (8 groups)	2023 (8 groups)	2024 (9 groups)	2022 (8 groups)	2023 (8 groups)	2024 (9 groups)
IT costs/Total assets (per thousand)	3,08	3,36	3,37	0,47	0,35	0,25	2,58	2,93	2,99
IT costs/Intermediation margin (%)	13,35	11,32	10,84	0,53	0,37	0,33	9,97	9,76	9,81
IT costs/Operating result (%) 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 (thousands 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 relationships (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 Depreciation	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 Cashout/Intermediation Margin (%)	13,36	11,73	10,95	0,51	0,38	0,33	9,95	9,68	10,00
IT Cashout/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 Cashout/Total 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			Coefficients of variation			Midlands		
	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)
Brokerage margin/Total assets (%)	2,42	3,02	3,26	0,21	0,16	0,28	2,51	3,07	3,20
Operating profit/Total assets (%)	0,81	1,13	1,33	0,24	0,24	0,54	0,88	1,24	1,18
Net profit for the year/IT costs	1,98	2,97	3,10	0,52	0,66	0,73	1,71	2,26	2,79
Net income/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/Intermediation margin ( <i>cost income</i> ) (%) 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 euros) 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 euros)	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 euros) 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 banking activity by groups<sup>23</sup> shows that, on average, retail banking accounts for 63.4% of total operations, corporate and investment banking for 21.2%, and private banking for 9.6%. Figure 51 shows the individual percentages and the average.

**Figure 51 - Activities of banking groups**



The Appendix reports the analysis of banking activity differentiated by size class (Figure 138).

### 2.1 Sourcing IT

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

- Ȑ **Insourcing:** the Data Center infrastructure (basic Hardware and Software) and the Applications are managed within the CIPA group, regardless of any application management or use of selective outsourcing for individual areas or initiatives;
- Ȑ **Facility management:** the Data Center infrastructures are managed by a supplier external to the CIPA<sup>24</sup> perimeter while the Applications are managed within the perimeter, regardless of any recourse to selective outsourcing;

<sup>23</sup> Based on the intermediation margin referred to the CIPA perimeter.

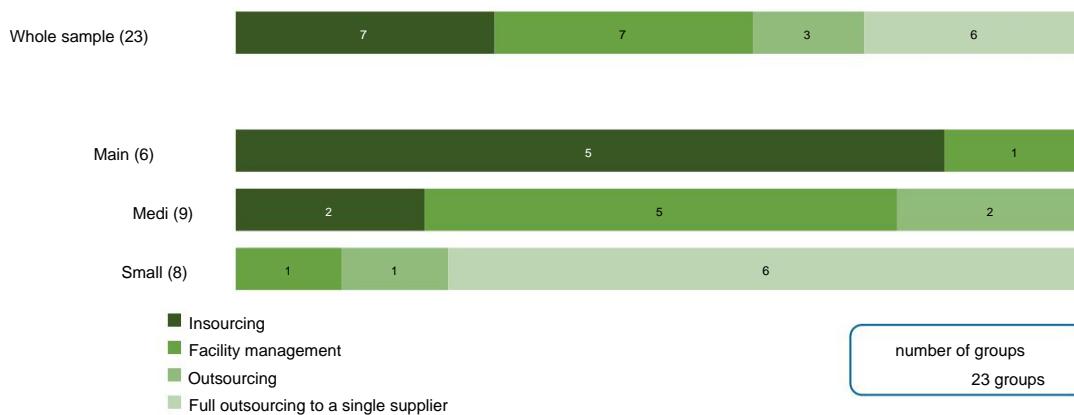
<sup>24</sup> Group member outside the CIPA perimeter (including the foreign parent company), another bank or banking group, consortium of banks, vendors, and joint ventures between vendors and a group member.

↳ **Outsourcing:** both the Data Center infrastructures and the Applications are managed by suppliers outside the CIPA perimeter;

↳ **Full outsourcing:** This model is a special case of outsourcing, distinguished by the use of a single, predominant external provider who manages both the data center infrastructure and the applications. Depending on the context, in this document, full outsourcing is sometimes equated and grouped with outsourcing.

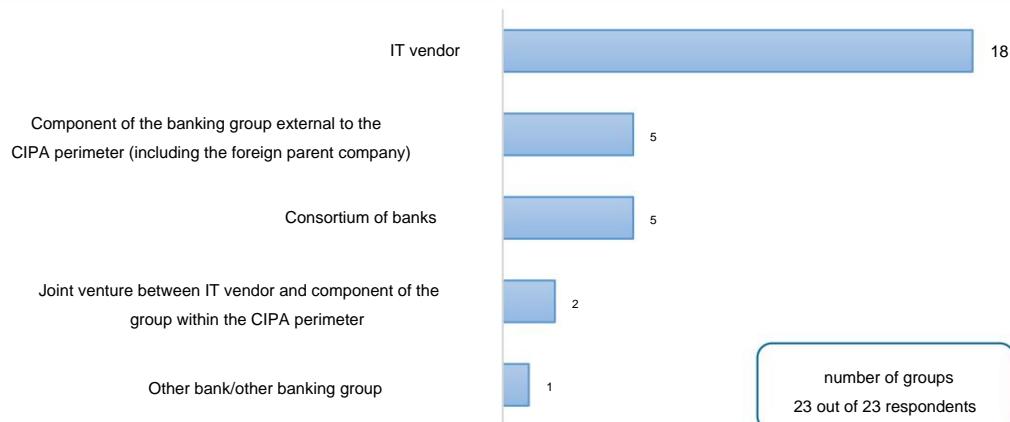
From the analysis of the data received from the groups, it emerges that seven of them maintain internal management of the infrastructure and applications, identifying themselves with the Insourcing model, seven are in the Facility Management model, and nine are in Outsourcing, of which six are in Full Outsourcing. The Large groups are predominantly characterized by Insourcing, and the Small ones mainly resort to Full Outsourcing, while for the Medium ones a differentiated situation is observed (Figure 52).

**Figure 52 - Prevalent IT sourcing model**

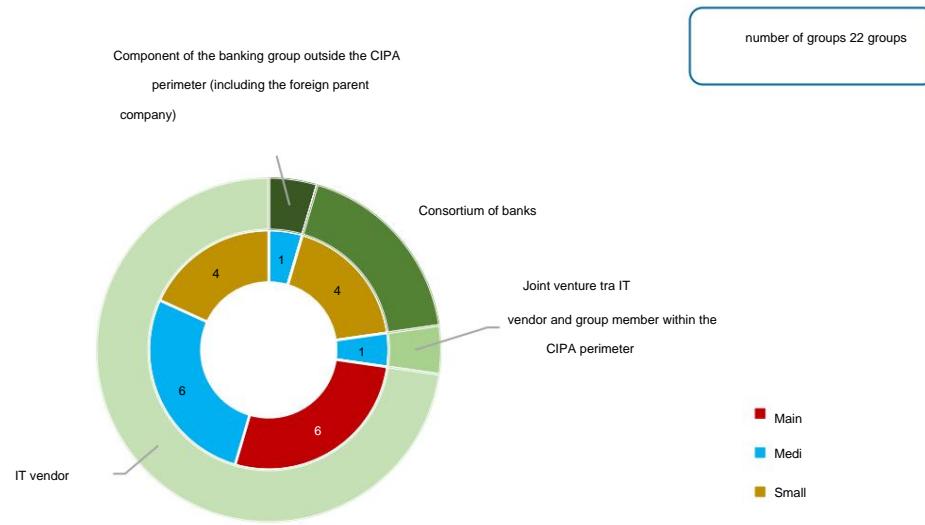


Analysing the different types of IT suppliers that the groups (CIPA perimeter) use (Figure 53), we observe that the majority of respondents turn to vendors (IT vendor includes any joint venture between vendors and a component of the banking group outside the CIPA perimeter).

**Figure 53 - Types of IT suppliers**



Restricting the analysis to the dominant supplier (in terms of invoiced IT costs), the most frequently reported category remains that of vendors, which are primarily used by 16 groups. Figure 54 shows this breakdown along with the size class.

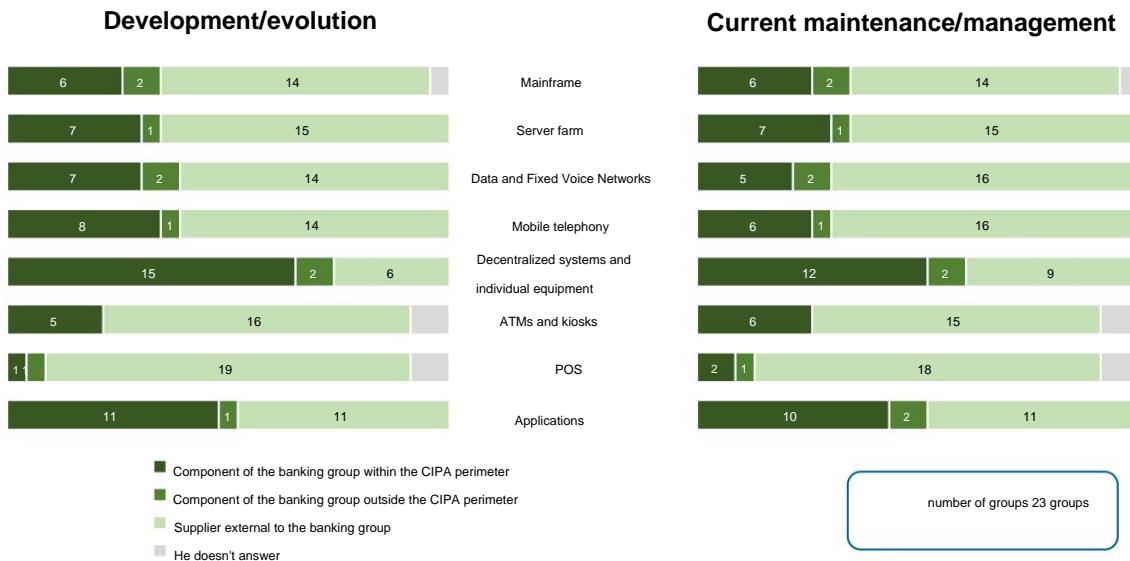
**Figure 54 - Prevalent IT provider**

### 2.1.1 IT Sourcing by Thematic Areas

This section analyzes, using a priority criterion, the sourcing choices made for the development and evolution, as well as corrective maintenance and ongoing management of IT services, differentiated by thematic area. To this end, the assignment of the aforementioned activities is distinguished between the following cases: i) a banking group component within the CIPA perimeter; ii) a banking group component outside the CIPA perimeter (including the foreign parent company); iii) a supplier external to the banking group (another banking group, another bank, a consortium of banks, an IT vendor, or a joint venture with an IT vendor).

The graph in Figure 55 shows that, overall, the use of group members occurs in less than half of the cases. The outsourcing of services outside the banking group remains prevalent.

The sourcing approach for development and evolution is fairly consistent with that adopted for ongoing maintenance and management, with a slight prevalence of external vendors for the latter. In terms of thematic areas, the groups tend to primarily retain in-house 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 edition addresses the topic of cloud computing starting from Figure 56, which highlights banking groups' use of various service models and deployment models to deliver the main application services (those examined in the figure are mostly taken from the ABI Lab application map).

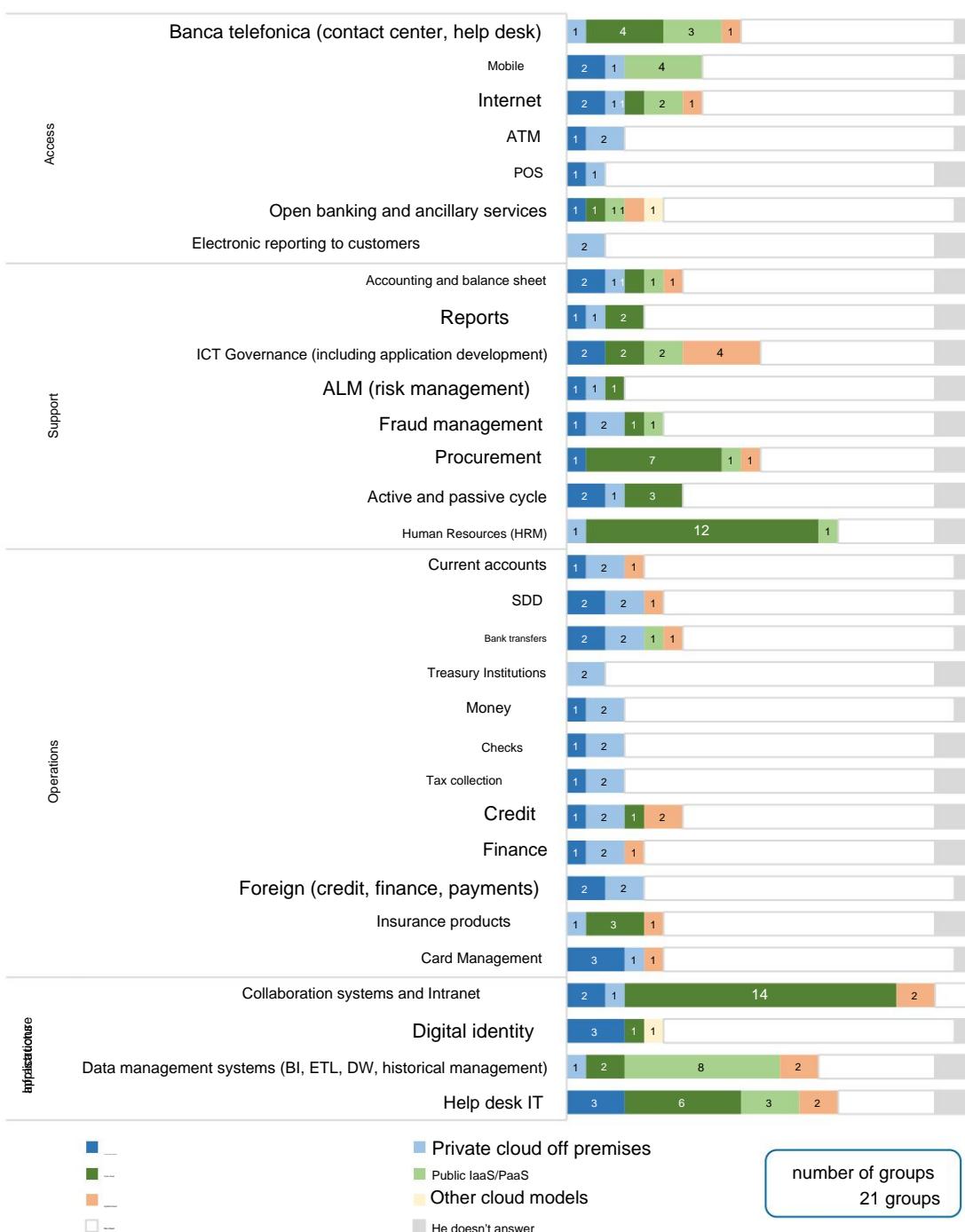
Infrastructure services, personnel management, procurement, and telephone banking are most frequently delivered via cloud computing—especially the public model. On the other hand, Operations services, characterized by a higher level of criticality,

they experience less use of the cloud which, where present, is often of a private type.

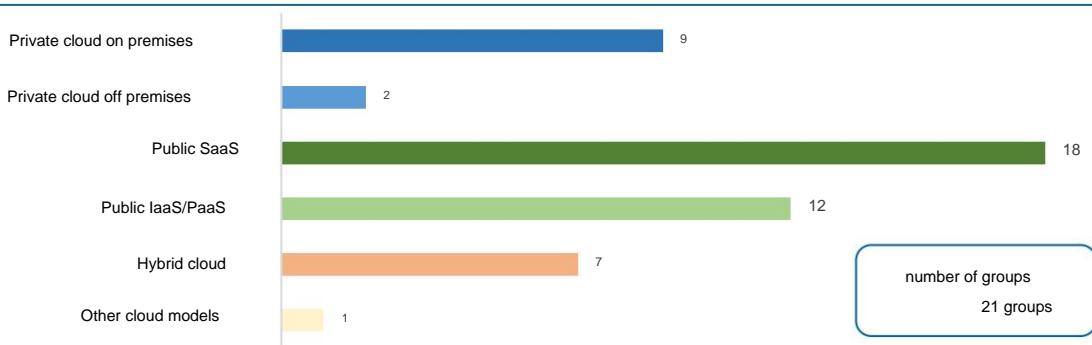
In the private cloud, there is essentially equal use of on-premises and off-premises solutions. For the public cloud, the SaaS model prevails. Hybrid cloud use is generally limited, with the exception of ICT governance.<sup>25</sup>

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<sup>25</sup> Hybrid cloud is understood as a combination of public and private models, whose infrastructures are connected and allow for the portability of data and applications.

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

For each of the cloud models examined in the previous graph, Figure 57 shows the number of groups using that model for at least one of the services analyzed above. It emerges that public models are the most widely 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 hybrid cloud is reported by seven groups.

**Figure 57 - Cloud computing: models in use**

The analysis of the microdata<sup>26</sup> also shows that, overall, 11 groups adopt only the public cloud, only one the private cloud and the remainder use more than one model between public, private and hybrid.

Human resources employed are also recorded, in terms of FTEs (full-time equivalents) dedicated to the cloud in various capacities (governance, competence center, infrastructure, development, management, etc.). Figure 58 shows, using a box-and-whisker plot<sup>27</sup>, the distribution of relative FTEs, percentage values calculated by comparing FTEs dedicated to the cloud to the total IT FTEs reported by the groups. Across 22 groups, an average of 3.4% of IT FTEs are employed in the cloud, with peaks of 15%.

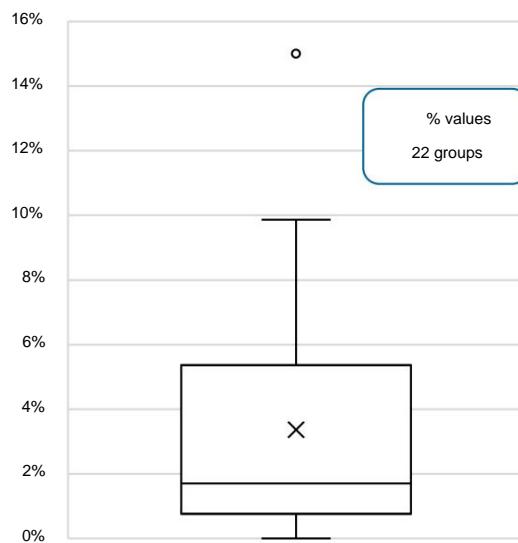
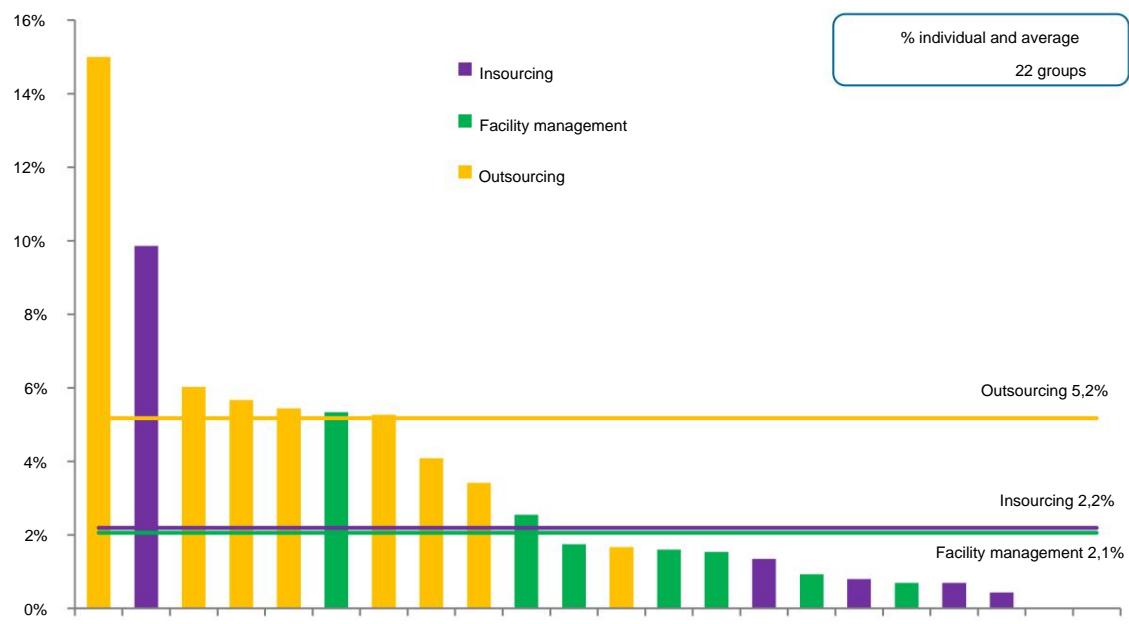
**Figure 58 - Cloud computing: dedicated FTE resources**

Figure 59 shows the individual percentages of FTEs dedicated to the cloud, broken down by IT sourcing model. Each bar represents the value of a group, and the color identifies the related model. Note how, on average, outsourcing groups dedicate a relatively small share of FTEs to the cloud.

equal to 5.2%, higher than other sourcing models. This phenomenon is also influenced by the number of human resources employed by IT groups overall, which increases with the increase in IT activities handled directly by the group.

<sup>26</sup> The analysis ignores the residual data relating to the item "Other cloud models".

<sup>27</sup> "X" represents the average.

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

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

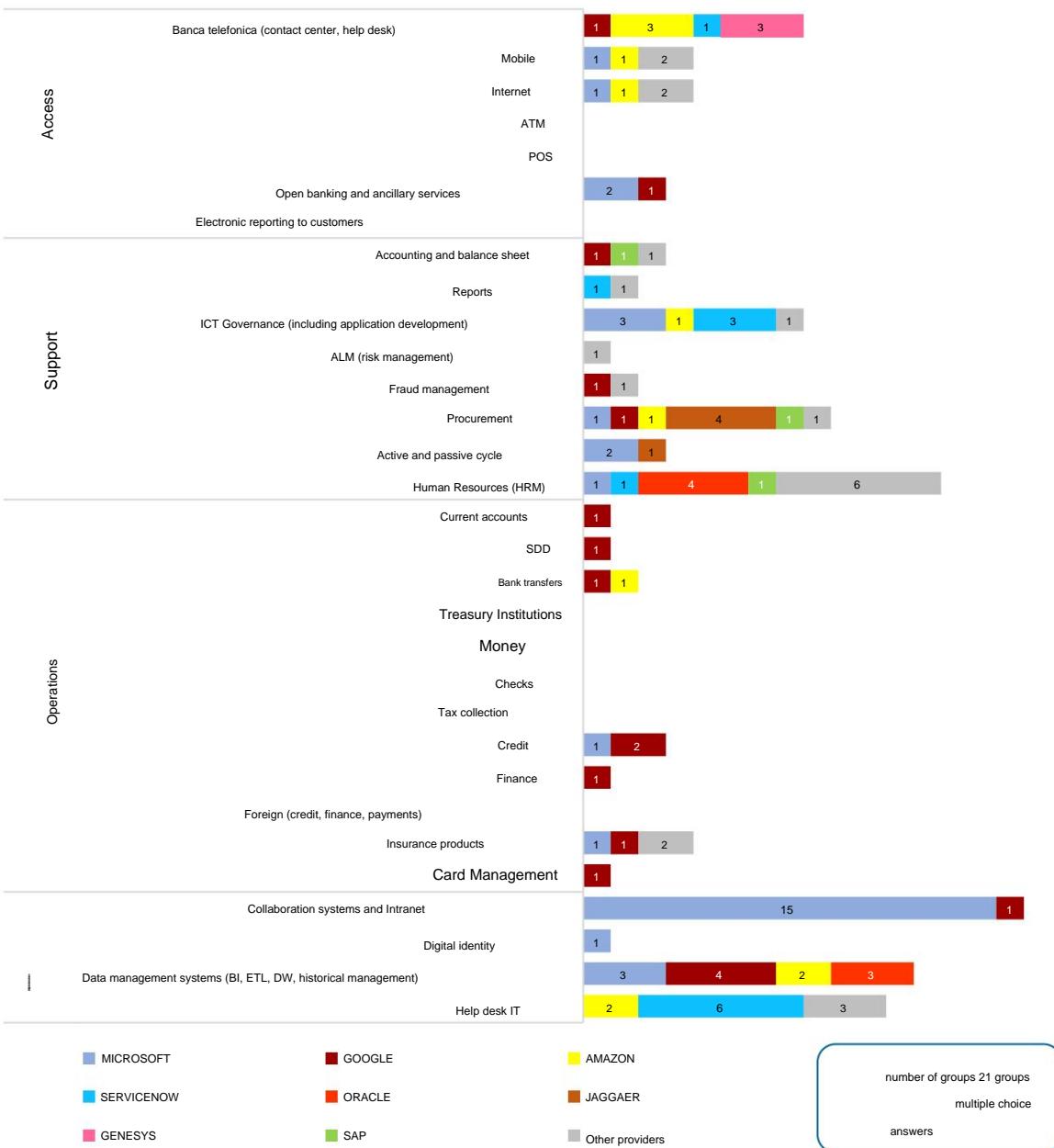
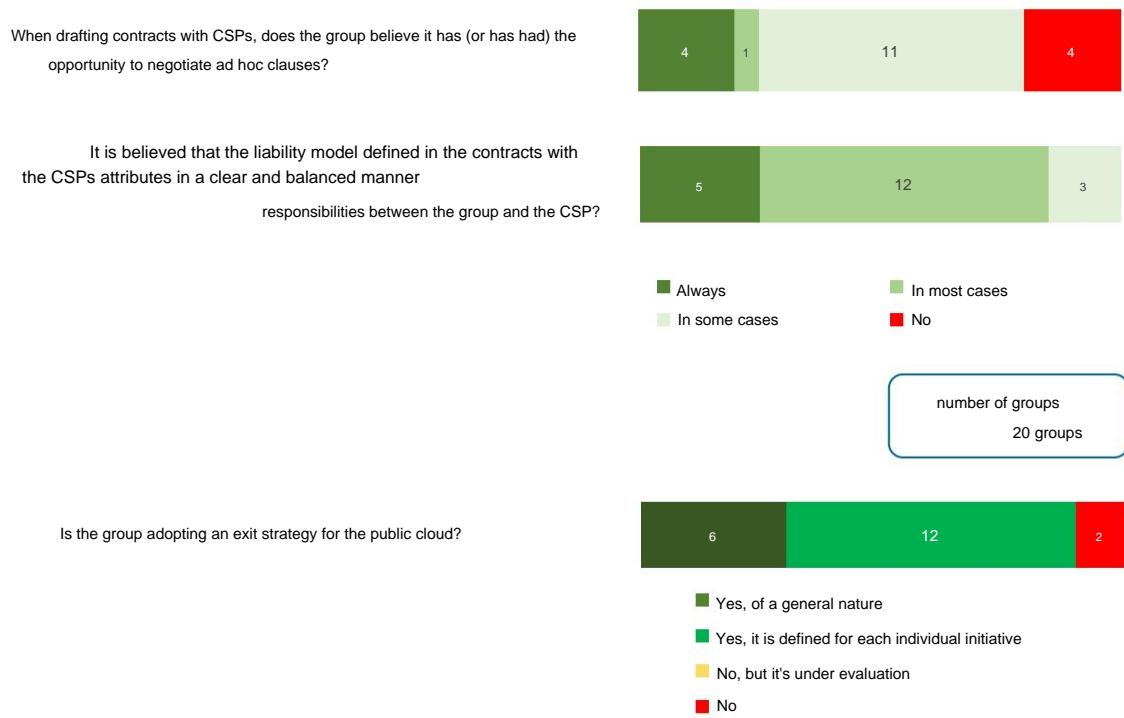
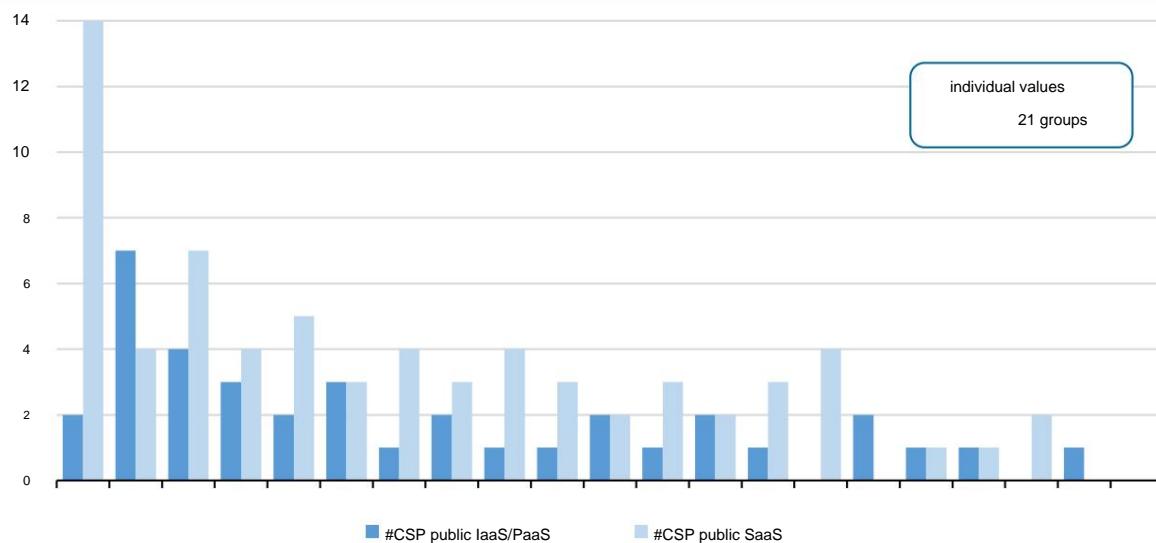
**Figura 60 - Cloud Service Providers**

Figure 61 focuses on some of the most significant issues relating to the public cloud and, in particular, to the relationship established between the banking group and the CSP. On the subject of negotiating power, with regard to the possibility of negotiating ad hoc contractual clauses when drafting contracts with CSPs, four groups believe they always have (or have had) this possibility, while, on the contrary, another four believe they do not have (or have not had) it. While one group reports having had the possibility of negotiating ad hoc clauses in most cases, the majority of groups report having negotiated such clauses only in some cases (11). Remaining on the contractual theme, five groups believe that the liability model defined in the contracts always clearly and balancedly attributes responsibilities between the banking group and the CSP. In general, the liability model is considered substantially adequate, even in cases of limited negotiating capacity. The definition of an exit strategy from the public cloud is another topic covered in this focus. It emerges that six groups adopt a general exit strategy, 12 declare that they define it in relation to individual initiatives and two groups do not have a defined exit strategy.

**Figure 61 - Public cloud: negotiation skills, responsibility, exit strategy**

Using the public cloud to provide 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 (dark blue) models. On average, groups use 1.8 CSPs for IaaS/PaaS, while there is greater diversification in SaaS, with an average of 3.5 CSPs. When reading the graph, it should be noted that in some cases, the same CSP may be counted in both bars if it provides both SaaS and IaaS/PaaS services to the same group.

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

## 2.3 IT Security Elements

This section is not intended to exhaustively describe the organizational initiatives undertaken by groups in the field of IT security, but rather to centrally collect the related elements that emerge across the analyses of IT organizational profiles.

From a human resources perspective, groups with at least 50 IT employees allocate an average of 6.7% of their IT FTEs to cybersecurity. This average rises to 7.6% when including technical staff dedicated to Business Continuity and Disaster Recovery. Similar analyses conducted on groups with fewer than 50 IT employees show that, for these groups, the average percentage of IT FTEs dedicated to security is 12.6%, rising to 14.7% when including Business Continuity and Disaster Recovery. The higher percentage, almost double, found among groups with fewer IT employees compared to those with a larger number of employees, demonstrates the banking industry's strong focus on cybersecurity, which pushes them to keep these resources within the company's perimeter even when extensive IT outsourcing is used (see Figure 85 and Figure 144).

Human resources strategies are closely linked to the topic of skills. The specialized technical skills in IT security covered in this survey concern:

Two main areas are identified, for which the level of skills present in banking groups in 2024 (as is) and the level they expect to achieve in the two-year period 2025-2026 (to be) are surveyed, as well as the methods for sourcing the related skills. The two areas, examined in Figure 88 and subsequent figures, are as follows:

ÿ **Security governance:** in this area, the average skill level<sup>28</sup> recorded in 2024 is 3.7 out of 5, and is projected to increase to 4.2 for the two-year period 2025-2026, with 52% of groups reporting a skills gap to be filled. In this area, more than in any other analyzed, skills are most often found through the hiring of IT personnel, further demonstrating the strategic importance of cybersecurity governance;

ÿ **Operational safety management:** in this area there is a smaller skills gap compared to the previous one; in fact, a transition from an average level of 3.8 in 2024 to 4.1 for the following two years is expected, a gap reported by 35% of the groups; most of them resort to training their IT staff to acquire the necessary specialized skills.

In terms of technological innovation applied to IT Security, ten groups report significant innovation initiatives in 2024 and another five plan to launch them in the two-year period 2025-2026 (see Figure 71). Overall, these initiatives involve strengthening data protection measures, improving intrusion prevention systems on endpoints (e.g., laptops, servers), standardizing security configurations for cloud services, enhancing anti-fraud engines, implementing zero trust network access (ZTNA) models, and activating the SOC (security operations center) and CTI (cyber threat intelligence) by integrating continuous monitoring and threat analysis.

## 2.4 FinTech

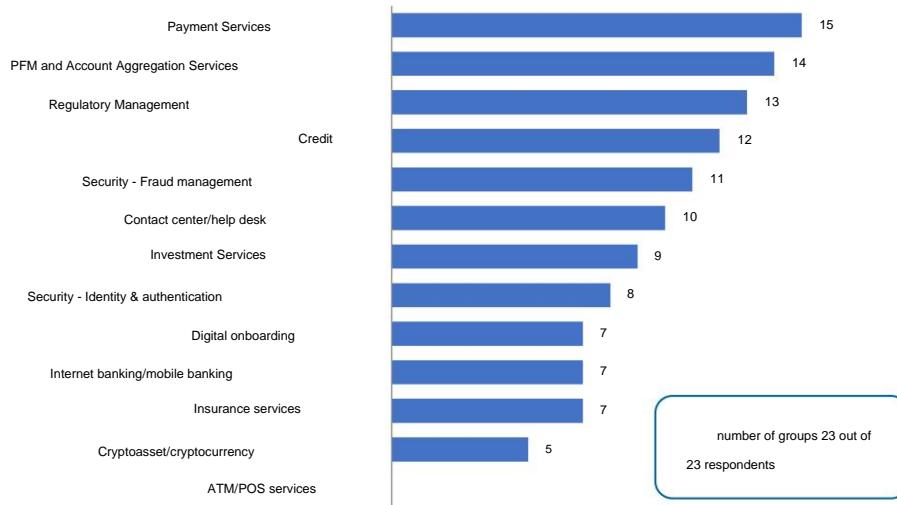
This section focuses on the banking world's collaboration with FinTech, specifically investigating the areas and technologies involved.

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<sup>28</sup> Subjectively determined by each banking group on a scale ranging from a minimum of zero to a maximum of five.

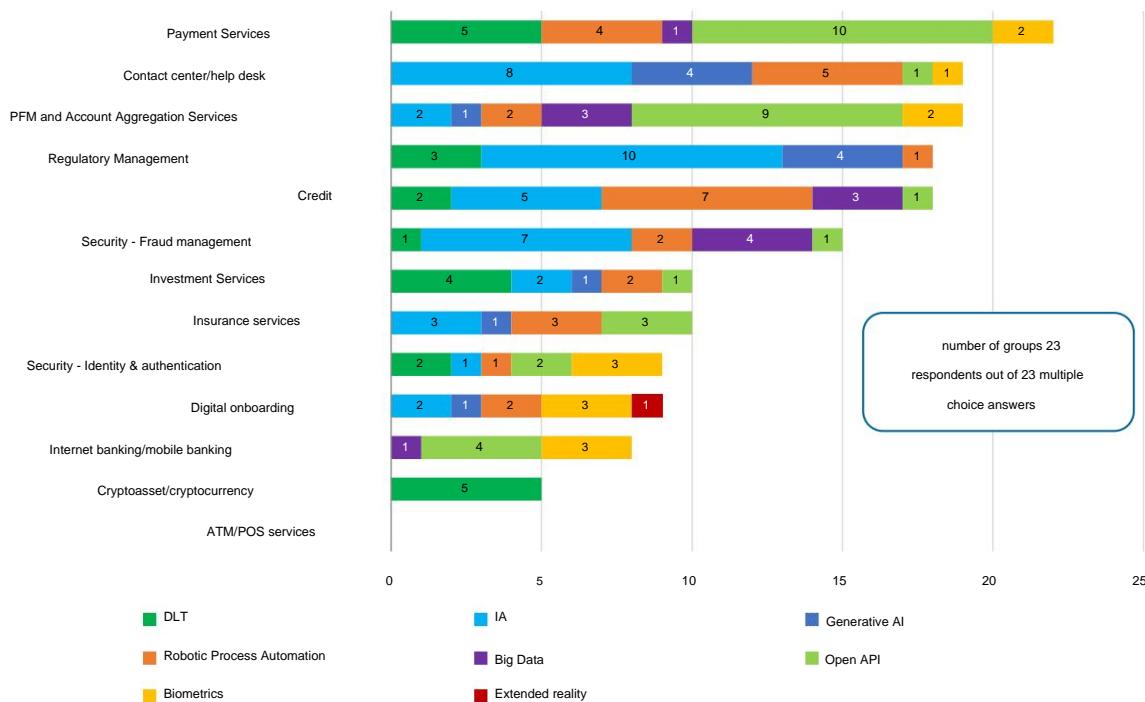
Of the 23 participating groups, all indicated forms of collaboration in various capacities with companies operating in FinTech, and every area investigated was affected by the phenomenon, with the exception of ATM/POS services; the most impacted were payment services, PFM (Personal Financial Management) and account aggregation, regulatory management, and credit, which saw the involvement of over half of the groups (Figure 63).

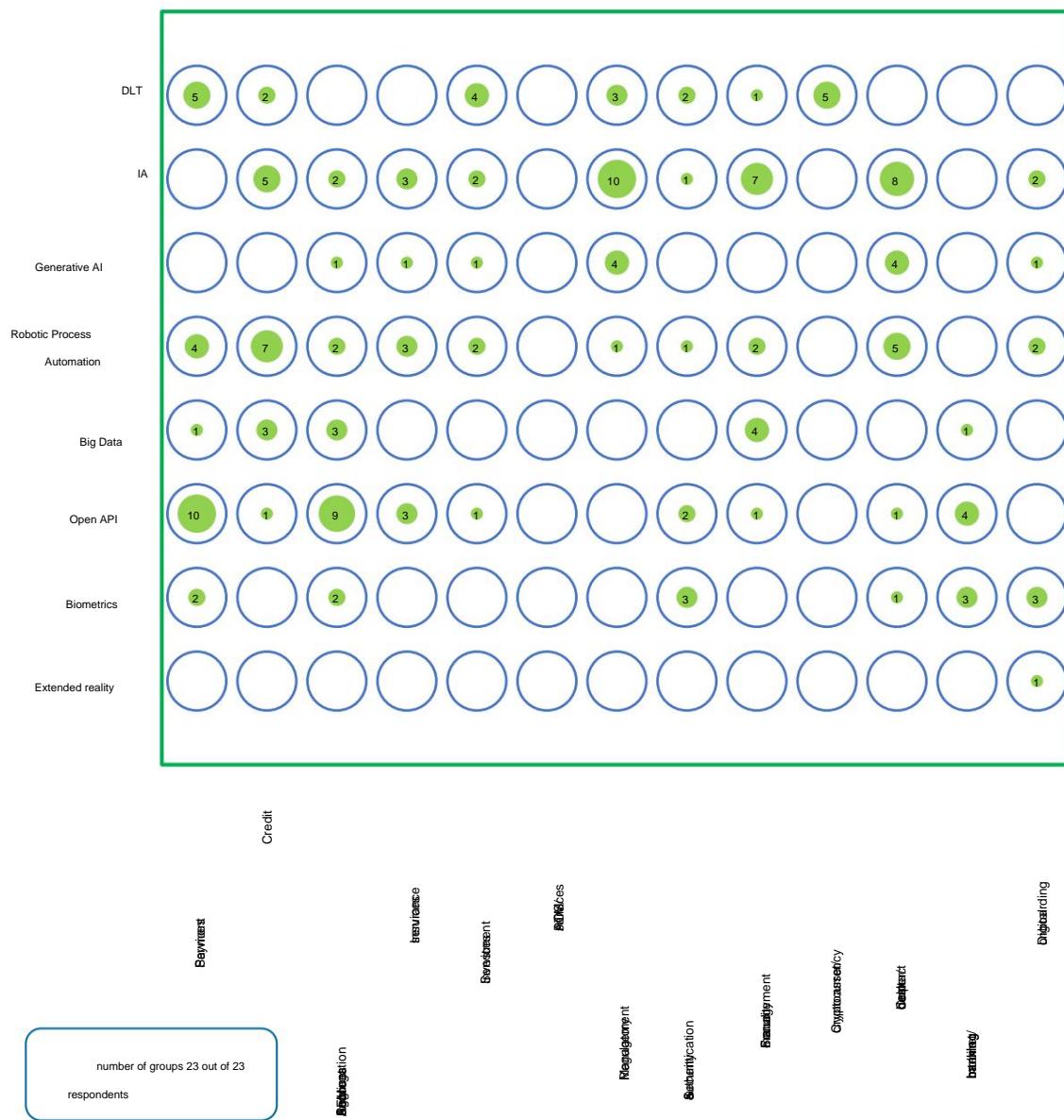
**Figure 63 - Areas of collaboration with FinTech**



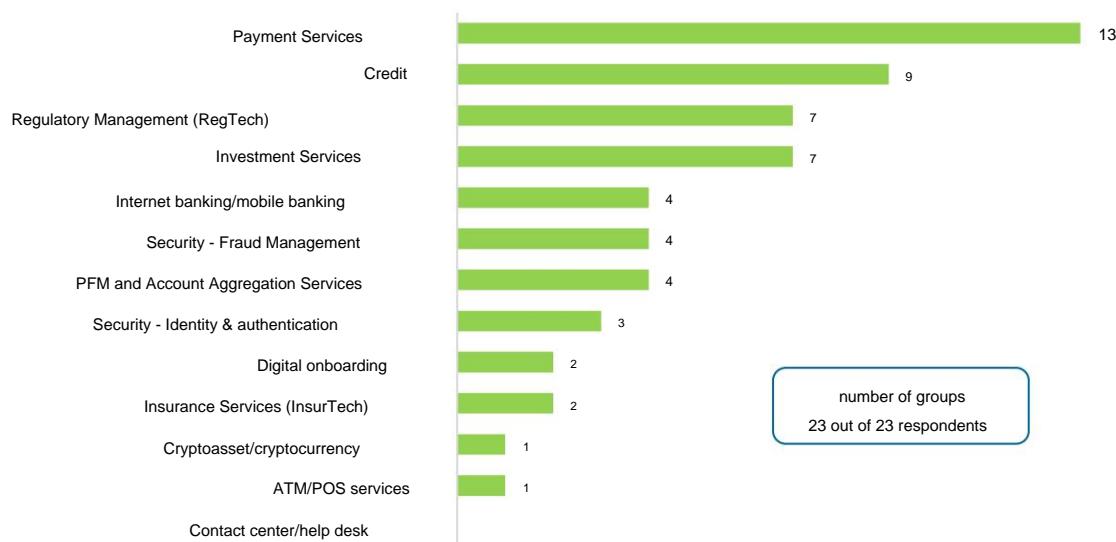
The technological paradigms involved in the various fields are examined below. Specifically, the graphs in Figures 64 and 65 provide two different perspectives on the same phenomenon and show that the technologies used in the greatest number of fields, through the use of FinTech, are RPA (robotic process automation), artificial intelligence, and open APIs. The field best suited to the use of multiple technologies is PFM and account aggregation services.

**Figure 64 - Collaboration with FinTech and technologies**



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

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

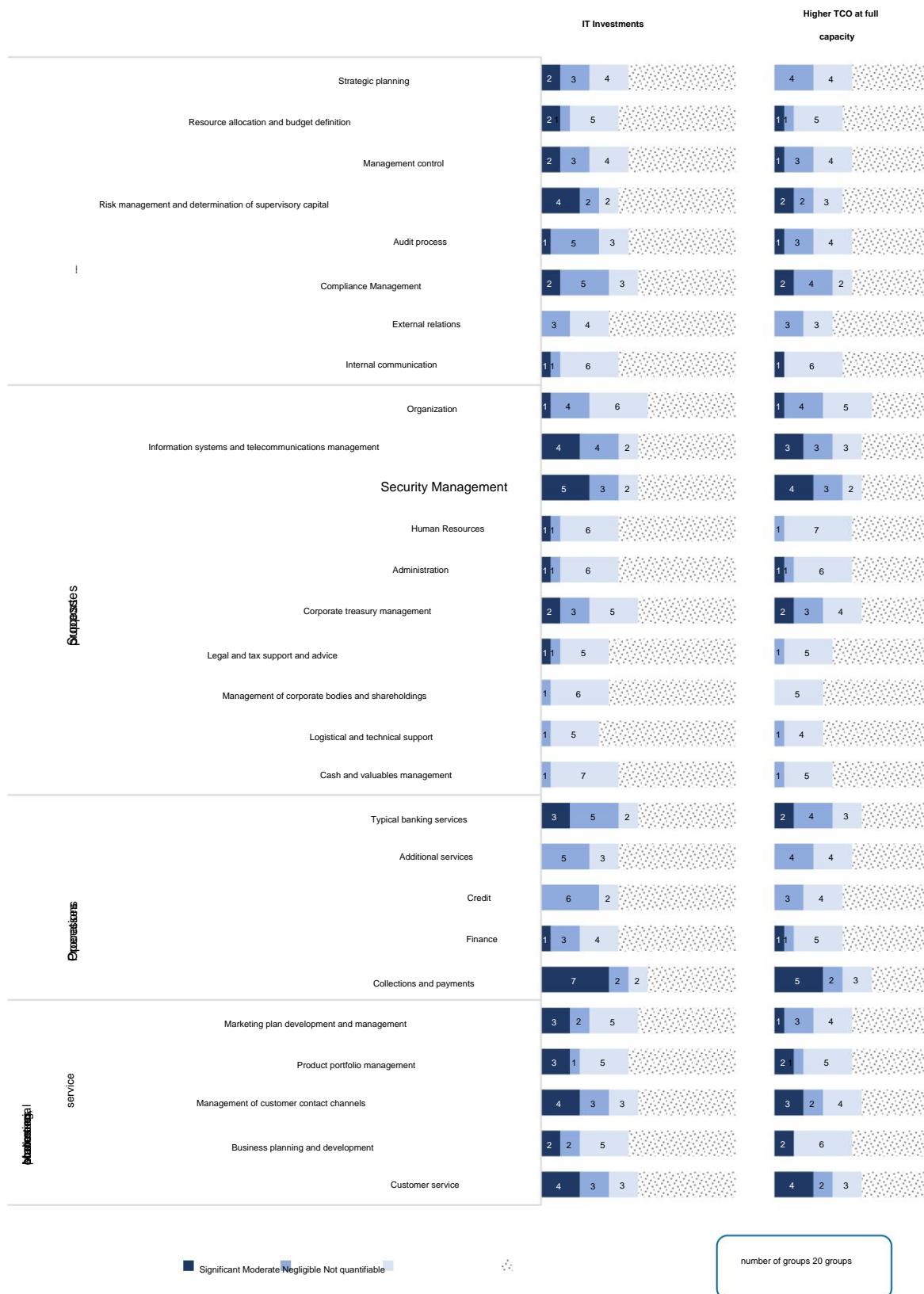
**Figure 66 - Collaboration with FinTech and increased IT investments**

## 2.5 Euro digital

This edition returns to the topic of the digital euro, highlighting the financial commitment that banking groups would need to make to prepare their business processes for the introduction of the digital euro. It also focuses on the opportunities that these groups intend to seize by undertaking initiatives that would expand their offering of new services or review/optimize their IT systems and infrastructure.

Based on ABI Lab's taxonomy of banking processes, the chart in Figure 67 shows, for each process, the expected IT investment required to address the initial IT upgrade of the group and the expected increased IT costs (TCO) to maintain banking operations. The analysis focuses exclusively on the minimal adjustments expected to be implemented for compliance purposes, excluding any initiatives aimed at introducing new optional services related to the digital euro. Of the 20 responding groups, 12 contributed to the analysis by quantifying forecasts. The economic impacts affect all mapped areas, particularly Operations processes.

From the perspective of initial IT investments, the processes on which the greatest number of respondents report significant quantifiable impacts are Collections and payments (9 groups), Typical banking services, Management of information systems and telecommunications, and Management of security (8 groups). With regard to the higher TCO expected at full capacity, following the adjustments aimed at introducing the digital euro, the processes most frequently reported to have significant quantifiable impacts are Collections and payments and Management of security (7 groups), Typical banking services, Customer service, Management of information systems and telecommunications, Management of compliance (6 groups).

**Figure 67 - Digital Euro: IT investment forecasts and higher TCO at full capacity**

From a strategic perspective, the potential introduction of the digital euro would also open up new opportunities for banks, some of which are explored in Figure 68. Of the 12 responding groups, all indicated they saw the opportunity to offer new and optional services to customers, and a minority indicated they would review and optimize their IT infrastructure. Finally, two groups also indicated the opportunity to offer new services related to the digital euro to other intermediaries.

**Figure 68 - Digital Euro: Possible Opportunities**

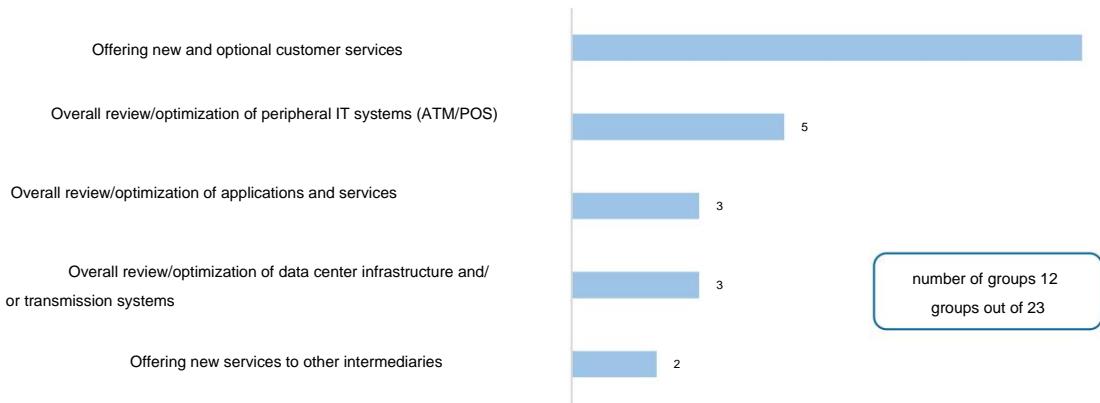
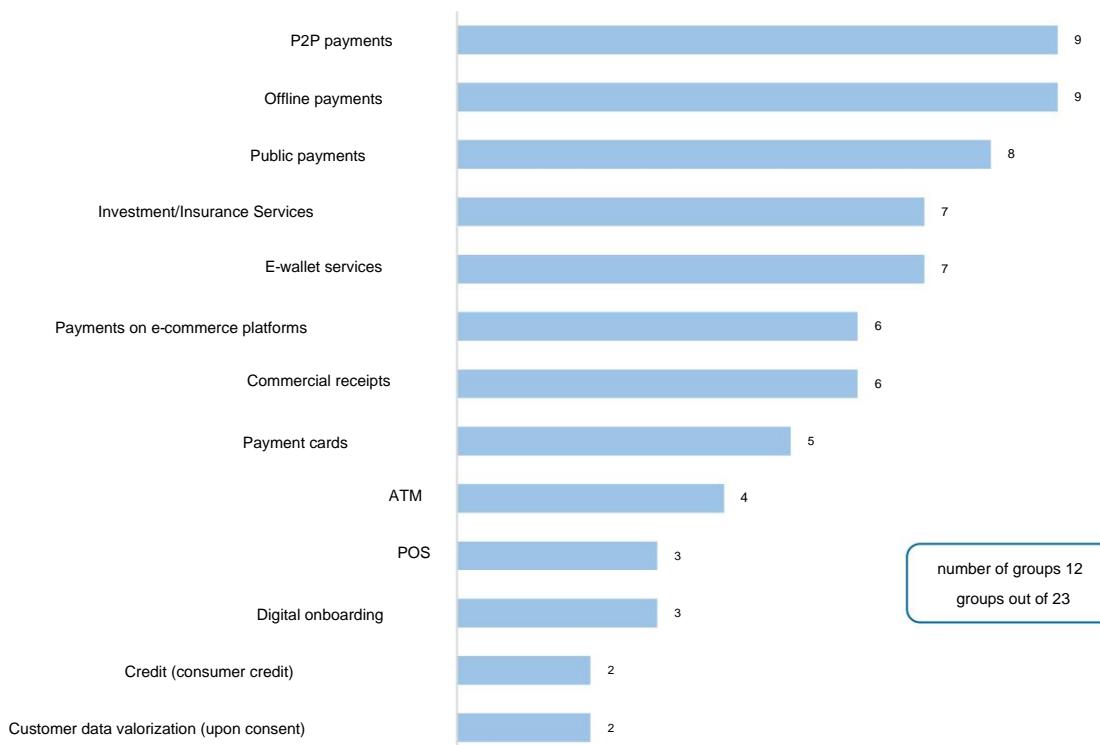


Figure 69 explores in detail some of the potential areas of offering for the new and optional customer services connected to the digital euro indicated in the previous figure. For at least half of the responding groups, the offering revolves around multiple forms of payment services—primarily P2P, offline,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

**Figure 69 - Digital Euro: possible areas of offering new customer services**



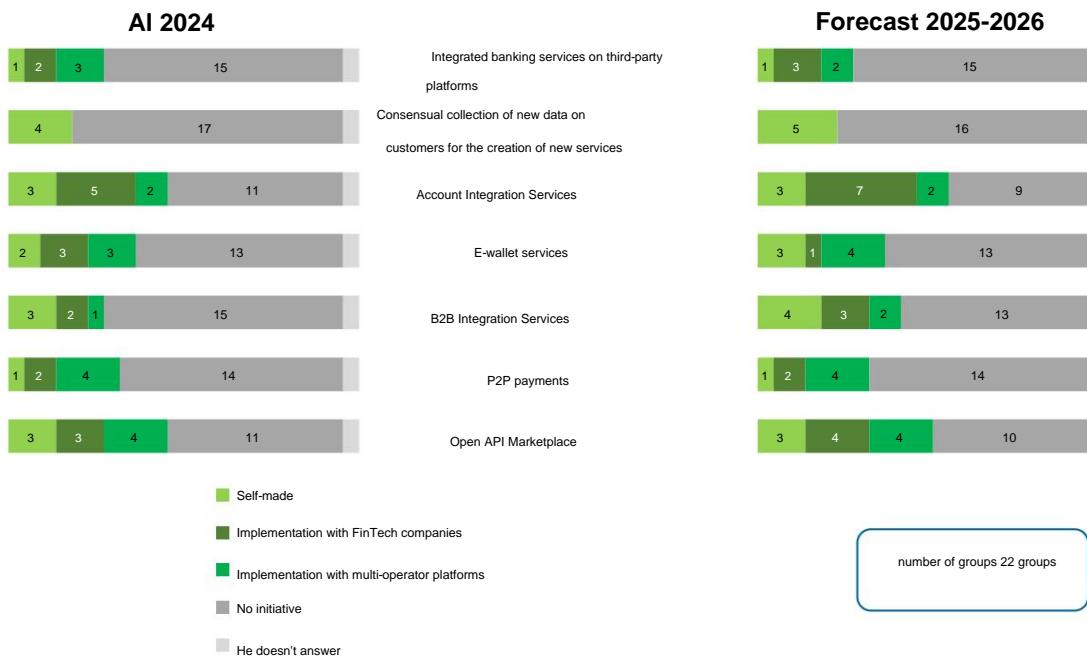
## 2.6 Open Banking

This section

focuses on open banking initiatives, ongoing in 2024 and planned for the two-year period 2025-2026, related to the implementation of value-added business services (VAS) and the related implementation methods.

Figure 70 shows a rather limited use of open banking, which occurs mainly to create account integration and services on the open API marketplace, a trend also confirmed in the forecast for the two-year period 2025-2026.

**Figure 70 - Open banking: areas<sup>29</sup> and implementation methods of value-added services**



## 2.7 Technological innovation

Innovation is a process that continuously develops in all technological domains and is particularly felt in IT, where it affects almost every area.

Figure 71 examines the most significant IT innovation initiatives undertaken or planned by banking groups, broken down by thematic area and implementation time horizon. As of 2024, all thematic areas are affected by significant innovation initiatives, either ongoing or completed during the year. Specifically, over half of respondents reported initiatives in the server farm and in development and evolutionary maintenance during the year.

<sup>29</sup> Below are some explanatory definitions for the items listed in the chart:  
 - Account integration: operational integration between bank accounts, even those of different institutions, which allows the customer to execute transactions centrally;  
 - 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 execute payment transactions;  
 - B2B integration services: e.g., transaction processing services integrated into corporate clients' ERP systems via a secure channel;  
 - P2P payments: real-time money transfer between private individuals;  
 - Open API marketplace: API (application programming interface) delivery platforms for development of value-added services.

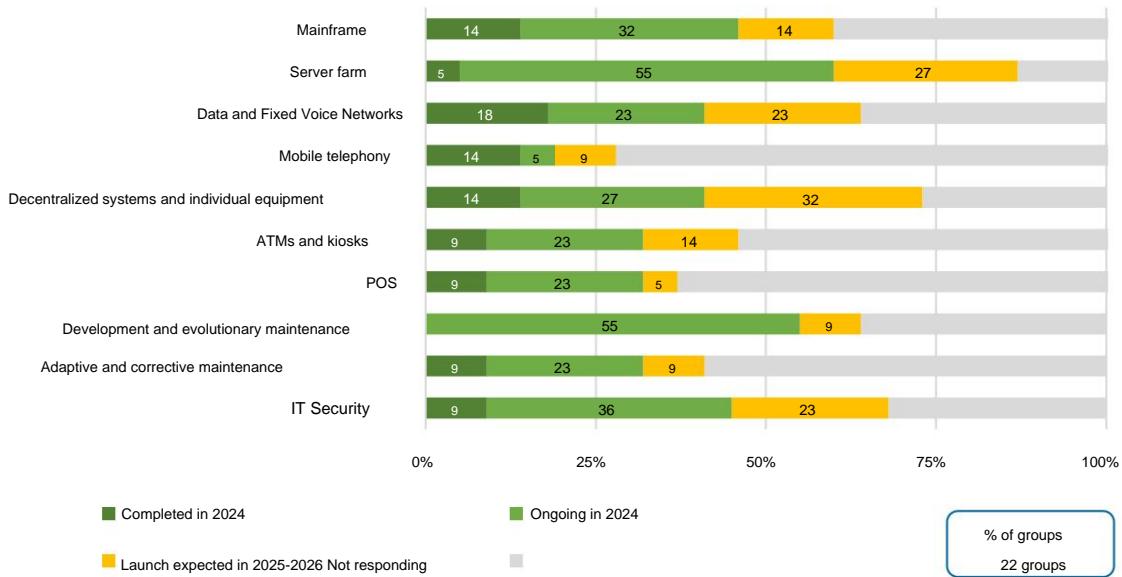
For the two-year period 2025-2026, a significant number of groups have reported initiatives that will impact decentralized systems and individual equipment, the server farm, data and fixed-line telephone networks, and IT security.

The following is an excerpt of the main activities reported for the 2025 time horizon.

2026, divided by thematic area:

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

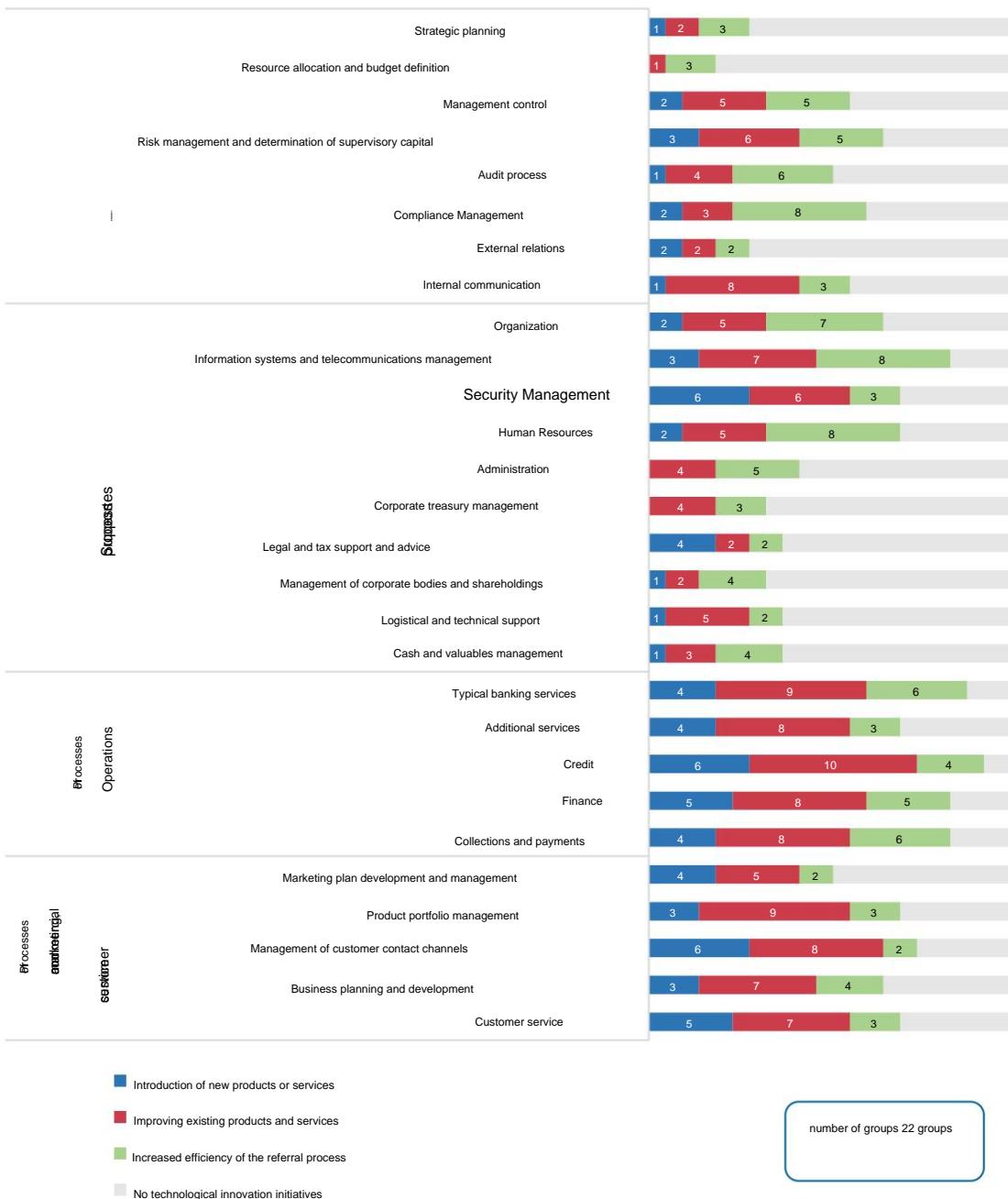
**Figure 71 - Technological innovation initiatives by thematic areas**



Finally, the survey focuses on the banking processes affected by technological innovation initiatives launched or underway in 2024 and their primary purpose (the taxonomy used for the processes is that defined by ABI Lab).

Figure 72 shows that the area most subject to innovation is that of Operations processes. Initiatives aimed at improving existing products and services prevail across the board. The introduction of new products or services particularly affects security, credit, and customer contact management processes. Increased efficiency primarily affects compliance management and information and telecommunications systems. Overall, besides Operations processes, the most affected by innovation is the information and telecommunications systems management process.

**Figure 72 - Purpose of technological innovation initiatives started or underway**



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

## 2.8 IT Staff

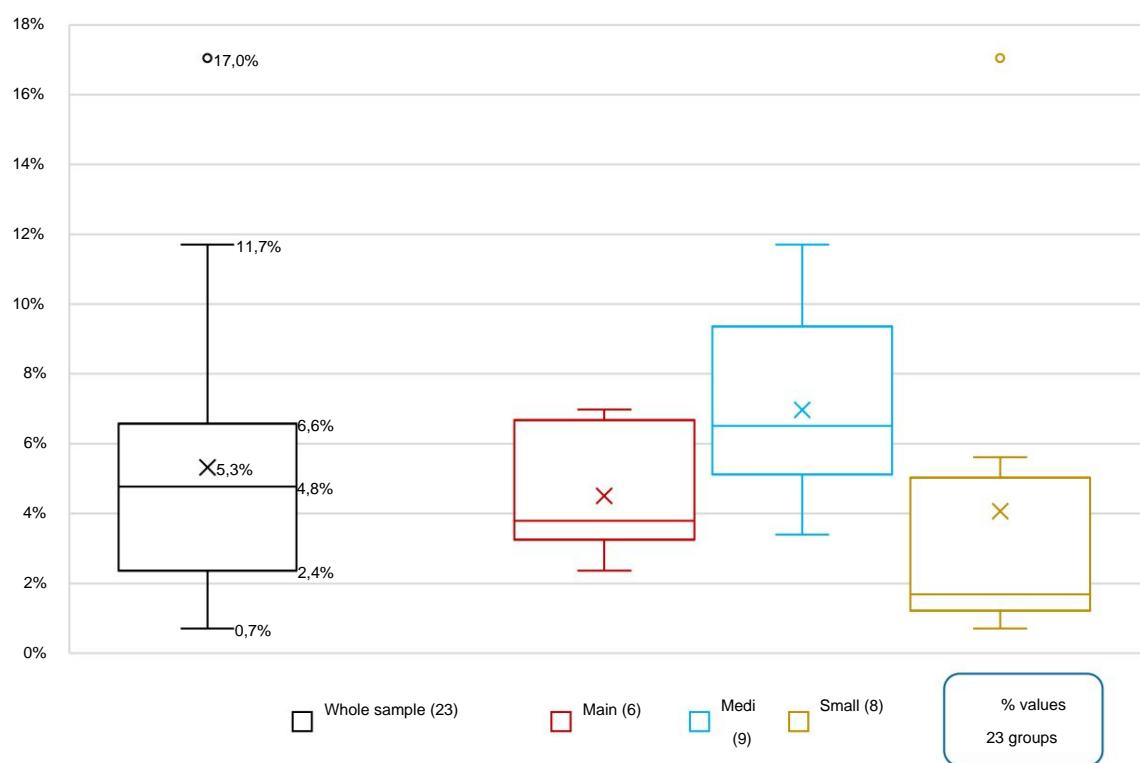
This section devotes ample space to analyses of IT staff, which as of December 31, 2024, comprised a total of 12,887 employees for the 23 participating groups (CIPA scope). This analysis characterizes the workforce and measures the allocation of resources among thematic areas, focusing on the technical skills acquired and those in need of improvement, recruitment methods, and the quality of the training offered.

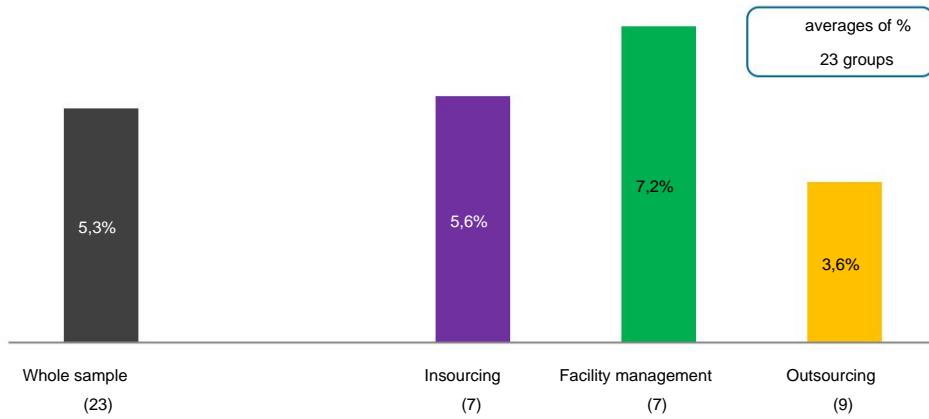
### 2.8.1 Characterization of the team

The analysis of IT personnel begins with an analysis of the ratio between the number of IT employees and the total number of banking group employees, within the CIPA scope. Figure 73 represents this ratio, for the entire sample and for size classes, using box-and-whisker plots.<sup>27</sup> For the entire sample of 23 groups, this ratio averages 5.3%. On average, the highest values are attributable to Medium groups (7.0%), while the lowest values are attributable to Small groups (4.1%), due to the greater use of outsourcing of IT activities.

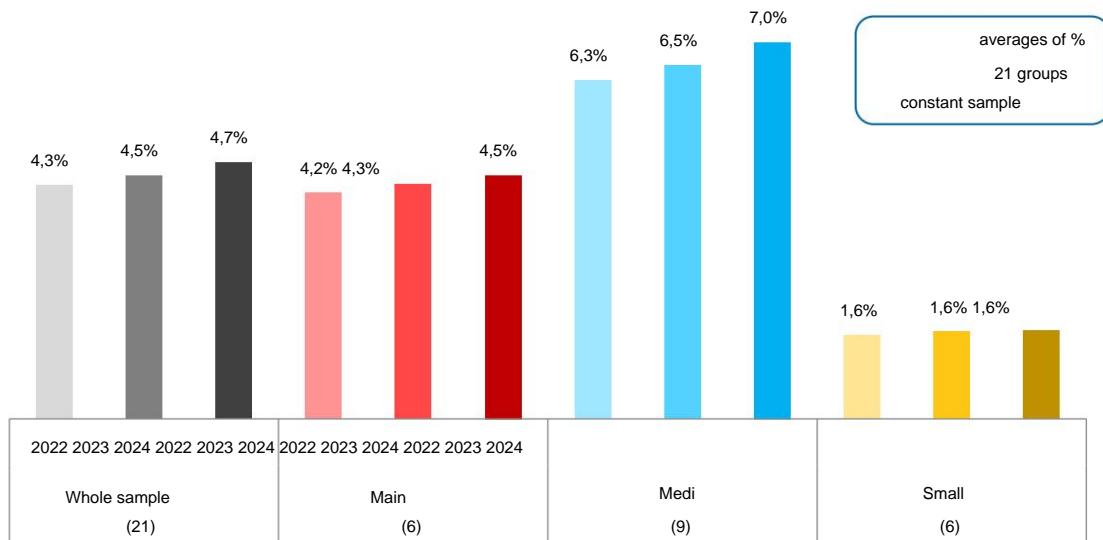
This phenomenon also emerges from Figure 74, which reports the average percentages for each IT sourcing model.

**Figure 73 - IT staff / total employees by size class**



**Figure 74 - IT staff / total employees by sourcing model**

In the three-year period 2022-2024, the ratio of IT staff to total employees, calculated as an average percentage of a constant sample of 21 groups, shows an upward trend, recording an overall average increase of 0.4% (Figure 75). At the size level, a constant increase is observed for the Large and Medium groups and a stable figure for the Small groups.

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

The similar analysis, carried out for sourcing model classes (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 characterization of the IT workforce by gender, age, and contractual level according to the following classification:

ÿ age, divided into five groups of comparable size: under 30, between 30 and 39, between

40 to 49 years old, 50 to 59 years old, 60 years old and over;

ÿ contractual level, divided into three bands: professional areas, executives and managers.

In Figure 77, referring to the entire sample and expressed in percentages (ratio between the sum of the values of the quantity under examination for all respondents and the total), it can be observed that, among the IT staff, the largest age group is that between 50 and 59 years (31.1%), the executives are 54.5% of the total and men are in clear majority compared to women who, in the sample examined, represent 28.9% of the entire IT sector.

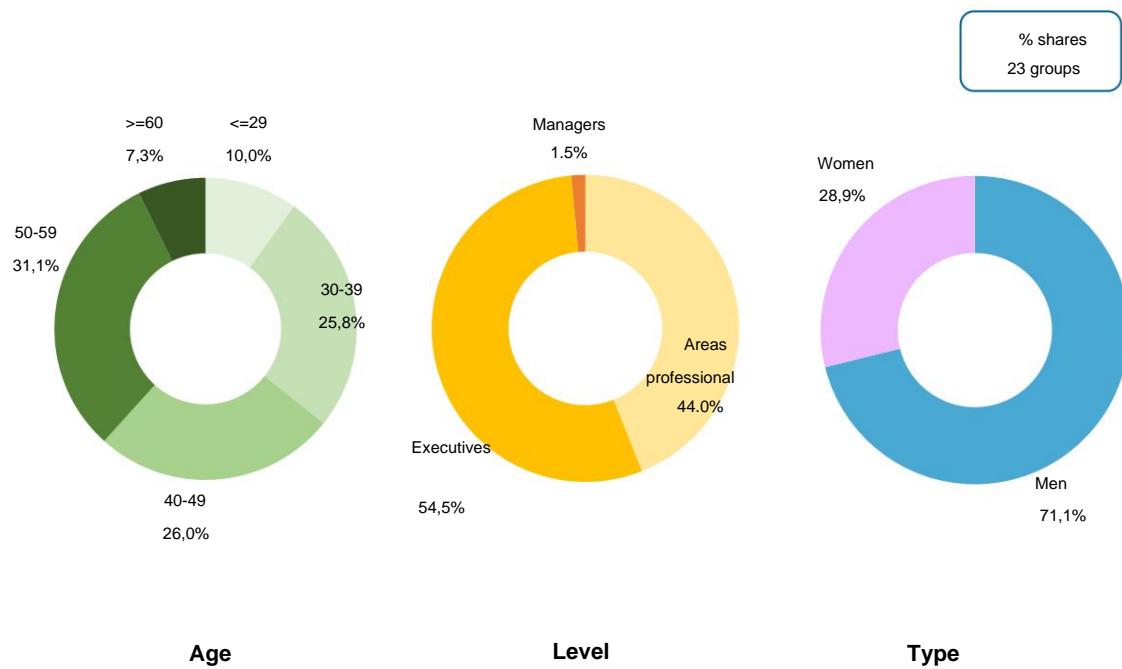
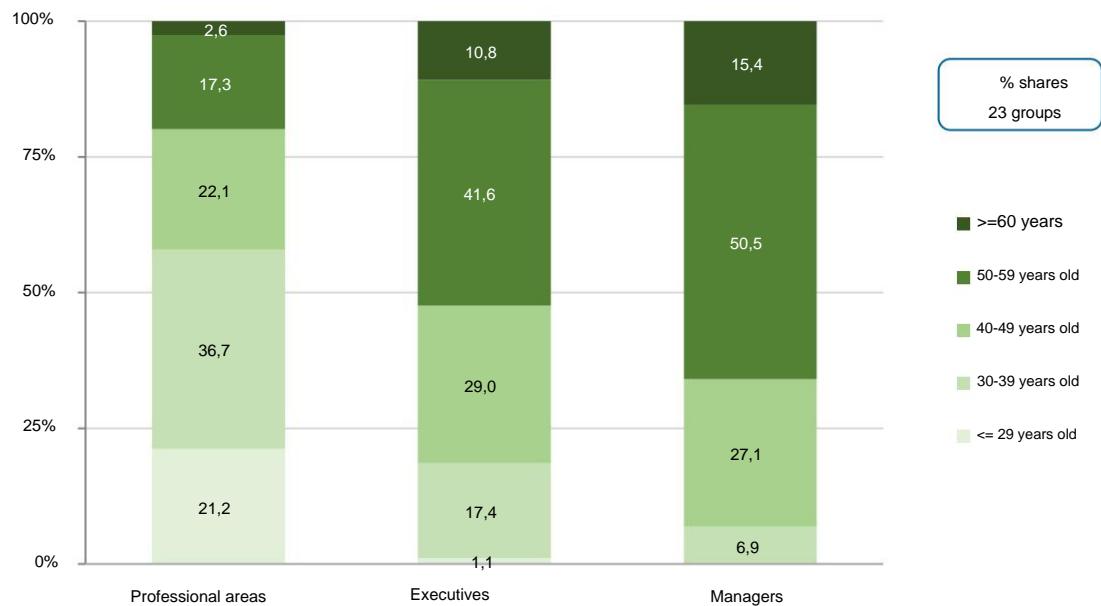
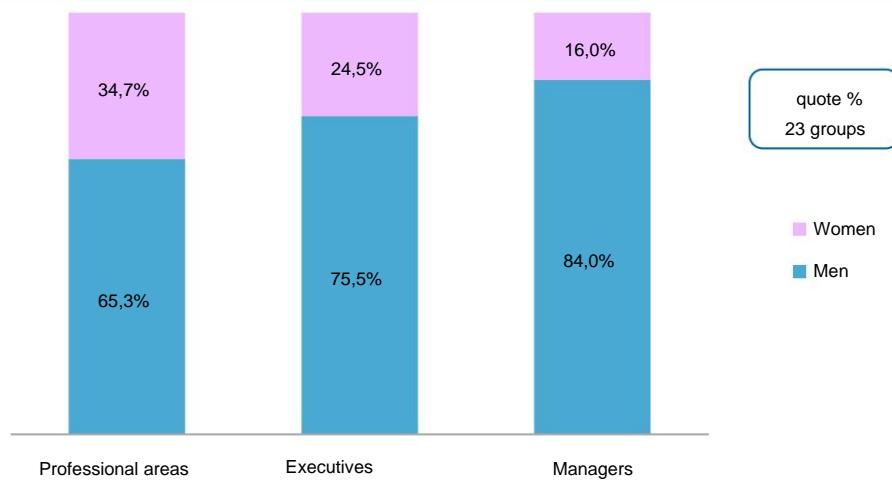
**Figure 77 - IT staff by age, contract level and gender**

Figure 78 shows the distribution of IT employees by age and contractual level. A general increase in age is noted as the level increases. IT employees under 30 are present almost exclusively in professional areas, where the largest age group is between 30 and 39 and over half of the staff is under 40. Among managers and executives, the largest age group is between 50 and 59 and, overall, over half of the employees at these contractual levels are 50 or older.

**Figure 78 - IT staff by age and contract level**

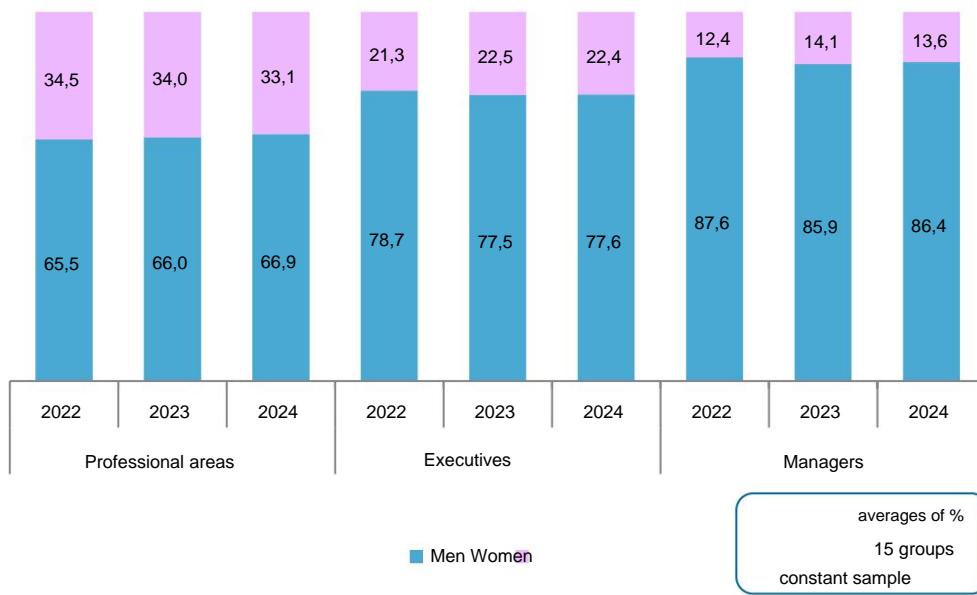
In relation to the composition by gender and contractual level, the female presence is lower than the male one at all contractual levels and decreases with increasing classification, going from 34.7% within the professional areas to 16.0% among managers (Figure 79).

**Figure 79 - IT staff by gender and contractual level**

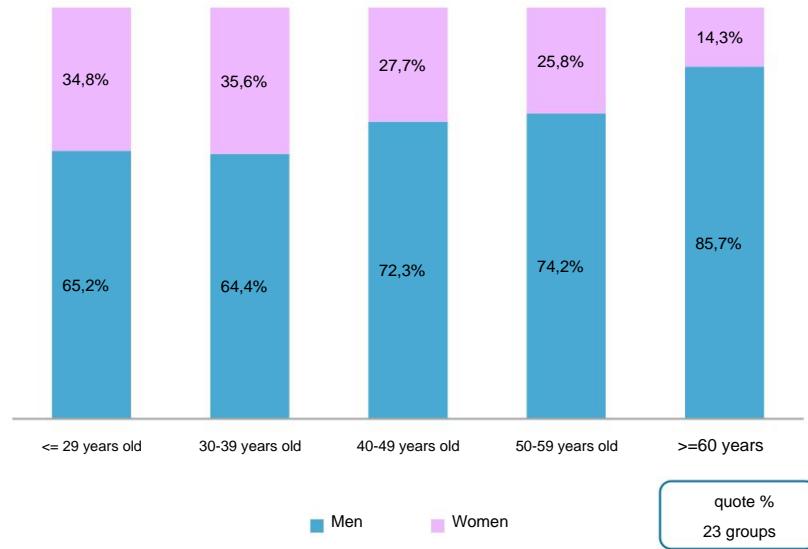


To observe the trend in the gender ratio among the various job categories in recent years, we can refer to Figure 80, which takes as a reference a constant sample of 15 groups with at least 50 IT employees and elaborates the data into percentage averages. Over the years, a slight decline in the percentage of women in professional areas is evident, and in the last financial year, even among middle managers and executives.

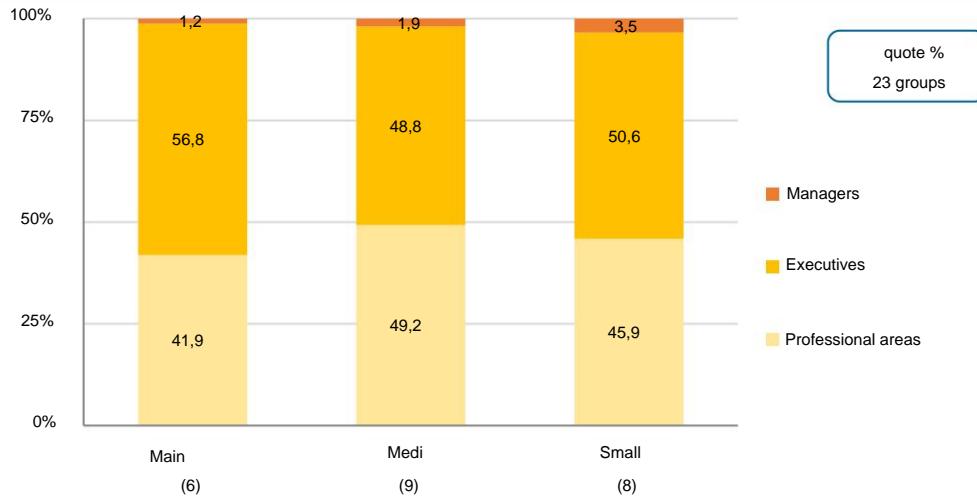
**Figure 80 - IT staff by gender and contractual level: 2022-2024 trend**

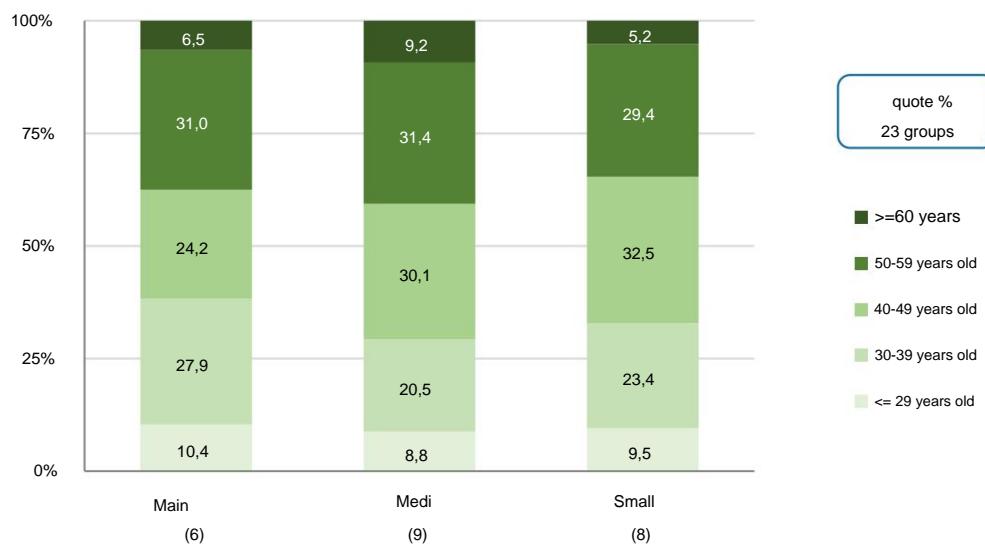
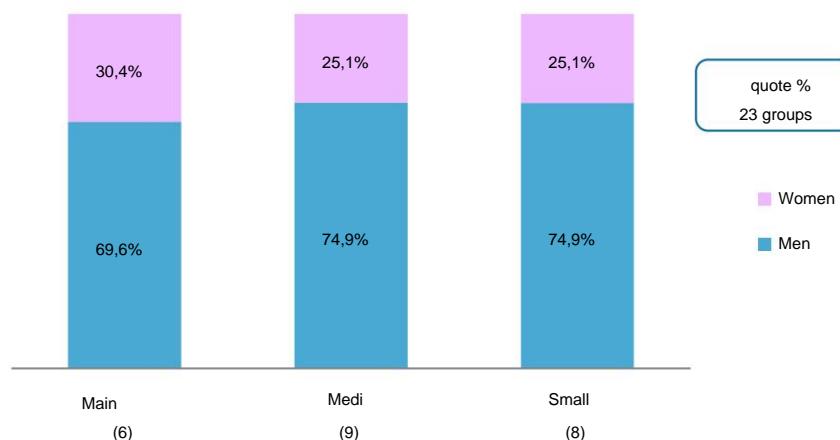


Regarding gender and age composition, the female share in IT is higher among younger age groups, gradually increasing from 14.3% of those over 60 to approximately 35% of those under 40 (Figure 81). A higher rate of new female hires in recent years, a lower age of female hiring, and a higher rate of early female exit may have contributed to this phenomenon.

**Figure 81 - IT staff by gender and age**

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

**Figure 82 - IT staff by contract level and size class**

**Figure 83 - IT staff by age and size class****Figure 84 - IT staff by gender and size class**

Finally, Table 13 provides a detailed overview, dividing the IT population of the entire sample into 30 categories, based on the three dimensions of analysis discussed thus far: age, contractual level, and gender. Looking at the largest categories, the age group for women is between 30 and 39, employed in professional areas (6.3%), while for men, the age group rises to 50-59, employed in executive positions (17.1%).

**Table 13 - IT staff: breakdown by gender, age and contractual level**

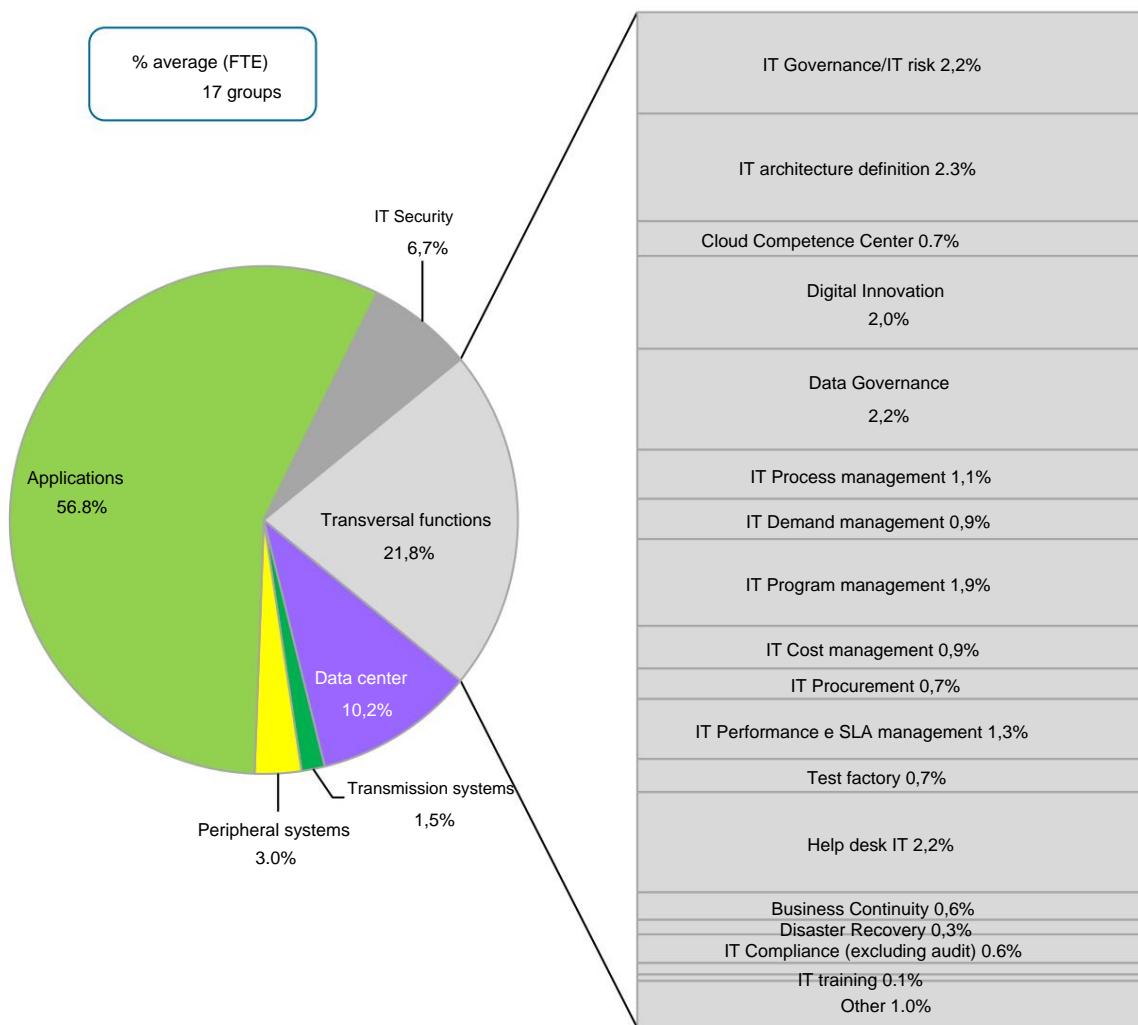
		<= 29 anni		30-39 anni		40-49 anni		50-59 anni		>= 60 anni	
		Uomini	Donne								
Aree professionali		6,1	3,2	9,9	6,3	6,5	3,2	5,3	2,3	0,9	0,2
Quadri-direttivi		0,4	0,2	6,6	2,9	11,9	3,9	17,1	5,6	5,1	0,8
Dirigenti		0,0	0,0	0,1	0,0	0,3	0,1	0,6	0,1	0,2	0,0

Table 15 in the Appendix shows a similar breakdown, expressed as average percentages calculated on the 16 groups with at least 50 IT employees.

## 2.8.2 FTE Allocation

Figure 85 shows the allocation of IT staff within the thematic areas, enriched with This is another category that includes personnel assigned to transversal IT functions. In this analysis, performed as average percentages for groups with at least 50 IT employees, the personnel is quantified in terms of FTEs (full-time equivalents) rather than headcount, to allow for proper role differentiation even for personnel performing activities in multiple areas. 56.8% of IT resources are allocated to the Applications area, followed by the Data Center (10.2%), IT Security (6.7%), and residual quotas for peripheral and transmission systems. More than a fifth of FTEs are dedicated to transversal functions, where architecture definition prevails.

IT, IT governance/IT risk, data governance, IT help desk, and digital innovation. The greater or lesser presence of IT personnel in cross-functional functions depends on the banking group's organizational structure, which may be within the IT sector, outside the IT sector, distributed between the IT and non-IT sectors, or outsourced.

**Figure 85 - IT Staff FTEs by Thematic Area**

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

### 2.8.3 Technical skills and training

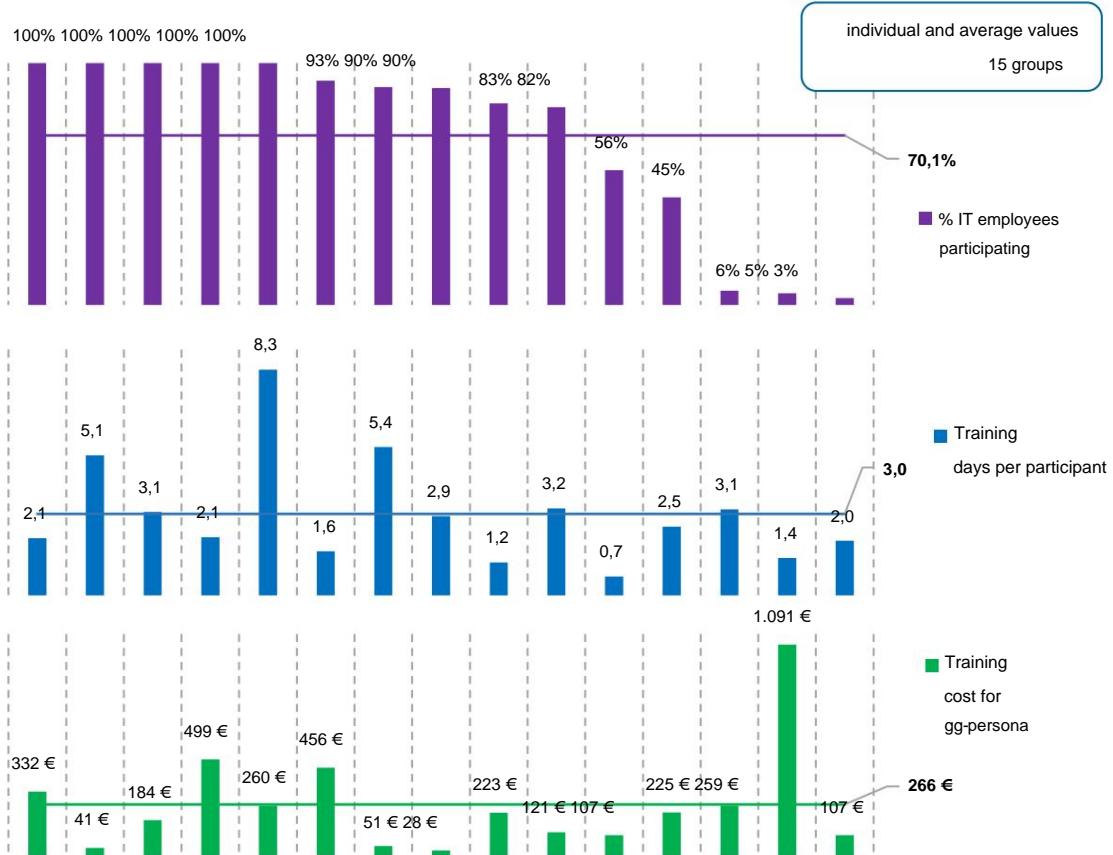
This paper addresses the topic of technical training for IT staff from the perspective of paid training offerings (costs borne by the banking group for the benefit of its own staff), in terms of participating employees, duration, and costs of training initiatives. Finally, the analysis focuses on the more general issue of technical skills and skill acquisition.

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. The training cost items exclude ancillary costs, such as travel, internal staff, and logistics. The graph shows:

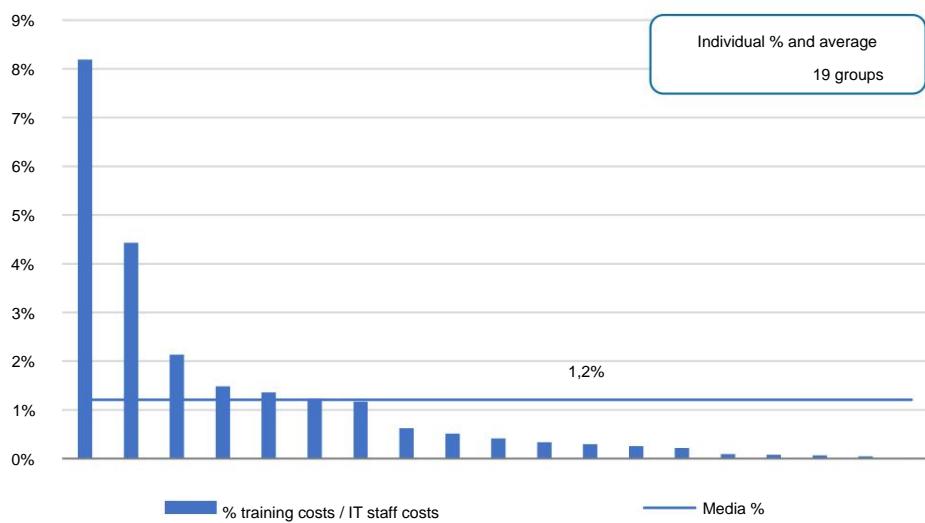
The individual positions and averages of some indicators are shown, superimposed vertically for ease of reading, with each vertical line representing a group.

Averaging the values declared by the 15 groups that, among those meeting the above-described criterion, provided the relevant data, we observe that in 2024, 70.1% of IT employees participated in paid technical training initiatives, each participant completing an average of 3 days of training, with an average cost of 266 euros per person-day.

**Figure 86 - IT training: participants, duration and costs**



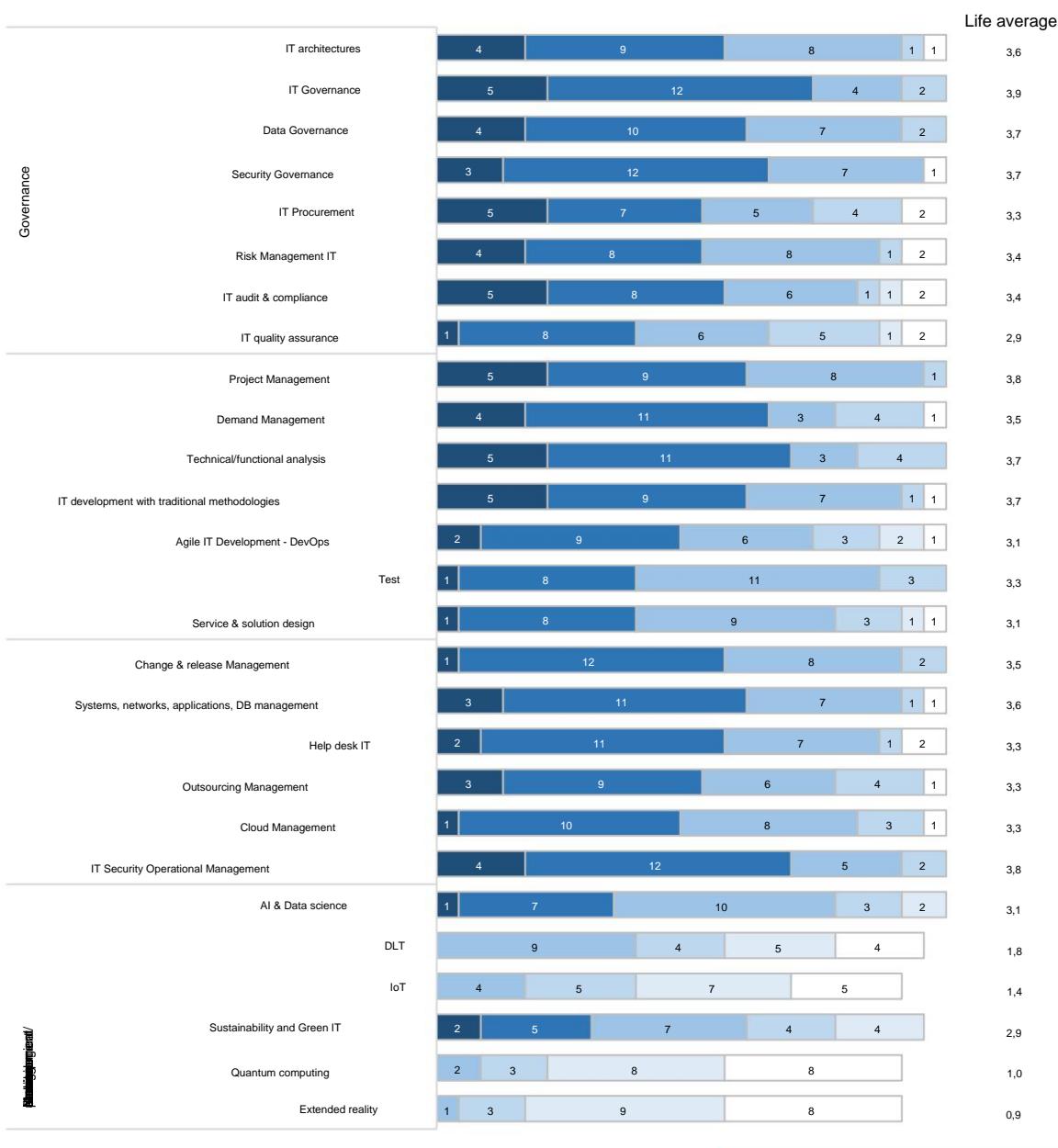
The ratio between training costs and total IT staff costs shows, for the 19 groups that provided the data, a range of up to 8.2%, with an average value of 1.2% (Figure 87).

**Figure 87 - IT training: training costs / IT personnel costs**

The average percentages by size class and sourcing model are reported in the Appendix (Figure 145).

Figure 88 and Figure 89 examine a range of IT domains/profiles, showing the level of associated competence, for 2024 (as is) and for the two-year period 2025-2026 (to be). This level is the average of those determined subjectively by each banking group, on a scale ranging from a minimum of zero (null) to a maximum of five.<sup>30</sup> The bars show the number of groups that have indicated it for each level. Observing the graphs by macro area, we note that in 2024 the profiles More traditional IT fields (governance, design and development, service management/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 fields, significantly lower levels are recorded, except for sustainability and green IT (2.9) and AI & data science (3.1). For the two-year period 2025-2026 The average levels are higher than in 2024, confirming the need to strengthen skills in all IT areas/ profiles. The largest gaps emerge for AI & data science ( $\bar{y} = 1.0$ ), cloud management ( $\bar{y} = 0.7$ ), IT governance and security governance ( $\bar{y} = 0.6$ ).

<sup>30</sup> The average is calculated only on the levels expressly indicated by the groups.

**Figure 88 - IT skills: levels as is (2024) by IT fields and profiles**

High (5)

Medium-high (4)

Medium (3)

Medium-low (2)

Low (1)

None (0)

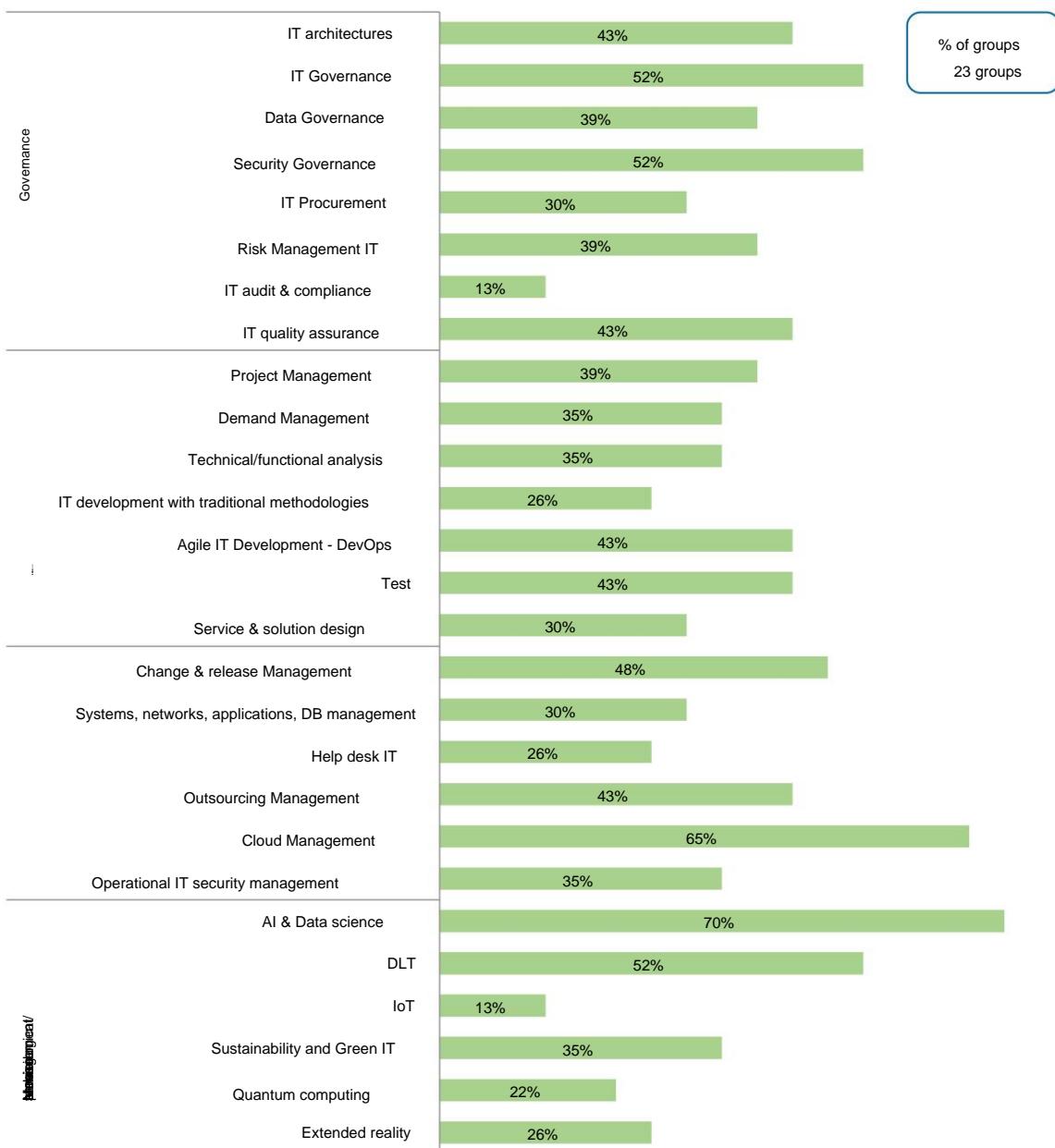
number of groups and average levels

23 groups

**Figure 89 - IT skills: levels to be (2025-2026) by IT fields and profiles**

Figure 90 provides, for all areas, a gap analysis on the perceived need for skills in the transition from the current to the prospective situation, indicating the percentage of banking groups that plan to increase their skills in the two-year period 2025-2026 compared to the financial year under review.

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

**Figura 90 - Competenze IT: gap analysis as is - to be**

Regarding the methods of sourcing skills in various fields, groups are still more likely to train their own IT staff rather than hire or use external resources in 2024. Hiring staff is more frequent in the areas of security governance and AI & data science, while the use of external resources is particularly evident in IoT and quantum computing (Figure 91).

**Figure 91 - IT skills: how to find them**

## 2.9 Remote work

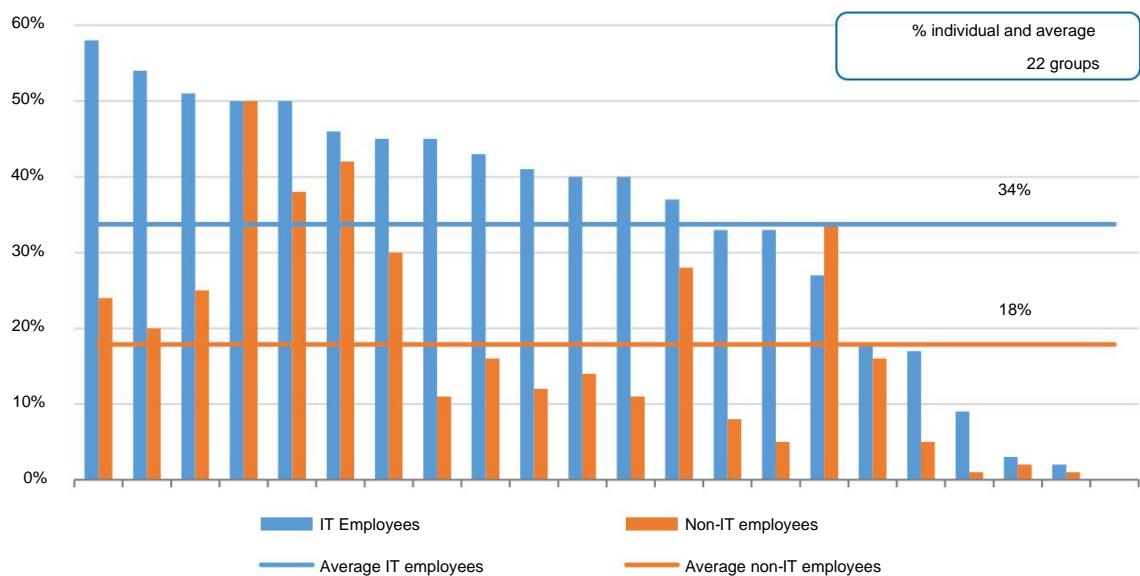
The working model, even in banking environments, provides the possibility, for all or some employees depending on the relevant activity, to alternate remote working with the usual in-person modality, with formulas and approaches that can vary greatly from group to group.

The mixed working model, remote and in-person, is in force in 2024 for 21 out of 22 responding banking groups.

Figure 92 quantifies the extent of employees' use of remote working by representing, for each group, the percentage of days worked remotely compared to the total number of days worked in 2024. The analysis is conducted separately for employees performing IT functions (blue bars) and for the remaining employees in the group (orange bars), always with reference to the CIPA perimeter. As mentioned above, with the exception of one respondent, 21 reported the use of remote working for both IT and non-IT employees, albeit with highly variable percentages.

The percentage of days worked remotely is generally higher for IT staff than for other employees. Among the 22 groups, IT staff worked remotely on average 34% of their days, while for other employees the average figure drops to 18%.

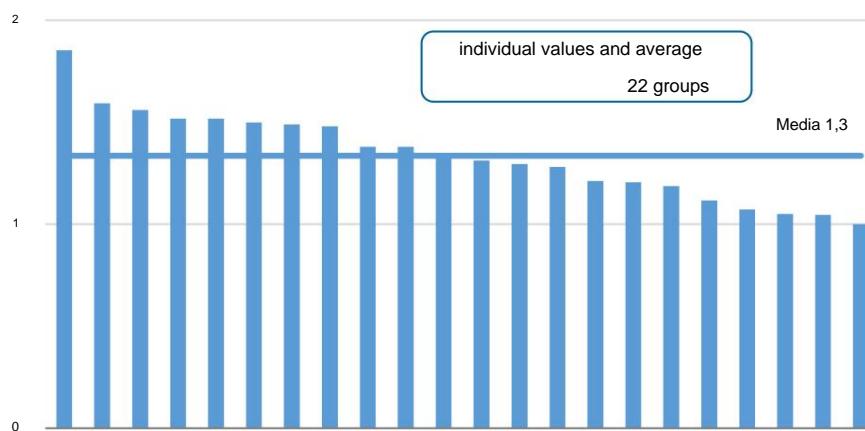
**Figure 92 - Days worked remotely in 2024**



## 2.10 Workstations (PDL)

With reference to the workstations made available to staff (IT and non-IT) for "standard" activities<sup>31</sup>, Figure 93 shows, for each group, the average number of PDLs available per individual employee, obtained by dividing the total workstations (owned + leased) by the total number of employees in the group. This ratio is always greater than or equal to one and, on average, equal to 1.3 PDLs each.

**Figure 93 - Number of standard workstations per employee**



<sup>31</sup> In this survey, "workstation" (or "workplace") has an IT-related meaning, referring to the set of technological equipment used to perform work activities. Those specifically equipped for specific tasks (e.g., finance, cash handling) are excluded from this analysis.

The survey distinguishes between the share of owned and rented workstations. It emerges that, in average percentages, 78.5% of the workstations are owned by the banking group (Figure 94).

**Figure 94 - Standard workstations: ownership vs. leasing**

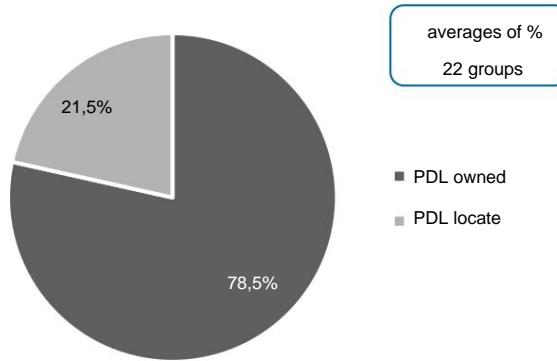
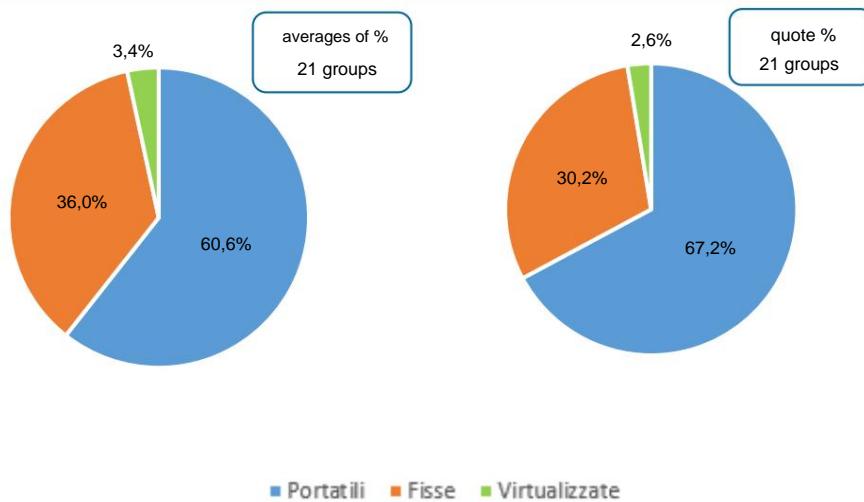


Figure 95 provides a breakdown of PDLs by type (portable, fixed and virtualized<sup>32</sup>) Using two graphs for the same sample of 21 respondent groups, calculated as percentage averages and percentage shares. The graph on the right shows that, assuming the total number of PDLs in the 21 groups is 100, 67.2 are portable, 30.2 are fixed, and 2.6 are virtualized. However, using percentage averages, where each group is considered equal to the others and contributes equally to the average value regardless of the absolute number of PDLs owned, 60.6% are portable, 36% are fixed, and 3.4% are virtualized.

**Figure 95 - Types of standard workstations**

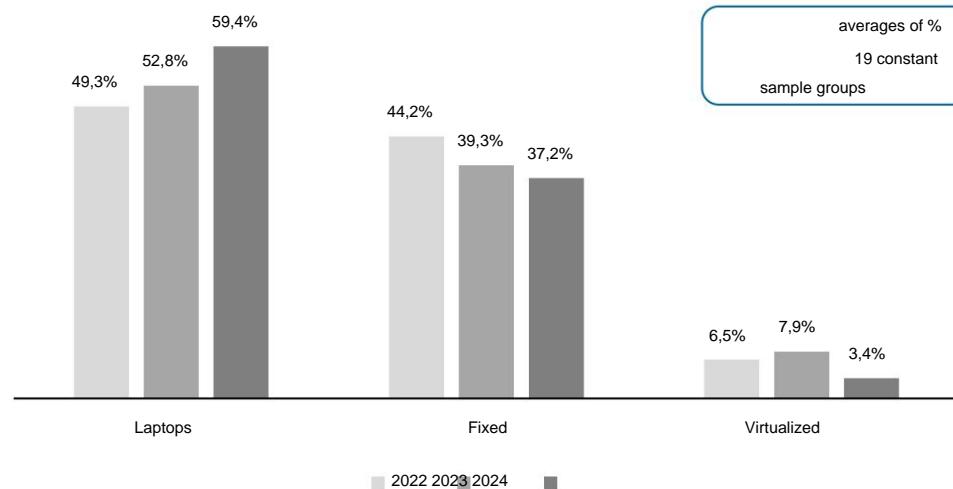


Analysing the typology of standard workstations in percentage averages on a constant sample of 19 groups in the period 2022-2024, the continuation of the rapid and constant

<sup>32</sup> Desktop virtualization.

increase in portable workstations, which by 2023 will account for more than half of the total. In 2024, a significant decrease in virtualized workstations was noted (Figure 96).

**Figure 96 - Types of standard workstations: trend 2022-2024**



# Chapter 3. Banks

## 3.1 Economic profiles

The sample of 32 banks participating in the Survey - two of which did not belong to groups or belonged to groups other than those examined here - represents 62.8% of the entire banking sector in terms of intermediated funds.

The overall IT economic figures reported for the 2024 financial year by the 32 banks participating in the Survey are:

- ÿ **TCO** (current expenses plus depreciation): 5,606 million euros;
- ÿ **Cash out** (current expenses plus investments): 5,766 million euros;
- ÿ **Current expenditure**: 3,989 million euros;
- ÿ **Investments**: 1,776 million euros;
- ÿ **Depreciation**: 1,617 million euros.

As with banking groups, the cost analysis model for thematic areas and production factors is also used for banks.

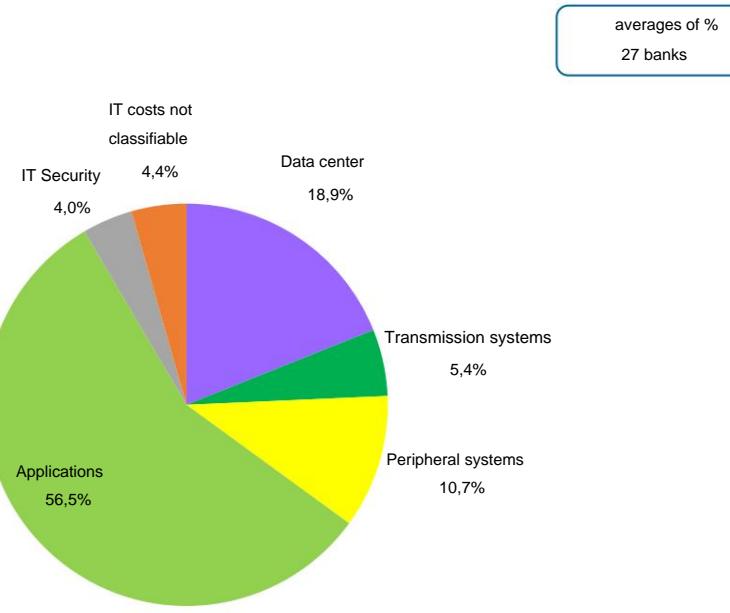
Of the 32 banks, 27 have performed a sufficiently detailed breakdown of TCO by thematic area to ensure a meaningful representation of the phenomena. The banks continue their efforts to achieve the most granular allocation possible of IT costs to individual areas, a task sometimes made difficult by the presence of outsourcing arrangements that do not guarantee visibility of such costs at this level of detail.

The Appendix, Tables 24 to 30, provides a detailed breakdown of IT costs by thematic area and production factor, similar to that provided for banking groups. All figures are expressed as percentage averages for the entire sample and the various analysis classes, based on size and operational characteristics. To ensure a meaningful representation of the data, only tables relating to classes with a sufficiently large sample are presented, and five banks that classified more than 30% of their total IT costs as "Unclassifiable IT costs" are excluded from the calculations.

On average, 56.5% of the TCO is absorbed by applications and 18.9% by the data center; followed by peripheral systems (10.7%) and transmission systems (5.4%). IT security costs stand at 4%, a figure that should be considered underestimated due to the difficulty in accurately isolating these costs (Figure 97).

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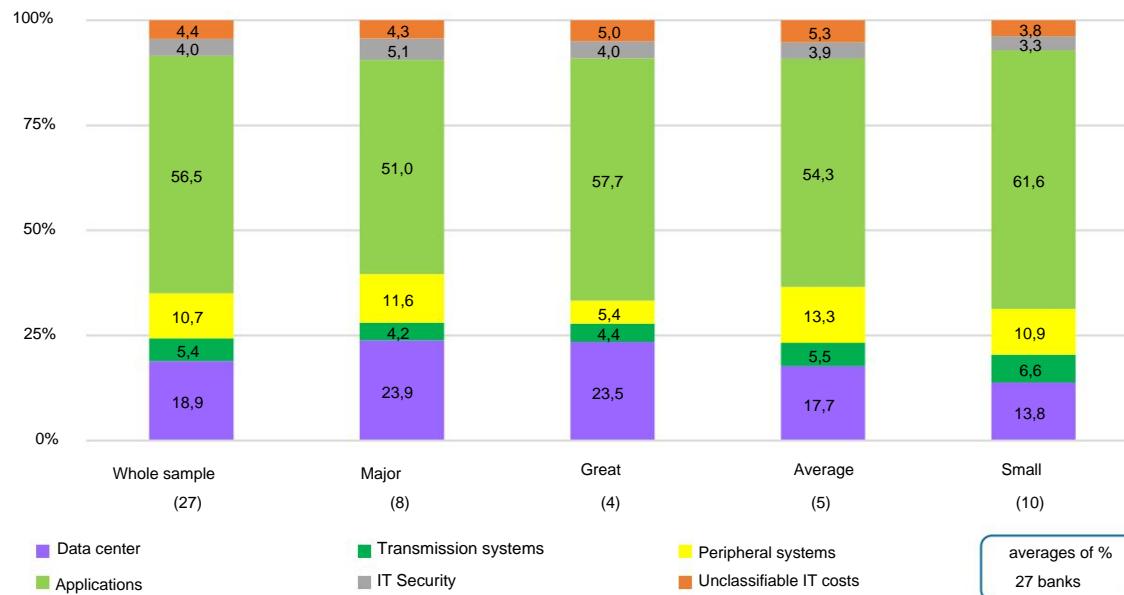
<sup>33</sup> In group analyses, costs are recorded using the full consolidation method. A group's IT costs are therefore different from the sum of the costs reported individually by the various banks within the group.

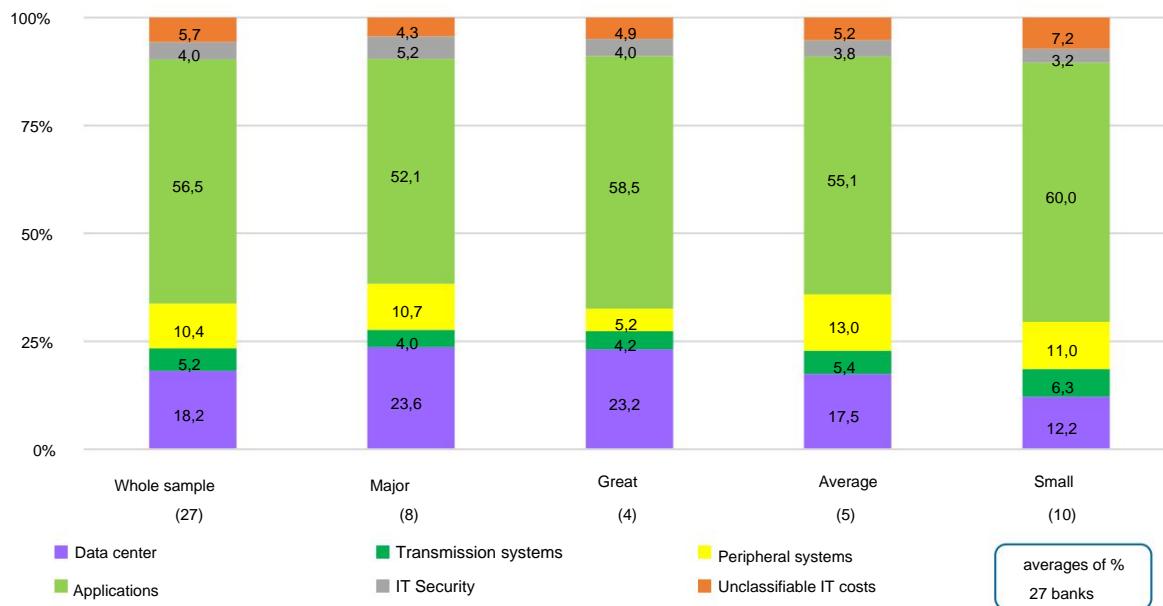
**Figure 97 - TCO of banks by thematic areas**

The breakdown of IT cash out by thematic area largely overlaps with that of TCO.

Figure 98 and Figure 99 show the TCO and cash out breakdowns by area respectively.

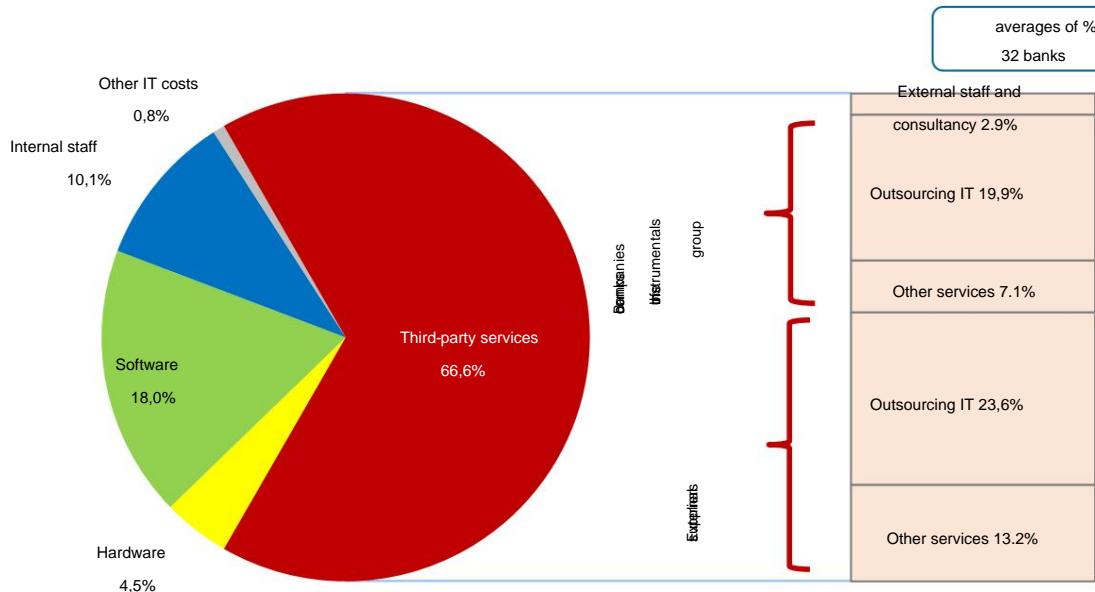
Bank-related topics, broken down by size class. As banks grow in size, they report higher average percentages for data centers and IT security.

**Figure 98 - TCO of banks by thematic areas and size classes**

**Figure 99 - IT cash out of banks by thematic areas and size classes**

In the distribution of TCO by production factors, the largest share is allocated to third-party services (66.6%) provided by: i) external personnel or consultancy; ii) other banks or instrumental companies of the banking group to which they belong and within the CIPA perimeter; iii) external suppliers<sup>34</sup>.

Of the costs directly incurred by the bank, on average 18% is attributed to Software, 10.1% to internal personnel and 4.5% to Hardware (Figure 100).

**Figure 100 - TCO of banks by production factors**

<sup>34</sup> An external supplier (outside the CIPA perimeter) means: IT vendor, banking consortium, other bank or group member outside the perimeter, or another banking group.

Figure 101 shows the breakdown of TCO by production factors, differentiated by size class.

**Figure 101 - TCO of banks by production factors and size classes**

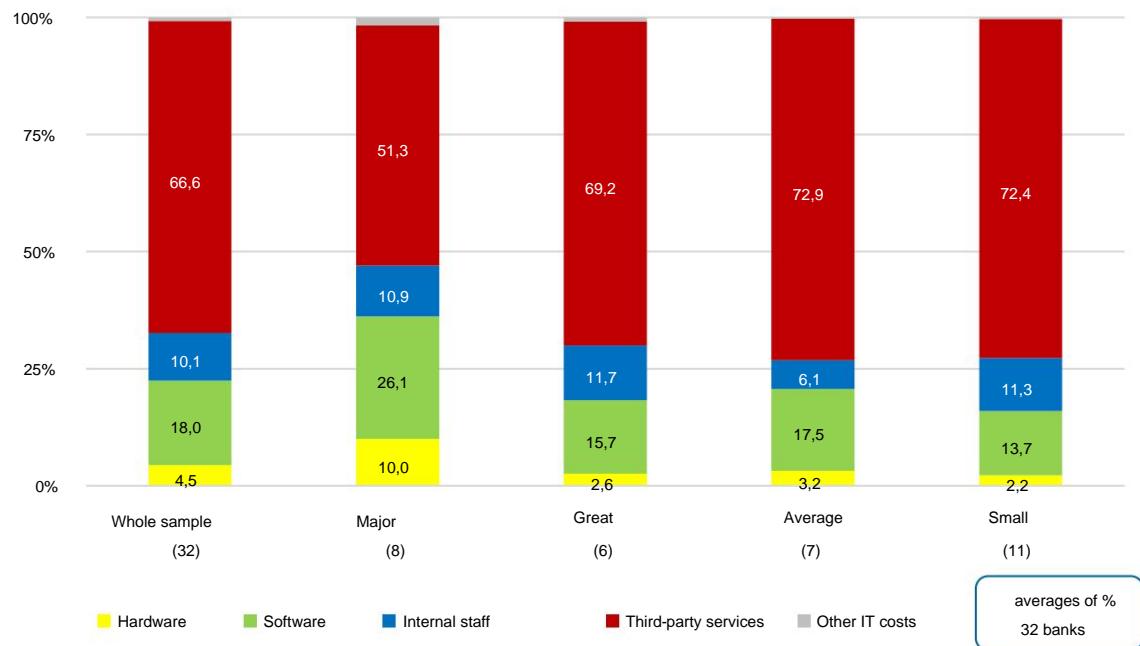
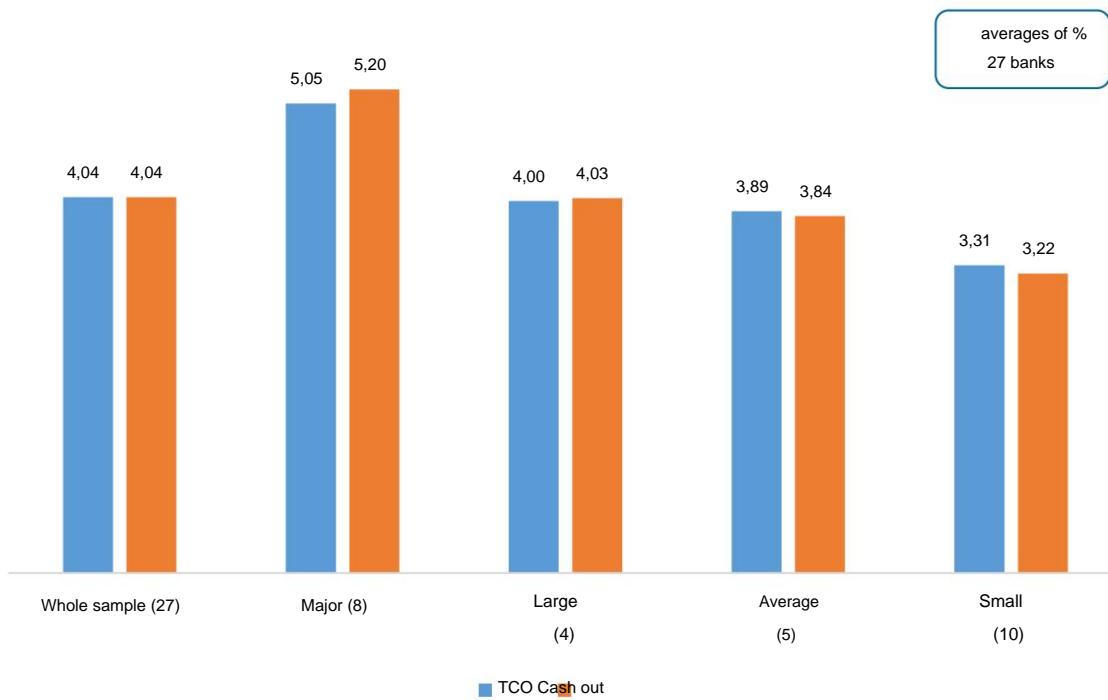
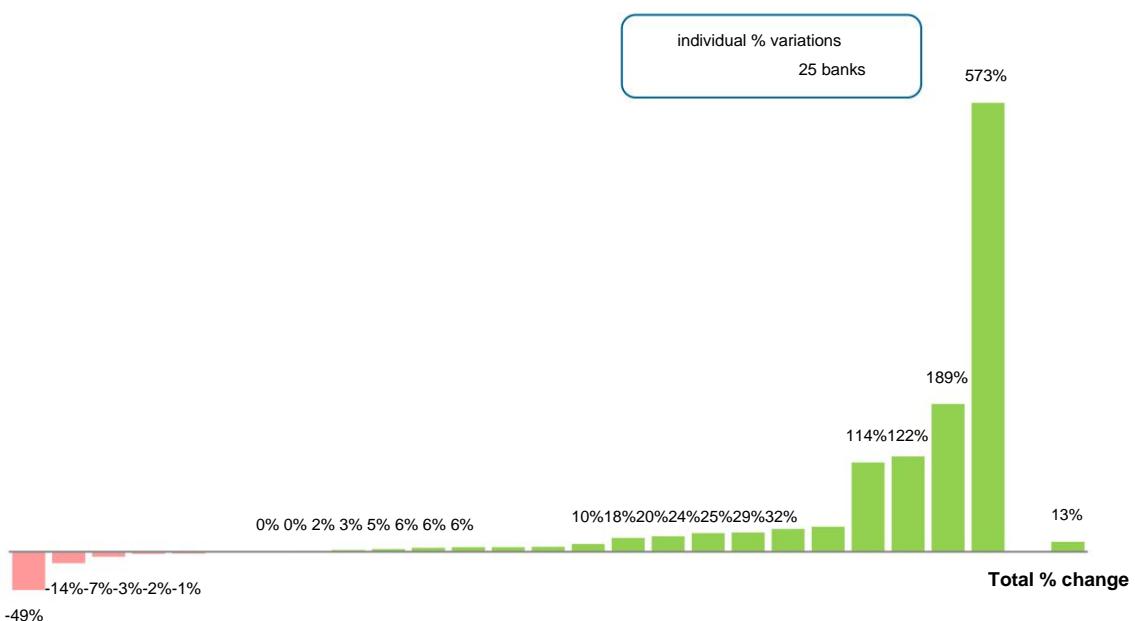


Figure 102 focuses on IT security, representing the average TCO and cash-out percentages for the classes that include a significant number of banks. From a size perspective, it is clear that, as banks grow in size, they report increasingly higher average percentages.

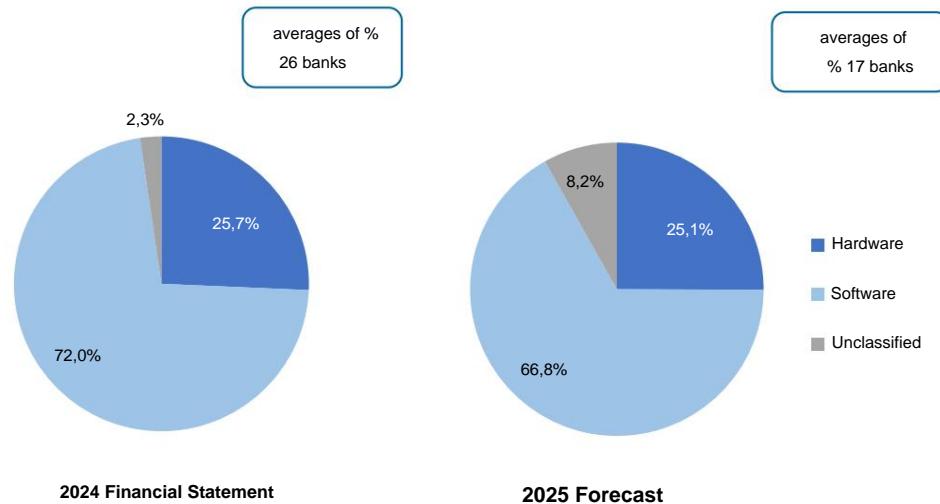
**Figure 102 - TCO and cash out of banks for IT security**

The graph in Figure 103 shows the individual percentage change between investments planned for 2025 compared to those implemented in 2024, for the 25 banks that provided both data. The majority are positive percentages, indicating increases, in some cases very significant. Overall, the nominal amount of IT investments planned for 2025 increases by 13% compared to the 2024 financial year.

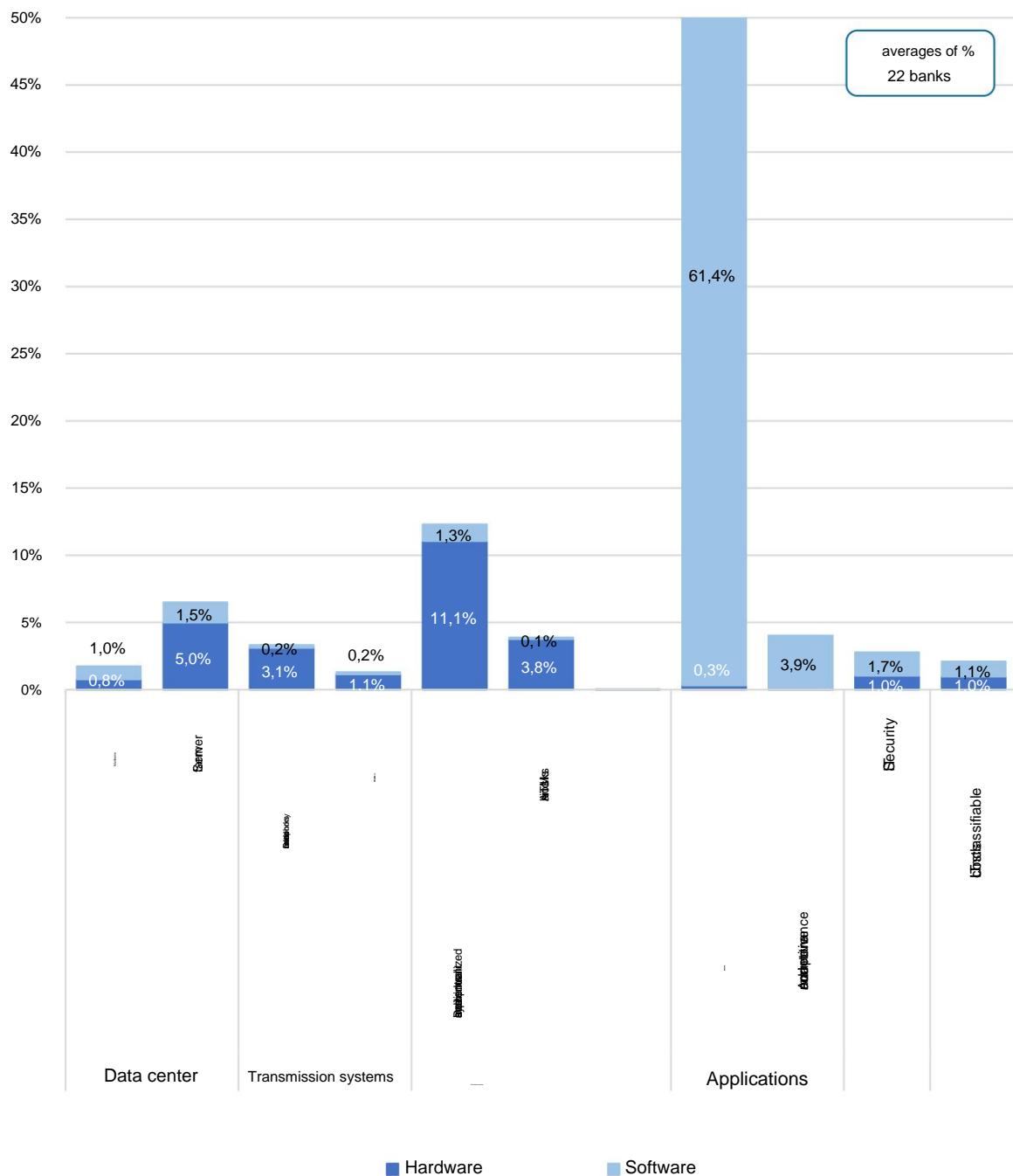
**Figure 103 - Banks' IT investments: change in 2025 forecast compared to 2024 actual**

Analyzing the breakdown of banks' IT investments between Hardware and Software, it emerges that, both in actual and forecast terms, more than two thirds are allocated to Software (Figure 104).

**Figure 104 - Banks' IT investments in HW and SW**



In Figure 105, investments in Hardware and Software for 2024 are further divided into thematic areas.

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

### 3.1.1 Economic indicators

Below are some indicators calculated by comparing the main profit and loss and operating figures of the 32 banks participating in the Survey, divided into classes based on size (Table 14).

For the items "IT costs"<sup>35</sup>, "IT cash out," "IT investments"<sup>36</sup>, "IT depreciation"<sup>37</sup>, "total number of employees," and "number of employees excluding IT" (the number of employees is calculated as an average of monthly values), the values reported by the individual banks in the questionnaire are used. The items "intermediated funds"<sup>38</sup>, "number of branches"<sup>39</sup>, "number of loans and deposits"<sup>40</sup>, "gross banking product"<sup>41</sup>, "operating margin"<sup>42</sup>, "overhead costs"<sup>42</sup>, and "operating profit"<sup>42</sup> are derived from the individual account matrix reports submitted by the banks.

The values of banks with negative operating results are eliminated from the indicators calculated from operating profit. In general, outliers are eliminated from the indicator calculations.

Compared to previous editions, this year the "Special Operations" category, which included banks with highly diversified organizational and operational structures, is no longer present and the related banks have been reclassified based on size.

The cost indicators reported in the table, necessarily dependent on the composition of the sample examined and the calculation methodology used, have a statistical value and do not represent a merit assessment of the choices and organizational models adopted by banks for IT management.

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<sup>35</sup> TCO net of adjusted IT revenues.

<sup>36</sup> Includes investments in hardware and software.

<sup>37</sup> Amount of depreciation charged to TCO.

<sup>38</sup> Average of monthly values for 13 months (reference year plus the month of December of the previous year).

<sup>39</sup> Average of quarterly values for the year taken from the Bank of Italy archives.

<sup>40</sup> Aggregate consisting of the sum of the items "loans: number of accounts" and "deposits: number of accounts".

<sup>41</sup> Aggregate consisting of the sum of the items "direct collections", "indirect collections" and "total uses".

<sup>42</sup> It refers to the new EBA reporting rules (see Bank of Italy Circular 272 and ECB Regulation No. 1534/2017).

**Table 14 - Indicators: 32 banks (entire sample)**

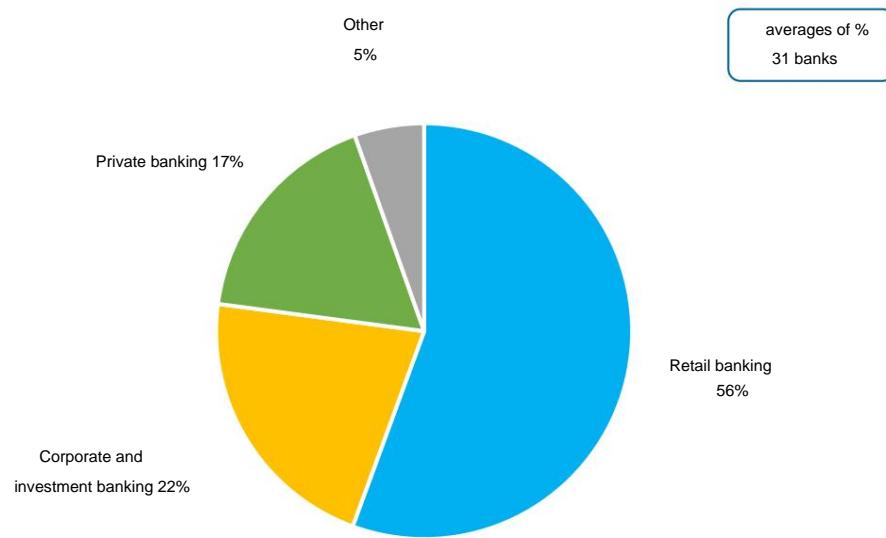
IT Cost Indicators*	Average 2024					Coefficients of variation 2024					Median 2024				
	Major	Large	Average	Small	Small	Major	Large	Average	Small	Small	Major	Large	Average	Small	Small
IT costs/Intermediated funds (per thousand) 2.35	3,11	3,29	2,68	5,80		0,39	0,39	0,44	0,33	0,79	2,04	2,72	2,90	2,35	4,57
IT costs/Operating margin (%) 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 result (%) 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/Overhead 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 €) 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 €) 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 €) 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 reports (tens of €) 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 Depreciation 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/Overhead 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 Cashout/Operating Margin (%) 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 Cashout/Number of employees net of IT (thousands of €) 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 Cashout/Number of Employees (thousands of €) 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					Coefficients of variation 2024					Median 2024				
Management margin/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 profit/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
Structure 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
Structure costs/Management margin (%) 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
Structure costs/Number of branches (hundreds of thousands of €) 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 (€ million) 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 (€ million) 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 (€ million) 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 negative values and outliers.

### 3.2 Organizational profiles

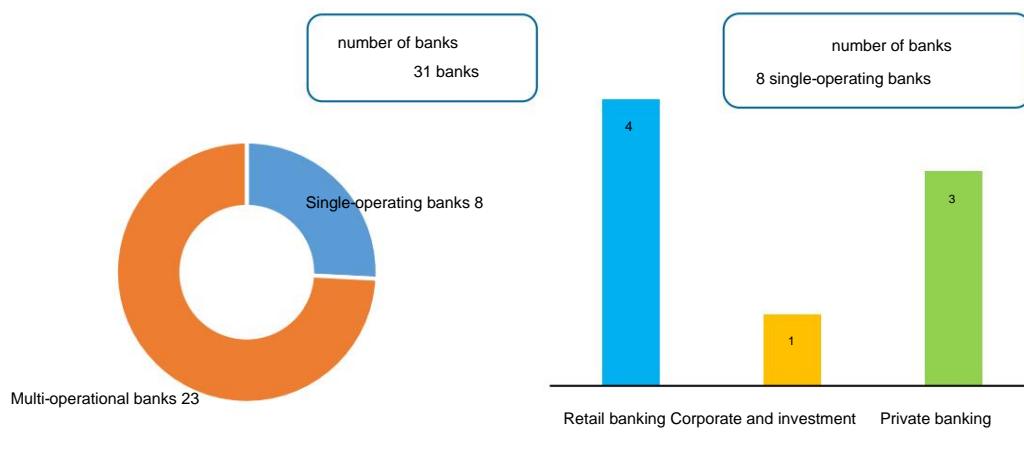
With reference to the sample's banking operations, based on the intermediation margin, it emerges that, in average percentages, for 31 banks, retail banking represents the predominant activity, equal to 56%, followed by corporate and investment banking (22%) and private banking (17%). Other activities account for an average of 5% of total operations (Figure 106).

**Figure 106 - Bank activities**



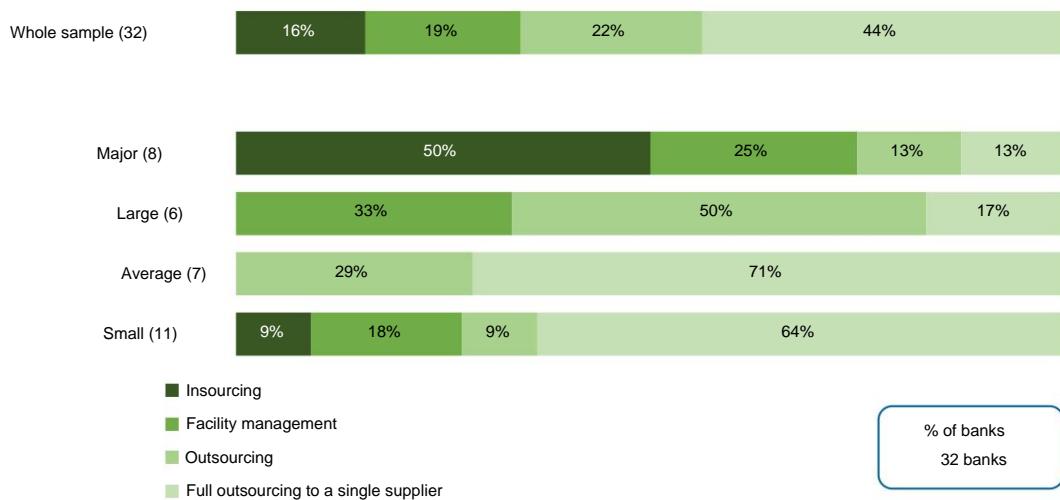
Of the 31 responding banks, 23 declare that they carry out more than one activity, while eight operate in only one sector: four in retail banking, three in private banking and one in corporate and investment banking (Figure 107).

**Figure 107 - Multi- and single-operating banks**



Outsourcing remains the dominant model for IT sourcing: 66% of banks outsource data center and application management to one or more external providers. Sixteen percent adopt the insourcing model, managing IT resources and applications internally, regardless of the presence of selective outsourcing for individual initiatives or areas. 19% of them rely on a "mixed" model, outsourcing data center infrastructure while maintaining application management in-house (facility management). Figure 108 analyzes the sourcing models for the entire sample and by size class.

**Figure 108 - Prevalent IT sourcing model of banks**

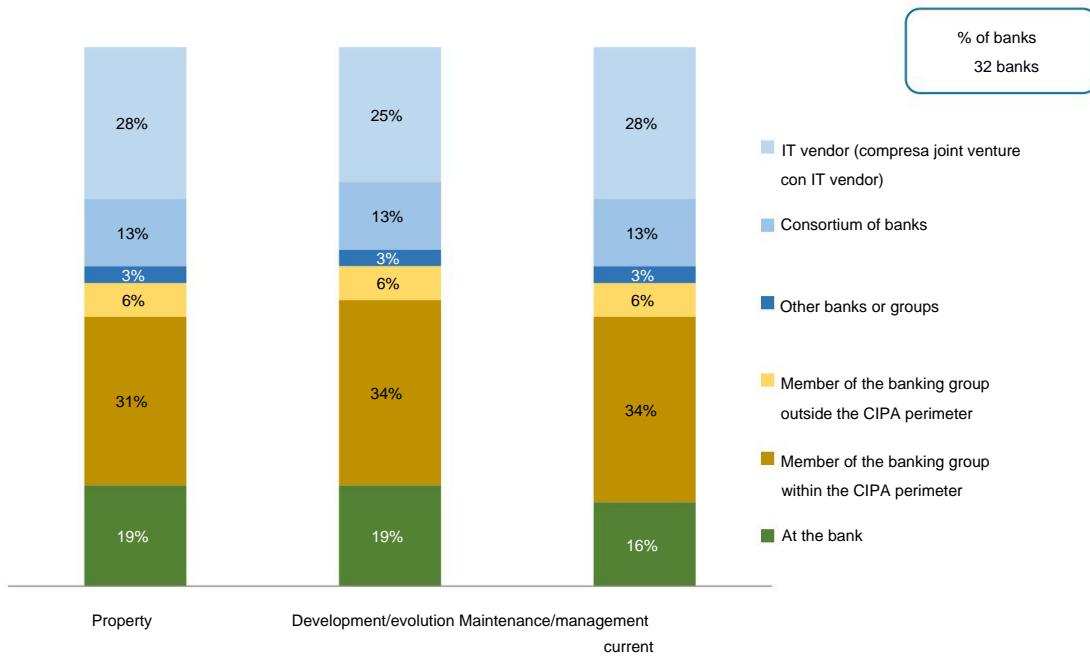


Below, we examine in more detail the sourcing choices made by banks separately for data center infrastructure (basic hardware and software) and for applications.

For the Data Center infrastructures, the ownership is analyzed, following a criterion of prevalence and regardless of the presence of forms of selective outsourcing for individual initiatives/areas. (including rental and leasing forms), who takes care of the development/evolution and who takes care of the maintenance corrective/current management, distinguishing between:

- ÿ the bank itself;
- ÿ components of the banking group within the CIPA perimeter (other banks or instrumental companies of the group);
- ÿ components of the banking group external to the CIPA perimeter (including the foreign parent company);
- ÿ other banks or banking groups;
- ÿ banking consortia;
- ÿ IT vendor (including joint ventures with vendors).

Substantially aligned sourcing models are emerging for data center ownership, development, and management. A share of banks ranging from 16% to 19% own and manage data centers directly. development/evolution and corrective maintenance/current management. The predominant share (31-34%) relies on group components within the CIPA perimeter, another significant segment (25-28%) uses vendors and 13% uses bank consortia (Figure 109).

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

With regard to Applications, the sourcing approach is very similar between development/evolution and maintenance/ongoing management. Approximately a quarter of banks handle both activities directly, 31% outsource them within the CIPA group, while the remaining share outsources them, with the IT vendor being the most popular choice (25%), followed by the banking consortium (13%). (Figure 110).

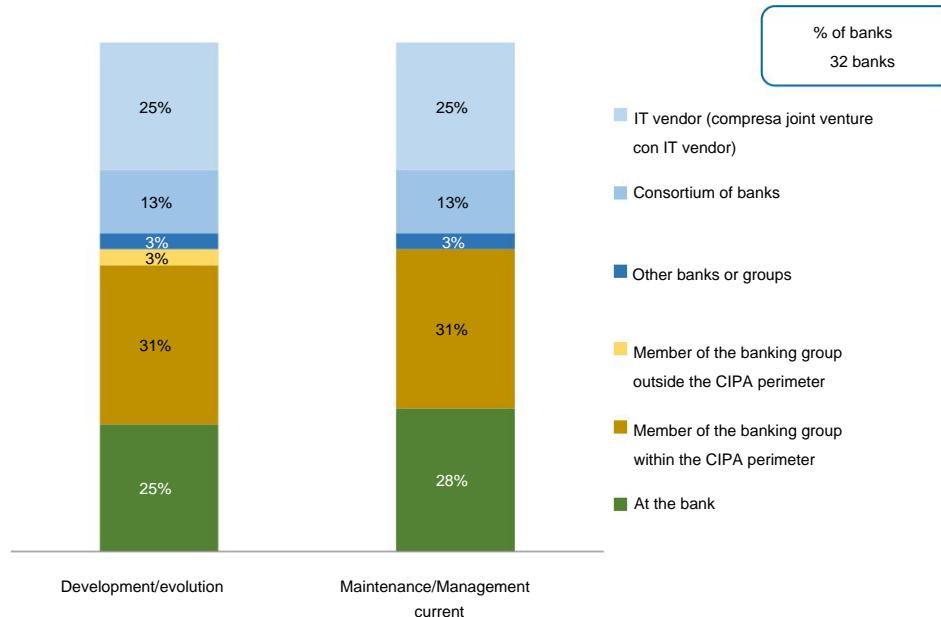
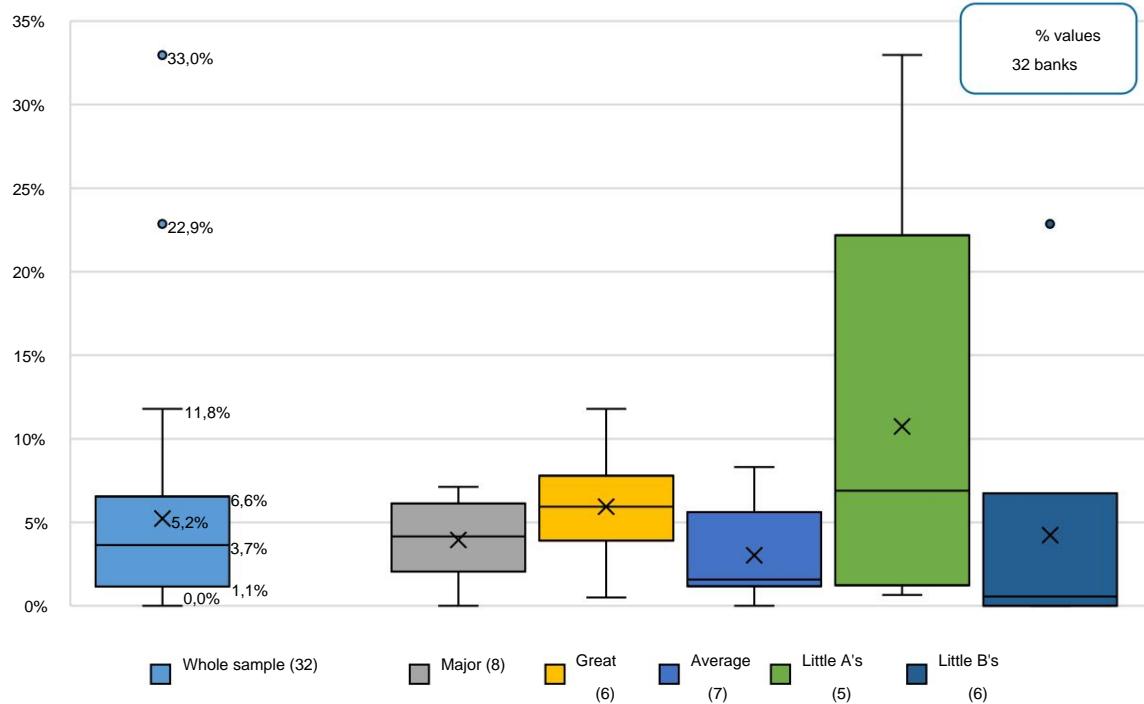
**Figure 110 - Development and management of banking applications**

Figure 111 represents, using box-and-whisker diagrams<sup>27</sup>, the percentage ratio between the number of IT employees and the total number of employees of the 32 participating banks, also by class.

dimensional. On average, IT employees make up 5.2% of the staff at the 32 participating banks.

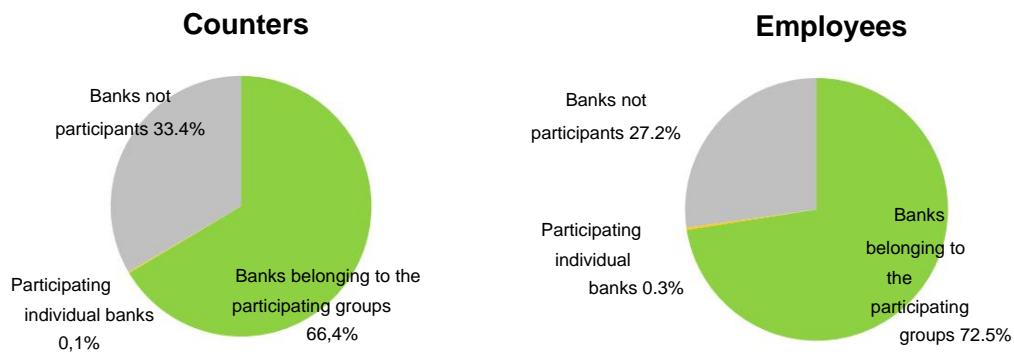
**Figure 111 - IT staff / total bank employees**



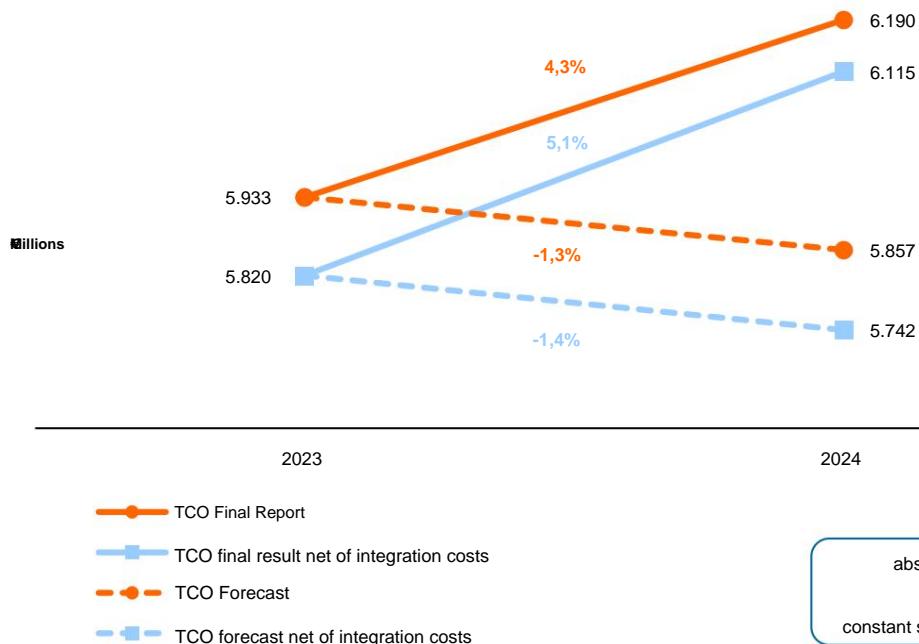


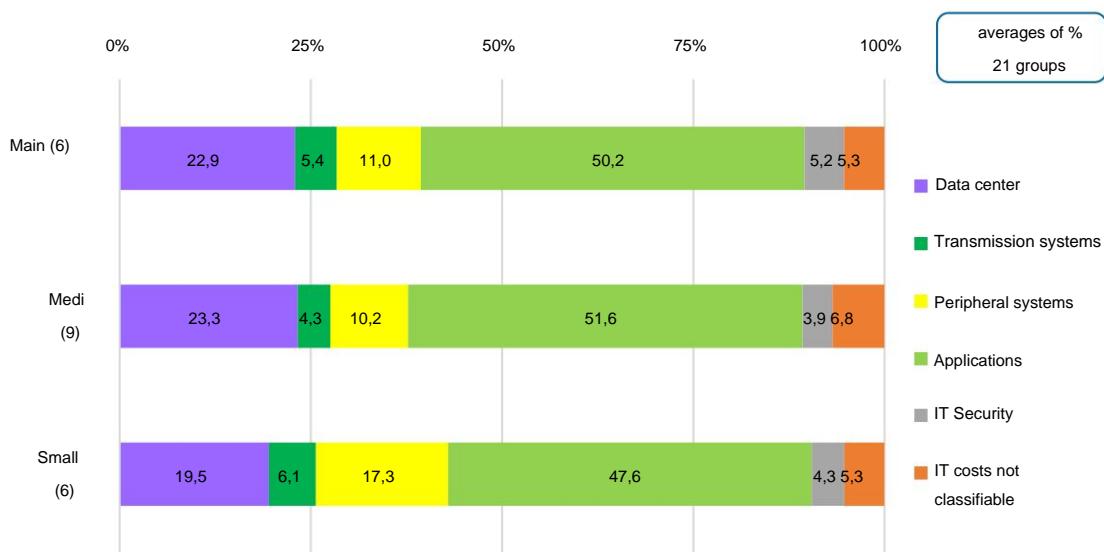
## Appendix

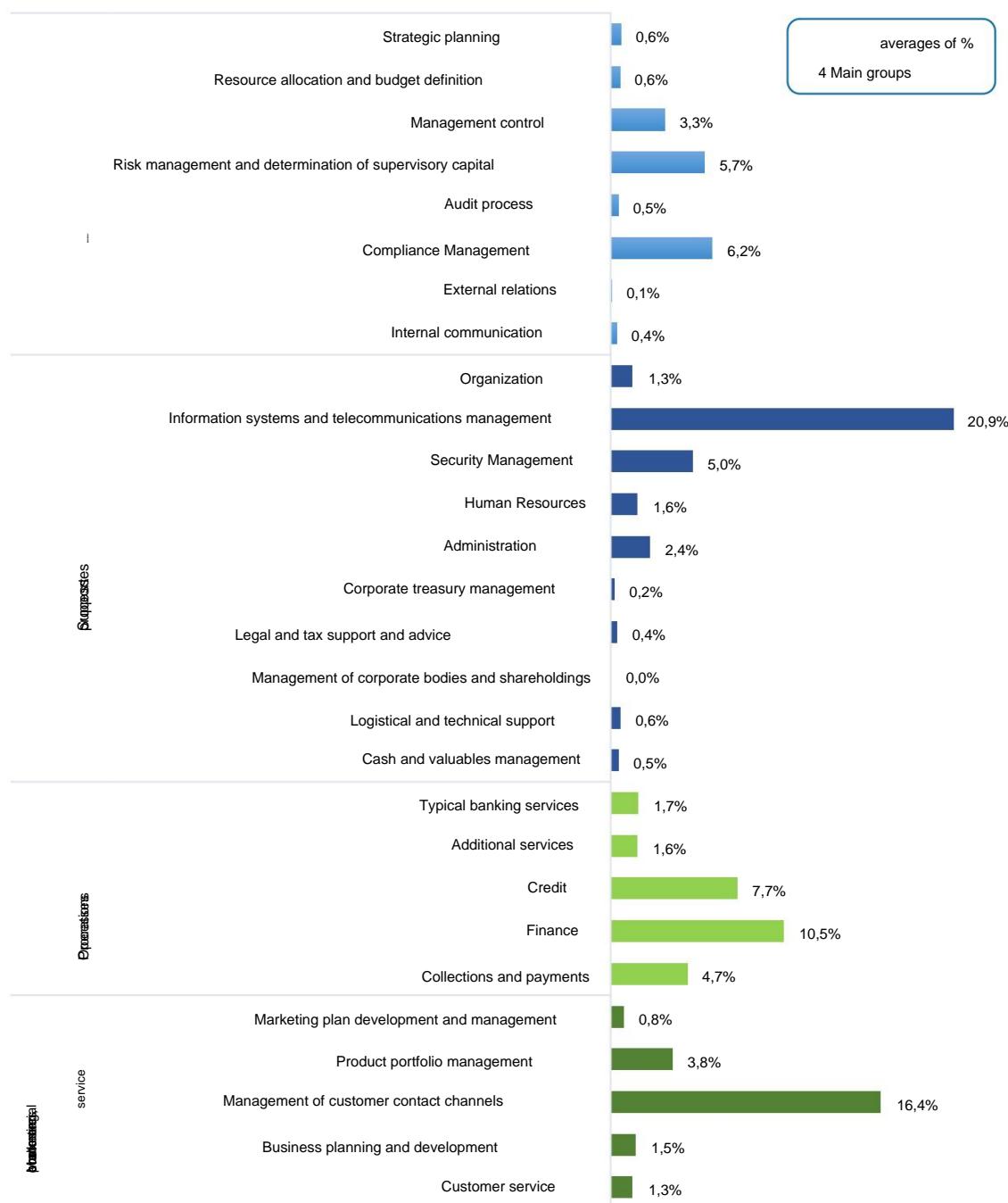
**Figure 112 - Representativeness of participating banks by branches and employees**



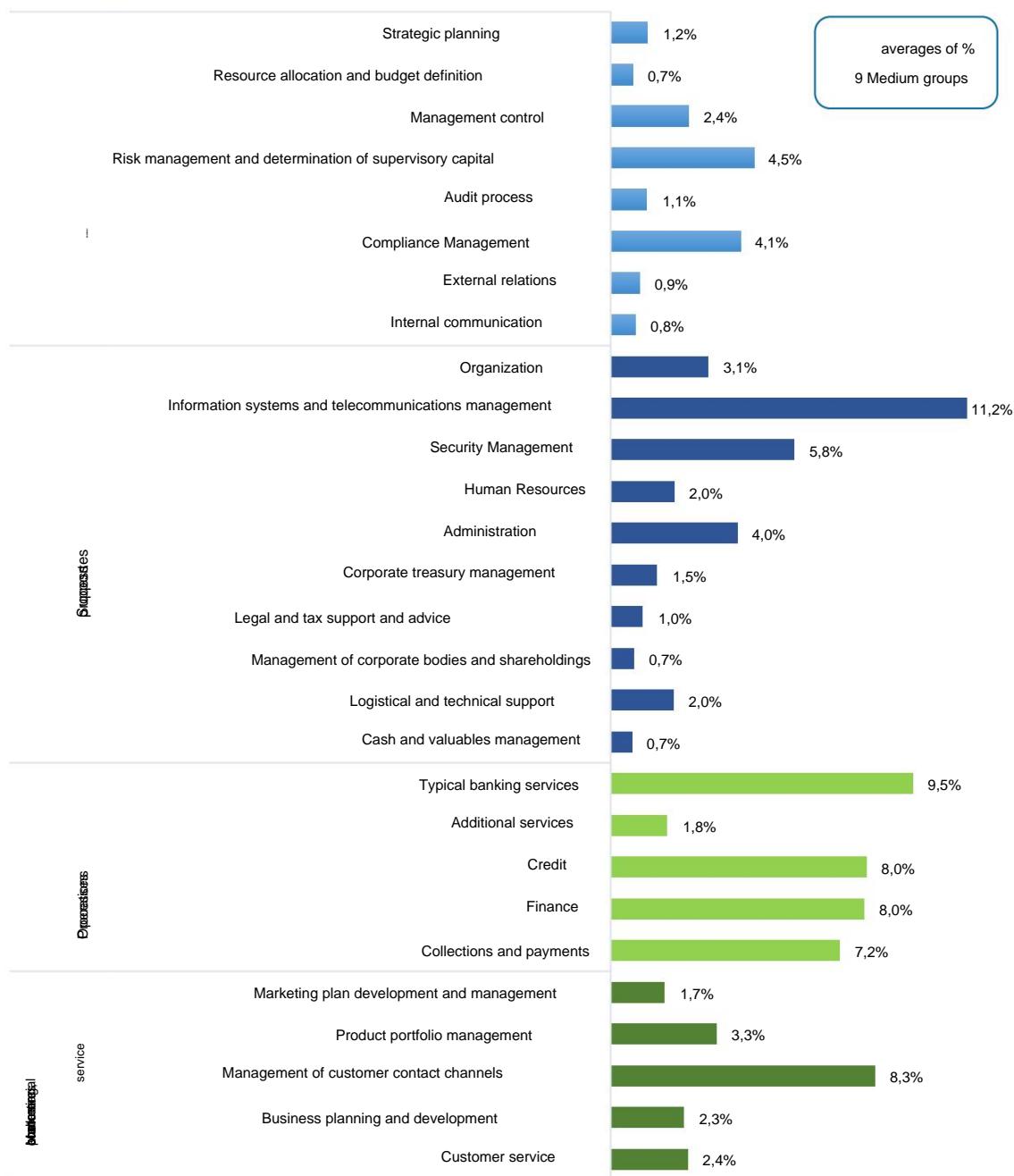
**Figure 113 - TCO: comparison between 2024 forecast and 2024 actual**

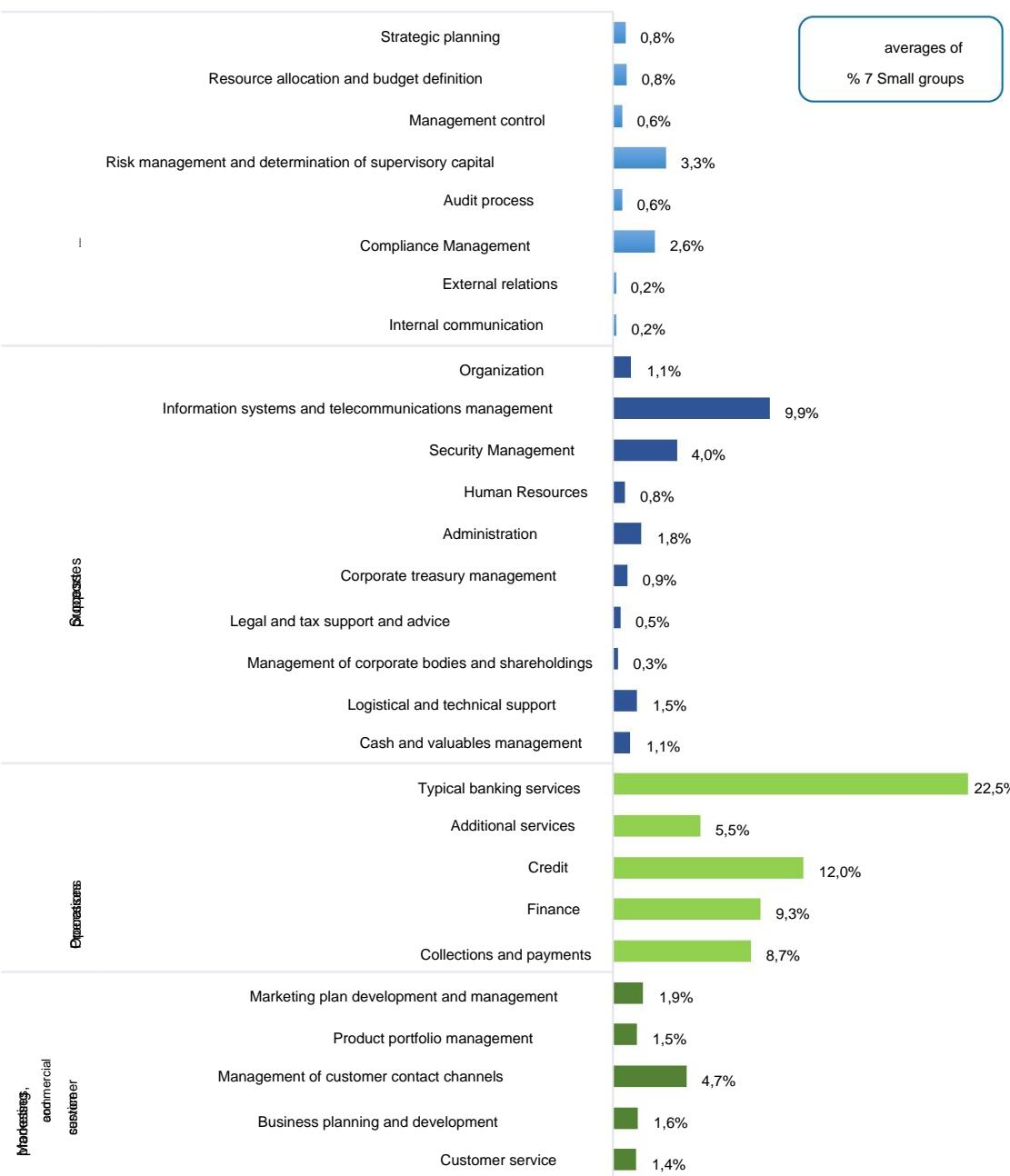


**Figure 114 - TCO by thematic areas and size class****Figure 115 - TCO by thematic areas and sourcing model**

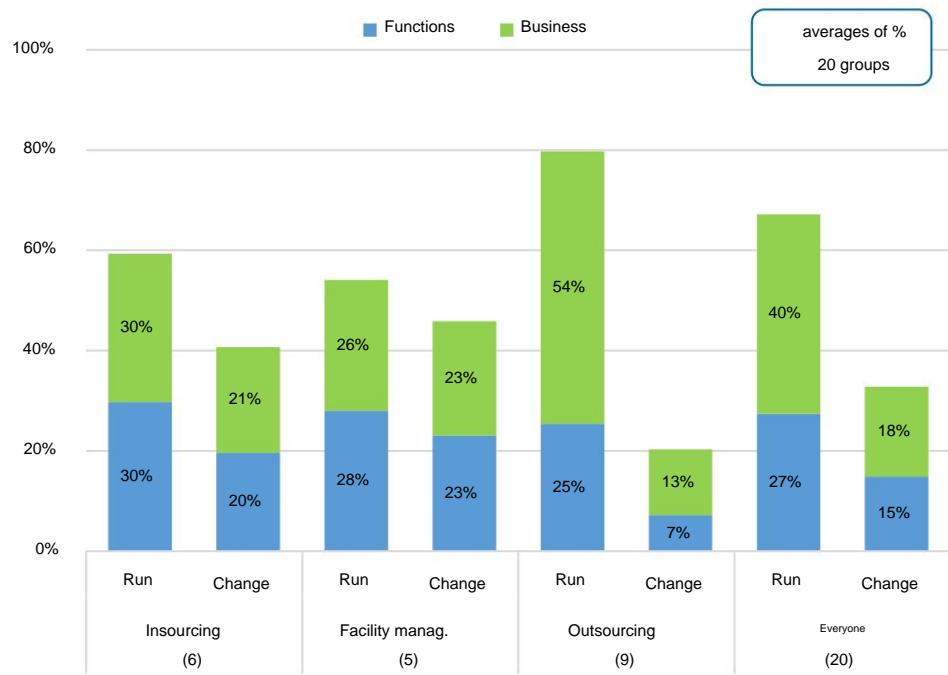
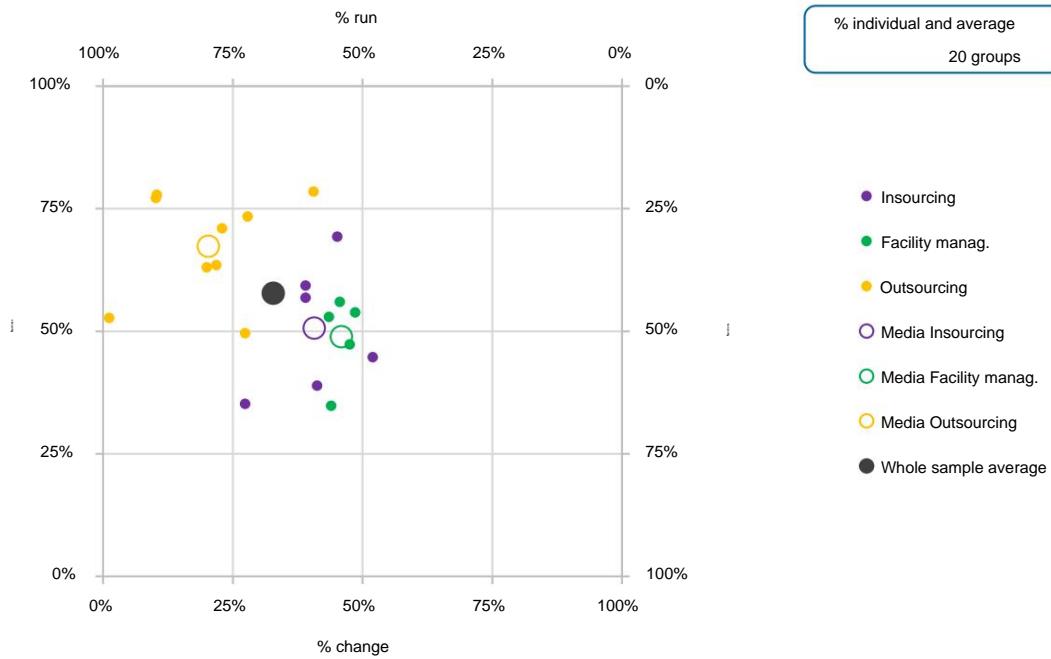
**Figure 116 - IT Cash Out by Process - Main Groups**

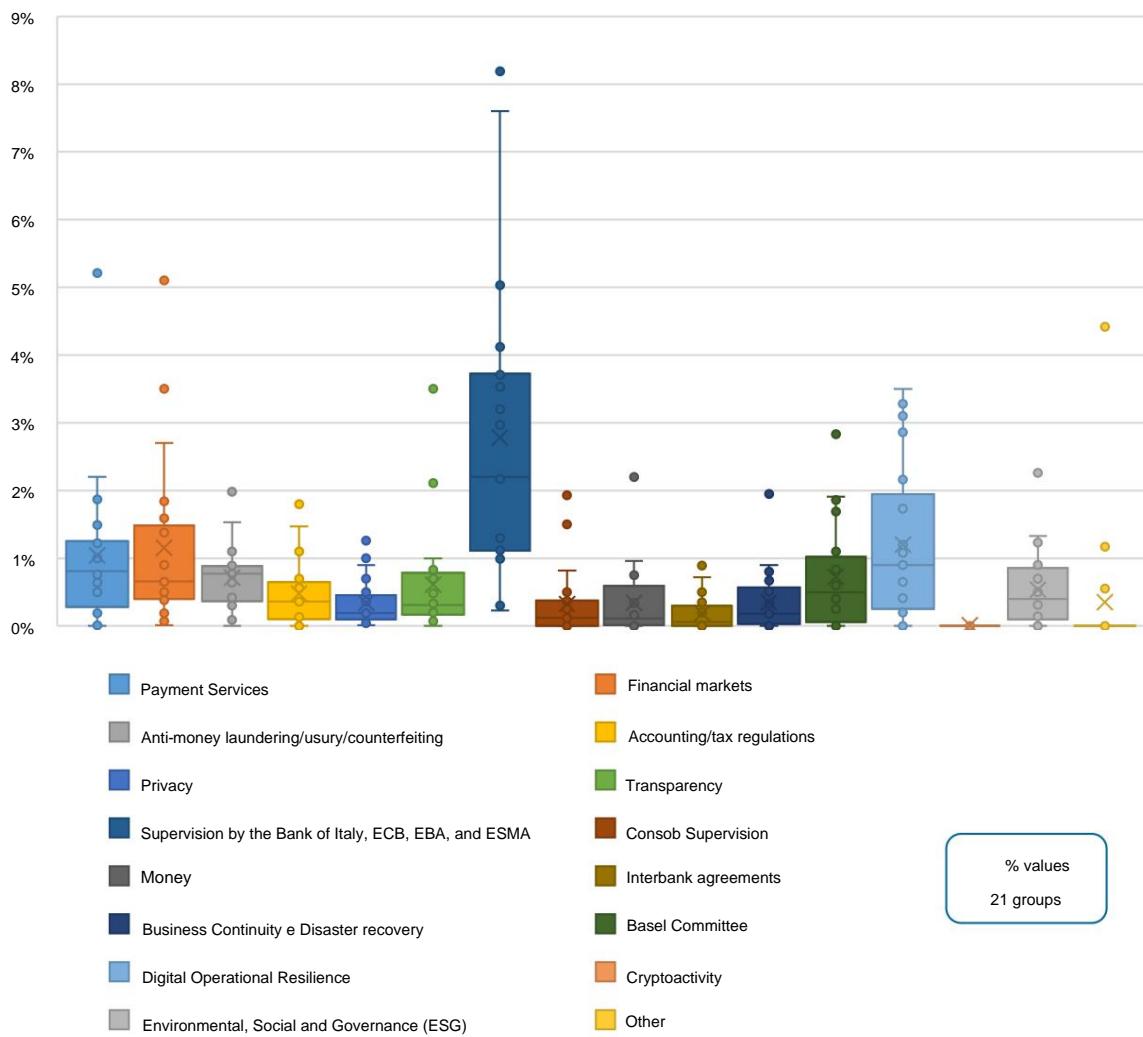
## Appendix

**Figure 117 - IT cash out for processes - Medium groups**

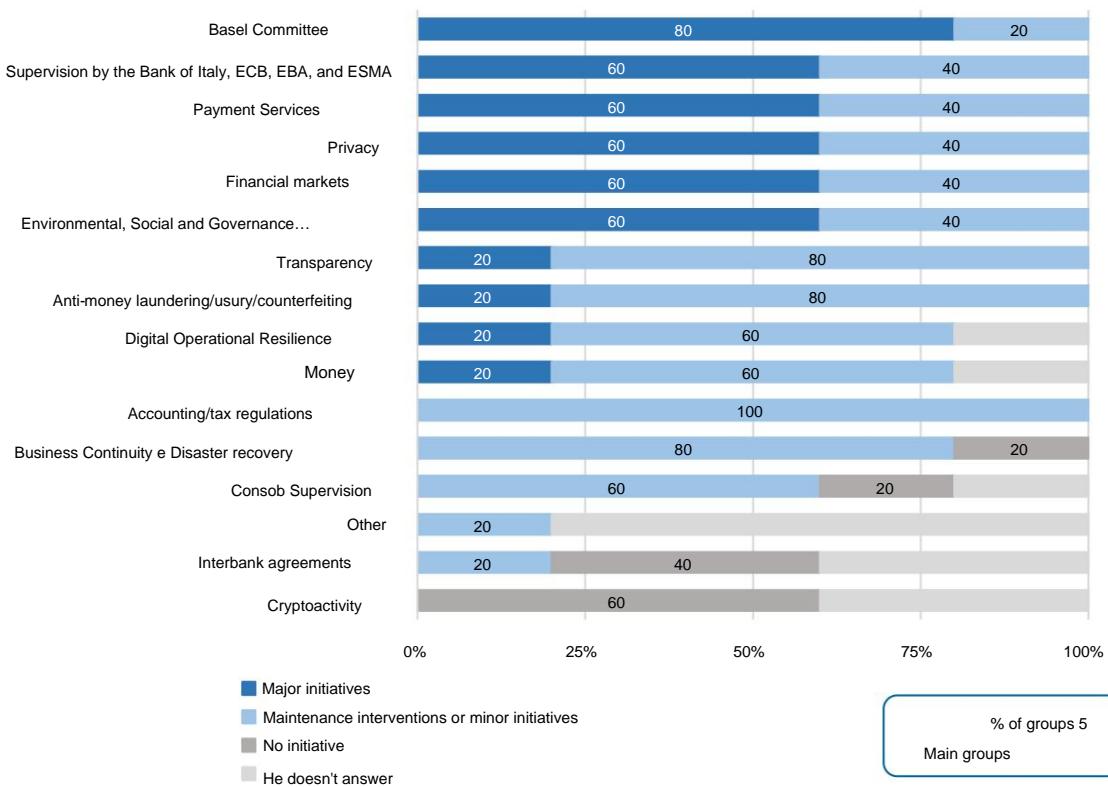
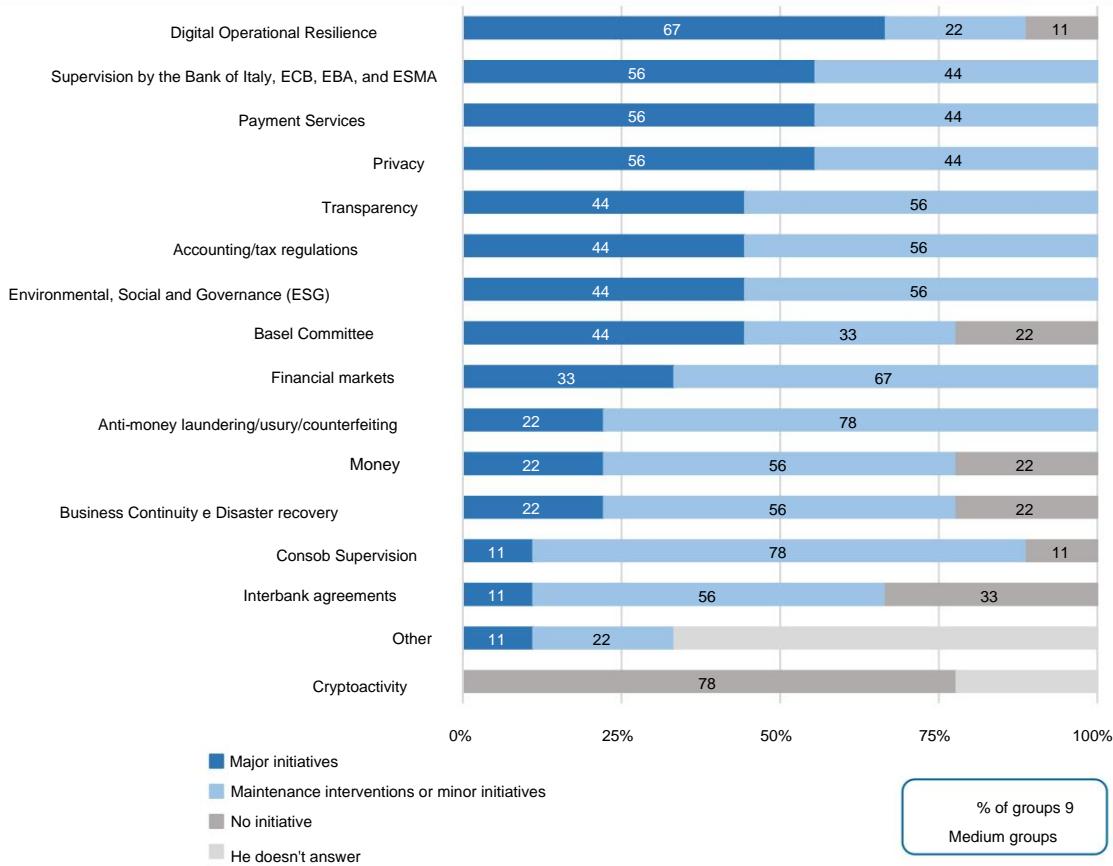
**Figure 118 - IT Cash Out for Processes - Small Groups**

## Appendix

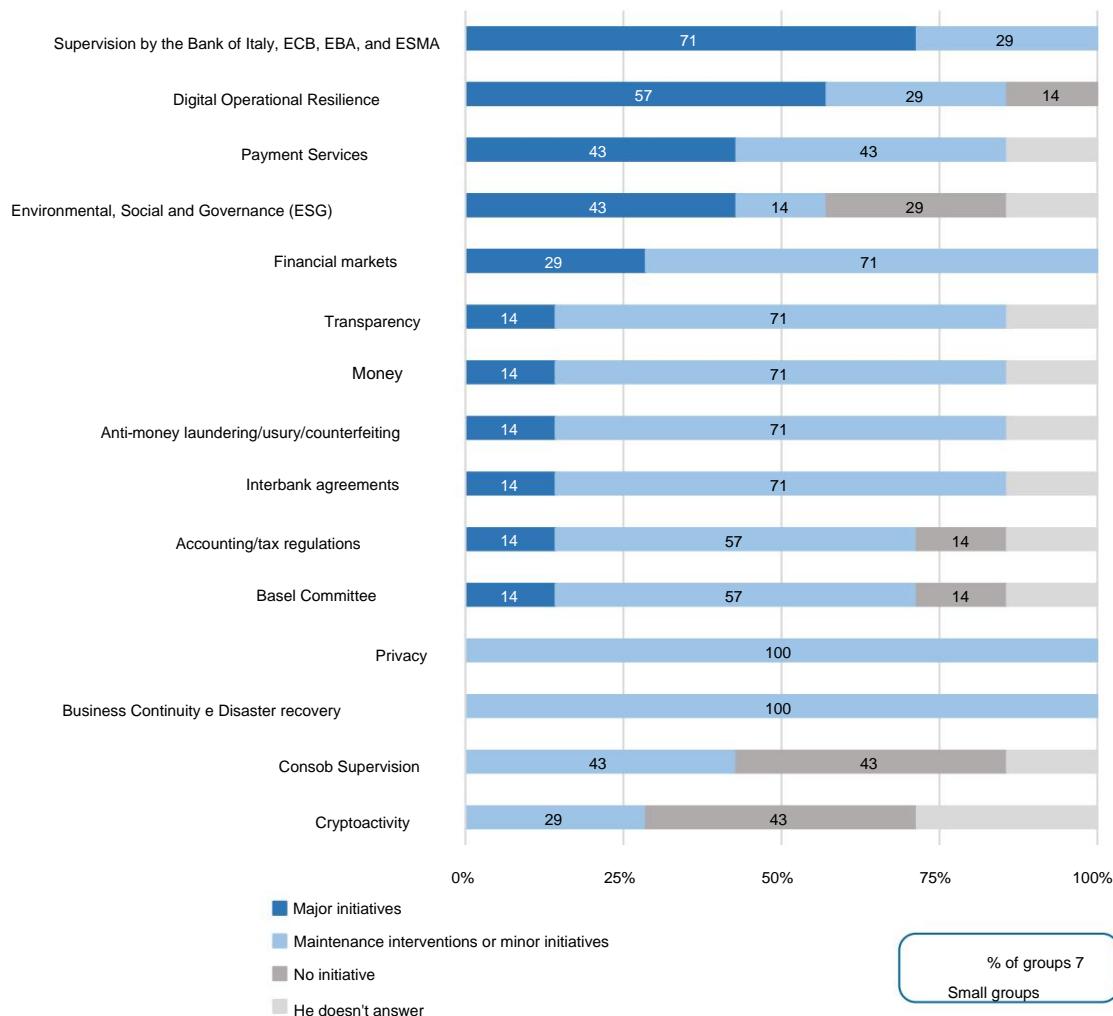
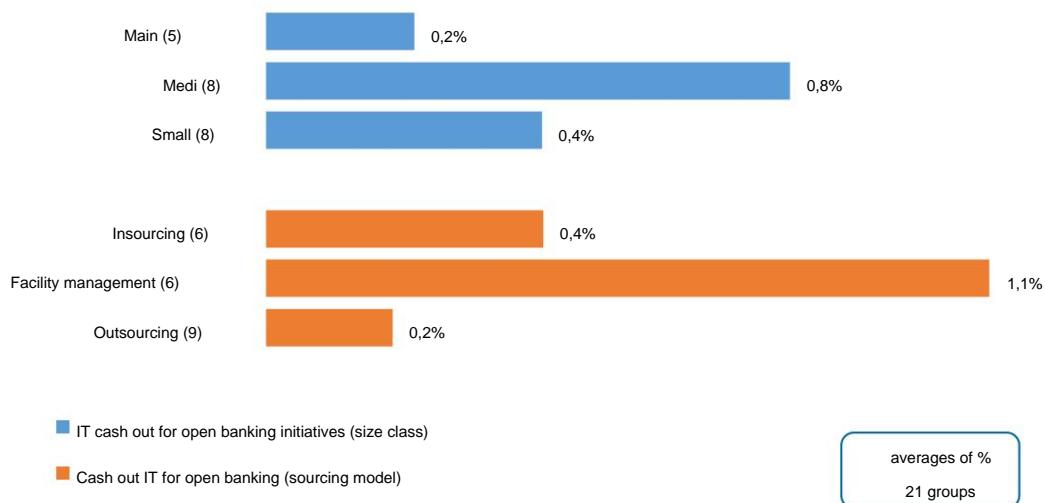
**Figure 119 - IT cash out for run/change and sourcing model****Figure 120 - IT cash out by business/function, run/change: individual values and by sourcing model**

**Figure 121 - IT cash out for compliance: distribution by area**

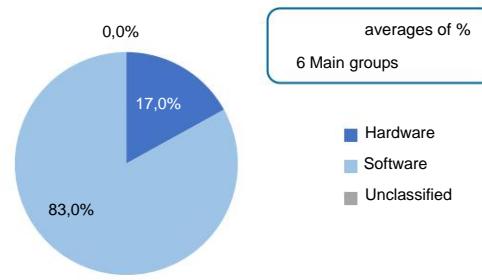
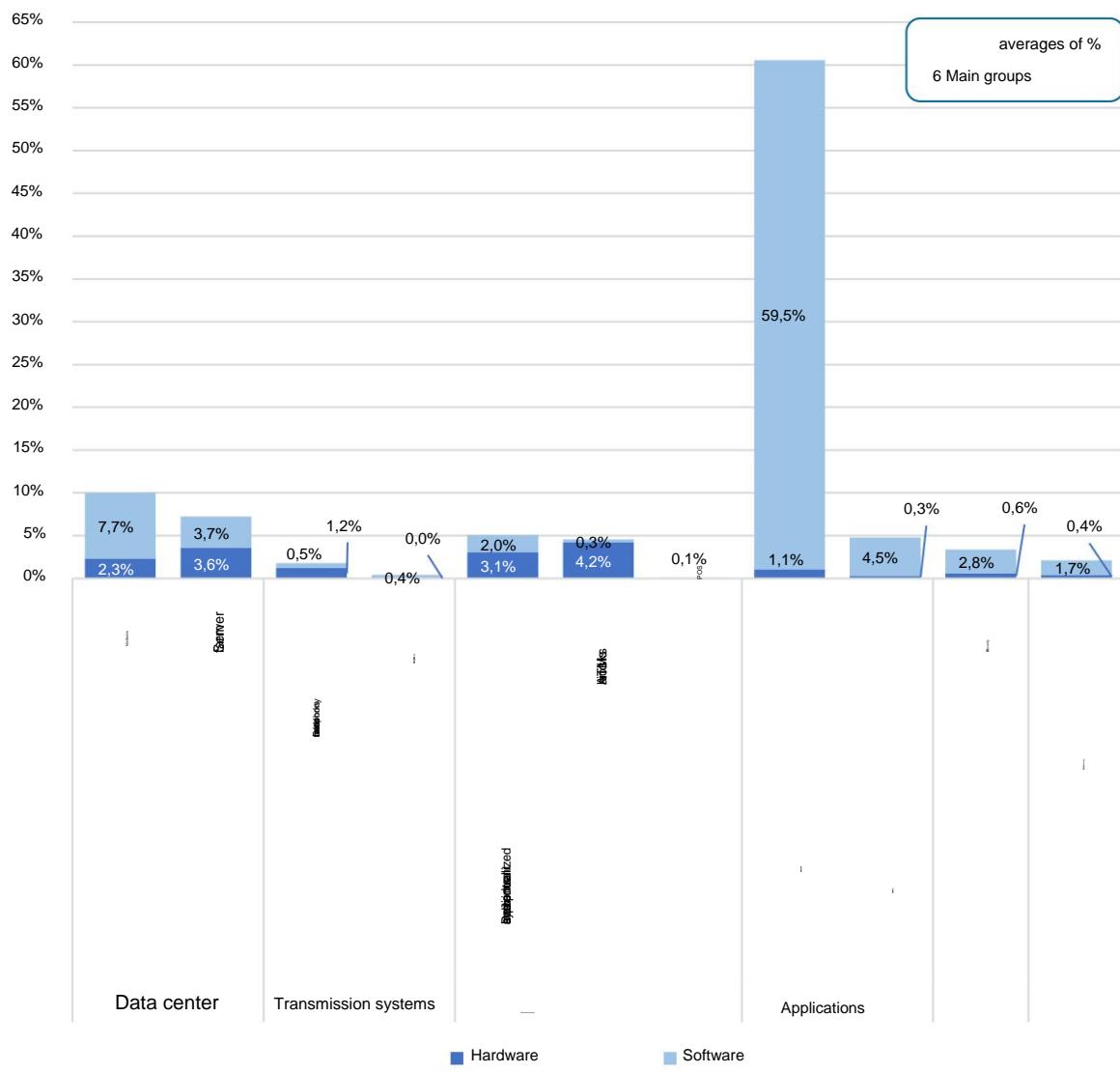
## Appendix

**Figure 122 - Compliance project initiatives - Main groups****Figure 123 - Compliance project initiatives - Medium groups**

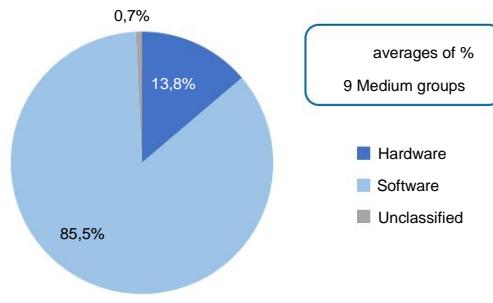
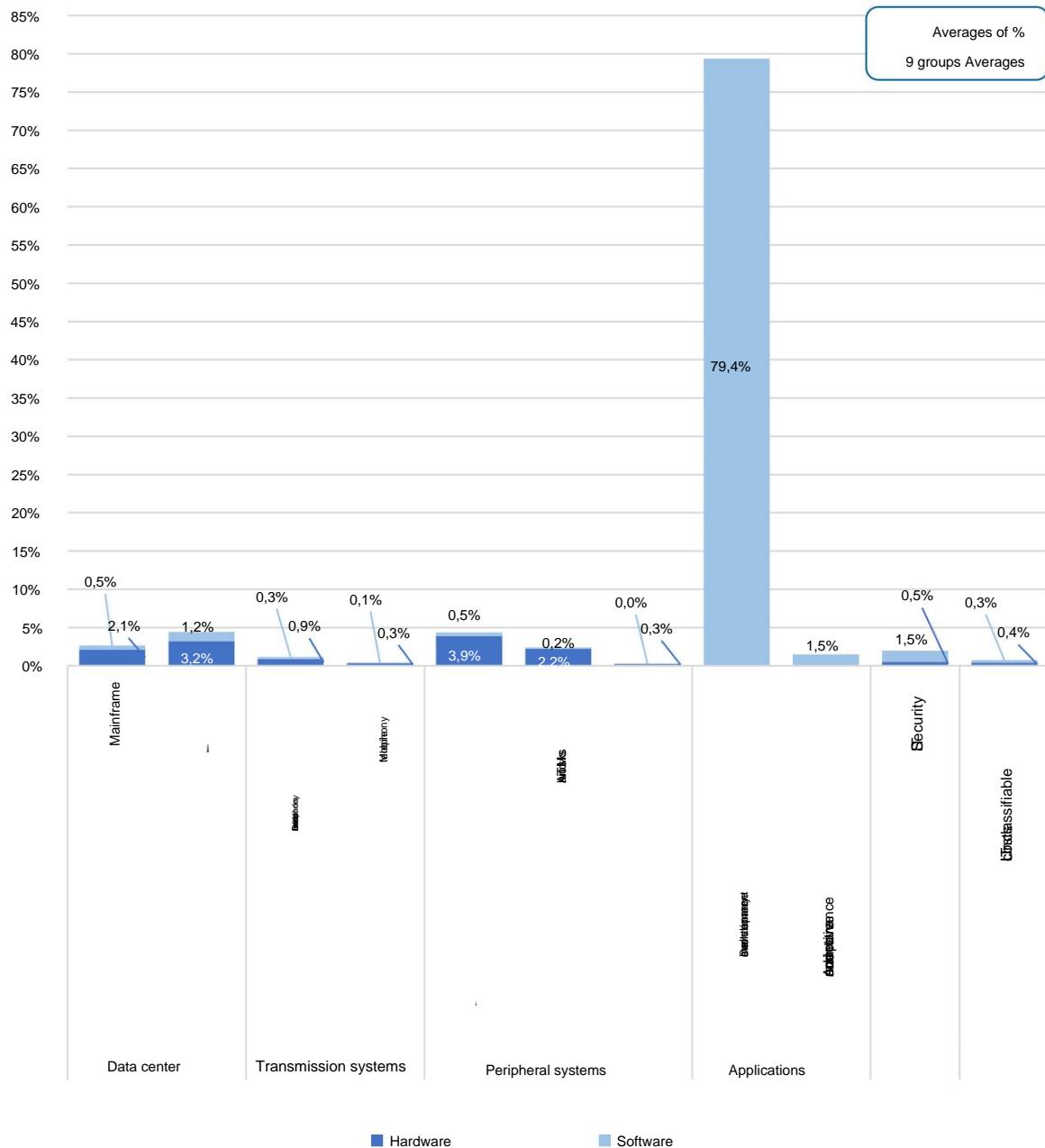
## Appendix

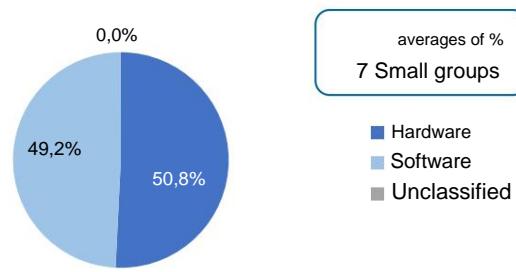
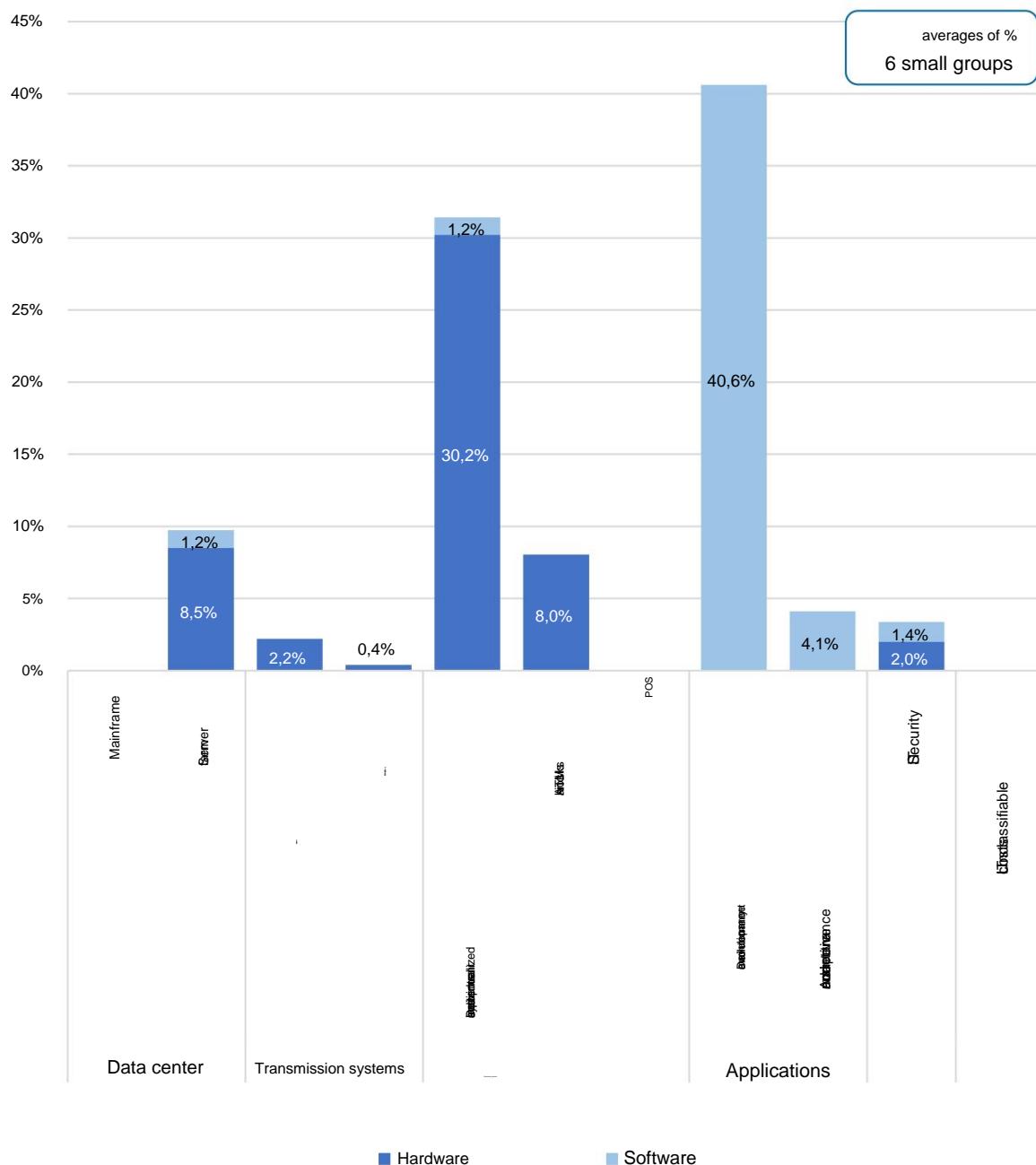
**Figure 124 - Compliance project initiatives - Small groups****Figure 125 - IT cash out for open banking: breakdown by size class and sourcing model**

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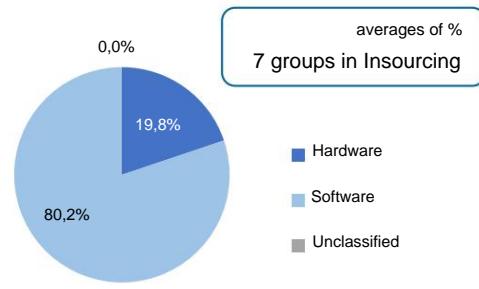
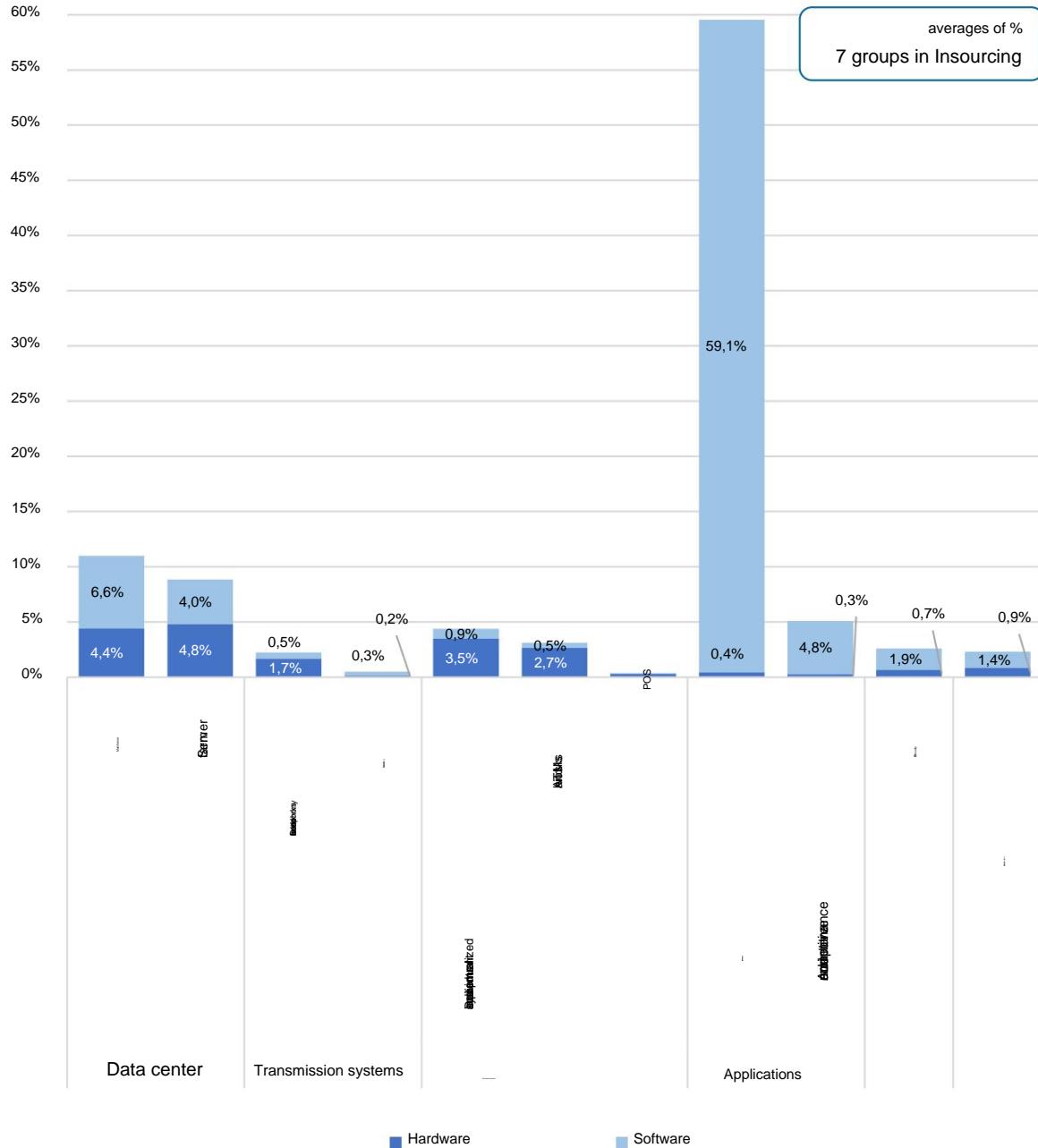
**Figure 126 – IT investments in HW and SW – Major groups****Figure 127 - IT investments in HW and SW by thematic areas - Main groups**

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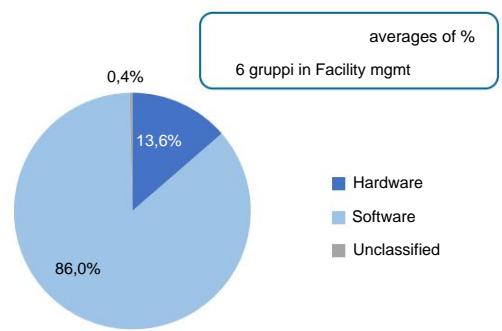
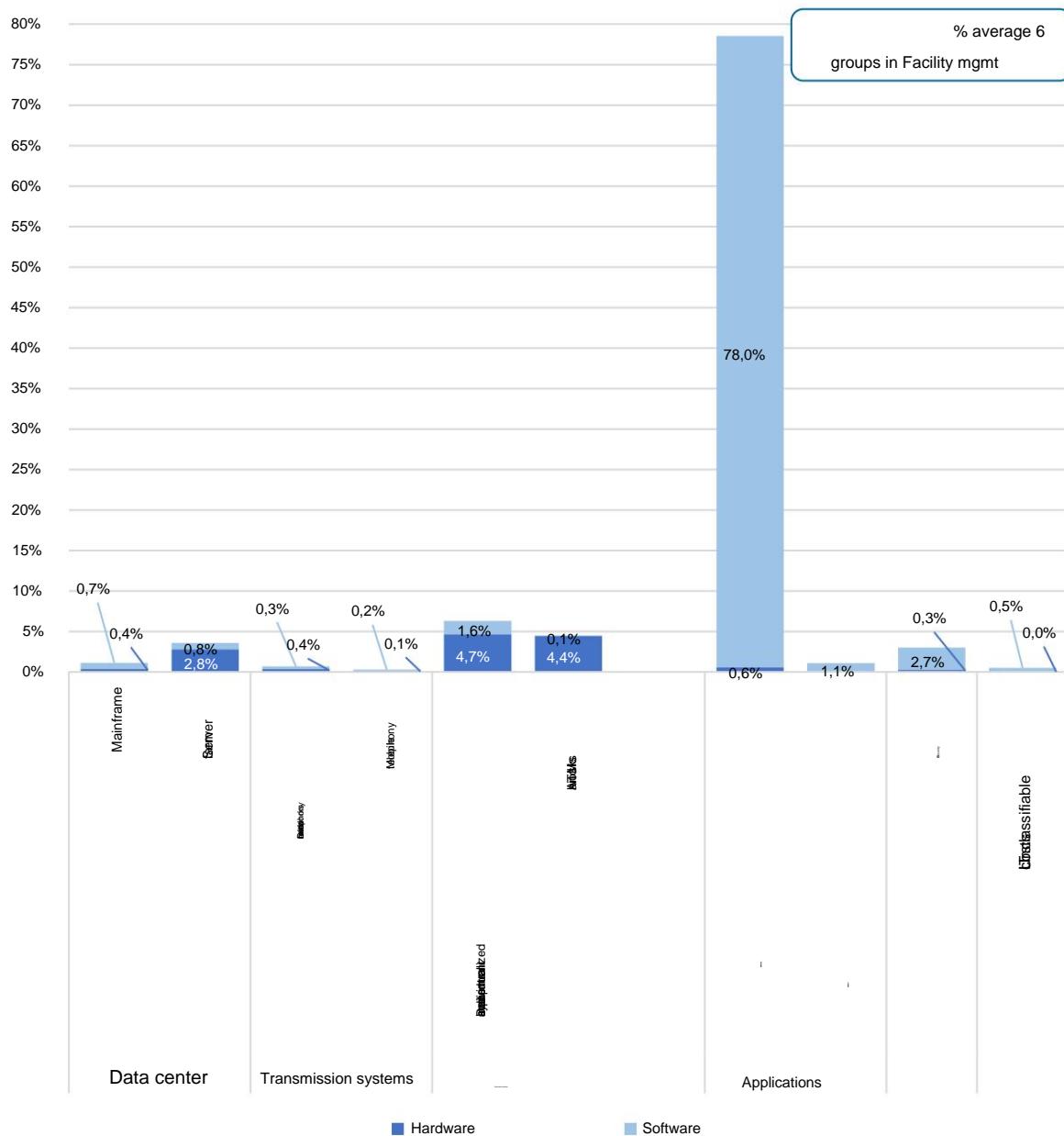
**Figure 128 – IT investments in HW and SW – Medium groups****Figure 129 - IT investments in HW and SW by topic areas - Medium groups**

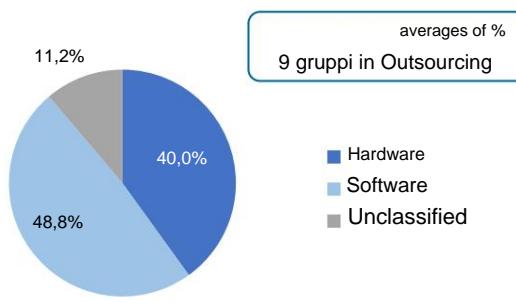
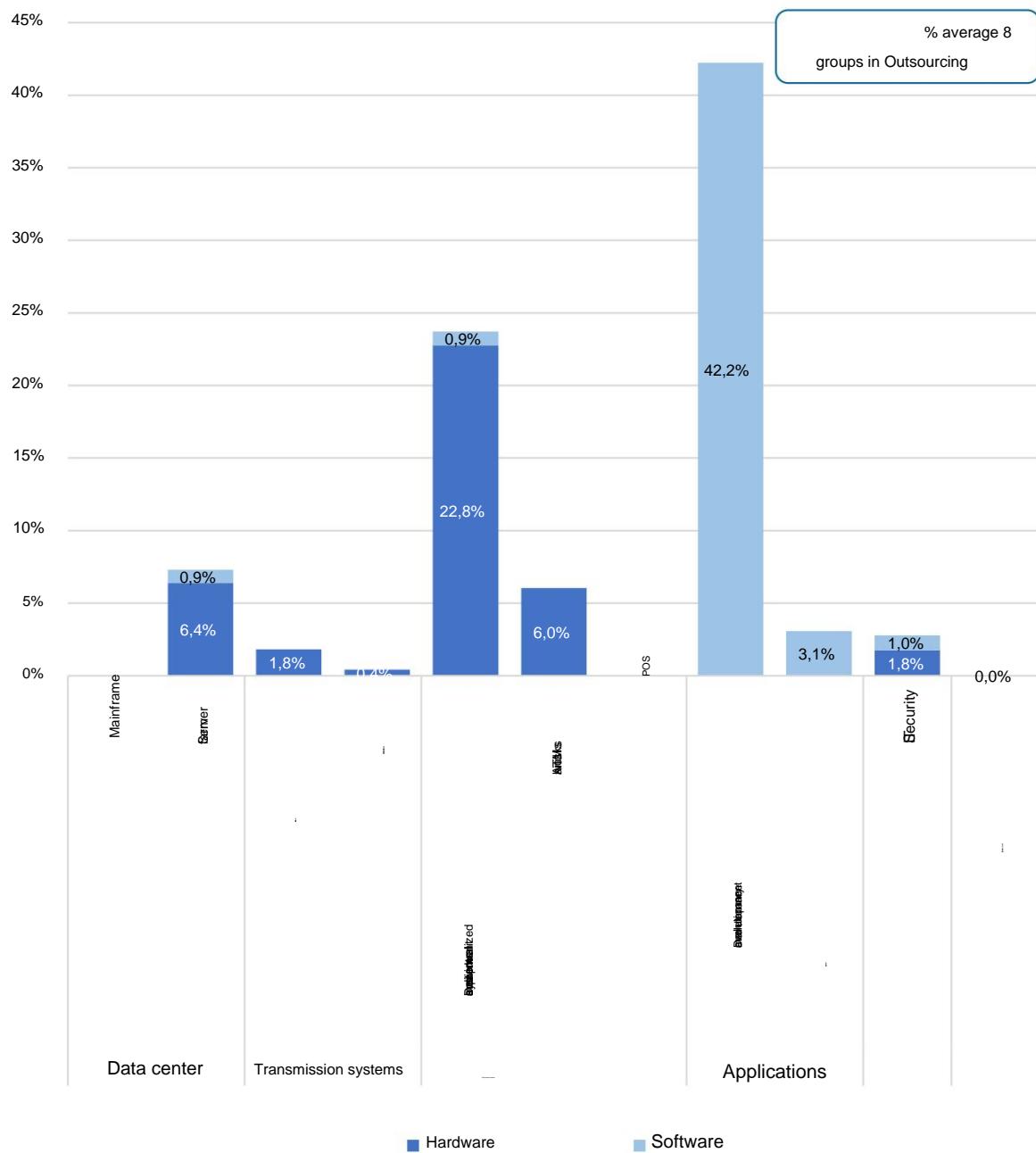
**Figure 130 - IT Investments in HW and SW - Small groups****Figure 131 - IT investments in HW and SW by thematic areas - Small groups**

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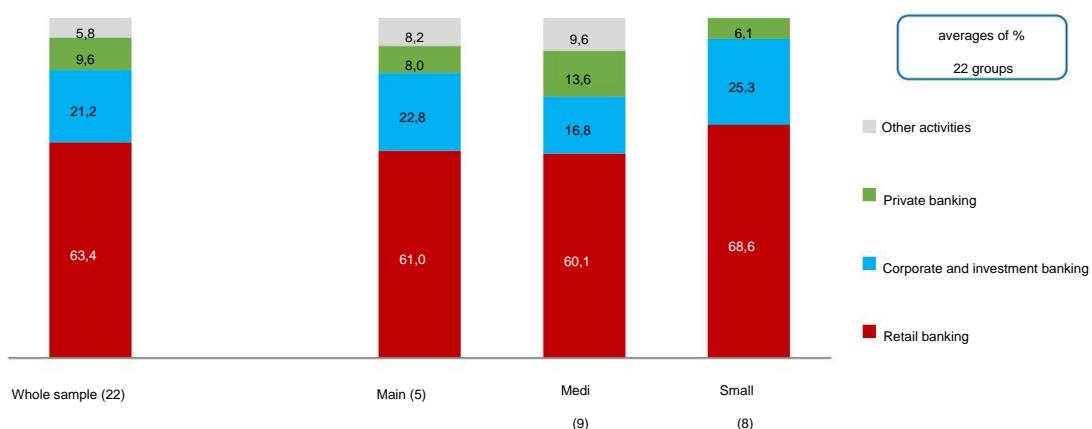
**Figure 132 - IT Investments in HW and SW - Insourcing groups****Figure 133 - IT investments in HW and SW by thematic area - Insourcing groups**

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**Figure 134 - IT investments in HW and SW - groups Facility management****Figure 135 - IT investments in HW and SW by thematic areas - Facility management groups**

**Figure 136 - IT Investments in HW and SW - Outsourcing groups****Figure 137 - IT investments in HW and SW by thematic area - Outsourcing groups**

## Appendix

**Figure 138 - Banking activity of groups by size class****Figure 139 - Purpose of technological innovation initiatives started or underway: groups Main**

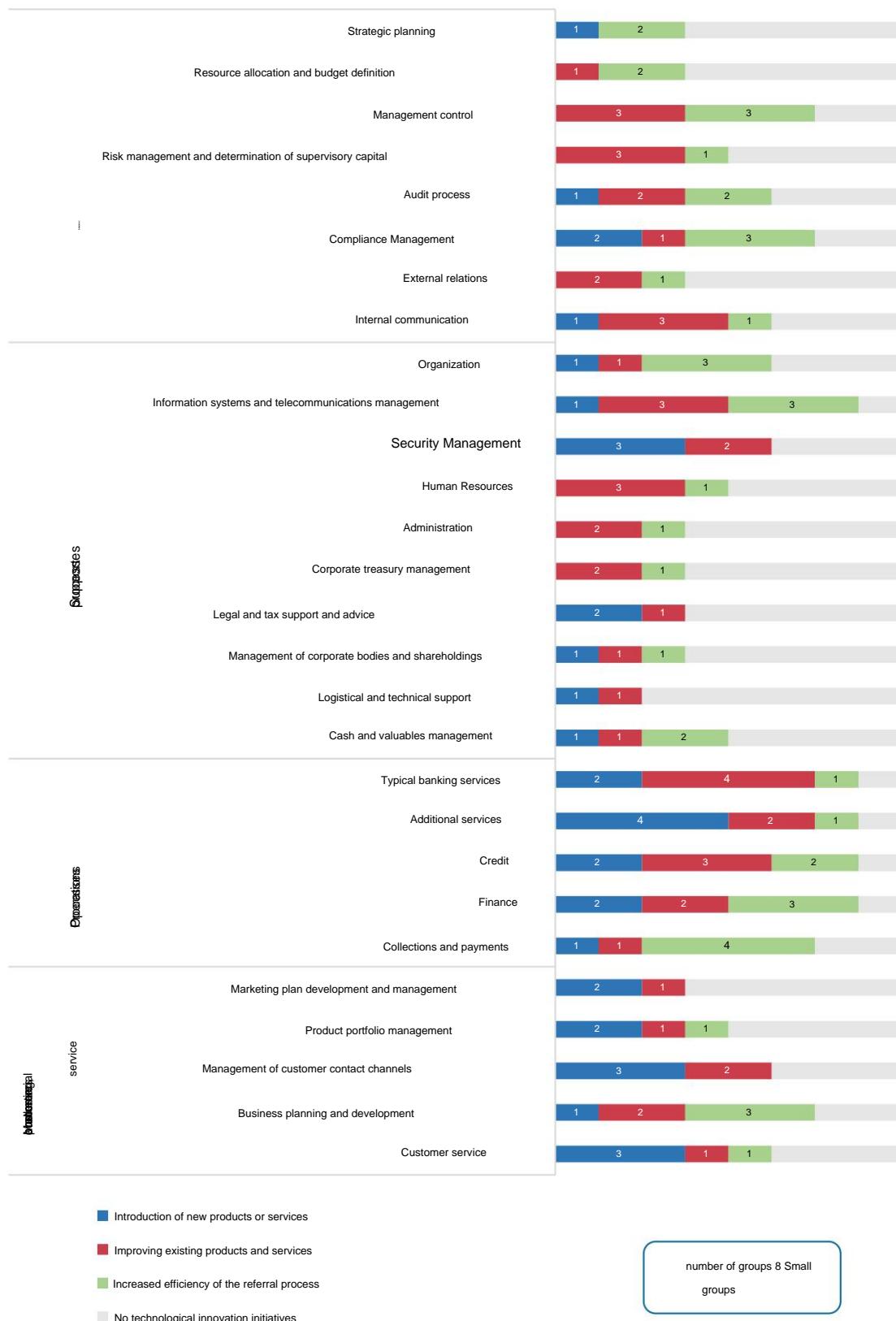
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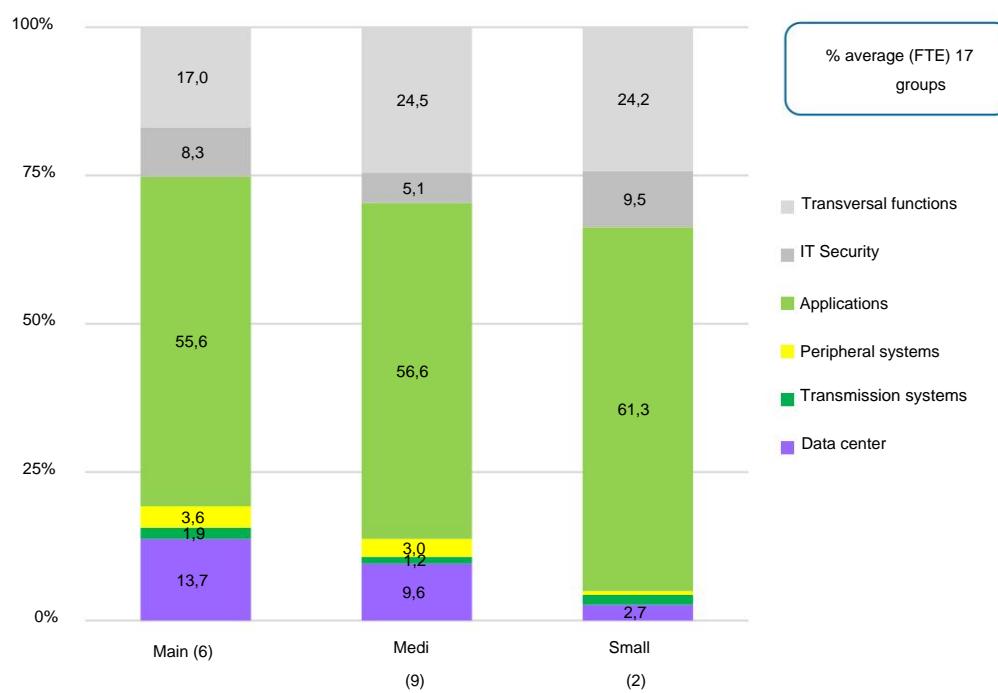
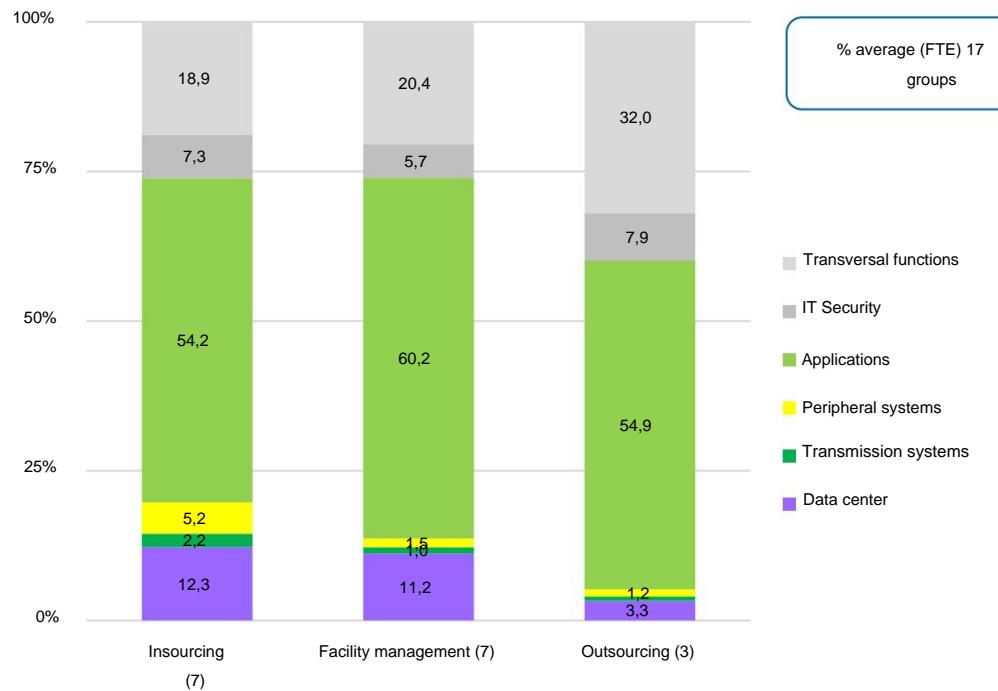
**Figure 140 - Purpose of technological innovation initiatives started or underway: groups Medi**



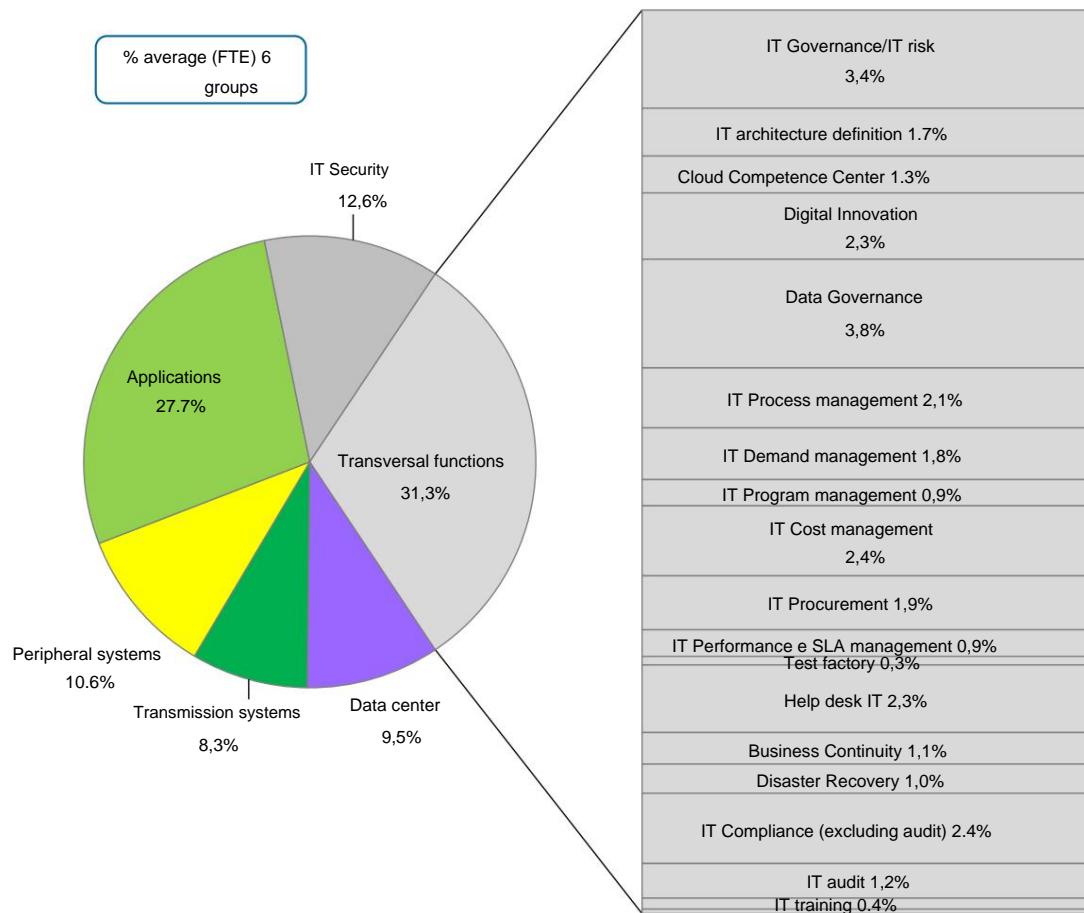
## Appendix

**Figure 141 - Purpose of technological innovation initiatives started or underway: groups Small**

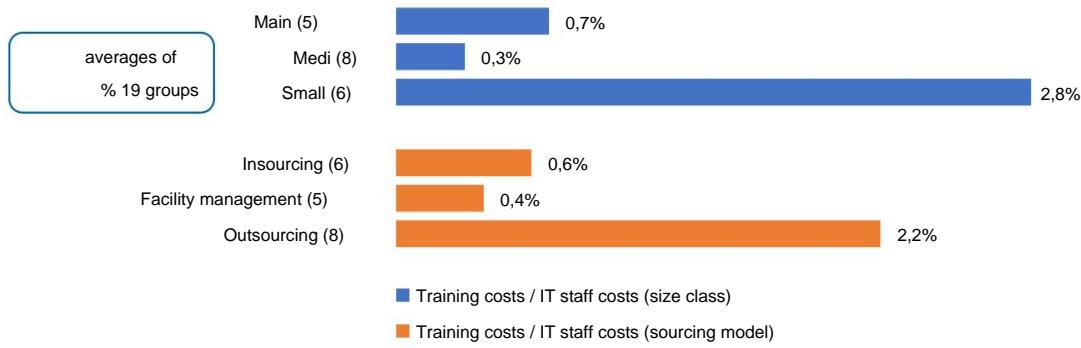


**Figure 142 - FTE of IT staff in thematic areas by size class****Figure 143 - IT Staff FTEs in Subject Areas by Sourcing Model**

**Figure 144 - IT staff FTEs in thematic areas - groups with fewer than 50 employees**  
IT



**Figure 145 - IT training: training costs / IT personnel costs, by analysis class**



**Table 15 - IT staff: breakdown by gender, age and contractual level (view 2)**

medie di % 16 gruppi	<= 29 anni		30-39 anni		40-49 anni		50-59 anni		>= 60 anni	
	Uomini	Donne								
Aree professionali	5,0	2,2	8,5	4,1	8,5	4,5	6,9	3,0	1,2	0,3
Quadri-direttivi	0,2	0,1	4,6	1,6	12,1	3,9	17,8	6,4	6,1	0,9
Dirigenti	0,0	0,0	0,1	0,0	0,3	0,0	1,0	0,1	0,3	0,1

## Appendix

**Table 16 - TCO Breakdown: 21\* Groups (Average %)**

Production factors	Thematic areas										Safety IT	Unclassifiable	Total 2024 financial statement IT costs		
	Data center		Transmission systems		Peripheral systems			Applications							
	Mainframe	Server farm	Data networks and fixed telephony	Mobile telephony	Decentralized systems and equipment individual	ATM is kiosks	POS	Development and maintenance evolutionary	Adaptive maintenance and corrective	E1	E2				
A1	A2	B1	B2	C1	C2	C3	D1	D2	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 (basic, middleware, licensed application)	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	Outsourcing IT	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		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		0,11	0,38	0,03		0,09	0,03	0,01	4,03	1,76	0,47	0,80	7,70		
.....		0,14	0,24	0,11		0,06	0,04		0,58	0,22	0,11	0,44	1,96		
.....		10,19	11,92	4,29	0,84	7,14	3,29	2,02	26,10	23,92	4,37	5,93	100		
.....		0,01	0,23	0,02		0,03	0,01	0,01	0,38	0,02		0,40	1,13		
.....		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 charged to TCO (line 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 to be charged on TCO (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	T 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	Cash out IT (Current expenses + 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% of their IT costs to the item "Unclassifiable IT costs".

## Appendix

**Table 17 - TCO Breakdown: 6 Main Groups (%) Averages**

Production factors		Thematic areas										Safety IT	Unclassifiable	Total IT costs <small>2024 financial statement</small>			
		Data center		Transmission systems		Peripheral systems			Applications								
		Mainframe	Server farm	Data networks and fixed telephony	Voice mobile	Decentralized systems and equipment individual	ATM is kiosks	POS	Development and maintenance evolutionary	Adaptive maintenance and corrective	E1						
A1	A2	B1	B2	C1	C2	C3	D1	D2	E1	E2	F						
1.00	<b>Hardware</b>	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 (basic, middleware, licensed application)	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	<b>Internal staff</b>	0,64	1,34	0,29	0,09	0,58	0,08		5,22	3,55	1,31	1,83		14,94			
4.11	Outsourcing IT	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 consultancy	0,19	0,54	0,09		0,17	0,08	0,02	1,50	2,93	0,68	0,61		6,82			
.....		0,48	0,75	0,39	0,01	0,12	0,13		1,87	0,45	0,25	0,63		5,09			
.....		10,20	12,73	4,52	0,91	5,81	3,54	1,66	28,20	21,95	5,19	5,29		100			
.....		0,04	0,02	0,01	0,01	0,03	0,02		0,07	0,04	0,01	0,98		1,22			
.....		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 charged to TCO (line 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 to be charged on TCO (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	T 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	Cash out IT (Current expenses + Investments)	10,97	11,66	4,18	0,91	4,67	3,94	1,61	30,85	20,87	5,28	5,06		100			

## Appendix

**Table 18 - TCO Breakdown: 15 Major and Medium Groups (%) Averages**

Production factors		Thematic areas									IT Security	Unclassifiable IT costs	Total 2024 financial statement		
		Data center		Transmission systems		Peripheral systems			Applications						
		Mainframe	Server farm	Data networks and fixed telephony	Voice mobile	Decentralized systems and equipment individual	ATMs	Kiosks	POS	Development and maintenance evolutionary	Adaptive maintenance and corrective				
A1	A2	B1	B2	C1	C2	C3	D1	D2	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 (basic, middleware, licensed application)	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	Outsourcing IT	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		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		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	IT revenues adjusted	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 IT Costs (TCO) Net	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 charged to TCO (line 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 to be charged on TCO (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	Cash out IT (Current expenses + Investments)	9,80	12,94	3,65	0,84	5,46	2,88	1,42	32,69	20,12	4,39	5,82	100		

## Appendix

**Table 19 - TCO Breakdown: 9 Medium Groups (%)**

Production factors		Thematic areas									IT Security	Unclassifiable IT costs	Total 2024 financial statement			
		Data center		Transmission systems		Peripheral systems			Applications							
		Mainframe	Server farm	Data networks and fixed telephony	Mobile telephony	Decentralized systems and equipment individual	ATM is	POS	Development and maintenance evolutionary	Adaptive maintenance and corrective						
A1	A2	B1	B2	C1	C2	C3	D1	D2	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 (basic, middleware, licensed application)	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	Outsourcing IT	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		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		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	IT revenues adjusted		0,52	0,03		0,06	0,01	0,03	0,85	0,03	0,01	0,29	1,82			
8.00	Total IT Costs (TCO) Net	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 charged to TCO (line 6.00)	0,08	0,11	0,02	0,02	0,07			0,16				0,46			
10.00	Depreciation to be charged on TCO (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	Cash out IT (Current expenses + Investments)	9,01	13,79	3,29	0,79	5,98	2,17	1,30	33,91	19,62	3,80	6,33	100			

## Appendix

**Table 20 - TCO Breakdown: 6\* Small Groups (Average %)**

Production factors		Thematic areas										IT Security	Unclassifiable IT costs	Total 2024 financial statement			
		Data center		Transmission systems		Peripheral systems			Applications								
		Mainframe	Server farm	Data networks and fixed telephony	Voice mobile	Decentralized systems and equipment individual	ATM individual	POS	Development and maintenance evolutionary	Adaptive maintenance and corrective							
A1	A2	B1	B2	C1	C2	C3	D1	D2	E1	F							
1.00	Hardware			0,09	0,18	2,31	1,34				0,22			4,14			
2.00	Software (basic, middleware, licensed application)	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	Outsourcing IT	10,20	5,73	2,32		2,40	2,54	3,18	5,61	23,04	1,89	0,07		56,96			
4.12			0,51	2,64	0,34	0,54	0,49		1,09	3,66	0,09	2,81		12,15			
4.20			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	IT revenues adjusted																
8.00	Total IT Costs (TCO) Net	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 charged to TCO (line 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 to be charged on TCO (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	Cash out IT (Current expenses + 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% of their IT costs to the item "Unclassifiable IT costs".

## Appendix

**Table 21 - TCO Breakdown: 7 Insourcing Groups (Average %)**

Production factors		Thematic areas										IT Security	Unclassifiable IT costs	Total 2024 financial statement			
		Data center		Transmission systems		Peripheral systems			Applications								
		Mainframe	Server farm	Data networks and fixed telephony	Mobile telephony	Decentralized systems and equipment individual	ATMs	POS	Development and maintenance evolutionary	Maintenance adaptive and corrective							
A1	A2	B1	B2	C1	C2	C3	D1	D2	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 (basic, middleware, licensed application)	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	Outsourcing IT	0,44	2,08	0,82		0,49	0,30	0,23	0,45	2,92	0,74	2,70	11,17				
4.12		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		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	IT revenues adjusted	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 IT Costs (TCO) Net	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 charged to TCO (line 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 to be charged on TCO (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	Cash out IT (Current expenses + Investments)	9,39	11,45	4,18	1,05	5,29	3,39	1,76	33,23	17,98	4,18	8,11	100				

## Appendix

**Table 22 - TCO Breakdown: 7 Facility Management Groups (Average %)**

Production factors		Thematic areas										IT Security	Unclassifiable IT costs	Total 2024 financial statement			
		Data center		Transmission systems		Peripheral systems			Applications								
		Mainframe	Server farm	Data networks and fixed telephony	Mobile telephony	Decentralized systems and equipment	ATMs	POS	Development and maintenance evolutionary	Adaptive maintenance and corrective							
A1	A2	B1	B2	C1	C2	C3	D1	D2	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 (basic, middleware, licensed application)	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	Outsourcing IT	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		0,65	1,42	1,73	0,31	0,72	0,16		3,89	0,91	0,43	0,75	10,97				
4.20		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	IT revenues adjusted		0,05	0,01		0,02			0,14	0,02	0,01	0,01	0,25				
8.00	Total IT Costs (TCO) Net	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 charged to TCO (line 6.00)	0,10	0,14	0,02	0,02	0,09			0,21				0,59				
10.00	Depreciation to be charged on TCO (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	Cash out IT (Current expenses + Investments)	10,08	13,24	3,11	0,62	6,33	2,61	1,17	36,72	17,72	4,95	3,43	100				

## Appendix

**Table 23 - TCO Breakdown: 7\* Outsourcing Groups (Average %)**

Production factors		Thematic areas										IT Security	Unclassifiable IT costs	Total 2024 financial statement			
		Data center		Transmission systems		Peripheral systems			Applications								
		Mainframe	Server farm	Data networks and fixed telephony	Voice mobile	Decentralized systems and equipment individual	ATMs	POS	Development and maintenance evolutionary	Maintenance adaptive and corrective							
		A1	A2	B1	B2	C1	C2	C3	D1	D2	E1	E2	F				
1.00	Hardware			0,07	0,03	0,16	1,94	1,15			0,19		3,54				
2.00	Software (basic, middleware, licensed application)	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	Outsourcing IT	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		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			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	IT revenues adjusted																
8.00	Total IT Costs (TCO) Net	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 charged to TCO (line 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 to be charged on TCO (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	Cash out IT (Current expenses + 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% of their IT costs to the item "Unclassifiable IT costs".

## Appendix

**Table 24 - TCO breakdown: 27\* banks (average %)**

Production factors			Thematic areas									Safety IT	Unclassifiable IT costs	Final total 2024			
			Data center		Transmission systems		Peripheral systems			Applications							
			Mainframe	Server farm	Data networks and fixed telephony	Mobile telephony	Decentralized systems and individual equipment	ATMs and kiosks	POS	Development and evolutionary maintenance	Maintenance adaptive and corrective						
A1	A2	B1	B2	C1	C2	C3	D1	D2	E1	E2	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 (basic, middleware, licensed application)	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 providers	Banks or companies instrumental of the group	Outsourcing IT	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		External suppliers	Outsourcing IT	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 consultancy		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 IT revenues adjusted				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 charged to TCO (line 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 Cash out IT (Current expenses + 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 classified more than 30% of their IT costs as "Non-classifiable IT costs".

\*\* Values calculated on 22 banks (five did not report investments).

## Appendix

**Table 25 - TCO Breakdown: 8 Major Banks (Average %)**

Production factors			Thematic areas									Safety IT	Unclassifiable IT costs	Final total 2024			
			Data center		Transmission systems		Peripheral systems			Applications							
			Mainframe A1	Server farm A2	Data networks and fixed telephony B1	Mobile telephony B2	Decentralized systems and individual equipment C1	ATMs and kiosks C2	POS C3	Development and evolutionary maintenance D1	Adaptive and corrective maintenance D2						
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 (basic, middleware, licensed application)			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-	Banks or companies instrumentals of the group	Outsourcing IT	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		External suppliers	Outsourcing IT	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 consultancy		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	IT revenues adjusted			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 IT Costs (TCO) Net			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 charged to TCO (line 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	Cash out IT (Current expenses + 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 did not report investments).

## Appendix

**Table 26 - TCO Breakdown: 4\* Large Banks (Average %)**

Production factors			Thematic areas									Safety IT	Unclassifiable IT costs	Final total 2024			
			Data center		Transmission systems		Peripheral systems			Applications							
			Mainframe	Server farm	Data networks and fixed telephony	Mobile telephony	Decentralized systems and individual equipment	ATM is kiosks	POS	Development and maintenance evolutionary	Maintenance adaptive and corrective						
A1	A2	B1	B2	C1	C2	C3	D1	D2	E1	F	G	H	I	J			
1.00 Hardware		0,81	0,22	0,02	0,96	0,87				0,09				2,97			
2.00	Software (basic, middleware, licensed application)	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 providers	Banks or companies instrumental of the group	Outsourcing IT														
4.02			Other services														
4.11		External suppliers	Outsourcing IT	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 consultancy		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	IT revenues adjusted				0,02		0,07			1,67	0,24	0,01			2,01		
8.00	Total IT Costs (TCO) Net		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 charged to TCO (line 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 Cash out IT (Current expenses + 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 classified more than 30% of their IT costs as "Non-classifiable IT costs".

## Appendix

**Table 27 - TCO Breakdown: 5\* Medium Banks (Average %)**

Production factors			Thematic areas									Safety IT	Unclassifiable IT costs	Final total 2024	
			Data center		Transmission systems		Peripheral systems			Applications					
			Mainframe A1	Server farm A2	Data networks and fixed telephony B1	Mobile telephony B2	Decentralized systems and individual equipment C1	ATM is kiosks C2	POS C3	Development and evolutionary maintenance D1	Adaptive and corrective maintenance D2	E1	E2	F	
1.00 Hardware					0,08	0,20	1,73	1,03					0,02	3,06	
2.00 Software (basic, middleware, licensed application)			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-	Banks or companies instrumentals of the group	Outsourcing IT	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		External suppliers	Outsourcing IT	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 consultancy			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 IT revenues adjusted								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 charged to TCO (line 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 Cash out IT (Current expenses + 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 classified more than 30% of their IT costs as "Non-classifiable IT costs".

\*\* Values calculated on four banks (one did not report investments).

## Appendix

**Table 28 - TCO Breakdown: 10\* Small A and B Banks (Average %)**

Production factors			Thematic areas									Safety IT	Unclassifiable IT costs	Final total 2024			
			Data center		Transmission systems		Peripheral systems			Applications							
			Mainframe	Server farm	Data networks and fixed telephony	Mobile telephony	Decentralized systems and individual equipment	ATMs and kiosks	POS	Development and evolutionary maintenance	Adaptive and corrective maintenance						
A1	A2	B1	B2	C1	C2	C3	D1	D2	E1	E2	F						
1.00 Hardware		0,26	0,12	0,42	1,31	0,04				0,30	0,01	2,45					
2.00 Software (basic, middleware, licensed application)		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- Banks or companies instrumentals of the group	Outsourcing IT	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		External suppliers	Outsourcing IT	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 consultancy		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 IT revenues adjusted											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 charged to TCO (line 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 Cash out IT (Current expenses + 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 one bank that classified more than 30% of its IT costs as "Non-classifiable IT costs".

\*\* Values calculated on seven banks (three did not report investments).

## Appendix

**Table 29 - TCO breakdown: 5 Small A banks (average %)**

Production factors		Thematic areas										Safety IT	IT costs not classifiable	Final total 2024			
		Data center		Transmission systems		Peripheral systems			Applications								
		Mainframe	Server farm	Data networks and fixed telephony	Mobile telephony	System decentralized and individual equipment	ATMs and kiosks	POS	Development and evolutionary maintenance	Maintenance adaptive and corrective							
A1	A2	B1	B2	C1	C2	C3	D1	D2	E1	E2	F						
1.00	Hardware		0,45	0,19	0,25	2,19	0,08				0,60	0,01	3,77				
2.00	Software (basic, middleware, licensed application)	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 providers of the group	Banks or instrumental companies	Outsourcing IT		1,07	0,17		0,47		1,87		0,29	0,45	4,31			
4.02			Other services														
4.11		Suppliers exteriors	Outsourcing IT	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 consultancy			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	IT revenues adjusted											2,92			2,92		
8.00	Total IT Costs (TCO) Net			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 charged to TCO (line 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	Cash out IT (Current expenses + 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 did not report investments).

## Appendix

**Table 30 - TCO breakdown: 5\* Small B banks (average %)**

Production factors		Thematic areas										Safety IT	IT costs not classifiable	Final total 2024			
		Data center		Transmission systems		Peripheral systems			Applications								
		Mainframe A1	Server farm A2	Data networks and fixed telephony B1	Mobile telephony B2	System decentralized and individual equipment C1	ATMs and kiosks C2	POS C3	Development and evolutionary maintenance D1	Maintenance adaptive and corrective D2							
1.00	Hardware			0,06	0,06	0,58	0,42							1,13			
2.00	Software (basic, middleware, licensed application)									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 providers	Banks or instrumental companies of the group	Outsourcing IT	1,01	1,03	1,82		2,41	0,01		16,48	17,63	1,25	2,12	43,77		
4.02		External suppliers	Other services														
4.11			Outsourcing IT	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 consultancy						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	IT revenues adjusted																
8.00	Total IT Costs (TCO) Net		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 charged to TCO (line 6.00)					0,40				4,84			0,34	5,58
11.00	IT Investments**					14,92				51,74			33,33	100
12.00	Cash out IT (Current expenses + 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 one bank that classified more than 30% of its IT costs as "Non-classifiable IT costs".

\*\* Values calculated on three banks (two did not report investments).



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