

CIPA
INTERBANK CONVENTION
ON AUTOMATION

ABI
ITALIAN BANKING
ASSOCIATION

**SURVEY ON THE USE OF IT IN EUROPEAN BANKING GROUPS WITH
INTERNATIONAL RAMIFICATIONS**

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Introduction

The Interbank Convention on Automation (CIPA) – set up in 1968 at the initiative of the Bank of Italy and the Italian Banking Association (ABI) – carries out an annual “Survey on Automation in the Credit System” in collaboration with ABI, with consideration given to a large sample of banks and banking groups.

The aim of the survey is to provide an overview of the use of information and communication technology in the Italian banking system. In particular, the survey examines the organizational and governance aspects, the sourcing choices, the use of technologies (both in making contact with customers and in internal administrative processes), and the safeguards adopted to manage and reduce IT risk. Special attention is paid to the economic aspects; in fact indicators relating IT costs to the main operational aggregates and income statement items are prepared, together with indices of the composition of costs.

The growing international articulation of the major Italian banking groups and the increasingly widespread presence in Italy of leading foreign intermediaries have made it necessary for the comparisons to go beyond Italy’s borders. Building on the experience gained in past years, the survey for 2008 has been extended to European groups. Born as a thematic analysis attached to the investigation of Italian groups, from which it takes the issues and reporting methods, this year the content of the survey has been broadened and given an autonomous form.

In the same way as for the national survey, the results of the analysis are set out in a document that is published on the CIPA and ABI websites (respectively www.cipa.it and www.abi.it). Each group that participates in the “international” survey receives feedback in the form of its indices compared with the average indices of its peer group.

As for earlier surveys, the participation of the foreign banks in the 2008 survey was achieved both via members of CIPA with a foreign leader bank and via their branches established in Italy, with the organizational assistance of the Milan branch of the Bank of Italy.

* * *

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Summary of the results

The international survey covered five banking groups headed by an Italian leader bank and twelve headed by a foreign leader bank.¹ While the composition of the sample of Italian groups remained basically unchanged, there were some changes compared with the 2007 survey in the sample of foreign groups (see the Methodological Note).

The first information gathered in the 2008 survey again concerned the geographical location of the facilities in which IT activity is performed. Considering the entire sample of seventeen internationally articulated (Italian and foreign) banking groups, IT facilities continued to be located mainly in Europe; in fact only 37.6% were located in the other continents.

As for governance, nearly every group, regardless of the leader bank's nationality, had a central unit for the governance of IT (88%), units that reported mainly to the Chief Executive Officer (33%) or a member of the board of directors (27%). In the foreign groups the involvement of the governing bodies in the definition of IT strategies is even greater (70%).

The degree of articulation of the group structure influences the primary organizational model adopted for the "IT factory". The most common organizational solution is the "centralized with some competence centers" model (35.3%), but there are also cases of the "centralized" model and the "distributed among competence centers" model (23.5% each). In the "distributed among competence centers" model, the division in the Italian groups is by technological segment.

In more than half the Italian groups and in all the foreign groups the "factory" provides cross-border IT services to the various business areas. Almost all the foreign groups have completed or are implementing projects for the cross-border integration of their information systems, compared with 60% for the Italian groups. Consequently most of the Italian and foreign banking groups are engaged in consolidating their data centers and/or server farms and in projects to unify their telecommunications networks.

As for the organization of business continuity, the most common solution is to entrust it to distinct plans, a choice that reflects different needs and situations depending on the various locations.

In the division of IT costs by functional area, the bulk (60%) is accounted for by the "operations" area,² in line with what was found in the national survey.

In the analysis³ of the division of IT resources between supporting current operations (Run the business - RTB) and fostering change (Change the business - CTB), the resources devoted to current operations prevail. In both RTB and CTB projects IT costs are mainly in relation to the Business area.

In the 2008 survey some new details were introduced concerning strategies for technological innovation, by means of questions on the prioritization of investment choices. The results show a high level of interest in "VoIP", followed by "Mobile" and "Web 2.0". It should

¹ For the sake of simplicity, in the rest of the text the groups headed by an Italian leader bank are referred to as "Italian" groups and those headed by a foreign leader bank as "foreign groups".

² The "operations" area comprises: Credit, Overseas, Finance and Treasury, Receipts and Payments, E-payment Systems and transversal applications.

³ Twelve of the seventeen groups responded.

be noted, however, that there was also interest in “SOA” (Service Oriented Architecture) and “Green IT”.

Turning to the economic aspects of IT, which are also examined in the international survey, attention is focused on the share of IT costs (taken to mean Total Cost of Ownership – TCO) in total assets (1.9‰ on average), in operating costs (13.2% on average) and in gross income (10.7% on average) with rather wide fluctuations between the minimum and maximum values.

Comparison between the three size-based classes⁴ into which the groups are divided shows that on average the “large” groups have a lower ratio of IT costs to total assets and operating costs than the “major” and “other” groups, while the “major” groups have a lower ratio of IT costs to gross income than the other groups.

The cross-border integration of information systems has a greater impact on the costs of the larger groups.

⁴ Consideration was given to total assets at 31 December 2008.

Results of the survey

The international survey covered five Italian and twelve foreign banking groups. While the composition of the sample of Italian groups remained basically unchanged, there were some changes compared with the 2007 survey in the sample of foreign groups (see the Methodological Note).

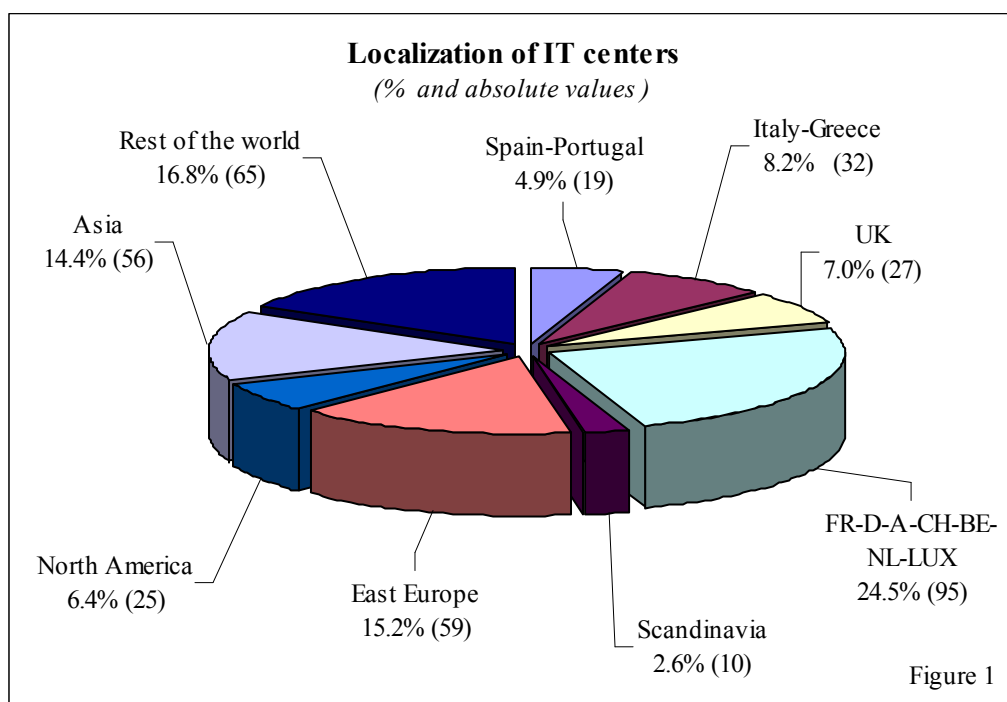
Of the twelve foreign groups that responded to the questionnaire, eleven are among the top thirty European banking groups ranked by total assets in 2008.⁵ If the Italian groups are included, the number of sample groups among the top thirty referred to above rises to thirteen.

The information gathered concerns some organizational and governance matters, together with the economic aspects of the IT function within groups, and the policies followed in technological choices.

1. Organizational matters

1.1. Localization of IT centers

The first information gathered in the 2008 survey again concerned the geographical location of the facilities in which IT activity is performed. Considering the entire sample of seventeen internationally articulated (Italian and foreign) banking groups, IT facilities continued to be located mainly in Europe; in fact only 37.6% were located in the other continents (Figure 1).



Compared with the previous year central Europe's share of IT centers rose from 13.6% to 24.5% of the total, while the share of the rest of the world fell from 21.9% to 16.8%. Obviously, where IT centers are located depends in part on the composition of the sample, which underwent

⁵ Consideration was given to banking groups with their head office in a euro-area country plus the United Kingdom and Switzerland. ING Direct N.V. participated as an autonomous group and not at the ING Groep level.

some changes compared with the previous year (see the Methodological Note). In fact the localization of the centers is affected by numerous factors, such as the localization of the groups' markets, the degree to which their international presence is consolidated, and their size. Naturally, it also depends on assessments of an economic nature. The more or less widely distributed model of the "IT factory" (see Section 1.3) also influences the number of IT centers and hence their distribution across the different geographical areas (Figure 2).

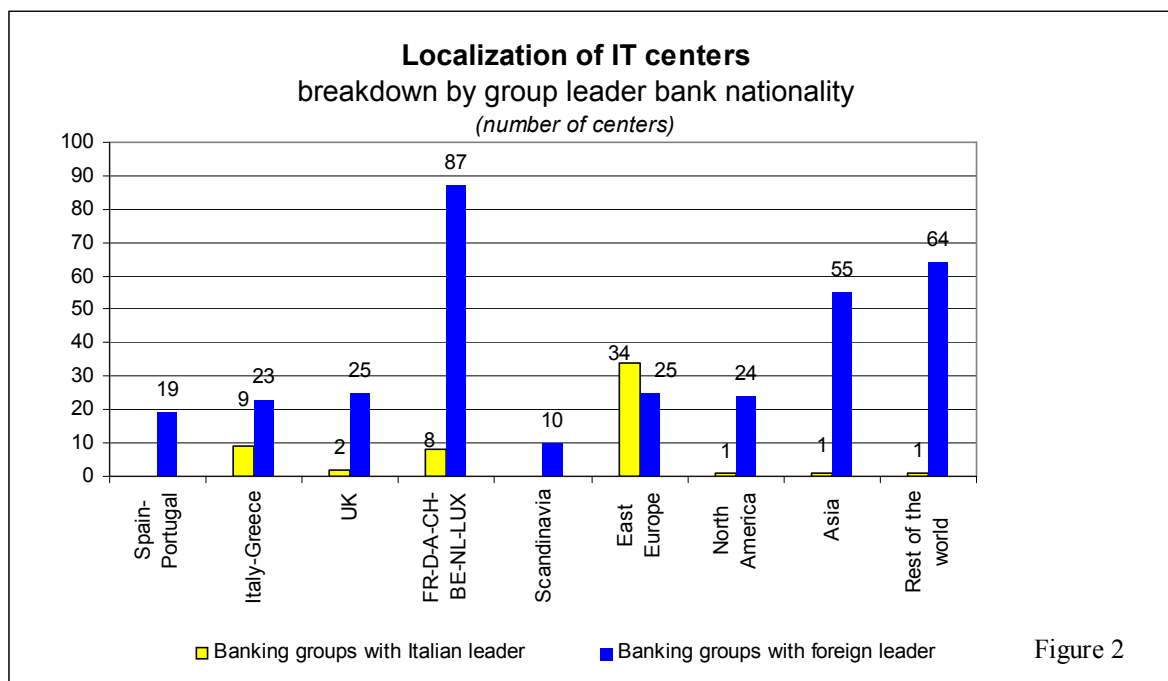


Figure 2

The Italian groups show a high degree of polarization not only in the Mediterranean area but above all in East Europe, which recorded an increase compared with 2007 in both absolute terms (+ 4 centers) and relative terms (from 52.5% to 60.7%). Foreign groups, by contrast, continued to show a more broadly distributed pattern, accompanied by a fall compared with the previous year in the share of the total outside Europe, from about 50% to about 43% (Figure 3).

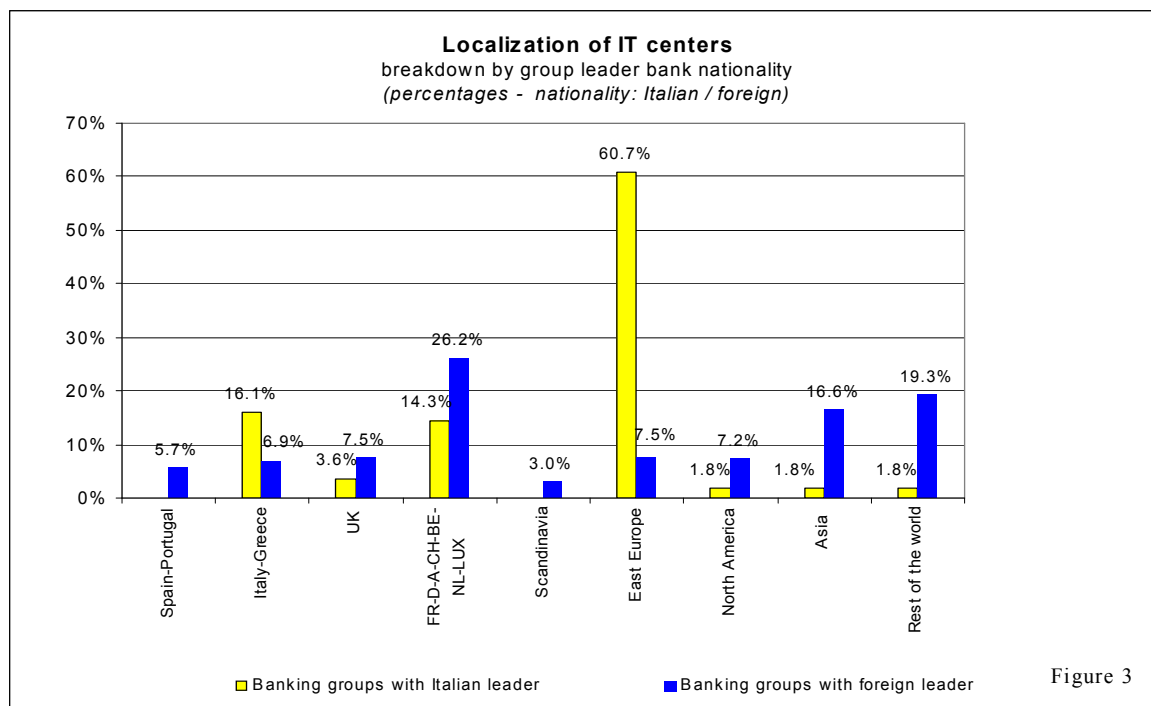
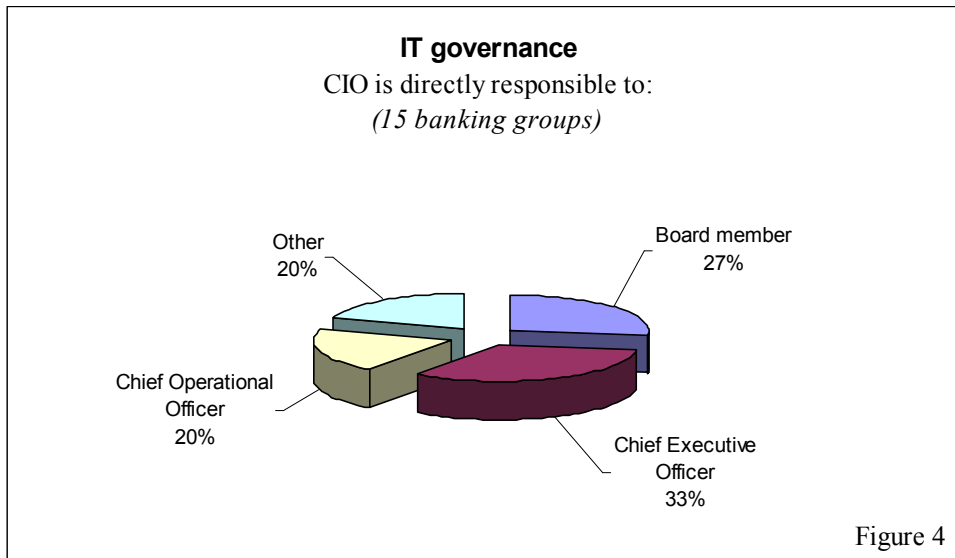


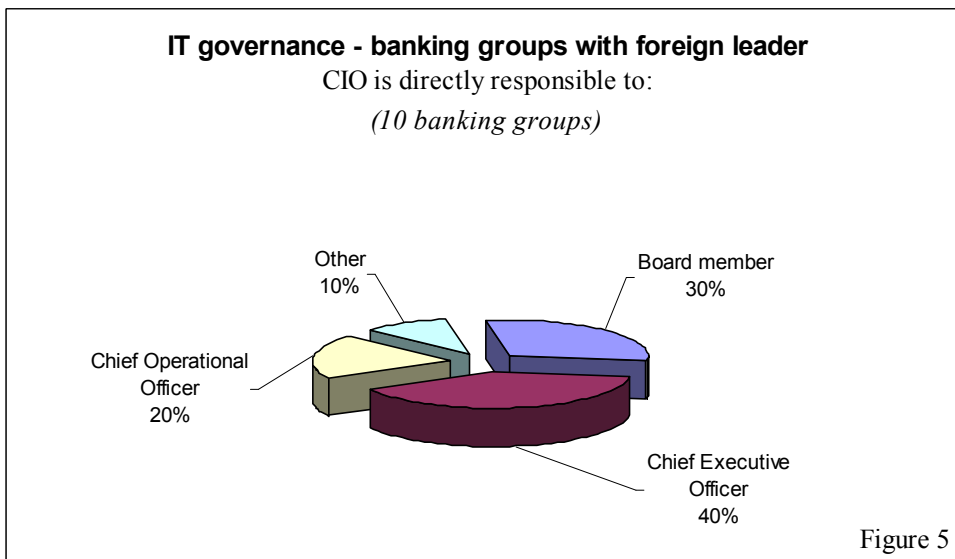
Figure 3

1.2. The governance structure

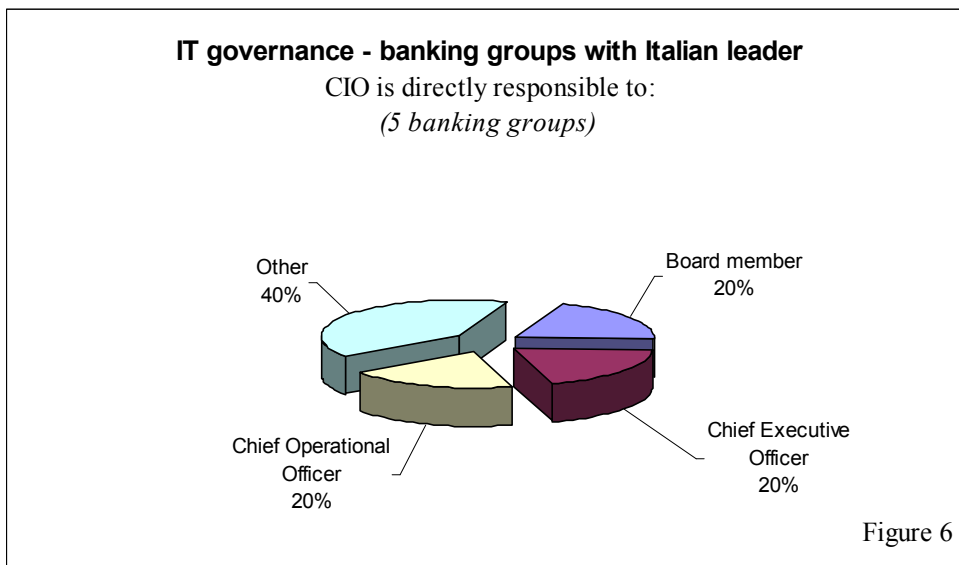
As for governance, nearly every group, regardless of the leader bank's nationality, had a central unit for the governance of IT (88%), units that reported mainly to the Chief Executive Officer (33%) or a member of the board of directors (27%) (Figure 4).



In the foreign groups the involvement of the governing bodies in the definition of IT strategies is even greater; in 70% of the sample cases the main governing body of the IT sector reports directly to the Chief Executive Officer (40%) or a member of the board of directors (30%) (Figure 5).

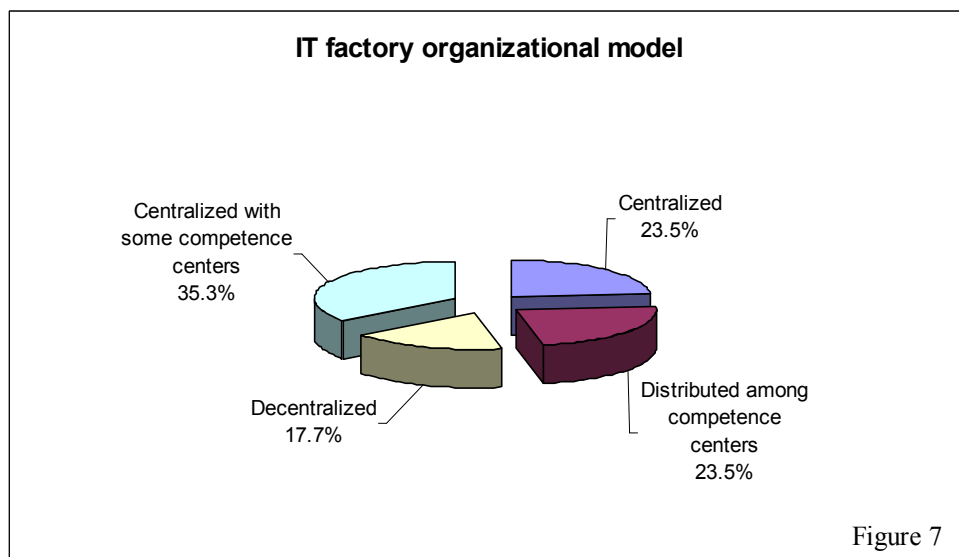


For the Italian groups these percentages both fall to 20% (Figure 6), in line with the figure for the Chief Operational Officer. In fact in the Italian groups responsibility for the central structure is equally divided between the CEO, the Board and the COO. The largest share, however, is that of a generic "other", which accounts for 40%. All told, the structure of IT governance therefore differs widely from group to group.

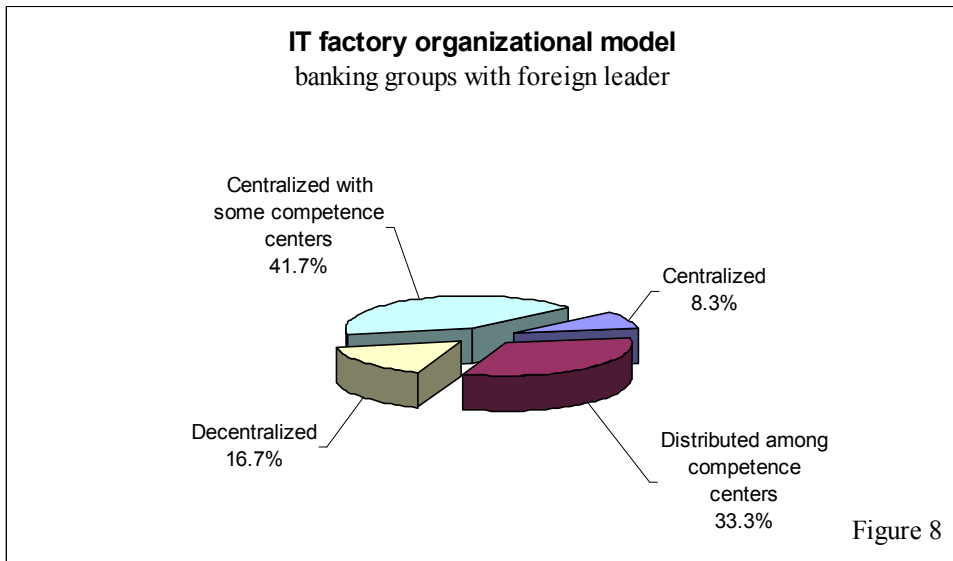


1.3. Organizational model of the “IT factory”

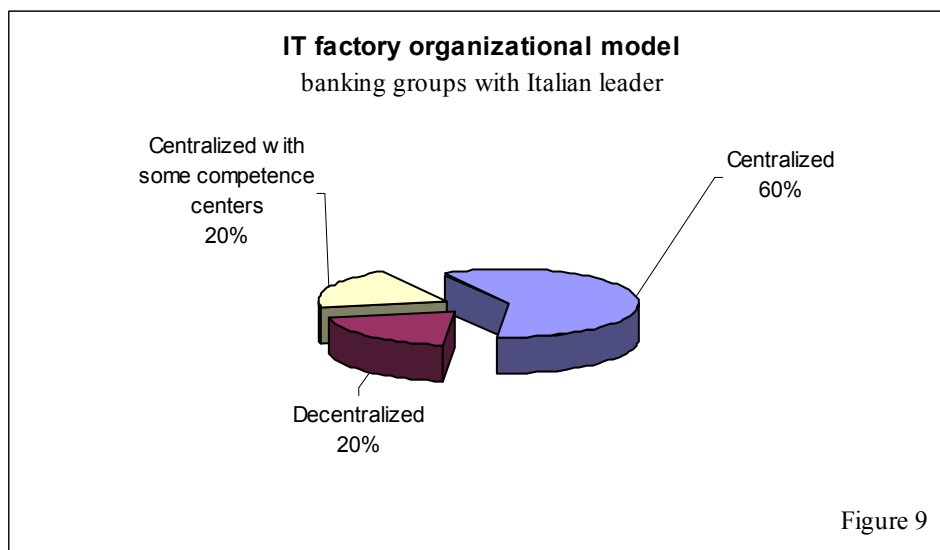
The degree of articulation of the group structure influences the primary organizational model adopted for the “IT factory”. The most common organizational solution is the “centralized with some competence centers” model (35.3%), but there are also cases of the “centralized” model and the “distributed among competence centers” model (23.5% each) (Figure 7).



Analyzing the data with reference to the nationality of the leader bank shows that groups with a foreign leader bank have even more predominant recourse than the total sample to the “centralized with some competence centers” model (41.7%), even though the share of the “distributed among competence centers” model is also large (33.3%) (Figure 8).

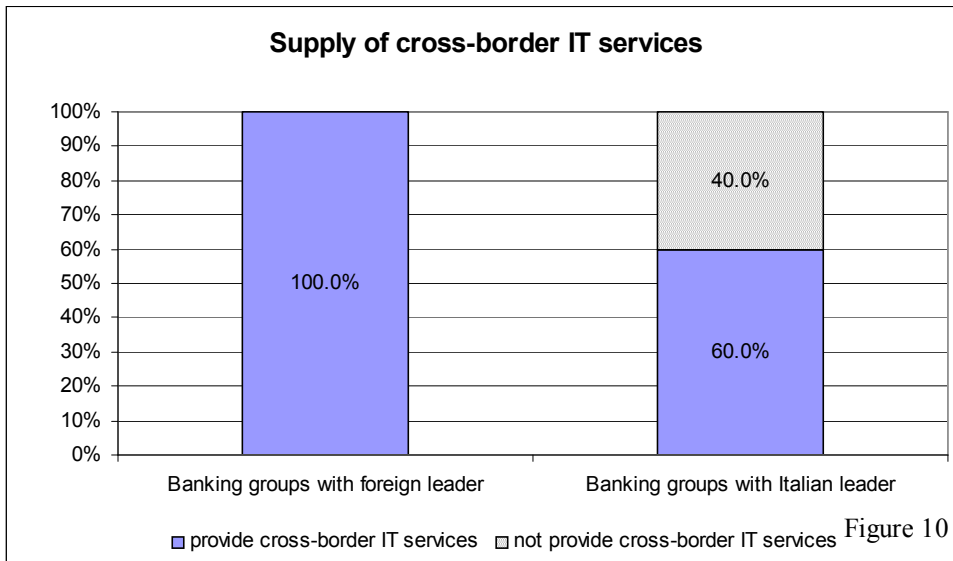


By contrast, among the Italian groups the centralization of the IT function in a single “factory” is the most widely adopted model and appears to have gained ground compared with the previous year, with its share of the total rising from 50% to 60% (Figure 9).



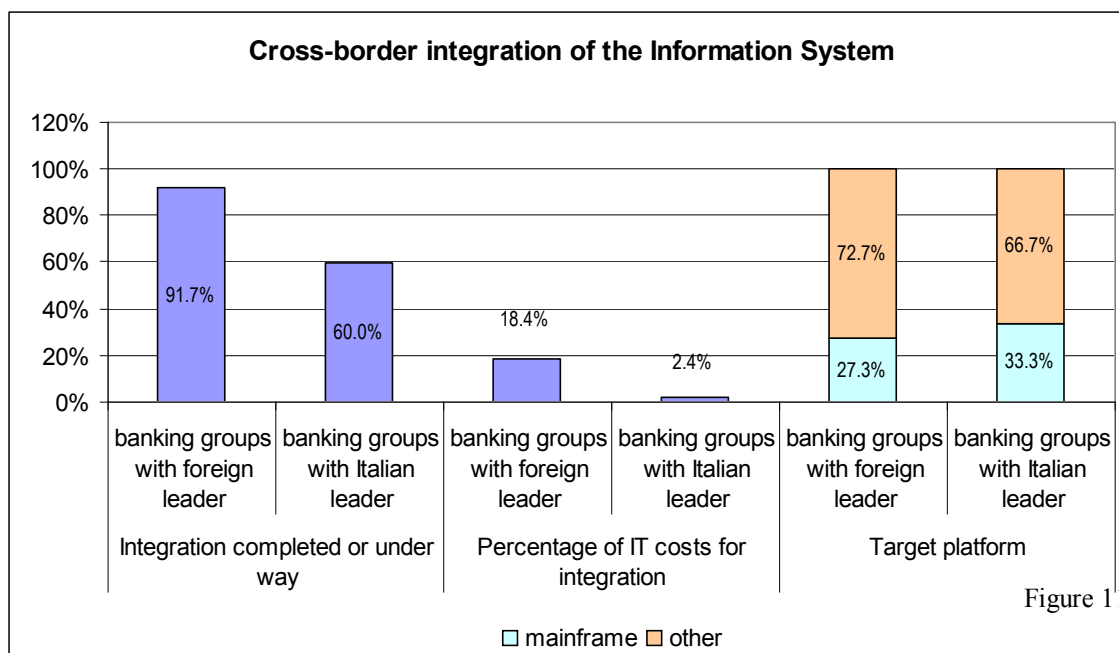
Although only nine foreign groups and one Italian group answered the question, among the former the criterion of specialization by competence centers is divided almost equally between “business areas” (55.6%) and “technological segment” (44.4%), while the Italian group has recourse to specialization by technological segment.

In more than half the Italian groups and in all the foreign groups the “factory” provides cross-border IT services to the various business areas (Figure 10).



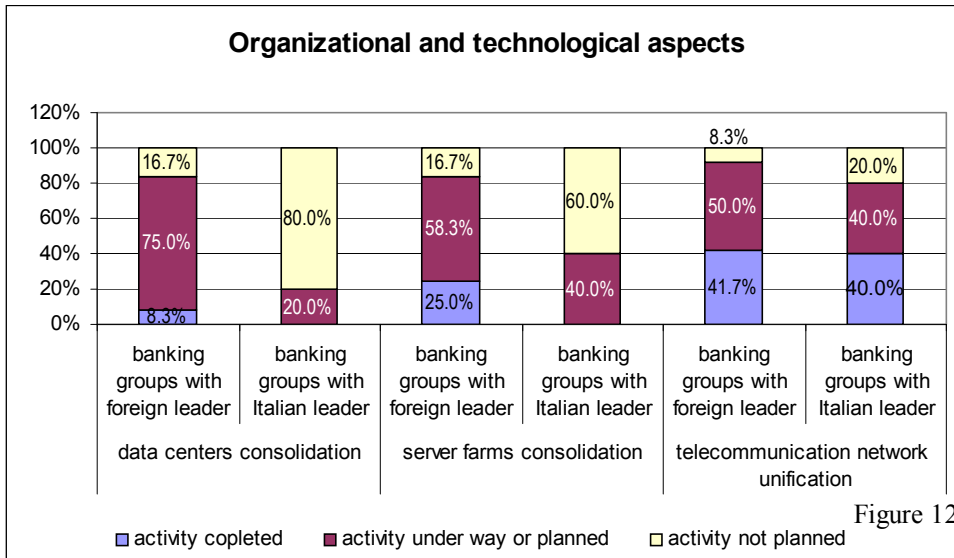
Almost all the foreign groups have completed or are implementing projects for the cross-border integration of their information systems (91.7%, compared with 60% for the Italian groups). The extent to which integration has been achieved influences the share of IT expenditure devoted to the process, 18.4% for the foreign groups but no more than 2.4% for the Italian groups.

Among the groups that have completed or are implementing the integration of their information systems (a total of 14 groups, of which 3 Italian and 11 foreign), mainframes are not the most common platform for integration (27.3% for the foreign groups 33.3% for the Italian groups (Figure 11).



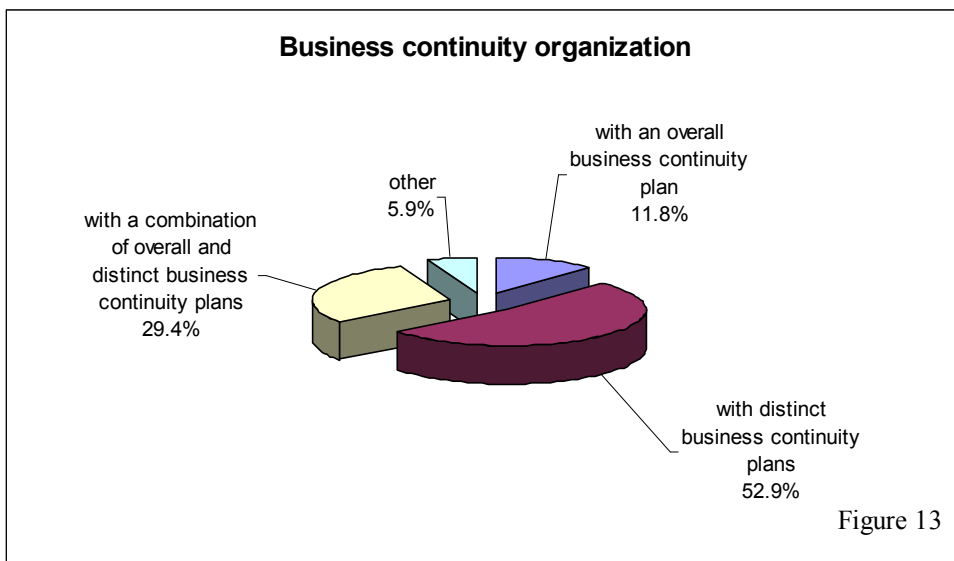
Analysis of the choices made with regard to consolidation and rationalization shows that most of the Italian and foreign banking groups are currently engaged in consolidating their data

centers and/or server farms and in projects to unify their telecommunications networks. For most groups the integration process is still under way and only for their telecommunications networks can it be considered completed for a significant number of groups (41.7% for the foreign groups and 40% for the Italian groups) (Figure 12).

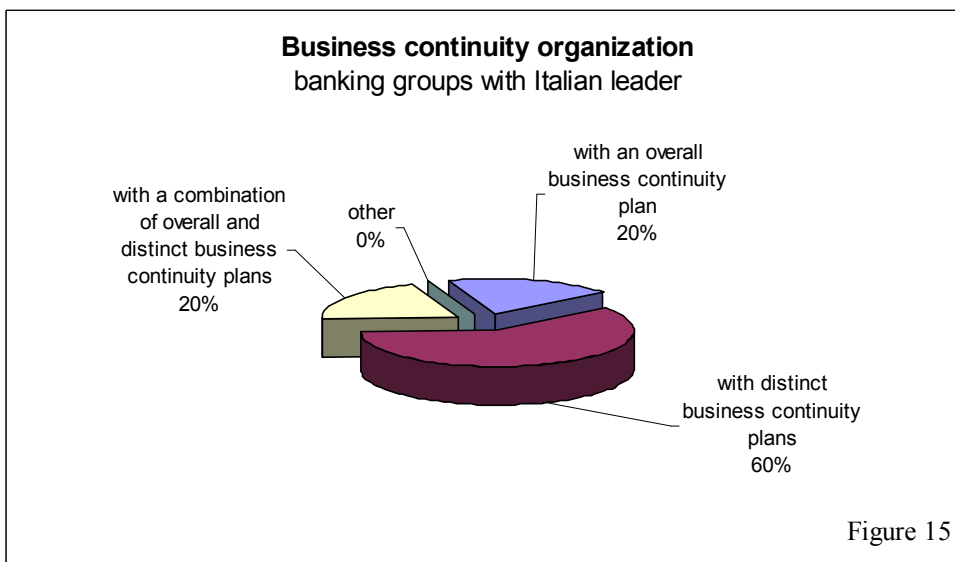
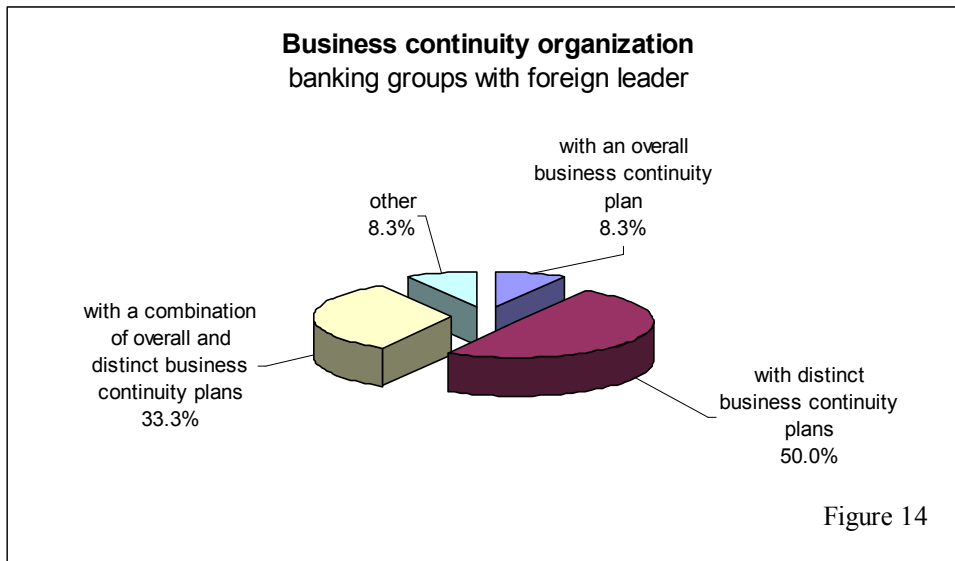


1.4. Organization of business continuity

Fundamentally different choices are not found in the organization of business continuity when the groups are considered together or according to the breakdown by the nationality of the leader bank. The predominant choice is always, albeit with small variations in the share, to entrust business continuity to distinct business continuity plans, a choice that reflects different needs and situations depending on the various locations (Figure 13).



In the usual breakdown by foreign/Italian leader bank small differences emerge with reference to the other options (Figures 14 and 15).

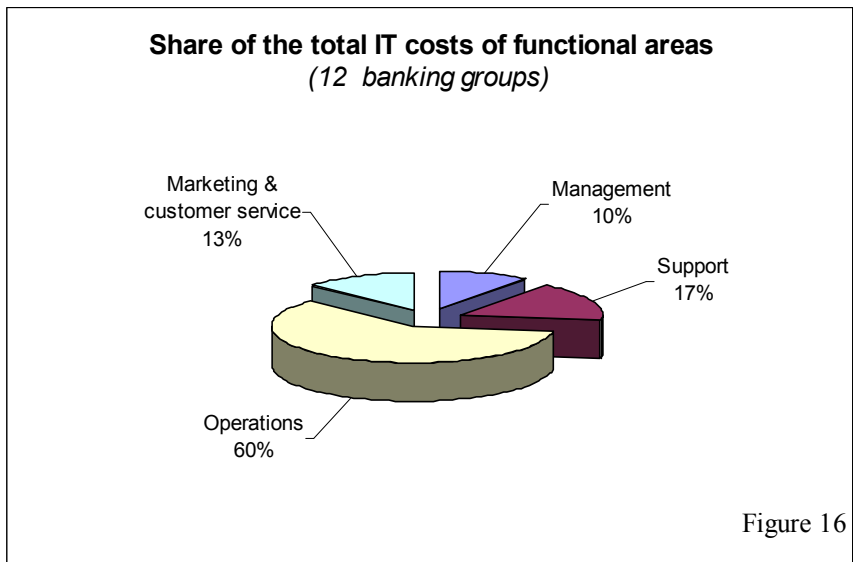


2. IT costs by functional area

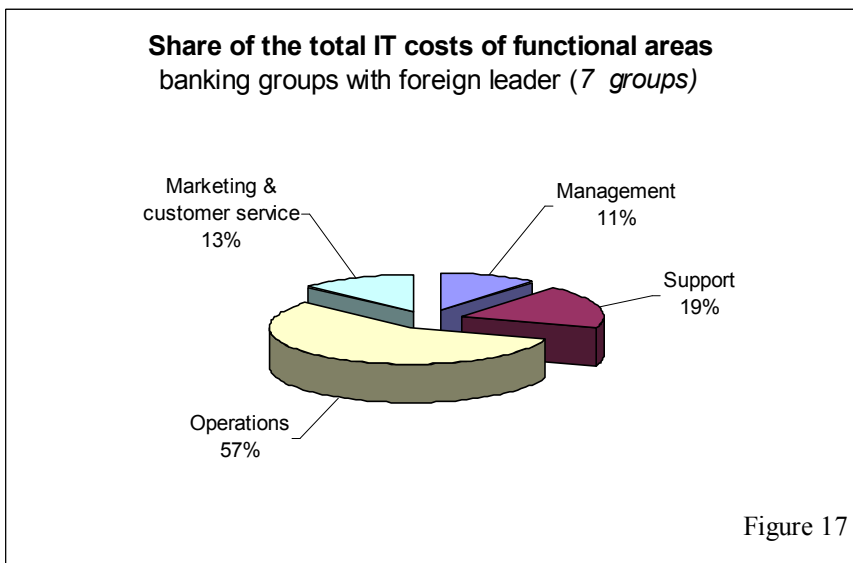
In the same way as the analysis conducted in the national survey, the participants in the international survey were asked about the distribution of their IT costs by functional area, using the classification used in the national survey.⁶ The distribution that emerges for the sample as a whole is marked by the predominance of the “operations” area, which accounts for 60% of total IT costs. This figure is not very different from the first results that emerged in the national

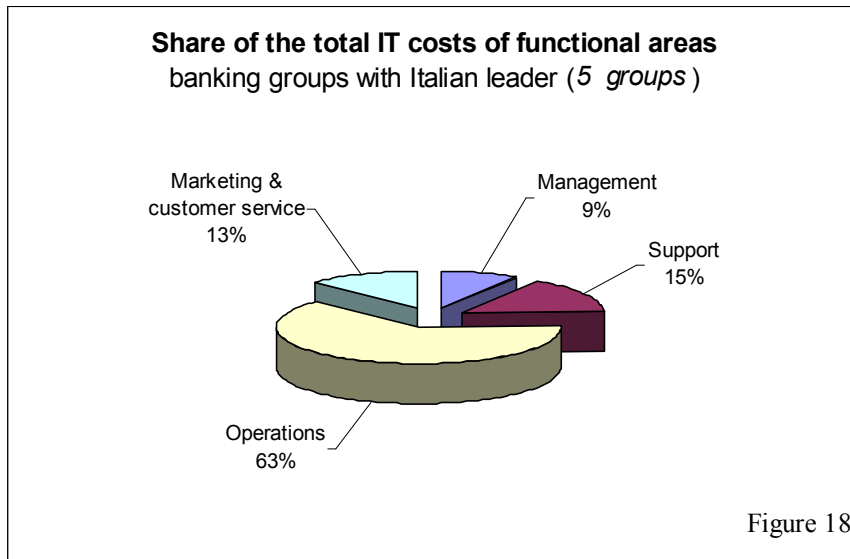
⁶ For the classification of the operational/business areas, for the sake of homogeneity, reference was made to the taxonomy of banking processes adopted by ABILab. The “operations” area comprises: Credit, Overseas, Finance and Treasury, Receipts and Payments, E-payment Systems and transversal applications. The “marketing and customer service” area comprises: E-banking and commercial support. The “management” area comprises: Management Control and Reporting, Risk Management. The “support” area comprises: Administration and Accounting, Help Desk and Other Services.

survey with reference to the Italian banking groups (63.3%). The distribution of the remaining share among the other three areas is also similar to that found in the national survey, with a slightly higher value for the “support” area (17%, compared with 12.7% in the national survey) (Figure 16).

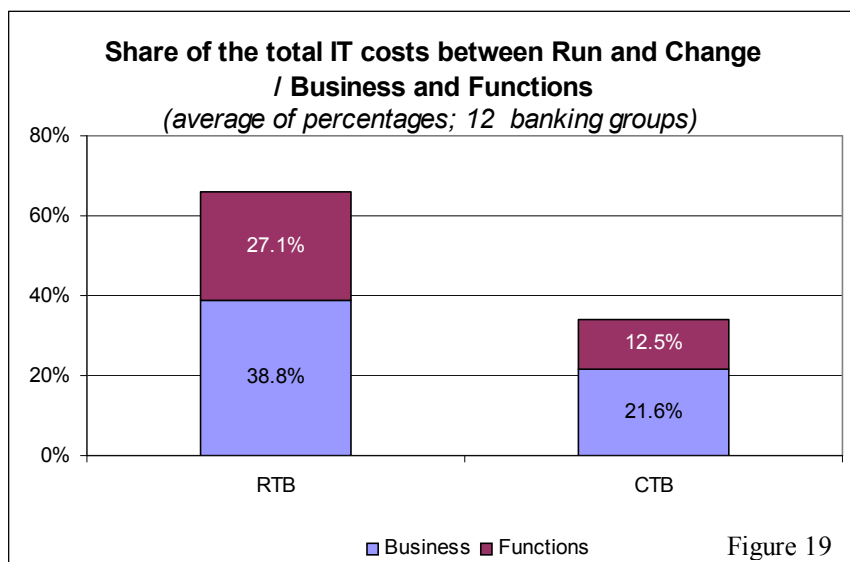


Breaking down the data by foreign/Italian leader bank, the distribution does not change significantly (Figures 17 and 18).

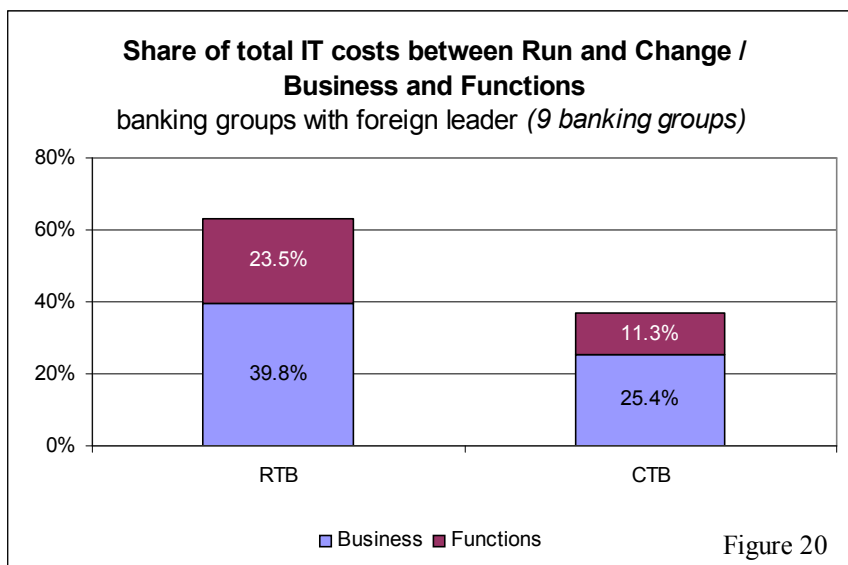




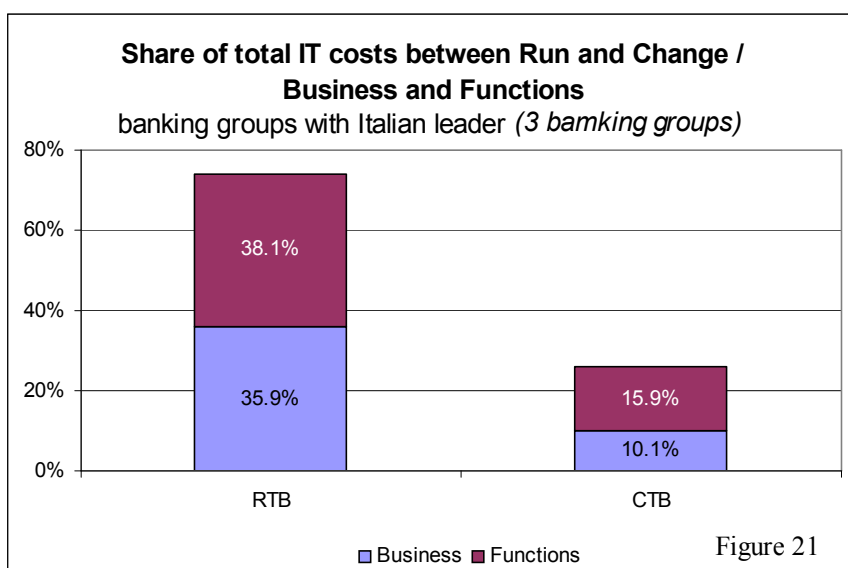
The international survey also took over the analysis, first proposed in the national survey, designed to show how much IT expenditure (again in the sense of TCO) is used to support current operations (running the business - RTB) and how much to foster change (changing the business - CTB), with a further distinction made in both cases between the resources devoted to the areas oriented towards Business (“core” activities) and those supporting Functions. With reference to the sample examined (twelve groups) the survey shows that the bulk of IT resources (65.9%) are devoted to running the business (RTB) and the remainder (34.1%) to changing the business (CTB). In both RTB and CTB the greater part of IT costs are incurred by the Business area (Figure 19).



Breaking down the data by foreign/Italian leader bank, the foreign groups are found to show a similar pattern to that of the entire sample, with a slightly higher share devoted to the Business area in both RTB and CTB (Figure 20).



The IT costs for RTB are even more predominant for the Italian groups (74% as against 26%) than those for CTB. In both cases, moreover, the share devoted to the Functions area is larger than that devoted to the Business area (Figure 21).

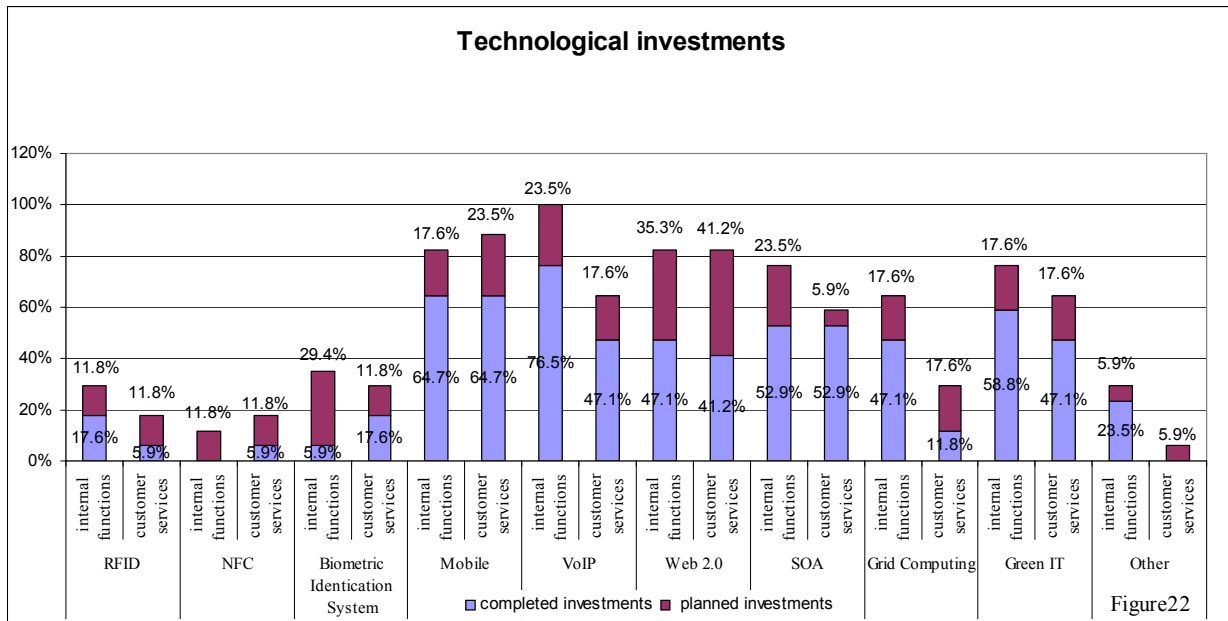


It is worth noting that the results for the Italian groups are in line with those found for the Italian banking groups in the national survey (preliminary results, where, moreover, the share of IT expenditure devoted to the Business area in the case of RTB is even smaller: 28.7%, as against 35.9%).

3. *Technological investments*

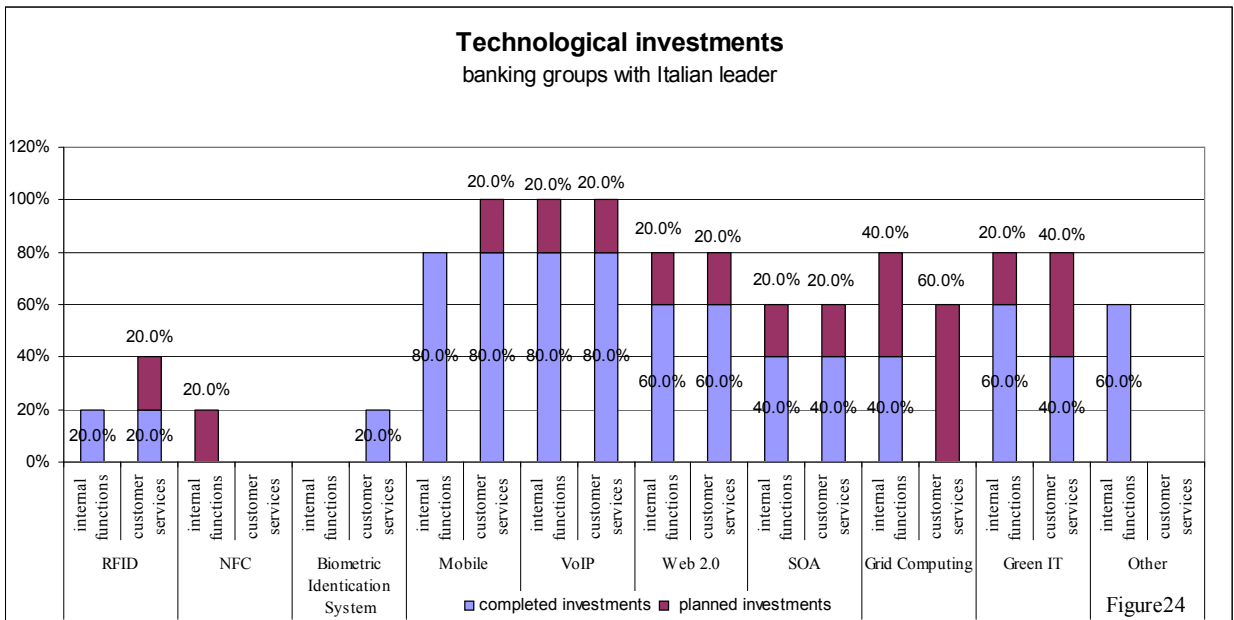
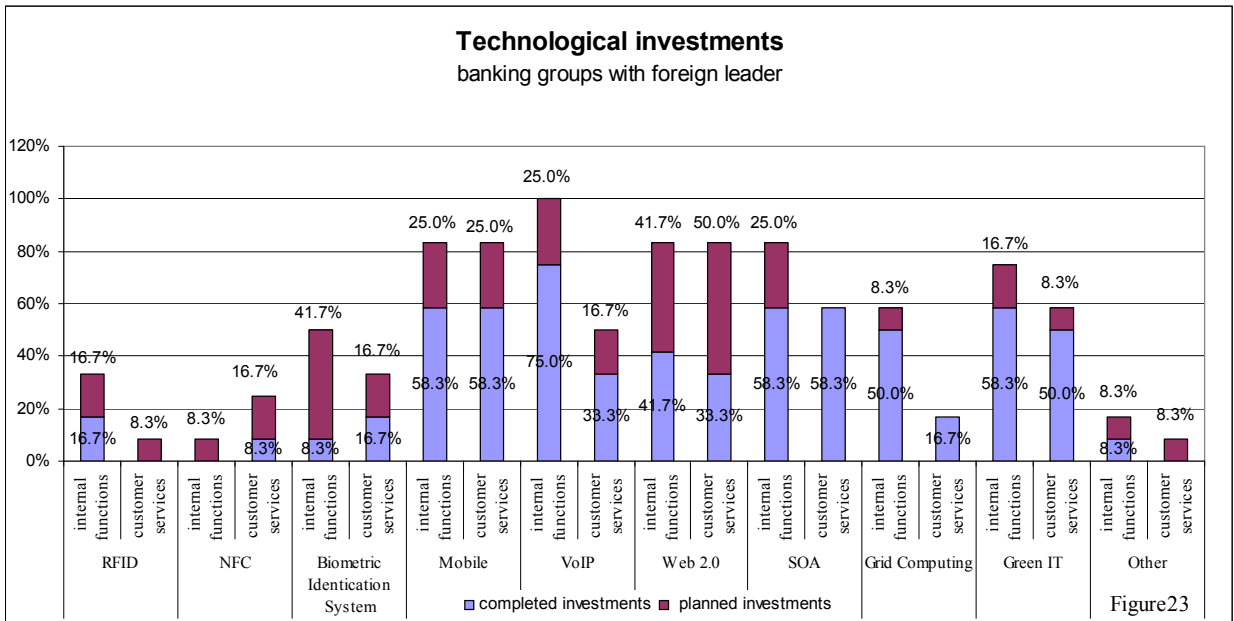
In the 2008 survey some new details were introduced concerning strategies for technological innovation, by means of questions on the investment choices adopted. Analysis of the results shows a high level of interest in “VoIP”, especially with regard to internal needs

(100% of the groups), followed by “Mobile”, primarily in connection with customer services (88.2%) and “Web 2.0” (82.4%), for both internal needs and customer services (Figure 22).



It should be noted, however, that there was also significant interest in “SOA” (Service Oriented Architecture), which ranked fourth, together with “Green IT”; in both cases in support of internal functions. As can be seen from the figure, most of the investments were made (or planned) in 2009.

Breaking down the data by foreign/Italian leader bank, the “VoIP” technologies continued to be predominant as the main destination of investments, but this tendency was more marked for the Italian groups, with reference on an equal footing to internal functions and customer services. The interest in “Mobile” and “WEB 2.0” technologies is virtually the same in the foreign groups, although the bulk of investments started in 2009 are devoted to the “Mobile” technologies, while the bulk of those planned for the next two years are devoted to the “WEB 2.0” technologies. By contrast, for the Italian groups the share of the investments devoted to the two technologies in question is much larger for those started in 2009. Another significant difference for the Italian groups is the greater interest in investing in “Mobile” technologies for customer services and in “Grid Computing” and “Green IT” (Figures 23 e 24).



Lastly, looking to see which of the technological fields identified receives the bulk of the expenditure made, “VoIP” technology ranks top, in line with the results of the preceding question (Figure 25). This choice is confirmed with reference to the entire sample, even though the number of foreign groups ranking it first is double that of Italian groups. The next technologies are “Mobile”, for which the foreign/Italian ratio is turned upside down, “WEB 2.0” and “SOA”, on an equal footing, thanks to the choices of the foreign groups.

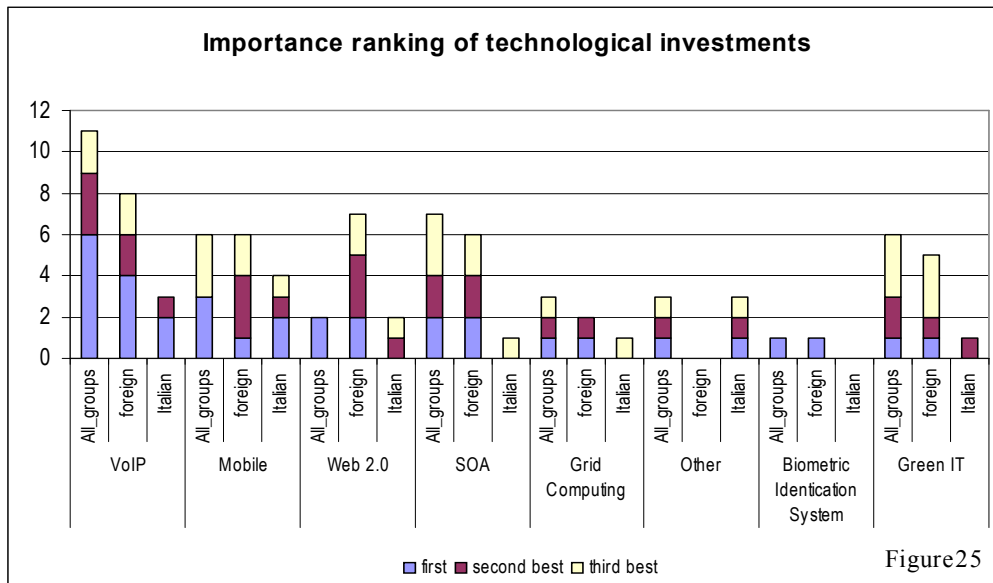


Figure 25

Overall, it is found that the technologies on which the bulk of investments are focused are VoIP, “Mobile” and “WEB 2.0”, but newer technologies such as “SOA” and “Green IT” also receive attention and investments.

4. Analysis of IT costs on the basis of indices

Some economic aspects of IT are also covered in the international survey. In particular, attention is focused on the ratios of IT costs (taken to mean Total Cost of Ownership – TCO) to other economic aggregates (total assets, operating costs and gross income). All the economic data used in the analyses were supplied directly by the groups that took part in the survey.

It can be seen that IT costs average 1.87% of total assets, 13.20% of operating costs and 10.68% of gross income, with rather wide fluctuations between the minimum and maximum values, especially for the last two income statement items (Figure 26).

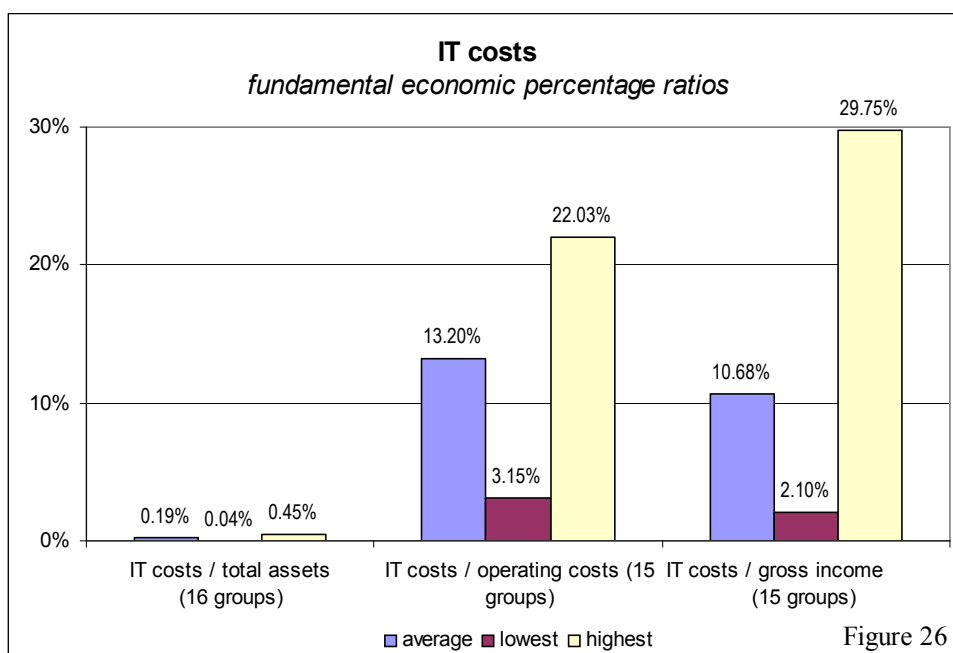


Figure 26

N.B.: for homogeneity in the graph, IT cost/Total asset ratio is shown per cent

In order to enrich the analysis of the economic profiles of IT, the information on the main operational and income statement aggregates is supplemented by that concerning employee productivity (in terms of total assets) and the ratio of technical staff to total staff (Table 1).⁷

We are obviously aware of the problems of data comparability that are always present in international surveys⁸ and also of the fact that the sample includes groups of different sizes and strategic/operational characteristics. We nonetheless believe that processing the data collected can provide useful information on important aspects of IT management in a significant set of European banking groups.

In order to enhance the consistency of the comparative analysis, all the groups that submitted the quantitative data requested were divided into three subsets according to their size (total assets at 31 December 2008). The first subset was made up of eight⁹ “major” groups, the second of five “large” groups and the third of four “other” groups (see the Methodological Note).

Comparison between the three sets of indicators shows that on average the “large” groups have a lower ratio of IT costs to total assets and operational costs than the other two groups, while the “major” groups have a lower ratio of IT costs to gross income.

As for the relationship between IT costs and the number of non-IT employees, it can be seen that the “major” groups have a slightly higher ratio than the two other groups together and a higher index of employee productivity (total assets per employee). Turning to the ratio of IT employees to total employees, the value is substantially homogeneous for all three subsets of groups (Table 2).¹⁰

Applying the analysis by size class to some aspects of the composition of IT costs, it can be seen that a total of eleven groups (four of the “major” groups, the five “large” groups and two of the “other” groups) had recourse to non-group IT outsourcers for facility management or outsourcing of the information system. The ratio of the related costs to total IT costs averaged 22%, for the four “major” groups it was 32%, for the “large” groups it was 11% and for the “other” groups it was 26%. The ratio varies considerably, however, ranging from a maximum of 77.5% to a minimum of 2.1%, thus confirming the notable diversity in the organizational models adopted by the international groups in the management of their IT.

The cross-border integration of information systems has a greater impact on the costs of the larger groups: four of the “major” groups report an average of about 21% of their total costs; for the four “large” groups that reported such costs the average was 8%, while for the “other” groups – only two – it was just under 3%.¹¹

⁷ The number of groups that contributed with the data they supplied to the results shown is indicated each time.

⁸ In order to ensure the maximum possible reporting homogeneity, the instructions for filling out the questionnaire include the reporting criteria and the definitions of the aggregates.

⁹ Seven of the eight major groups provided economic data.

¹⁰ The technical staff considered includes that employed by groups’ instrumental companies; the aggregate “total employees” used to calculate the “IT costs/employees” and “total assets/employees” indicators does not include the technical staff.

¹¹ Fourteen out of seventeen groups declared they were engaged in or had completed integration projects; of these, only ten reported integration costs.

International banking groups: overview of IT costs

Ratios	All groups (16)	
	Average	STD / Average
<i>IT costs/Total assets (x 1000)</i>	1.9	0.6
<i>IT costs/Operational expenses (%)¹</i>	13.2	0.4
<i>IT costs/Gross income (%)¹</i>	10.7	0.6
<i>IT costs/Employees (thousands of euro)</i>	17.2	0.5
<i>IT employees/Employees (%)</i>	6.4	0.6
<i>Operational expenses/Total assets (%)¹</i>	1.4	0.4
<i>Gross income/Total assets (%)¹</i>	2.1	0.5
<i>Cost-income ratio (%)²</i>	64.5	0.2
<i>Total assets/Employees (millions of euros)</i>	12.1	0.7
<i>Employees/Branches³</i>	36.6	1.5

¹ Average calculated on 15 groups.

² Average calculated on 13 groups.

³ Average calculated on 14 groups.

Table 1

International banking groups: overview of IT costs

Ratios	Major groups (7)		Large groups (5)		Other groups (4)	
	Average	STD / Average	Average	STD / Average	Average	STD / Average
<i>IT costs/Total assets (x 1000)</i>	1.8	0.3	1.4	0.6	2.6	0.6
<i>IT costs/Operational expenses (%)¹</i>	16.1	0.3	9.6	0.4	13.4	0.3
<i>IT costs/Gross income (%)¹</i>	9.9	0.3	10.4	1.1	12.2	0.4
<i>IT costs/Employees (thousands of euro)</i>	18.2	0.4	16.0	1.0	16.6	0.4
<i>IT employees/Employees (%)</i>	6.4	0.2	6.1	1.0	6.7	0.7
<i>Operational expenses/Total assets (%)¹</i>	1.2	0.2	1.4	0.3	1.9	0.5
<i>Gross income/Total assets (%)¹</i>	1.9	0.1	2.0	0.6	2.5	0.6
<i>Cost-income (%)²</i>	62.5	0.2	62.5	0.3	70.9	0.1
<i>Total assets/Employees (millions of euro)</i>	13.2	0.6	11.1	0.5	11.6	1.2
<i>Employees/Branches³</i>	23.7	0.5	68.1	1.3	11.3	0.2

¹ Average calculated for 6 "Major" groups.

² Average calculated for 6 "Major" groups, for 5 "Large" groups and for 3 "Other" groups.

³ Average calculated for 6 "Major" groups and for 3 "Other" groups.

Table 2

APPENDIX

Methodological Note

The survey is based on a questionnaire that is published on CIPA's website (www.cipa.it); the information was gathered using the Bank of Italy's Internet data collection infrastructure, accessible via a link on CIPA's website.

In the phases of acquiring and checking the data, the main components were analyzed to find outliers.

The involvement of the foreign groups was achieved both via the banks belonging to CIPA with a foreign leader bank and via their branches established in Italy, with the organizational assistance of the Milan branch of the Bank of Italy.

The economic and organizational data refer to the banking groups as a whole.¹²

For the purposes of the survey the groups were classified in two ways: by the nationality (Italian or foreign) of the leader bank and by size.

The classification by size was made on the basis of the value declared for total assets at 31 December 2008. The groups were divided into three classes giving: eight "major" groups, five "large" groups and four "other" groups.

Classification by nationality of the leader bank

Italian banking groups (5)

Intesa Sanpaolo
UniCredit Group
Banco Popolare
Gruppo Banca Sella
Veneto Banca Holding

The groups are the same as those that took part in the 2007 survey, except for the Banca CR Firenze group, which became part of the Intesa Sanpaolo group.

Foreign banking groups (12), of which:

- involved via group banks belonging to CIPA (3)

Deutsche Bank AG (*), Germany (via Deutsche Bank)
BNP Paribas (*), France (via BNL)
Crédit Agricole Group (*), France (via Cariparma)

¹² In the national survey data are requested exclusively with reference to the Italian banking component of the groups, so that the data referring to the Italian groups included in the international survey are different from those included in the national survey.

- involved via branches established in Italy (9)

Barclays Bank plc (*), United Kingdom
Banco Bilbao Vizcaya Argentaria SA(*), Spain
Credit Suisse (*), Switzerland
Commerzbank AG(*), Germany
ING Direct NV, Netherlands
Rabobank (*), Netherlands
Santander (*), Spain
Société Générale SA, France
UBS (*), Switzerland

The groups with a foreign leader bank marked with an asterisk took part in the survey in 2007 as well.

Classification by size

Major groups (“total assets” more than €1,000 billion) (8)

Barclays Bank plc
BNP Paribas
Crédit Agricole Group
Deutsche Bank AG
Unicredit Group
Société Générale
Santander
UBS

Large groups (“total assets” between €1,000 billion and €500 billion) (5)

Banco Bilbao Vizcaya Argentaria SA
Commerzbank AG
Credit Suisse
Intesa Sanpaolo
Rabobank

Other groups (“total assets” less than €500 billion) (4)

Banco Popolare
ING Direct NV
Gruppo Banca Sella
Veneto Banca Holding