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Hybridising international models and practices

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As well known, Italy did not have an international financial centre in the 19th century, even if a number of regional financial markets were operating up to the mid-1910s (Genoa, Turin, Milan, Rome, Venice, Trieste, and Naples). Until 1926 a number of «regional» issuing banks operated alongside the major one, Banca Nazionale (1861-1893) and Banca d'Italia (from 1894 onward). The long-lasting lack of a common financial market at a national level and of a unique issuing bank could be considered as the long-run consequence both of pre-unification political fragmentation and of structural gaps in income and productivity. Nevertheless, all major Italian joint stock banks and private bankers were generally well connected with the more prominent European banks and merchant bankers in London, Paris, Vienna and Berlin. Even if they were not able to take part directly to international financial operations organised in Paris, London, Berlin or Geneva, Italian bankers were usually active whenever a syndicate was formed to issue and settle securities in Europe and elsewhere in the world. They used to buy relevant shares of bonds issuance on behalf of their local customers or to act as local partners when Italian securities had to be settled on the European financial markets, especially through the Paris Stock Exchange.

Thus, from the last decades of the 19th century, participation to financial syndicates in Paris and London enabled Italian bankers to be part in wide international financial networks. Moreover, since the end of the Napoleon wars, an increasing number of French, German and Swiss private and merchant bankers established themselves in all the major centres of the country, such as Milan, Turin, Genoa, and Naples. After political unification in 1861, French and, to a minor extent, German and Belgian capitals produced a strong and enduring flow of foreign direct investments. Foreign direct investments were concentrated in public utilities as well as in the banking sector. As a result a bulk of joint stock banks was established in Italy in the 1860s and 1870s.

In the long cycle of industrialisation and growth from 1896 to 1907 some dramatic changes in the Italian financial structure occurred. After a tough banking crisis and a depression, issuing banking was deeply reformed in 1894-1895 with the establishment of Banca d'Italia and two big German-style mixed banks were created in Milan with the strong support of German, Swiss and French capitals. As well known, Alexander Gerschenkron argued that Italian mixed banks played a major role in the industrialisation during the so-called «big spurt» of that phase[1].

Thus, during the first globalisation, up to 1914, Italian banks and bankers were rather internationalised, even though an international financial centre did not emerge in the peninsula. This feature may suggest that single national models could emerge not from a simple imitative process, but rather by adapting in a very selective way a common evolutionary frame to the specific national context and needs. International bankers' networks were probably the more effective vehicle for matching single operative practices and organisational structures to each specific national context. Through this vehicle human capital and knowledge – especially tacit knowledge – could be more or less efficiently selected and allocated at least at a European scale. But in order to be able to successfully hybridise models it was necessary to have access to international networks in Paris, London, and Berlin. Successfully networking was quite relevant for any European banker. By significantly reducing transaction costs and reinforcing his reputation and trustworthiness, any Italian banker could ease conditions (quantities) and interest rates (prices) for borrowing in the European inter-bank credit markets and increase opportunities of investment at home and abroad. It was an opportunity for major bankers based in international financial centres as well: indeed, a larger network of bankers, also including intermediaries of fast growing economies as the Italian one, allowed to diversify risks in all syndicated operations (for instance, in public bonds) among a higher number of participants.

The paper will focus on the process of hybridisation of banking patterns and practices in the Italian investment banking sector by considering the common European frame (§ 1). The hybridisation process is assumed as an evolutionary process related to

[1] See A. Gerschenkron 1962.

complex and multiple international connections and networks (Paris, London, and Berlin): the operational pattern of major investment and universal banks is considered compared with the European ones, by assuming that single national experiences stemmed from a common continental one (§ 2). Two subsequent paragraphs deal with Italian bankers' networks and practices in the period 1860-1914 (§§ 3 and 4). Finally, we provide a comparative quantitative analysis of the portfolio of major European investment and mixed banks in order to assess how much they really differed (§5). At the very end of the paper, some short conclusions follow (§ 6).

1. *Hybridising banking models up to 1914: a national or an European frame?*

During the first globalisation, thanks also to the lack of legal constraints to capital exports, a very internationalised professional group – private and merchant bankers – faced significant changes. Economic growth and industrialisation did require changes in financial structures and operative schemes. International trade intensification needed both an international monetary system and an international credit market. The strengthening of foreign investments (both portfolio and direct investments) was fostering changes in national financial systems as well. As it has been pointed out, different levels of growth required different financial devices, that is the demand side exerted a specific pressure on the supply side according to the degree of productivity[2]. During the second half of the 19^{h} century growth of second comer countries of the continental Europe core depended, to some extent, on the relative ability of the financial structure to effectively provide funds for industrial investments[3]. From the mid-1850s relevant changes in the national financial structure occurred in France, Belgium, and Germany along specific institutional patterns [4]. As David Landes observed, in France a new species of bank – the «nouvelle banque» – stemmed out from the old and probably more conservative private *haute banque,* embodied by the Rothschilds of Paris. In fact, a sharp discontinuity can't be really recognised in Crédit Mobilier – an investment bank created in Paris in 1852 by the former employees of the Rothschilds, Isaac and Emile Péreire – in relation with the more aristocratic Parisian *haute banque*[5].

[2] This is probably the key point of the seminal hypothesis by Gerschenkron 1962. On Gerschenkron and Italy see also Federico and Toniolo 1991.
[3] See Cameron 1967.
[4] Cf. Cameron 1967; Tilly 1989 and 1998; Cassis 1992; Verdier 2002; Forsyth and Verdier 2003.
[5] See Landes 1956.

If Crédit Mobilier was in some way an evolution more than an innovation in the French (or European) finance, the heritage of private and merchant banking of previous decades is a relevant matter. This approach could be useful when the German universal banks of the subsequent two decades are considered as well. As well known, German universal banks were usually founded by private bankers in order to face changes in the credit market and enlarge their capacity of financing industrial and infrastructural investments[6]. Even if Crédit Mobilier suffered a final crisis in 1867, largely due to the specific liquidity crunch decided by Banque de France[7], from the 1870s universal banking gained robustly room all around the industrialising and growing Europe. The more was the economic backwardness of a country, the closer was its imitative approach to the German universal banking model[8]. The strongest push in this trend is generally ascribed to the German-style model of universal banking and, in particular, to the brilliant success of Deutsche Bank in financing industrial sectors at home[9].

According to this broader framework, literature tends to differentiate two main models. On one side, the French model is clearly depicted as one in which investment banking was sharply separated from commercial banking after some severe crises between the late 1860s and the 1880s, such as those experienced by Crédit Mobilier and Crédit Lyonnais[10]. Thus, investment banking became a very specific activity carried on by specialised banks, such as Banque de Paris et des Pays Bas (Paribas) based in Paris. On the other one, universal banking was more a German banking attitude towards long-term financing of growing industrial sectors. From this model other national experiences of universal banking did spread out in peripheral European countries, such as in the Italian case. In fact, according to a very plain sequence, the Italian banking system experienced both these models in the second half of the 19th century. From the mid-1860s Italian joint stock banks were influenced by the French model and acted as investment banks following the Crédit Mobilier paradigm. After the early 1890s slump, Italian universal banks, established in the mid-1890s, would have behaved as typical

[6] Cf. Landes 1956 and Kindleberger 1984.
[7] Cf. Kindleberger 1984.
[8] Cf. Gerschenkron 1962; Tilly 1992a; Forsyth and Verdier 2003.
[9] Cf. Tilly 1992b; Gall, Geldman, James, Holtfrerich and Bueschgen 1995; Wixforth and Ziegler 1995; Fohlin 1999a.
[10] Bouvier argued that a more gradual process characterised the French banking system (Bouvier 1961).

German-style mixed banks, with some minor peculiarities. In sum, largest Italian universal banks moved from the French model to the German one in some few decades.

Our main point is that a dualistic approach to universal banking evolution in Europe, even though rhetorically effective, is not completely convincing when some important factors are taken into account. Conceiving universal banking not as a dualistic evolutionary process emerging from two different national models, but rather as complex evolutionary dynamics characterised by speciation phenomena and largely depending on the previous banking structure, the institutional frame, and, finally, the demand side (that is, how much a country is late, how much capital-intensive are its leading industrial sectors?) would be more interesting and telling. That is, evolutionary dynamics are the overall outcome of a complex selective adaptation process in which financial innovation has to match with pre-existing models and practices. In other terms, they are the result of gradual and sequential adjustments of organisational structures and operational schemes to the economic change within specific institutional contexts[11].

Hybridisation is the product deriving from the European main frame – what was called «nuovelle banque» – with specific pre-existing banking traditions and structures – that is, the so-called «vieille banque». As Landes demonstrated, it is hard to observe a real discontinuity between these two groups which mixed each other in the mid-1850s[12]. Single national specificities (or models in a broader sense) derived from that first speciation which was developed in Europe in those years, in order to face a macroeconomic shock – the productivity and technological shock of the first industrialisation in the United Kingdom. As an institutional response to economic backwardness, a coherent innovative financial structure emerged in those European countries in which the second industrial revolution was taking place. They needed a financial structure fitting the increasing credit demand from emerging capital-intensive manufacturing sectors[13].

The mid-1850s financial innovation in structures and organisations, even according to a Schumpeterian perspective[14], gained momentum through a multifaceted hybridisation process at a European scale. From the first species of investment banking,

[11] This approach has clearly a debt with the history of technological innovation as it is depicted and analysed by Mokyr 200.
[12] See Landes 1956.
[13] Cf. Perez 2002; M. O'Sullivan, 2005.
[14] Cf. Perez 2002.

embodied in the French Crédit Mobilier, centring on universal banking principles derived all the other national models along an evolutionary process that took place at a continental level. They basically derived from this first model by specifically hybridising joint stock (universal) banking with private and merchant banking. As in the second half of the 19th century financing was in part an international activity, due to the absence of significant legal barriers to the free capital movement, a European credit market was functioning at least to some extent. A European financial market emerged whenever a sovereign State – even an extra-European one – sought for funds by issuing bonds (the same occurred when major transport and public utility companies issued securities)[15]. Besides, as the Italian case shows, a more or less efficient inter-bank market could allocate funds at an international scale by providing short-term extra-funds. It was quite common that among major European bankers correspondence occurred on a regular basis. For instance, up to 1914 Otto Joel, managing director of Banca Commerciale Italiana, regularly wrote, among many others, to Edouard Noetzlin, a leading figure of Paribas and a member of the board of the Italian bank[16]. This could be seen as an evidence of the cosmopolitan character of European banking up to the Great War[17], and even as a direct consequence of the intimately international nature of a very wide process of learning and structuring the banking industry. Writing to Joel of the would-be style of banking at Banca Commerciale, Noetzlin openly stressed this point in a letter sent to him on 23rd August 1902. He suggested that Joel would search an equilibrium between the French-style investment banking (that is, Paribas) and the very successful model of German-style universal banking (explicitly, Deutsche Bank), by refusing the 'grey' example of the French Crédit Lyonnais[18].

The Italian case could help to clarify and verify this hypothesis as roughly depicted above. The usual approach to financial innovation in the second half of the 19h century stresses a clear discontinuity between French-style investment banks, such as Credito Mobiliare and Banca Generale, and German-style mixed banks, Banca Commerciale Italiana and Credito Italiano. According to this idea a sharp change in the

[15] Of course, the international capital market was usually rather able to discriminate between more or less reliable borrowers. If strong and sounding powers, such as the United Kindgom, were able to rise funds at low interest rates, instead high yield bonds were generally issued by riskier States, such as, for instance, the newborn Reign of Italy in the 1860s. Cf. .
[16] Cf. Confalonieri 1982; Bussière 1992.
[17] Cf. Cassis 1992.
[18] Cf. Confalonieri 1982, vol. III, p. 62.

banking system is observable at the end of the century, when German capitals and techniques massively substituted French ones[19]. This idea is more or less explicitly underlying some comparative works on mixed banks and industrialisation in Germany and in Italy up to 1914. These contributions tend to strictly associate universal banking in the two countries *vis-à-vis* manufacturing enterprises[20]. But it is probably more interesting reconsidering operational and organisational changes in the banking system as a more complex process of evolution and adaptation of different subsequent banking structures. That is, Banca Commerciale Italiana and Credito Italiano, for instance, were not simple replica of Deutsche Bank, nor they followed a presumed pure German-style model without any distinction, but, along with a spurious and continuing process of adjustment to institutional regulation and industrial-side pressure, the German universal banking model (very broadly defined), was hybridised with the pre-existing French model and the local banking structure. This was the reason why Joel at Banca Commerciale searched for a specific mix of banking styles. He was convinced that Deutsche Bank could be an example to follow – as declared in his letters to Noetzlin in 1902 – but in a different general frame. Indeed, it was important, first of all, not to forget the experience of Banca Generale, whose he became general director in its ultimate uneasy phase in 1892-1893: it was necessary to back investment banking with a strong network of branches, in order to obtain more stable liabilities with more stable and numerous depositors. Secondly, he started from a French-style bank to develop a more German-oriented one, but he was deeply aware of mutual elements of these two models of banking[21].

As Antonio Confalonieri and Peter Hertner observed, German-style mixed banks financed new manufacturing enterprises and sectors, but they were mostly relevant because they were able to effectively deal with discontinuity phases in the life of growing firms. They did so by combining both short-term credits, as commercial banks, and long-term credits, such as equity or bonds issuances, as investment banks. Thus, Banca Commerciale and Credito Italiano properly acted as merchant banks whenever industrial firms required financial markets' services or needed financial or managerial

[19] See Gille 1968; Confalonieri 1975; Hertner 1984.
[20] Cf. Fohlin 1998b and 1999b; Da Rin 1996.
[21] Cf. Garruccio 2002.

restructuring[22]. Offering merchant and investment banking services implied the acquisition of technical competences, a robust knowledge of markets and, last but not least, personal connections. Competences, knowledge and connections were essentially provided by professionals coming from merchant banks or French-style investment banks. Otto Joel, who managed Banca Commerciale before the Great War, came from the headquarters of Banca Generale. The managing director of Credito Italiano, Enrico Rava, came from Banca Generale as well. While some other important bankers of the early 1900s, such as Giacomo Castelbolognesi or Federico Ettore Balzarotti, both at Credito Italiano, came from private banking[23].

2. *In search for a model?*

In Italy, investment banking have been performed by different kinds of intermediaries, with different functional organizations, over time. For this reason investment banking here is intended in a broad sense, as a function comprehending both industrial financing and market activities, such as emission, underwriting and placement of securities; offering of services such as promotion and transformation of firms, quotation and listing, consulting in merger and acquisitions, in corporate governance and in enterprises' crises of growth; and syndicates' organisation and leading (and/or participation to). Thus, the paper will consider those major banks which performed, at least in part, such functions.

At the beginning of the 1860s, the banking system of the newborn Kingdom of Italy was still in its infancy. Traditional forms of banking organization, namely merchant-bankers, still represented the bulk of the banking services' supply in the country, alongside of a handful of issuing banks inherited by the pre-unification states and a few quasi-publicly-owned institutes and savings banks[24]. The only examples of 'modern' banking institutions – the joint stock banks – were in Piedmont and, to a certain extent, in Tuscany[25]. At the beginning of the 1850s Piedmont experienced a growing need of capitals due to the rapid development of new infrastructures and public

[22] Cf. Confalonieri 1982; Hertner, 1984.
[23] On Italian private banking see Segreto 2001.
[24] Issuing banks were indeed quite different in the various regions: while in Tuscany they operated both as commercial banks and as issuing banks, in Piedmont Banca Nazionale discounted only three signatures bills – like the Banque de France – envisaging a 'system' with several levels of credit (Conte 1990; Polsi 1993).
[25] See Sachs 1885, pp. 699-700; Polsi 1993, ch. 1.

utilities, first and foremost the railways, which led to the creation of large banking institutions along the lines of the French *banques nouvelles*. France, in fact, was probably the most important economic partner of the small kingdom: Piedmont quoted at the Paris Bourse large shares of its public debt and of its railways companies stocks and bonds, while private bankers often took part in French bankers networks; trading relations were also relevant, especially as silk exports to Lyon were concerned. Moreover, the recent experience of the French Comptoirs d'Escompte and, later on, that of the Crédit Mobilier offered to Cavour an example on how important a well structured credit system could help modernization and economic development of the country[26].

Turin's private bankers set up the first joint stock banks as discount banks "to serve the needs of trade", but soon they started petitioning the government to enlarge their scope to comprehend investment banking activities, especially trading in railways and other public utilities' securities. At the beginning of the 1850s, following the robust upward trend in investments that Piedmont was experiencing under Cavour's cabinets, private bankers were heavily investing in railways and other industrial activities and they needed an institution able to mobilize their assets both by granting advances on shares and even by holding and trading them, and that could help them to place securities to the public, since the stock exchanges (Turin and Genoa) were still small and underdeveloped. Thus, from the mid-1850s, the Cassa del Commercio e delle Industrie (1852) and the Cassa di Sconto (1853) – the two most important joint stock banks at that time – started buying large stakes from the private bankers (especially railways securities) and, in 1856, even modified their charters, officially embracing investment banking. Nevertheless, these banks did not comply exactly with the Crédit Mobilier pattern, but were allowed to carry out both investment and deposit banking activities[27]. Shareholders of the new Cassa del Commercio were the old shareholders in half with the Rothschilds, but by 1860 the latter withdrew their participation and the bank had to undergo a new reorganization as soon as 1863, this time with the Péreires'

[26] In the 1850s French banking was considered the most advanced in Continental Europe, also by scholars like Boccardo who underlined the relevance of the new banks for economic growth (see Boccardo 1858, p. 375).

[27] Royal Decree, May 3rd 1856, which approved the new charters of the Cassa del Commercio (quoted in Polsi 1993, pp. 18-19).

Crédit Mobilier as a partner, giving birth to the Società Generale di Credito Mobiliare Italiano (Credito Mobiliare)[28].

During the 1860s, Italy experienced major financial needs linked to the public debt growth and the building of the railway network. Credito Mobiliare Italiano and the other new joint stock banks[29] were very active in placing public debt securities and railways stocks and bonds, while starting developing strict relations and cooperation with the leading bank of issue, Banca Nazionale nel Regno d'Italia. At the beginning of the following decade, a new wave of banking foundations took place giving birth to several new joint stock banks, that nevertheless were often swept away in the following crisis of the mid-1870s[30]. Among these were a number of very important institutions that indeed succeeded in coming through the crisis, sometimes lasting for many decades, or even till very recent times. One bank, then, emerged for its relevance and size: Banca Generale, founded in Milan in 1871 and active from the beginning of 1872, was headquartered in Rome and was soon to become the second largest investment bank in the country. Banca Generale was created by some of the most prominent private bankers from Milan, Venice, Trieste and Turin, with the participation of an important Austrian joint stock bank and other Centre-European bankers, such as Goldschmidt and Bischoffsheim[31].

From the 1870s, Credito Mobiliare Italiano and Banca Generale established as giants in an environment of dwarf or local banks, having hardly any relations both with cooperative and savings banks and with smaller joint-stock ones, but strong ties with the major note-issuing bank, Banca Nazionale, with which they collaborated in placing Italian public debt securities, in emitting bond issues by provinces and municipalities, and in underwriting and placing railways companies' bonds and equities[32]. The Bank, in fact, relied upon them to successfully place public debt securities and, moreover, many

[28] Cameron 1961, pp. 181-82. Among Italian founders there were also outstanding bankers, such as Bastogi and Balduino.
[29] As for instance Banca di Credito Italiano, founded under the aegis of another French institute, the Crédit Industriel et Commercial.
[30] Luzzatto 1991, pp. 75-81; Sachs 1885, pp. 700 ff.
[31] Galli 1997; Luzzatto 1991. Among founding partners there were: the Union Bank of Vienna; the Milan banking houses Figli Weill-Schott, Pio Cozzi e C., Ulrich e C., Zaccaria Pisa, Cavajani Oneto e C.; the Houses of Morpurgo e Parente, in Trieste, which were Rothschilds' correspondents; and three outstanding bankers from Turin Ulrico Geisser, Ignazio Weil Weiss and Fratelli Ceriana. On the financial *milieu* of the Piedmont capital see Balbo 2000.
[32] Banca Nazionale sustained them whenever downturns or crises threatened their liquidity. In 1867, for instance, Banca Nazionale refinanced Credito Mobiliare with 10 million lire (Bouvier 1961).

bankers serving as directors at the banks' boards were also sitting in its board[33]. Although multi-purpose banks according to their charters, the great banks tended to be primarily, though not exclusively, committed to market activities. Alternate economic trends in the 1860s-1880s period are mirrored in these banks working pattern, characterised by fluctuations between sustained emission and placement activities in upturns and ordinary banking activities in downturns[34]. Probably to foster these latter, they developed a small network of branches, nevertheless being unsuccessful in raising significant deposits, which they substituted with correspondents' current accounts. Great *affaires* in real estate speculation, then, led to frozen assets, that, together with accumulated non performing assets on industrial investments and persisting economic depression, eventually caused Credito Mobiliare and Banca Generale going bankrupt in 1893-94[35].

The fierce financial crisis of the early 1890s beheaded the Italian credit system: the two great banks failed, and so did many other institutes; moreover, the fall of one of the six banks of issue (Banca Romana), led to the reorganization of note issuing with the creation of the Banca d'Italia from the merger of Banca Nazionale with the two Tuscan issuing banks. Banca d'Italia established itself as the dominant bank of issue, and soon as a real central bank, while the other two survivor issuing banks (Banco di Napoli and Banco di Sicilia) playing a marginal role as central and issuing authorities. Such an institutional break had consequences on the relations between the Bank of Italy and the joint stock banks, too. Indeed, the former soon proved to be less 'collaborative' with the big banks than Banca Nazionale had been with Credito Mobiliare Italiano and Banca Generale. That was most probably due to two main reasons: first, the fact that its new director, Bonaldo Stringher, was a civil servant coming from the ministry for Agriculture, Industry and Trade, rather than being a banker or a "merchant" like his precursors, thus being less concerned with "the needs of trade", but far more worried about general (macroeconomic) stability; secondly, the Bank had to face a difficult situation because of the frozen assets it inherited from the liquidation of Banca Romana, that would have been a burden for its balance sheet till the beginning of the new century.

[33] Polsi 1993, p. 35
[34] Confalonieri 1981, vol. 1.
[35]See Pantaleoni 1895, Luzzatto 1991 and Confalonieri 1981.

Two new big joint stock banks emerged from the earthquake of the 1893's crisis: Banca Commerciale Italiana (Comit, 1894) and Credito Italiano (Credit, 1895), which soon started operating as universal banks. They are commonly referred to in the literature as German-style universal banks, often implicitly considering them as the outcome of a shift in Italian banking patterns from a French model to a German one[36]. Indeed, they were set up with the important contribution of foreign capitals, especially of German origins, while many of their directors were also foreigners or of foreign origins – most often Germans[37]. Nevertheless, Comit and Credit showed many continuities with the experience of their Italian ancestors, Credito Mobiliare and Banca Generale. First of all, their setting up involved the Italian *haute banque*, as it was the case for the failed banks 20 or 30 years before and, moreover, it took advantage of tangible and intangible assets of the failed *crédit mobilier*-style banks. Indeed, directors, such as Comit's Otto Joel and Credit's Enrico Rava, and many middle managers of the two new banks came from the failed ones, representing a continuum of experience to Italian universal banks, while timid attempts shown by failed *crédit moblier*-style banks to establish durable relations with customers was a strategy new universal banks would have widely developed[38]. A telling example of how more complex these setting up were than a simple adoption of a new banking pattern, is offered by the case of Credito Italiano. The new bank resulted from the joint venture of a Genoese bank (Banca di Genova, 1870), the House Vonwiller & Co. of Milan and a handful of other outstanding German, Swiss, French and Italian private bankers, coordinated by Giacomo Castelbolognesi an Italian banker who spent half of his life abroad and that had strong ties with the European high finance[39].

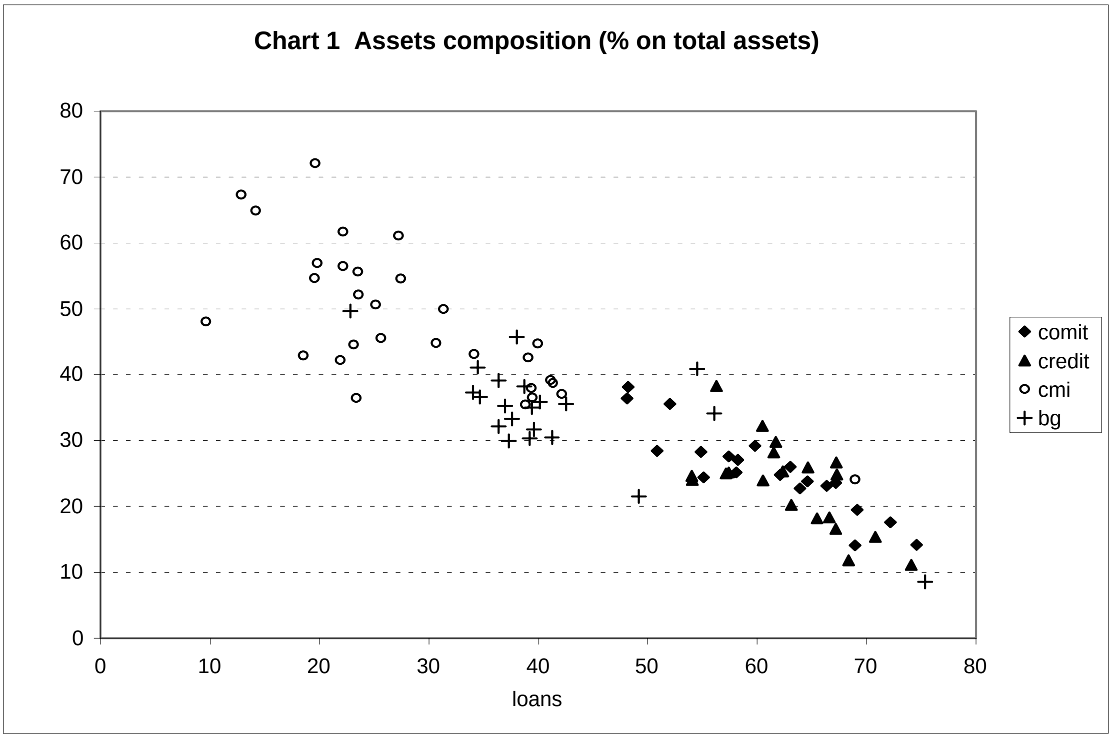
Assets and liabilities composition, too, seems to confirm a certain degree of continuity between Banca Generale and the two new banks especially as deposits are concerned (Charts 1 to 3). Nevertheless, Comit and Credit stronger ability to raise funds

[36]See for instance Cohen 1967; Mori, 1992; Fohlin 1998a and 1999b.
[37] Hertner 1984 and 1990. On the two new great banks birth see Confalonieri 1981, vol. 2.
[38] Confalonieri 1981. Conti 1999, stresses the existence of two segments in the Italian financial system: one devoted to the collection of savings, represented by traditional intermediaries and networks (postal and ordinary savings institutions, coop-banks), the other to the formation of industrial capital (banks and bankers). Separation, or difficult communication, between them would have hindered universal banks development producing a new version of crédit mobilier banks.
[39] Asui, Cda, August 3rd 1918; Confalonieri 1981, vol. 2, pp. 35-39. Among the new shareholders were Manzi & Co. of Rome and Kuster & Co. of Turin; partners in the House Manzi were Castelbolognesi himself, Vittorio Manzi and Robert Warschauer, who was also among the founder of the Darmstädter Bank.

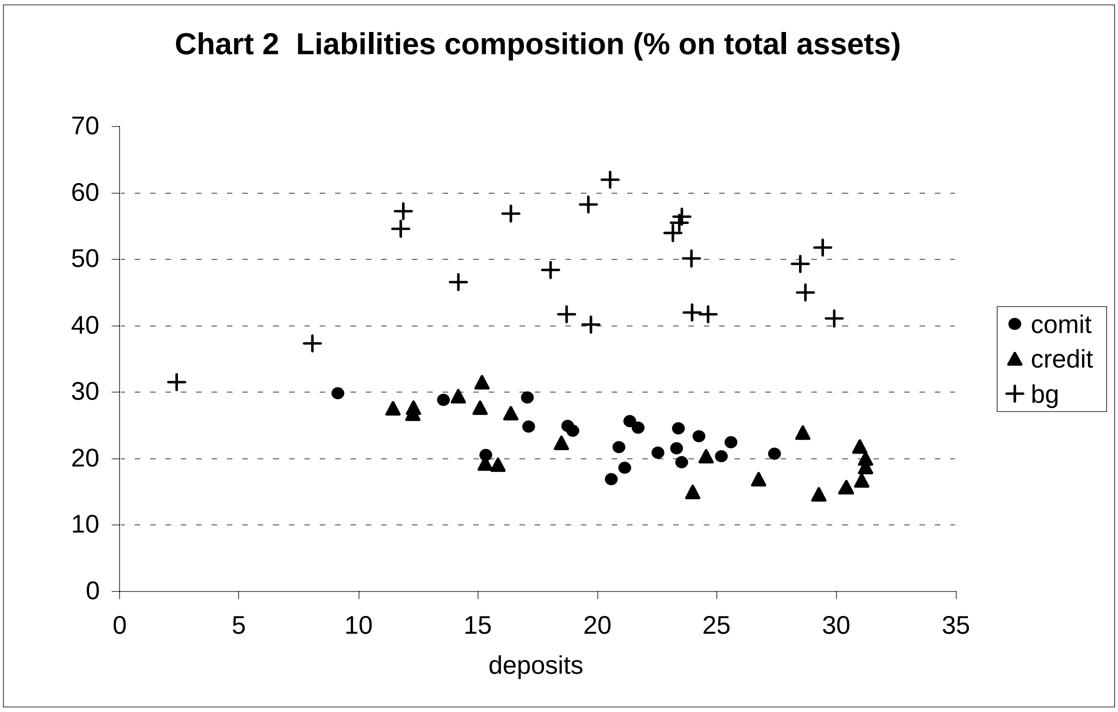
from customers and to manage multi-branch banking, particularly from 1900 onwards, together with less friendly relations and collaborative attitudes towards Banca d'Italia could cast doubts on it[40]. During the two decades preceding the Great war, universal banks[41] answered to the growing demand for investment banking and industrial financing induced by the upturn trend of the Giolittian years, committing themselves in financing especially new sectors such as chemicals, metal works and mechanical engineering, electricity. With the new century, the growth of industrial investments and profits, the slackening of public debt issues, and universal banks market activities produced the first stock exchange relevant widening in listed securities and prices[42].

The evolution of the Italian great banks structures before 1914, then, can be explained better as the hybridization of a common pattern in Europe, that saw its first appearance in France in the mid-19th century. After the country unification, a first wave of big joint stock banks involved in investment banking and industrial financing arose, with intermediaries hybridizing the functional organization of big French banks, first and foremost the Crédit Mobilier. When Credito Mobiliare Italiano and Banca Generale fell in 1892-93, their successors, Comit and Credit, modified that pattern. Mixing short and medium to long term credit was not a novelty, nor was multi-branching: what was new was the awareness that these activities needed special management and better coordination both in the internal organization of the two banks and with their correspondents and international partners. Knowing that they could not rely upon Banca d'Italia for constant refinancing, they tried to develop alternative source of funds' collection, such as deposits and foreign inter-bank borrowing.

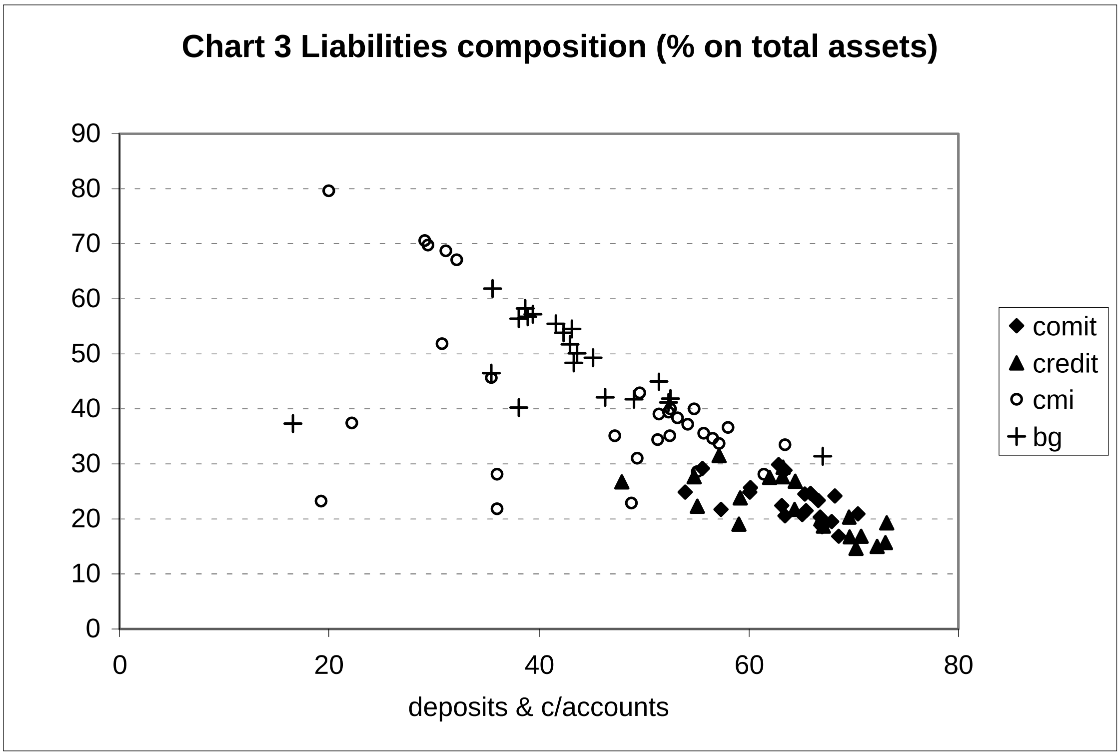
[40] See Conti 1999.
[41] By the 1900s four big universal banks were present: Comit and Credit, the major and most important ones, and Banco di Roma and Società Bancaria Italiana (then Banca Italiana di Sconto, BIS).
[42] See Toniolo 1988.



Source: our calculation from data in Brambilla 2003; data are for the period 1863-1914



Source: our calculation from data in Brambilla 2003; data are for the period 1863-1914



Source: our calculation from data in Brambilla 2003; data are for the period 1863-1914

3. *Networks*

As observed, successfully networking was a key point in the profession for European bankers, and Italian bankers did not and could not make an exception to this basic rule. This is true both as domestic relationships in the credit market are concerned, and when considering inter-bank relations in an international perspective. As said, an international inter-bank market was operating in Europe between the 1870s and 1914. In order to significantly reduce free-riding risks and transaction costs deriving from market imperfections reputation and trustworthiness were relevant assets for every banker and bank keen to operate in this international market. A sounding reputation was relevant in shaping trust among professionals and markets, and a reputation of competence and reliability needed networking as well. Networks could depend on a number of personal and social factors, such as ethnicity. In fact, ethnicity was probably a key point in providing trust and offer opportunities for networking in the bankers' world, even if it was not the only one[43].

[43] On this point see Garruccio 2002.

To some extent, from the 1860s to the 1910s Italian bankers were rather internationalised as a professional group. Even before the creation of major mixed banks in Milan in 1894-1895, they had some representatives of Swiss and German banking amid their ranks. From the first decades of the century French, Swiss and German bankers successfully operated in Milan, Turin and Genoa. Bankers such as Mirabaud, Vonwiller, and Weill-Schott reached a prominent position in Milan along the Nineteenth century[44]. Up to the early 1890s, some Italian bankers were also very well connected with French finance, either as local partner of French investors in Italy, or as shareholders of major French financial institutions (Giulio Belinzaghi and Oneto, Cavajani & Co., two private banks in Milan, were among the first shareholders of Crédit Lyonnais)[45].

A couple of examples could help illustrating the ability of Italian bankers in building networks at a European scale. Joel was a German-origin banker who lived in Genoa and Milan after his twenties and became the leading personality of Banca Commerciale from its very beginnings. In 1894 Joel was the key man when German, French and Swiss investors decided to take part to the foundation of the new bank in Milan. Joel was able to develop and maintain a vast network all over Europe, among all major bankers, in France, Germany, and Austria. He was an authoritative correspondent, among others, with Edouard Noetzlin and Horace Finaly (Paribas), Hermann Wallich (Deutsche Bank) and M. Winterfeldt (Berliner Handels-Gesellschaft)[46].

If Otto Joel was an extraordinarily successful banker also because of his networking capabilities deriving from his foreign and Jewish origins[47], Cesare Mangili, operative chairman of Banca Commerciale from 1907 to 1916, was able to develop the same wide network by largely leveraging on his profession, being an international shipper. Thus, Mangili was able to get in contact with the most prominent European bankers of the 1900s-1910s, especially in Germany and France, such as Max Ballin, Hermann Schwabach, Hermann Wallich, and Max Winterfeldt in Berlin, Albert Oppenheim in Koln, Louis Dapples and Albert Turrettini in Paris, and Emile Odier in Geneva[48].

[44] Cf. Piluso 1999.
[45] Cf. Bouvier 1961.
[46] Cf. Confalonieri 1982, vol. III.
[47] Cf. Garruccio 1997 and 2002.
[48] Cf. Piluso 2007.

Networking was equally relevant when Banca Commerciale and Credito Italiano decided to develop a multinational organisation of subsidiaries in South America and Centre-Eastern Europe in the early 1910s. Having the possibility to access to a large network of European bankers and banks was quite important in order to overcome the huge constraints of the domestic economy. The Italian banking system did not have an international financial market, neither a strong currency, nor a robust bulk of multinational enterprises, but rather a growing flow of emigrants, an increasing export of manufactured goods, and a developing industrial structure. Thus, when major mixed banks wanted to build a vast multinational organization they needed the support of some French and Belgian banks. In 1911 Sudameris was established in Paris as a joint venture by Banca Commerciale and Paribas, thanks to the networking developed by Joel and Mangili[49].

4. *Practices*

Till the 1890s, great banks performed mostly market activities, such as promotion, issuing, quotation and placement, although most of these *affaires* were realized in the first part of the period, being very difficult for them to renew their portfolios and to launch new operations both because of financial markets underdevelopment and new firms formation paucity. They basically invested in railways and in connected sectors – metallurgical industry and mechanical engineering – though they also granted loans to other 'lighter' industries like textiles, for instance[50]. Conditions of demand and the Italian economic structure compelled Credito Mobiliare and Banca Generale to supply any kind of banking services, trying to avoid inactivity. In fact, during their almost 30 years of life, their assets grew very slowly, suggesting that they encountered difficulties to find sound investments for their funds.

Comparison of assets composition between first generation great banks and second generation ones seems to confirm that a certain continuity existed among them (Chart 1). Indeed, only Credito Mobiliare Italiano conformed to an almost "pure" investment banking pattern, while Banca Generale adopted a model closer to universal banking[51]. On the contrary, composition of liabilities and branching policies would

[49] Cf. Confalonieri 1982; Piluso 1996; D'Alessandro 2002; Piluso and Toninelli 2002.
[50] Confalonieri 1981, vol. 1.
[51] See also Brambilla 2004a.

attest discontinuity: Comit and Credit pursued the raise of deposits and new branches openings all over the country, especially from 1900 onwards (Chart 2), while, as it has been noticed, Credito Mobiliare and Banca Generale outreached awareness of its relevance only in the last part of their life, when they tried to develop branch and deposit banking, perhaps even accelerating their decline[52]. The new great banks were able to profit from their ancestors mistakes and experiences, especially as branch banking was concerned, by trying to root themselves more deeply in the economic environment. Their different attitude manifested in the development of both commercial banking and merchant banking. Although declarations pretending that their main interests were developing day-to-day banking relations with enterprises were often exaggerated by window-dressing ends, still universal banks activities evolved along two directions, after 1890s. Activities like new share capital issuing, quotation and placement were most often part of a liquidating strategy intended to close an *affaire* started with a credit opened in current account. Indeed, the classical mixed bank's strategy consisted in establishing long run and possibly exclusive relations with customers, investment and merchant banking services being the first step to obtain their whole day-to-day banking business. Advances in current account, then transformed in shares to be placed to the public, were the typical method industrial financing was performed[53]. This technique permitted to Comit and Credit to foster new sectors like metal works, mechanical engineering, electricity and chemicals, characterised by high capital intensity and postponed profits. Friendly and stable relations with international financial circles and with European *haute banque*, then, allowed banks to more easily manage demand for investment and merchant banking services through the organization of larger pools and syndicates, thus preventing too rapid exhaustion of their means and helping preserving their liquidity.

Both Credito Mobiliare and Banca Generale, on the one hand, and the two big universal banks, on the other, developed *long term insider* relations with most of their customers from the beginning of their history. Sometimes great banks performed an entrepreneurial function too, as it was the case of Banca Generale with Ferriere Italiane

[52] Indeed, the sudden acceleration in the adoption of a new banking policy – especially by Credito Mobiliare – has been interpreted as a mistake, since the two institutes did not developed specific expertise needed to manage deposit banking on a large scale (Confalonieri 1981).
[53] Confalonieri 1981 and 1982.

(metal works), a role later taken by Credit; or of Comit with Terni (metal works); Credit with Cantieri Pattison (shipbuilding) and Edison (electricity), or Comit with Odero-Orlando (shipbuilding) and Sip (electricity, telephone). *Hausbank* relations manifested in interlocking directorates, a habit common to the Big Two – though not unknown to their predecessors – but particularly developed by Comit since the 1900s, and in monitoring of enterprise cash flow through supply of day-to-day banking services[54]. Presence of banks' officers in the customers' board was a means to collect additional information about debtors' economic and financial health. From the early 20th century both banks developed other strategies to monitor customers and strengthen their ability to collect private information about debtors: while Comit organized a first nut of an industrial technical department, Credit relied upon expertise of some of its board members, namely Pirelli, an engineer who run the first and most important rubber company in Italy, and Castelbolognesi, who had a long experience on international financial markets and in chemical industry. In 1915, then, Credit hired Lodolo, an electrical engineer with a relevant experience in electrical plant building and management, as general director for electrical and industrial *affaires* of the bank. Lodolo flanked Orsi as managing director in the 1920s, being especially committed to the creation of Credit's electrical group and with its financial and industrial organization[55]. At Comit, a metallurgical engineer, Tansini, was hired in 1900 and flanked by Adamoli, a bank officer since 1898 and an expert in accounting and financial mathematics[56]. In 1907 both were transferred to the newly organized “Technical industrial office”, Tansini being the director. This office was the first nut of a “Technical financial office” which was committed with financial and technical monitoring on financed and/or participated enterprises, and from the late 1920s comprehended a number of young engineers and accountants. Though in late, as compared to other similar European banks experiences, the Big Two were thus conforming to the most advanced strategies to cope with information collection and

[54] Pino 1991; Baccini and Vasta 1997.
[55] An industrial department gradually emerged in the 1910s and 1920s, devoting itself mainly with collection of information on financial and accounting health of debtor companies. Credit also published reports on major companies (Notizie statistiche).
[56] He taught *Banking practice* at Bocconi University from 1904 to 1907 (Montanari 1991).

management as their European partners – German, French and Belgian – were doing[57].

In the first 1930s, then, Comit engineers worked under Di Veroli direction at the industrial holding Sofindit to reorganize industrial companies belonging to "Comit group" and to coordinate Comit officers' work in those companies' boards[58]. After 1933 this group of experts was transferred to Iri where they went on working on the same tasks[59]. During the 1920s, in both banks technical and financial departments (however organized) flanked banks management in securing control over relevant companies and sectors (metal works and mechanics, electricity, chemicals); banks tried to impose sound finance criteria to participated companies, too, sometimes suggesting plant reorganization. In some cases, they also shaped holding structures, merging plants and companies, to obtain more "rational" sectoral organization (metal works and mechanical engineering, electricity, gas, chemicals).

5. *A quantitative assessment*

During the decades preceding WW1, Italian great banks developed their own strategies and patterns of functional organization hybridizing Continental European banking models and adapting them to the specific markets they had to work on and institutions they had to cope with. In this section such phenomena are studied from a quantitative point of view. The comparison among European banking patterns of functional organization takes into account three countries, Italy, France and Germany. That is not only because, as mentioned above, historical literature has stressed the relevance of Centre-European models for Italian banking development, but also because the two countries were most relevant in European economic development: they were the largest continental economies – and the first to begin a process of industrial growth and transformation; they were among the larger capital exporters; and they hosted some of the most important capital markets, Paris being the preeminent in the continent.

Sources for the quantitative analysis are the banks' balance sheets, from which data were collected, after having opportunely reordered and standardized balance

[57] In particular they developed special offices as great French banks like Paribas and Crédit Lyonnais had done in the previous decades. See for instance Bussière 1996; Bouvier 1961; Flandreau 2003.
[58] Their activities were especially devoted to reorganization of steel works, telephone and electrical holdings and gas companies (Terni, Ilva, Sip). On Sofindit engineers see Ricciardi 1998.
[59] Many of these young engineers became directors and managers in Iri's participated companies in the late 1930s, often continuing their job also in the 1950s (Mortara 1984).

sheet's items in a common frame for all banks considered. These data were used to calculate financial ratios such as assets (and liabilities) composition, liquidity, solvency for each bank in the sample. The sample includes 15 great banks of the three countries, chosen according to their relevance in investment and merchant banking, in fostering industrial development, and for their significant role in the development of their national banking system. The banks considered are: the French Crédit Mobilier, Crédit Industriel et Commercial, Crédit Lyonnais, Société Générale, Paribas, and Crédit Commercial de France; the German Bank für Handel und Industrie (Darmstädter Bank), Disconto Gesellschaft, Deutsche Bank, Dresnder Bank, Commerz und Disconto Bank; and the Italian Credito Mobiliare Italiano, Banca Generale, Banca Commerciale Italiana, Credito Italiano. The Péreirs' Crédit Mobilier was, if not the first big European joint stock investment bank, surely a paradigm to which any other European experience referred to[60]. As for the other French banks, they were often created by Péreirs competitors – which were also trying to counterbalance Crédit Mobilier power – to foster economic and industrial development, although in a number of cases they evolved towards deposit banking by the end of the 19th century[61].

To check similarities and differences among these banks, the study adopted a multivariate analysis method: cluster analysis. This is a statistical method for grouping objects of similar kind into respective categories, and to develop taxonomies. Here the hierarchical cluster analysis has been used: each object (bank) is assigned to its own cluster and then the algorithm proceeds iteratively, at each stage joining the two most similar clusters (according to their characteristics, i.e. financial ratios), continuing until there is just a single cluster (at each stage distances between clusters are recomputed). Several different clustering methods exist: in this work the single linkage method and the Euclidean distance –which adopt a 'friends of friends' clustering strategy – have been employed. Thus, groups will represent similar banking patterns of functional organization among the banks considered[62].

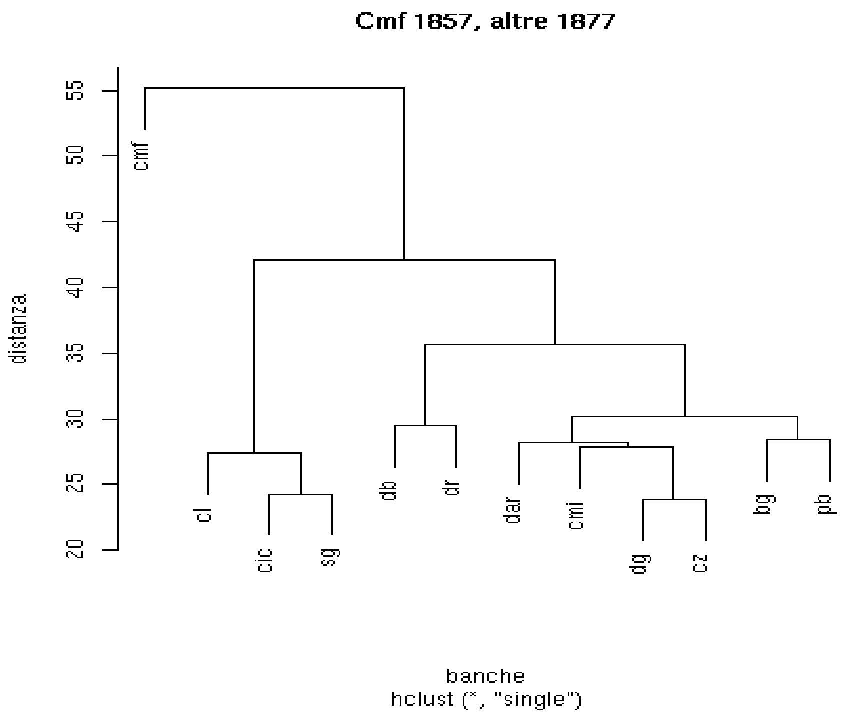
[60] The first being the Société Générale de Belgique; nevertheless, it was the Péreirs' bank that provoked the wave of new large joint stock banks foundation which, from the 1850s onward, characterized the shifting form the 'old' to the 'new' banks all over Europe. See for instance Cameron 1961, Gille 1970 and Kindleberger 1984.

[61] Lévy-Leboyer 1976, Bouvier 1978, Lévy-Leboyer and Lescure 1991.

[62] A deeper discussion on cluster analysis and raw data, a complete series of plots covering the whole period and a wider discussion on their significance is in Brambilla 2003 and 2007 (forthcoming).

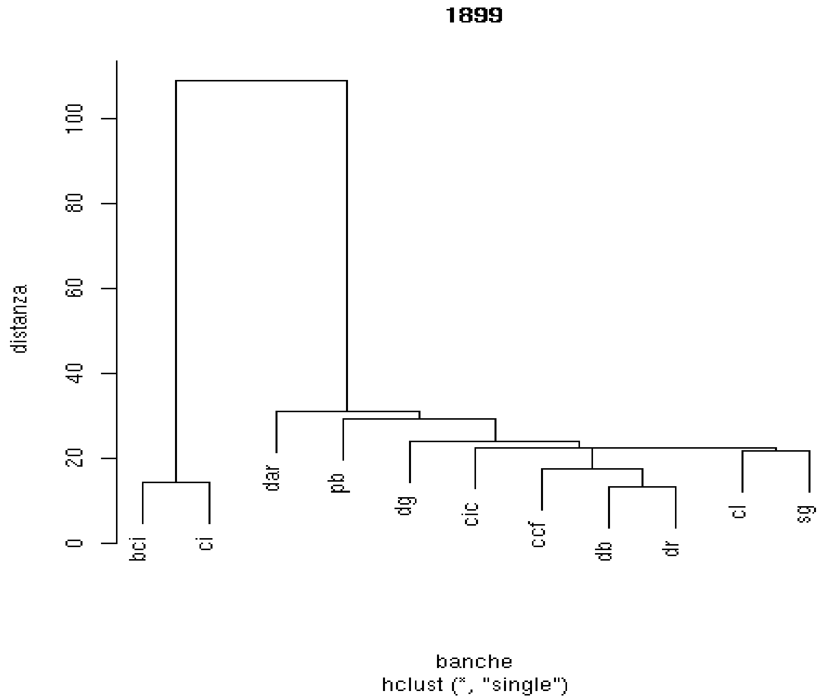
In the following charts some relevant and typical examples of how the banks in the sample behaved are shown. Chart D.1 plots the hierarchical tree in 1877 (data on Crédit Mobilier, which had already failed by then, refer to 1857). As can be noticed, Crédit Mobilier, the ancestor of all other banks, doesn't group with any other cluster, thus suggesting its banking pattern was soon abandoned (if ever adopted) by European banks in all countries. Moreover, all other institutes seem to be quite similar to one another, the only clear cut cluster being that of the big French banks that were soon to develop a massive multi-branch and deposit banking strategy, namely Crédit Lyonnais, Société Générale and Crédit Industriel et Commercial. Paribas, the Italian 'crédit mobilier' banks and the German banks tend to group together at various stages. Observing this group, it emerges a close similarity between first generation German banks (Darmstädter Bank and Disconto Gesellschaft) and Credito Mobiliare Italiano, which in their turn group together with the cluster formed by Banca Generale and Paribas, thus suggesting common banking patterns in investment banking throughout Europe[63].

Chart D.1



[63] On the first generation German banks see Risser 1977 and Whale 1968; see also Bussière 1992 for a discussion on Paribas foundation and the European banking networks to which it participated in.

Chart D.2



By the end of the 19th century the situation had evolved even further. Italian universal banks developed their own pattern, which distinguished them from other European experiences, as it is clear form Chart D.2. Great French banks, like Crédit Lyonnais and Société Générale, already adopted deposit banking and showed a common behaviour, grouping together at a certain distance from other institutes. The larger cluster comprehends both French and German banks: second generation big German banks, Deutsche Bank and Dresdner Bank, groups directly to form the first sub-cluster; the youngest French bank in the sample (Crédit Commercial de France, 1894) and Crédit Industriel et Commercial join the group at short distance, suggesting the adoption of similar banking practices. Less defined are the following steps, that bring together both great French deposit banks and, at a certain distance, Paribas and the first generation German banks in the larger cluster opposed to that of the Italian institutes. What seems to be clear is that French and German banking patterns were probably more permeable and leakier than commonly recognised.

Chart D.3

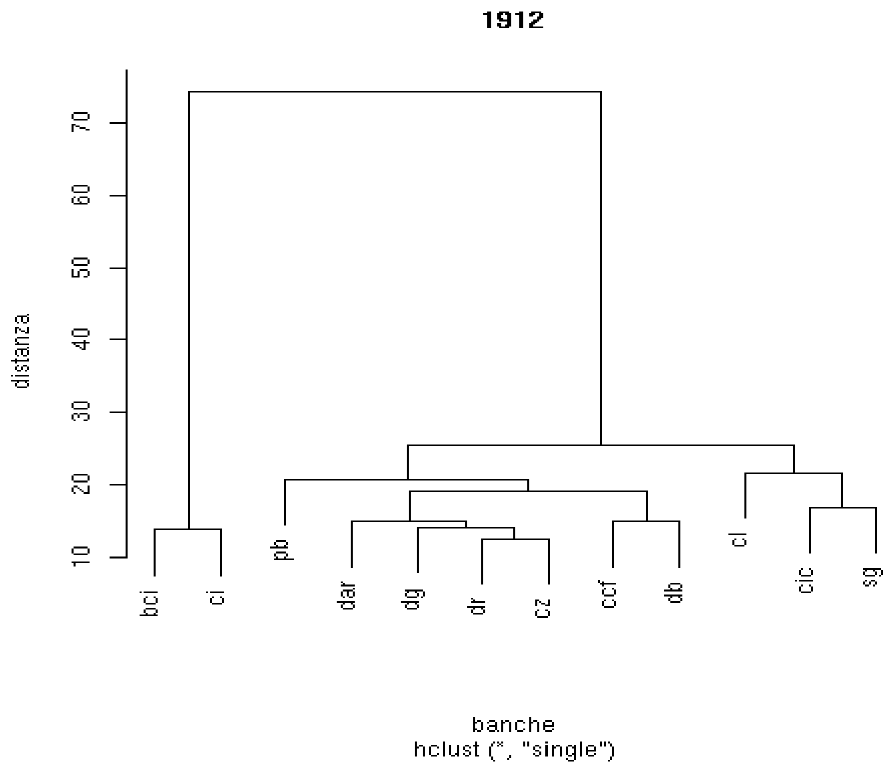


Chart D.3 gives even a more clear cut image of the evolution in European investment banking patterns. While on the one hand, Italian universal banks confirm themselves as very different in structure from the other banks, French great deposit banks show now a more defined model, that distinguished them from the other large institutes. The larger cluster in the middle of Chart D.3, then, comprehends both German and French universal or investment banks, though levels of aggregation are relevant for sub-cluster formation. Indeed, while Deutsche Bank groups with Crédit Commercial de France, the other large German banks gather at short distances, being followed by the former and by Paribas at subsequent iterations. The grouping of this latter cluster with that of French deposit banks (at quite short distance) seems to confirm the existence of a European common pattern that evolved and differentiated during the decades preceding 1914, being nevertheless permeable and interdependent. In France, indeed, great banks seem to have developed various coexisting models of banking functional organization, while this was less the case in Germany and in Italy[64].

[64] As Italy is concerned, it has to be noted that a pioneering article by Bini and Conti (1996) using this same method, and aimed to check Italian universal banks similarities with German ones, finds relevant differences in patterns of functional organization among Italian banks, which permit to distinguish Comit

6. *Conclusions*

A traditional approach to the formation and evolution of national banking systems in Europe tends to emphasise the role played by institutional innovations. This perspective stresses discontinuity phases and undervalues more evolutionary dynamics in major organisational changes. On the contrary, here we have pointed out that hybridisation could describe and explain in a better way the evolution of banking systems in Europe from the mid-1850s to 1914. In particular, as we have said, this could be an appropriate perspective for explaining the nature of changes and, above all, the dynamics of changes in the Italian banking system before 1914.

In this paper we have explained the rationale of this approach by looking at the endless evolution of many organisational models, networking capabilities, operational practices and, finally, by analysing and comparing balance-sheet data of a number of European universal banks in order to verify our hypotheses. Cluster analysis provides some interesting findings and confirms qualitative evidence, strongly supporting our hypotheses.

and Credit from the other two big banks, Banco di Roma and Banca Italiana di Sconto. The latter were not taken into account here because of their scarce if any, links with international high finance and banking networks, that gave them a mainly national character.

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