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Financing firms: Beyond the dichotomy between banks and markets

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ABSTRACT

This article provides a review of the different streams of literature that have contributed, since the seminal work by Alexander Gerschenkron, to the issue on firms' financing. We show that, although the traditional dichotomy between bank and stock market is out of date, the Gerschenkronian thesis is still debated. We find that many microeconomic issues have yet to be explored. In particular, the interaction between bank and stock market in financing firms merits further attention. Finally, we show that the combinations of several approaches and the use of new techniques, such as the network analysis, can contribute to provide further results on this topic.

KEYWORDS

Bank-industry relationship; stock market-industry relationship; bank-based financial systems; market-based financial systems; interlocking directorates

Financial systems are nowadays largely acknowledged to be a crucial element in determining economic growth. In modern economies, they play a key role by mobilising savings, pricing risks and allocating capital to firms. The two main components of financial systems are financial institutions and financial markets. Financial institutions, being mainly different kinds of banks but also insurances, act as intermediaries by channelling resources from the suppliers of funds to the users. Conversely, financial markets allow buyers and sellers of securities to trade directly.

Following a consolidated taxonomy focussing on the historical perspective, countries have been conventionally divided in bank-oriented (Continental Europe countries and Japan) and in market-oriented systems (Anglo-Saxon countries). In the former, financial institutions that bear risks and lend resources through close relationship with their clients prevails. In the latter, savings are mainly channelling through markets, where equity and debt securities are traded. One of the most important issues in the functioning of the financial systems is how resources are allocated to industrial firms. The way in which firms are financed affects many elements of a country such as the industrial structure, its specialisation, the corporate governance and, ultimately, the pace of economic growth.

Traditionally, the historical literature has mainly focussed on the role played by banks following the seminal contribution by Alexander Gerschenkron (1962). Indeed, in his very influential essay *Economic Backwardness in Historical Perspective*, Gerschenkron maintained that banks, particularly the long term financing universal ones, are the major drivers of industrial spurts of latecomer countries, such as Germany and Italy, in the pre-World War I

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years. In his view, this typology of banks functioned as a 'substitutive factor' for otherwise missing prerequisites of industrialisation, i.e., the substantial capital accumulation and the willingness to invest it in the industries related to the technologies of the Second Industrial Revolution. The creation of a bank system to stabilise the currency and, particularly, to provide capital to business has been still considered by Robert Allen in his recent survey of global economic history, as one of the pillars of the 'standard model' of industrialisation adopted by the Western countries (Allen, 2011).[1] In his model, Allen has acknowledged the crucial role played by the investment banks, which did not have a role in British industrialisation, in Continental Europe, especially in Germany.

Indeed, the nexus between banks and the successful catching up of the German economy during the Second Industrial Revolution is a classical topic in economic history. The idea of a positive impact of large German joint stock credit banks dates back to the traditional contribution by Otto Jeidels in 1905 and Rudolf Hilferding in 1910, but has been systematised by Gerschenkron in 1962 in his original model of 'conditional convergence' based on the adoption of new technologies of latecomer countries (Hilferding, 1910; Jeidels 1905). According to Gerschenkron, the German investment banks are a so crucial invention to be comparable to that of the steam engine.

The main idea of the Gerschenkron thesis has been analysed by several empirical researches not only mainly focussed on the German case. In his influential book *Scale and Scope*, Alfred Chandler gave support to the Gerschenkronian thesis suggesting that German universal banks provided capital for new industries and contributed to guide industrial firms in the initial stage of their growth (Chandler, 1990). In the same vein, Jürgen Kocka maintained that the joint stock companies, closely linked with the universal banks, played a major role in the big rise of the German industry (Kocka, 1978). The combination of joint stock companies and the investment banks would have provided savings to the new industrial investment necessary for the sectors of the Second Industrial Revolution.

1. Gerschenkron hypothesis is still alive?

The Gerschenkronian thesis on the crucial role of the universal banks has been reviewed and tested by many contributions. Jeremy Edwards and Sheilagh Ogilvie found that the claim that universal banks played a crucial role in German industrialisation is not confirmed for at least three reasons (Edwards & Ogilvie, 1996). First, universal banks accounted for a small proportion of the total assets of financial institutions before World War I. Second, they did not support the increase in concentration in German industry. Third, their contribution to coordinate the system exploiting the information flows they got via supervisory boards was over evaluated. Finally, they claim that other type of banks (savings banks, mortgage banks, and credit cooperatives) were also important for financing the German industrial system. Successively, in a series of empirical research, Caroline Fohlin found evidence that universal banks had a limited impact on capital mobilisation, industrial investment, and economic growth since firms connected to universal banks performed similarly to 'unattached' ones (Fohlin, 1999a). Carsten Burhop, in an empirical exercise, provided a nuanced view of the Gershenkronian thesis, by suggesting that the universal banks played an important role in the early phases of German industrialisation (1851–1882), while their role faded away later on (Burhop, 2006).

The Gerschenkronian hypothesis has been largely tested also for other countries (Cameron, 1967, 1972).[2] It is not possible to mention all the related studies in this context, but two cases are worth noting. The first refers to Italy, a country directly analysed by Gerschenkron in 1962. Fohlin showed formalised relationships with universal banks had limited impact on firms' investment, while Michelangelo Vasta, Carlo Drago, Roberto Ricciuti and Alberto Rinaldi reconsidering the centrality of the universal banks suggested that also local banks played a role in funding new industries (Fohlin, 1998, 1999b; Vasta et al., 2017). The second concerns the United States, the country which shares with Germany, great success during the rise of the Second Industrial Revolution. In a kind of counterfactual exercise, Charles Calomiris found that, at the turn of the twentieth century, American firms paid more for financing their investment than German firms, and attributed this gap to the lack of universal banks in the United States (Calomiris, 1995).

Although, the Gerschenkronian thesis dates back more than half century, it continues to be tested also by following the new theoretical approaches developed by the economic literature. However, the first criticism of the Gerschenkronian thesis came, at least implicitly, from Raymond Goldsmith in his seminal contribution *Finance Structure and Development* (Goldsmith, 1969).[3] In his quantitative survey, Goldsmith provided a large amount of data on the historical evolution of financial systems in a large sample of countries, developed and less developed. Although the work is by and large a vast collection of data, it casts doubts about the critical role played by banks and emphasised the crucial contribution of markets in financing of industrial firms and in determining economic growth.

Since the Goldsmith contribution, a growing stream of literature has emphasised, both theoretically and with a series of empirical studies, the great importance of financial markets for economic growth (Allen & Gale, 2000; Demirgüç-Kunt & Maksimovic, 2002; King & Levine, 1993). All these contributions generated a large amount of literature which overcame the traditional dichotomy between bank-oriented vs market-oriented financial system by emphasising that banks and markets must be seen as complementary rather than substitutes in financing industrial firms. In the same context, it has been highlighted that both, bank and markets, have an empirical connection with long run growth rates (Allen & Gale, 2000; Boot & Thakor, 2010; Levine & Zervos, 1998).

Following this stream of literature, new research offered further analysis of the Gerschenkron hypothesis. Fohlin provided new insights into the structure of the German financial system (Fohlin, 2007). Her results showed that key characteristics of universal banking emerged late in the industrialisation process and their influence came from something other than the formalised control relationship over firms. The importance of universality—the combination of investment and commercial banking—appears mostly in the support that universal banks gave to the development of active securities markets, not in the domination of industry nor in the dramatic alteration of firm behaviour or performance. In a recent study, Sibylle Lehmann, acknowledging the importance of the large universal German banks, modified the Gerschenkronian hypothesis by showing that these banks played an important role in fostering the development of the stock market, which increasingly replaced loans as a major source of capital for industrial firms (Lehmann, 2014).

2. Bank-based vs market-based financial systems?

Following the stream of theoretical and empirical literature which has been developed since the late 1990s, Fohlin provided a reappraisal of the dichotomy bank-based vs market-based by adopting a historical perspective (Fohlin, 2012, 2016). She showed most financial systems have a mix of characteristics and do not fit into a clear-cut taxonomy. In a nutshell, she suggested that the historical perspective helps to understand that a well-functioning financial system is crucial for economic growth, beyond the specific type it has developed.

Although some scholars continued to maintain the peculiarities of the firms' financing patterns in the two systems, the dichotomy between bank-based and market-based financial systems seems to be overcome (Lescure, 2007).[4] Indeed, many studies have tried to understand the determinants of the structure of financial systems. For instance, the crucial role played by the legal origin in determining the level of financial development of different countries has been highlighted, in some seminal contributions, by Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Shleifer and Robert Vishny (La Porta et al., 1997, 1998).[5] This approach, labelled as 'Law and Finance', maintained that the efficiency of the legal system is positively related to economic growth via financial development. In a nutshell, they suggested that countries with a civil law system (France, Germany, Italy, etc.) have both a weak investor protection and least developed capital markets. In contrast, common law countries (United Kingdom and United States) have led to market-oriented financial systems. Furthermore, they also reconsidered the dichotomy of bank-based vs market-based systems arguing that it is the financial development and not the financial structure which are crucial for supporting firms' investments. In contrast with this hypothesis, Raghuram Rajan and Luigi Zingales, by adopting a comparative perspective, maintained that the driving force of the development of financial institutions is the political context. Indeed, they showed that, at the eve of World War I, the most developed countries had similar levels of financial development, regardless of the legal system they have (Rajan & Zingales, 2003).

The Law and Finance approach has been tested and discussed even in further contributions which have adopted a historical perspective. Most of the various works have not found much evidence in support of this hypothesis. For instance, Timothy Guinnane, Ron Harris, Naomi Lamoreaux and Jean-Laurent Rosenthal challenged the idea that the Anglo-Saxon common law is supporting economic growth more strongly than the civil law systems diffused in Continental Europe (Guinnane et al., 2007). Within the business history, a recent issue of this journal has tackled the topic of the effectiveness of the Law and Finance hypothesis. These contributions have emphasised that legal origins do not matter that much in driving the financial development of a country.[6] Furthermore, in a recent contribution, Christopher Coyle, Aldo Musacchio and John Turner, looking at the capital market in the United Kingdom (the home of common law), in the early twentieth century, showed that both the size of the UK domestic capital market is not correlated with the investor protection laws and that UK legislation was so not different in comparison with those of the civil law countries (Coyle et al. 2019). Thus, they maintained that the divergence, if any, of the two different systems does not have its roots in the period before the World War I.

3. New approaches to the analysis of the financial systems

In recent times, many works have highlighted the complexity and the rich variety of the institutional set up of the financial systems which, to provide resource to industrial firms,

have shown a vast heterogeneity of forms involving a plurality of actors. The growing interest in the analysis of the structure of financial systems and their determinants in economics have thus relaunched interest in the historical perspective.[7]

The field of the history of financial systems and, particularly, on the financing of industrial firms is nowadays characterised by a mix of epistemological approach and research subject (Colvin, 2017). It is not easy to provide an exhaustive survey of all studies in this field, but it is possible to emphasise the main general trends. First of all, it seems rather clear that both business historians and economic historians continue to contribute to the field, although, in recent times, business historians seem to be more active.[8] Second, most of the studies are still largely concentrated on the major European countries and on the United States, even if in the last few years some research has focussed on other cases. Third, if the economic historians use the nowadays traditional quantitative techniques, also in the field of business history these techniques are more diffused than in the past (de Jong et al. 2015; Eloranta et al., 2010). Indeed, in recent years, the network analysis has spread in business history and its use seems to be particularly concentrated in the reconstruction of corporate networks and in the relationships between industrial firms with banks and financial companies. Indeed, a stream of research focussing on corporate networks has used the network analysis to look at the dense relationship between different actors providing a detailed description of the structure of the corporate system.[9] Some works have investigated the structure of the national networks for different countries such as Germany (Fohlin, 1997, 1999a; Windolf, 2014), United Kingdom (Schnyder & Wilson, 2014), Italy (Rinaldi & Vasta, 2005, 2012; Vasta & Baccini, 1997; Vasta et al., 2017), Switzerland (Ginalski et al. 2014), Belgium (Deloof et al., 2010), Japan (Okazaki et al., 2005) and United States (Frydman & Hilt, 2017) for different periods. In all these works, the crucial role played by banks (but also financial companies) in monitoring and financing industrial firms is analysed in detail. In the same vein, other studies have investigated interlocking directorship, by adopting a qualitative approach, for single cases. For instance, the Rotterdamsche Bankvereeninging in the Netherlands and the J.P. Morgan in US (Colvin, 2014; Pak, 2013).

4. The content of this special issue

This special issue aims to contribute, by using different approaches, to the issue on how firms, particularly industrial ones, have been funded in different historical periods. The main aim is to look at the financial system as a whole, focussing on both financial institutions and financial markets and, particularly, on their interactions. The selected articles, although limited to Western-European case studies, contribute to that goal.

For the First Industrial Revolution, Stefano Ugolini focuses on the financing of the take-off of industry in Belgium, the first country to follow the path pioneered by Great Britain in the mid eighteenth century. Belgium's independence was recognised by the London Conference of 1830, although the decision was not accepted by the Dutch until 1839. Ugolini's article analyses that decade and demonstrates how financial markets and institutions worked together to consolidate the new country's economy. Far from having a conflictive relationship, the stock market and banks found a way to 'co-evolve', both for their mutual benefit and for that of the national economy.

The author investigates this co-evolution based on information provided by two databases: his own dataset and the SCOB Database. The starting point was an underdeveloped financial system, where the Société Générale (SG) (1822) played a prominent role. The SG was soon joined by the Banque de Belgique (BdB) (1835). Both were entities with strong state intervention. Ugolini illustrates the critical role played by the banking industry in the Belgian industrial take-off. SG and BdB acted as universal banks and did not hesitate to purchase a significant quantity of shares of the innovative companies that contributed to spread the Industrial Revolution to the Continent.

In a second phase, the banks then helped those companies to list on the Brussels Stock Exchange and proceeded to act as 'market makers' at all times. Thus, in Belgium, there was no conflict whatsoever between the banks and the stock exchange. In contrast, the banks viewed the Brussels Stock Exchange as an additional financial instrument. The 1839 crisis, which came about as a result of the final conflict with Netherlands, had a disastrous effect on BdB, which had to be rescued and converted into a commercial bank. However, SG and other banks continued to serve as universal banks without preventing Brussels from becoming an important international financial hub.

This special issue addresses the Second Industrial Revolution with a study undertaken by Emilie Bonhoure and David Le Bris. The study looks at the role played by the stock exchanges in France. Although the leaders of the Second Industrial Revolution were Germany and the United States, France also played a significant role, notably, for example, with its automobile industry, which continues to enjoy success today. The research question posed by Bonhoure and Le Bris is whether the Paris stock exchanges provided sufficient support to the successful firms that appeared during the Second Industrial Revolution. These firms were emerging businesses and, therefore, often lacked information. If the answer is yes, according to the authors, one might identify high Tobin's Q ratios even if dividends were meagre.

The authors work with their own database of around a thousand companies that, in 1907, were listed on the Paris stock exchanges (both the Parquet official exchange and the non-regulated Coulisse), as well as information provided by the new Data for Financial History Equipment of Excellence (DFIH Equipex). According to their findings, Second Industrial Revolution companies accounted for 9% of total market capitalisation in 1907 and 27% in 1929, so they had tripled their share. These data indicate that France's industrial efforts in new and upcoming sectors were well supported by the country's stock exchanges. The authors believe that in 1907 the trajectories of the Second Industrial Revolution had only just arrived on French shores. Funding during the first stage of the revolution would have primarily been provided by banks; however, in early twentieth-century the stock markets began to take centre stage in the United States, although much less so in Germany. France would follow the American model.

When comparing the sectors of the Second Industrial Revolution with others, Bonhoure and Le Bris found significant differences between Tobin's Q, which was higher for Second-Industrial-Revolution companies, and the dividend yield, which was somewhat lower for those same companies. The regression analyses of both variables controlling risk, liquidity, governance, and nationality only point towards a connection between the Second Industrial Revolution and Tobin's Q. Because Tobin's Q is a more definitive variable than dividend yield, the authors conclude that, despite information asymmetries, the French financial markets were indeed able to recognise the potential of some of the emerging companies that were poised to change the world.

With regard to Britain, the relationships between financial system and industrialisation have always been viewed critically. The qualitative study undertaken by Mark Billings, Simon Mollan, and Philip Garnet uses the work of the Colwyn Committee to review the state of that relationship at a crucial moment in time: the end of World War I in 1918. This was a banking system where the universal banking is not working, preferring to deal with customers through credit. According to the figures, the banks extended credit abundantly, but with significant aversion to doing so on a long-term basis. In any case, in the British financial system, the markets tended (and tend) to dominate the institutions. The British saw the commercial banks, the merchant banks, and the stock exchanges as completely disconnected from the industrialisation process. The problem became more serious with the advent of the Second Industrial Revolution, when the need for capital was clearly greater than in the First.

The Colwyn Committee, chaired by the entrepreneur and banker Lord Colwyn, was convened by the British Treasury to investigate the process of bank concentration which had led to the excessive weight of the well-known 'Big Five' in the City of London (Barclays, Lloyds, Midland, National Provincial, and Westminster). The committee was made up of 12 members—among them, the governor of the Bank of England—and compiled 280 pages of information obtained from 22 witnesses. The committee members and witnesses included many bankers, including representatives of the 'Big Five', except Barclays. For this reason, the Colwyn Committee report is often blamed for partiality and, according to the authors of the article, has not been received proper consideration.

In reality, the work of the Colwyn Committee constituted a vital step in the British banking industry's journey towards accepting regulation and supervision. The Committee had heated debates on issues that continue to be relevant, such as the rationality of using mergers as an expansion strategy, the need to have large institutions to compete with those in other countries (the United States or Germany), the structural weakness of local banks and their failure to capture savings in regions with surplus and invest it in regions with deficit, the debatable effect of mergers on competition (would a handful of entities be enough to maintain a sufficient level of competition?), the advantages and disadvantages of nationalising banks (which the Labour Party was proposing), the role of regulation now that liberal capitalism had come to an end (there was only agreement on promoting transparency), the desirability of reinforcing capital ratios, and the possibility of moving towards German-style universal banking as a mechanism for supporting industry more effectively.

The work of the Colwyn Committee may not have resulted in legal changes, but the authors of the article suggest it did bring about a more tentative approach towards bank mergers and greater acceptance of an increased degree of regulation. Far fewer mergers took place between 1924 and 1987 than between 1810 and 1924. The number increased again at the turn of the twenty-first century.

The trajectory of the British banking industry after World War II is addressed by an article written by Philipp Kern and Gerhard Schnyder. The authors claim that a fundamental issue in the relationship between financial institutions and companies is the power created by interlocking directorates, i.e., the coordinated actions made possible by common directorships. In a specialised banking system, such as the British in 1918, there was no place for interlocking directorates. As Sir Edward Holden, the Chairman of Midland Bank, stated forthrightly before the Colwyn Committee: 'Interlocking directors are unknown in our banking world' (see article by Billings, Mollan and Garnett in this issue). However, during the

1950–2010 period analysed by Kern and Schnyder, things had changed in line with the British bank's move towards universal banking. This move was broadly backed by the political authorities.

The ambitious approach by Kern and Schnyder attempts not only to identify British interlocking directorates and their evolution over time but also their influence on levels of corporate debt. They use an own dataset that includes information on the 50 largest financial companies and the 200 largest non-financial companies, in eight benchmark years (1950, 1958, 1976, 1983, 1993, 1997, 2003 and 2010). The theory identifies different reasons why bankers would want to be on the boards of companies, and why companies would want to be on the boards of banks. The authors suggest three hypotheses: (1) debt levels are greater in companies with more connections to financial institutions; (2) the debt level of a company increases if those connections occur throughout the company network; and (3) the influence of those connections on debt levels was greater before the stock market reforms of 1986—the 'Big Bang'—than afterwards.

Before World War II, the British financial system kept aside from universal banking because this was seen as a formula to keep funds inside the borders and a way to accelerate growth in countries lagging in industrialisation. The war changed everything. By the end of the 1940s, 90% of the stocks listed in the London Stock Exchange were domestic, compared to just 8% in 1913. The financial system concentrated its interest in the national economy and, between 1945 and 1979, banks reinforced their commitment to British industry by adopting universal banking practices. Everything changed again in 1979, when the Conservative leader Margaret Thatcher introduced a neoliberal program which, among other things, was intended to boost the London Stock Exchange. This was achieved by a package of measures introduced in 1986 known as the 'Big Bang'. In line with these reforms, deposit and merchant banks merged their activities to give birth to a new type of universal banking that focussed on globalisation and had little concern for domestic industry.

The interlocking directorates are subjected to network analysis in order to understand the resulting maps for each year and a regression analysis was conducted to test the three hypotheses on debt levels. It should be noted that the authors refer to financial institutions in the broadest sense of the term, with banks constituting 56% of the sample in 1950 but only 14% in 2010, and that debt is assumed to be anything that is not capital or self-financing. The results suggest that there was increasing integration between 1950 and 1976, with banks occupying a central role. This was in line with the proposed hypotheses. Since the late 1970s, the ties have loosened and financial institutions have lost centrality, which in turn, has brought about a change in the way companies are financed. The article ends by pointing out that, overall, the traditional view of the British financial system is upheld, because the links identified were weak, their impact on financing only lasted for a short period and industrial companies continued to have difficulties in obtaining long-term funding throughout. The networks that existed before Thatcher were due more to regulatory pressures than to the will of the financial institutions.

The last article in this special issue focuses on financing for small and medium-sized industrial firms. These were particularly significant in economies such as Italy's, which was analysed by Alberto Rinaldi and Anna Spadavecchia. The authors concentrate on the period 1913–1936, when universal banking still existed in Italy. In 1936, following the financial crisis that provoked a large state intervention in industry and in its funding channels, a new law prohibited universal banking. The analysis is based on interlocking directorates with

information obtained from Imita.db (http://imitadb.unisi.it), the database on Italian joint stock companies. The research intends to further test the Gerschenkron hypothesis, which gave all the credit for the Italian industrial take-off to the large German-style universal banks and the large companies.

The largest nation-wide five universal banks are studied separately with the 20 most prominent local banks in three benchmark years (1913, 1927, and 1936). The common denominator is that they all have links to the more industrialised regions of Italy, in particular, Lombardy, which had more dealings with local banks. The larger banks tended to extend their reach throughout the country. The Great Depression would end up seriously affecting the large banks, and Banca Commerciale, Credito Italiano, and Banco di Roma had to be rescued by the Istituto per la Ricostruzione Industriale (IRI), while the local banks remained largely independent of the bigger banks throughout.

The interlocking directorates indicate a correlation in size: the large companies tended to work with the big banks and smaller companies preferred the smaller local banks. It was also the case that emerging companies began their financial dealings with local banks and then moved them to the larger banks. It seems, therefore, that local banks were less averse to risk and would have played a significant role in the country's industrial take-off, although this role seems to be mainly concentrated in the light sectors.

Importantly, the article also addresses the direction of causality in the interlocks. Based on the theory that the more powerful exerts an influence on the less powerful, it examines who would have been more important in the interlock relationship. If the bank influences the company, the relationship is described as 'outdegree', but if the company exerts influence on the bank, it is an 'indegree' relationship. By calculating the outdegree/indegree ratio one can deduce the directionality of a set of relationships. The results obtained are inconclusive, leading the authors to believe that in Italy the bank-industry relationship was one of mutual dependence, or leaned slightly towards industry exerting influence over the banks, but that in no case was industry completely subjected to the power of the banks as has sometimes been assumed. It could even be suggested that the problems experienced by the banking industry in the 1930s came as a result of pressure exerted by industry. In this sense, there were few similarities between the Italian situation and that of Germany or the United States.

The article concludes with two case studies: Banca Lombarda (1870) and Banca di Legnano (1887), two leading local banks. The interlocks they had reveal that both banks had a lot of involvement in the development of the textile and silk industries, but they also had some links with the sectors of the Second Industrial Revolution. For Rinaldi and Spadavecchia, these cases confirm the two main conclusions of their article: (1) local banks played an important role in supporting emerging firms in light-industry sectors; and (2) relationships between banks and industry were not always dictated by a hierarchical system where the banks held the most power. According to the authors, the Gerschenkron thesis is too simple to be applied to the complex realities behind the industrial take-off in Italy.[10]

5. Conclusion and further development

In the long review of the book that Rondo Cameron dedicated to challenging the Gerschenkron hypothesis, Raymond Goldsmith concluded that it was necessary to extend the sample to include more countries, adopt a 'common statistical framework', analyse more carefully the causal relationships and take 'the study of the relationship on a microeconomic

level, i.e., from the point of view, and on the basis of the records, of selected individual financial institutions or of selected business firms' (Goldsmith, 1973). In the almost half a century that has elapsed since then, much progress has been mainly made in the macroeconomic aspects proposed by Goldsmith. The microeconomic issues have been analysed deeply only in more recent times. This special issue follows this recent pattern by adopting the more updated approaches developed within the business history.

From the theoretical point of view, it has been usual to distinguish between countries with financial systems based on banks and financial systems based on markets and, more recently, also between systems based on civil law (institutions) and systems based on common law (markets). It has even sought to contrast universal banking with specialised banking and relational banking with fully competitive banking. Historical research has concluded that 'setting up banks and markets as opposites misses the fundamental complementarities between them and ignores their complexity and heterogeneity' (Fohlin, 2012, p. 151, 2016). It also begins to become clear that financial systems do not trigger growth processes and industrialisation, but they are essential to sustain them over time. Each society has the financial system that fits with its historical trajectory, without any being better or worse than others. The important thing is to have a financial system sophisticated and stable and that evolves according to the demand forces of the moment. History matters.

The analysis of the Belgian case in the 1830s diminishes the role of the banks in order to stress the existence of a 'co-evolution' of banks and financial markets, even if the former were essential in the take-off of the first country in Continental Europe that catched up the trajectories of the First Industrial Revolution. For France in the early decades of the twentieth century, an analysis with new sources also revalued the role of financial markets in the Second Industrial Revolution. Both works contribute to a more balanced and nuanced image of the role of the components of the financial system in the industrialisation process.[11]

The difficulty of joining the Second Industrial Revolution by Great Britain is found in the reports of the Cowlyn Committee that met in 1918. The work of the Cowlyn Committee has been neglected because it was not translated into legal measures, but a rereading of the reports allows us to verify the frustration of British bankers in the face of the success of universal banking in Germany and the United States (closely linked to the stock market in this latter case and perhaps, as suggested by Sybille Lehmann (2014) even in the former) and their willingness to consider greater regulation inevitable, which was what followed the world wars of the twentieth century.

Finally, the modern network analysis, through interlocking directorates, proves its effectiveness in both the British case, for 1950–2010, and the Italian case, for 1913–1936. Ending a long tradition of pure commercial banking, British banks and companies were integrated into networks during the Golden Age, where banks took centre stage. In truth, it was a universal banking system forced by the authorities, which did not prevent the continuation of the industrial decline and that jumped through the air with the neoliberal revolution of Margaret Thatcher. In the Italian case, the study reveals the existence of networks segregated by size (large banks with large companies and local banks with small and medium-sized companies) and more complex than those derived from Gerschenkron thesis.

This special issue has focussed on a variety of themes concerning the relationship between financial systems in a broader sense and firms' growth. However, many research topics remain pending.

If, as said, the traditional dichotomy between banking system and stock market seems to be out of date, the interaction between these two elements seems to be under-researched. Thus, many aspects related to the regulation, both of the banking system and of the stock market, deserve to be further analysed. Indeed, financial regulation is a crucial element in the selection process of firms' investments. For instance, the existence of a self-regulation, able to provide some oversight, seems to have played a positive role to reduce the IPO failure even in the London stock exchange in the early 19th century (Burhop et al., 2014). We believe that both qualitative and quantitative studies can contribute to increase our knowledge on how regulation mechanisms have determined firms' investments and, ultimately, economic growth.

The second issue that merits much attention is related to the characteristics of the firms to be financed. Most of the literature has concentrated its attention to the firms lato sensu or, more often, to the archetypal firm associated to one single country. In our view, what we need is to have more analysis that take into account the vast heterogeneity of firms in different countries. First of all, as we have seen in this special issue, size matters. Thus, we believe that more attention should be paid to the different conditions to access to capital for firms of different size, also within the same country. Generally, small and medium-sized companies have to settle for self-financing their projects or resorting to bank credit by providing guarantees and compensation. In contrast, larger companies may face expensive but wider access to capital markets. However, these differences are crucial in order to understand whether there were factors that can favour (limit) firms' growth capacity. Second, it would be important to understand if sectoral and technological characteristics of the firms can have determined, in different context, their capacity to be funded. In particular, we would need to have more analysis—both as case studies on single firm and/or at more aggregate level—able to explore the capacity for a country to foster firms that are close to the technological frontier.

Last but not least, we would like to emphasise some methodological issues. First, much of the analysis is still focussed on a small number of European countries. Our knowledge has been often limited to the most successful countries, such as England or Germany, or to countries for which some general hypothesis was developed by some seminal studies (e.g. Gerschenkron for Italy). In this special issue, attention has been paid to Belgium and France, but many efforts must be made in order to study several other countries in Europe and also in other continents. Second, as showed in this special issue, the interaction between the tools of the business historians and those of the economic historians can provide fruitful results. If we still believe that qualitative sources can be used to validate theoretical and empirical hypotheses, in the last years, the quantitative methodologies have been largely used by business historians. In this perspective, network analysis seems to be one of the more promising approaches to develop our knowledge on the relationship between financial markets and industrial firms.

Notes

1. The other pillars of Allen's standard model are the creation of a 'mass education' system able to speed the adoption of modern industrial technologies, the construction of a national transport infrastructure for creating a large national market and an external tariff for protecting 'infant' industries.

2. Cameron (1967) and Cameron (1972) were the first attempts to contrast the Gerschenkron's thesis. Cameron and his collaborators studied 12 national cases (Austria, Belgium, England, France, Germany, Italy, Japan, Russia, Scotland, Serbia, Spain and the United States) with mixed results.
3. In his book, Goldsmith quoted Gerschenkron only once in a footnote (p. 402).
4. Lescure is an example of maintaining the dichotomy.
5. See La Porta et al. (2008) for a survey.
6. See Musacchio and Turner (2013) for a survey of these contributions.
7. For two recent surveys respectively on banking history and on stock market history, see Colvin (2014) and Smith and Tennent (2017).
8. However, it is worth noticing that, according to Cioni et al. (2020, Table 3), the studies on banking and financial systems have increased considerably their weight within the top five economic history journals in the last twenty years.
9. For a comparative long run studies on this issue, see David and Westerhuis (2014).
10. The article by Rinaldi and Spadavecchia in this issue follows the line opened by Rinaldi and Vasta (2005), which has inspired Rubio-Mondéjar and Garrués-Irurzun (2016). According to these authors, the Spanish networks were mere examples of crony capitalism, which is at odds with the Gerschenkronian interpretation of the role of the banks in the Spanish economic development by Tortella and García-Ruiz (2013).
11. In a recent work, Heblich and Trew (2019) have investigated the role of banks in the spreading of the Industrial Revolution in England since the early XIX century. They find that the presence of banks in a given area accelerated the industrialization process.

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