# The Value of Political Connections in Fascist Italy - Stock Market Returns and Corporate Networks ${ }^{\text {T }}$ 

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Keywords: Fascism, Event Studies, Social Network Analysis, Italian business history

## 1. Introduction

Recent years have witnessed the flourishing of a body of economic literature concerned with the search for empirical evidence of a positive relation between political connections, economic rent and the value of firms $\rightarrow$ The present paper contributes to the strand of this literature that deals with the quantitative measurement of the value of the political connections of firms $5^{5}$

Our work proposes a quantitative measurement of the value of political connections between Italian firms and the Fascist regime in the years of Benito Mussolini's rise to power (1921-1925). Specifically, the present paper offers a quantitative answer to the question: how much was it worth to have close, early connections with the National Fascist Party (hereafter, PNF)?

Following in the tracks of Ferguson and Voth (2008), who studied the reaction of the German stock market to the Nazi seizure of power, in order to assess the value of political connections we perform an event study, which consists of an estimation of the impact of unexpected events on stock market returns (MacKinlay, 1997, Campbell et al., 1997). In particular, the present paper analyzes the reaction of Italian stock market investors to the March on Rome, the Fascist military expedition of $28^{\text {th }}$ October 1922 with which the first Mussolini government unexpectedly began.

[^0]In the years of Mussolini's rise to power, the Italian stock market was less advanced than, for example, the German one. To begin with, in Italy there were seven stock exchanges: Milan, Rome, Turin, Genoa, Trieste, Naples and Florence. There was a sort of topographic division among the different markets that reflected the industrial specialization of each region. For example, Milan was the leading Italian stock market for state bonds, banking bonds, and many others securities. Turin was the leading stock market for electric stocks. Genoa was the leading stock market for nautical stocks and sugar stocks. Secondly, in 1921 only 120 societies were quoted in Milan, which was the leading market for exchange value (Consob, 2011, chapters 1 and 2). Thirdly, stock-market transactions were often somewhat opaque because of a structural conflict of interests due to the connection between listed companies and 'mixed' banks.${ }^{6}$ In other words, a few big banks and the group of firms that was financed by them tended to form something like credit-industrial organizations that, mutually, influenced the conduct of business and credit management (Bonelli, 1971). As we shall show, our innovative analysis not only unveils the clustering configuration in terms of political connections with PNF of Italian industry during the interwar period, but also shows that the firms in the connected cluster outperformed the rest of the economy in terms of stock market returns. 7

Mussolini's assumption of power in November 1922 was facilitated by a complex concurrence of economic and social factors. At the end of the World War One, Italy went through a deep economic crisis. War expenses had been supported by government borrowing. On December $19^{\text {th }} 1914$, on June $15^{\text {th }} 1915$, and on December $22^{\text {nd }} 1915$ the government authorized three 'National Loans' (Prestiti Nazionali). These loans, redeemable in 1925, yielded $4.5 \%$ interest in the case of the first two and $5 \%$ in the case of the third. On January $2^{\text {nd }}$ 1917, on December $6^{\text {th }} 1917$, and on November $24^{\text {th }} 1919$ the government issued consolidated debts at $5 \%$ interest. Northern Italy, home to only $46 \%$ of the population, absorbed $60 \%$ of the loans. Moreover, Italy had heavy international debts - owing 611 million pounds to Great Britain and 1648 million dollars to the United States Ministero del Tesoro, 1999, chapter 3).

The war-profits tax of 1915 and the capital levy taxes of 1919 and 1920 notwithstanding, by the end of the war Italy faced a persistent budget deficit and a predominant shortterm floating debt in the structure of the public debt (on June $30^{t h} 1921$, for example, it amounted to $36.5 \%$ of the national debt; Ibid.: 35). The post-war economic situation was further worsened by the inflationary trend triggered by a massive note issue in the years before.

In addition, the numerous governments that followed each other until 1922 had to face a difficult social situation characterized by repeated strikes in cities and country. The social discontent arose out of increases in the prices of basic goods, such as bread, and a high rate of unemployment due to the industrial reconversion of the factories involved in military

[^1]production and the mass of ex-servicemen.
This is the context in which Mussolini, following his interventionist position with regard to the war, was able to exploit the expectations of ex-servicemen and to present the PNF to the public as a safeguard of public order by means of the fascist action squads. At the same time, he cemented his relationships with the big magnates of Italian industry thanks to the anti-union bias that, from 1920, increasingly characterized the fascist movement. As we shall see, some of the big names of electrical and metallurgic industry financed Mussolini's political project in its initial stage. In this respect, our work enriches current knowledge concerning the origin of the flow of capital that financed Mussolini in these years.

As for the Italian Stock Market, the years after World War One were characterized by strong financial instability, which was worsened in the early 1920s by the difficulties of two important banks: Banca Italiana di Sconto and Banco di Roma ${ }^{8}$ Between 1918 and 1922 the real stock return decreased $25 \%$ (Consob, 2011, p. 20). In the years from 1923 to 1925, that is during the first Mussolini government, shares prices were boosted by the economic recovery of those sectors which were more open to exports, such as textiles and machinery, and those which were more innovatory, such as the electrical sector $9^{9}$

Nevertheless, conclusive evidence of the sizeable impact of political connectedness on stock market performance suggests the significant involvement of big business in political developments during a key period of modern history. Moreover, such a finding signals the need to perform a more careful reading of business history (Lamoreaux et al., 2007). Specifically, the existence of a measurable advantage for connected firms suggests that key players behind the widening of Italy's industrial structure were not only driven by effective demand for their output, but also by the differential returns to be obtained from political support of Fascism. Indeed, the possibility for the firms in the connected cluster to outperform the rest of the economy in terms of stock market returns calls into question studies in firm dynamics that exclude the role of power and politics in the capitalist competition process (Ferguson, 1995).

The rest of the paper is organized as follows. Section 2 offers a general description of the phases of Mussolini's rise to power. Section 3 focuses on the extent of Italian magnates' support for Mussolini. Section 4 explains the characteristics of our dataset. Section 5 presents the results of our research into firms connected with the PNF by means of a network analysis. Section 6 illustrates the methodology of an event analysis. Section 7 presents the results of the employment of this technique in the case of the Milan Stock Exchange during the March on Rome. Appendix A contains a historiographic analysis of prominent individuals within the cluster of connected firms. Appendix B provides a statistical companion.

## 2. Mussolini's rise to power

As is well known, in spring 1921 Mussolini transformed the Fascist movement into the PNF and, in the general elections that took place in May 1921, 32 candidates of the PNF,

[^2]together with Mussolini, became deputies.
In the following months Mussolini defined the political platform of the PNF and, no doubt with an eye to following the parliamentary path to power, agreed with the Socialist Party to end the violence of the fascist action squads (Patto di Pacificazione). The strong opposition of the fascist actions squads towards this Party line, however, soon compelled Mussolini to break his agreement with the Socialist Party. Summer 1921 saw a new period of social riots, acts of violence against political opponents, and the progressive transformation of the fascist action squads into a paramilitary organization.

The weakness of the Bonomi Government (July $4^{\text {th }} 1921$ - February $26^{\text {th }}$ 1922) and of the two Facta Governments (respectively, February $26^{\text {th }} 1922$ - August $1^{\text {st }} 1922$ and August $1^{\text {st }} 1922$ - October $31^{\text {st }} 1922$ ) in opposing the unlawful actions of the fascist action squads, together with the inability of the leaders of the other Italian political parties to overcome their individual interests in order to establish a joint front against Fascism, paved the way to Mussolini's rise to power.

In this context of political instability, on August $1^{\text {st }} 1922$ the trade unions called a new general strike in support of workers' rights. This strike again gave to the Fascists the possibility of presenting themselves before the public as the only Party able to maintain public order. In many cities, such as for example Milan, members of the PNF assumed responsibility for providing public transport. However, the strike also gave the fascist action squads the opportunity to attack the seats of trade-union organizations across the country. The PNF was thus simultaneously maintaining public order and committing illegal acts; but it was the former that primarily attracted public attention. Because of the strikes 7.336.393 workdays were wasted in Italy between November $1^{\text {st }} 1921$ and October $31^{\text {st }} 1922$; of these 6.892 .795 were workdays of the manufacturing sector (De Felice, 1966a, vol. I: 396).

The March on Rome (Marcia su Roma) of October 1922 was, then, the culmination of the long political and social crisis that began after the general elections of May 1921. In the build up to this Fascist military expedition to Rome three dates have a crucial importance for us: the $16^{t h}, 24^{\text {th }}$ and $28^{\text {th }}$ of October 1922 (Vivarelli, 1992, vol. III: 435-454).

In Milan, on $16^{\text {th }}$ October 1922, Mussolini met with some generals of the Italian army who were also members of the PNF in order to seek the support of parts of the Italian army. In Naples, on $24^{\text {th }}$ October 1922, during a secret meeting with his closest collaborators, Mussolini fixed the date of the March on Rome: that is, October, $28^{\text {th }} 1922$.

The revolt was to be carried out by means of two different kinds of operation. The advance on Rome would be concurrent with the taking of the Prefectures and the editorial offices of the most important newspapers in many Italian cities. Nevertheless, and as we know, none of the Fascists Marched on Rome until King Vittorio Emanuele III of Savoia gave Mussolini (who was in Milan) the task of forming a new government on October, $29^{\text {th }}$ 1922. On the morning of October $28^{\text {th }}$, the King refused to sign the decree that had been drawn up by the Government during the night. The Prime Minister, Facta, asked the King to declare a state of siege in order to allow the army to defend Rome. The army undoubtedly had an advantage over the fascist action squads, being better equipped and better drilled, and so today it is hard to understand why the King did not sign the decree on the state of siege and, in fact, compelled Facta to resign.

On November $16^{\text {th }}$ 1922, Mussolini called the Chamber of Deputies for a vote of confidence on his first government and, on November $29^{\text {th }}$, he won a vote of confidence at the Senate.

Mussolini had the offices of both Foreign Minister and Home Minister. Three other members of the PNF were appointed ministers: Alberto De Stefani became Minister of Finance, Aldo Oviglio was given the office of Minister of Justice, and Giovanni Giurati was put in charge of the ministry that administered the territories annexed to Italy after the First World War (Ministero per le Terre liberate dal Nemico). The other ministers were members of the Popular Party, the Liberal Party and the Democratic Party. High Admiral Paolo Emilio Thaon di Revel was appointed Minister of Navy and Armando Diaz, who on November $8^{\text {th }} 1917$ had been nominated Chief of Staff by the King, held the position of Minister of Defence ${ }^{10}$ Nine out of eighteen vice-ministers were fascists. Thus the first Mussolini government undoubtedly had a fascist complexion, but was nevertheless the expression of a parliamentary coalition (Ibid.: 480).

However, as leader of the PNF, Mussolini had to face the problem of the normalization of the fascist action squads. With this in mind, the government established the Milizia volontaria per la sicurezza nazionale (hereafter, MVSN) with a royal decree of January 1923. Because the MVSN was under the authority of the Prime Minister, the fascist action squads were removed from the control of the local members of the PNF. Moreover, Mussolini succeeded in legalizing the actions of the fascist squads because the purpose of the MVSN was to defend the Fascist revolution and public order in collaboration with the army (De Felice, 1966a, vol. I: chapter 5).

In concomitance with the establishment of the MSVN as a politicized security force, Mussolini gave up on passing any reform bill regarding military regulations and, notwithstanding the different view of the Finance Minister, De Stefani, he increased the national budget for military expenditure. In the financial year 1921-1922 the army received a budget of 1921 million lire rather than the budget that had been proposed for this year, that is 1571 million lire. These complications regarding the army notwithstanding, on July $28^{\text {th }} 1923$ the Minister Diaz hailed the "highly patriotic goals of the MSVN" (Ibid.: 435).

In the first months of his government Mussolini, with an eye to calling general elections, partly amended the existing proportional electoral system with the so-called Acerbo law, which was passed by the Chamber of Deputies on July $23^{\text {rd }} 1923$ and by the Senate on November $13^{\text {th }}$ 1923. By the Acerbo law, if a Party list reached a percentage of $25 \%$ of votes, that Party automatically received $2 / 3$ of the total parliamentary seats. Moreover, the vote count had to be conducted on a national basis. Of 535 deputies, 365 would enter through this majority premium, the remaining 179 by means of the proportional system.

In April 1924 the PNF won the general elections with $65 \%$ of the votes. As is well known, Giacomo Matteotti, before his assassination on June $10^{\text {th }} 1924$ by a group of fascists, publicly denounced the widespread electoral fraud of the 1924 general elections. $\sqrt{11}$

On January $3^{\text {rd }}$ 1925, Mussolini spoke to the Chamber of Deputies and took full political,

[^3]moral and historical responsibility for Matteotti's assassination; but he denied having been the instigator of the assassination. Mussolini, in fact, challenged the Parliament to impeach him. Not only did Mussolini not suffer impeachment, but his speech sanctioned the transformation of Italy into a totalitarian state. In the following years the Italian Parliament was progressively deprived of its prerogatives and the general elections, held on March $24^{t h}$ 1929, took the form of a referendum.

## 3. Fascism and Industry

The extent of Italian magnates' support for Mussolini is a controversial point. Broadly, scholars such as Rossi (1955), Guérin (1956) and Sarti (1977) explicitly link Mussolini's rise to power with the attempt of the big landowners and magnates to check union demands in the farmlands and in the factories. More cautiously, Melograni (1972) denies the existence of any organic support to Mussolini from the big magnates, arguing that among them there was a plurality of attitudes towards fascism.

As we shall see, Mussolini benefited from the financial support of some of the big names in the electrical, the tyre, the steel and the iron industries in the form of financing of his newspapers and of the election campaign of the PNF in 1922. Moreover, Mussolini's first government had the official confidence of both Confindustria (the Confederation of Italian Industry) and Assonime (the Association of Italian joint-stock companies), notwithstanding any unfavourable attitudes of some of their members towards fascism. On November $1^{\text {st }} 1922$ Confindustria, in fact, claimed "to have exerted a direct and pressing influence in favour of Mussolini's solution" (Rossi, 1955, p. 41).

In beginning the exploration of the complex relation between fascism and industry, it is necessary as a first step to outline briefly the structure of Confindustria and Assonime during the years of the birth of the fascist movement and of the success of Mussolini.

Following the experience of local entrepreneurial associations in Milan, Genoa and Biella between 1902 and 1906, and the establishment of the Lega Industriale of Turin, Confindustria was founded on May $5^{\text {th }} 1910$ with the goal of coordinating at the national level the initiatives of entrepreneurs in their relations with the trades union and both the central and local governments. The founder of this employers' association was Gino Olivetti, the general secretary of the Lega Industriale, and an expert of industrial organization. He was the general director of Confindustria until 1934.

Confidustria's first president was Luigi Bennefon Craponne, a French silk industrialist who was in office until 1913. In the years 1914-1918 he was followed by Ferdinando Bocca, the head of a leather tanning industry. In 1919 Confindustria had two presidents, first Dante Ferraris, who resigned because he was nominated Minister of Industry, Commerce and Work (Ministro dell'industria, commercio e lavoro) in the Nitti government, and then Giovanni Battista Pirelli, who headed the most important Italian tyre factory. Giovanni Silvestri took office as president in the years 1919-1920. With his Officine Meccaniche Miani-Silvestri, he is considered one of the pioneers of the Italian mechanics industry. Silvestri was followed by Ettore Conti (1920-1921), who boosted the exploitation of hydraulic force for producing electric energy in Northern Italy. From 1922 to 1923 the president was Raimondo Targetti,
who operated in the wool industry. Targetti was succeeded by Antonio Stefano Benni, who stayed on until 1934. Benni headed Fabbrica Italiana Magneti Marelli, a factory of electrical machinery.

Assonime was founded on November $22^{\text {nd }} 1910$ on the initiative of 53 businessmen on behalf of 181 companies. Their objective was to reduce the sphere of state intervention in the economy and to obtain tax cuts for joint-stock companies. The following year 503 companies joined Assonime. Carlo Esterle, one of the pioneers of the electrical industry in Italy, was the president of Assonime from its foundation to 1917. Esterle was followed by Ferraris, who held the position of president until 1919. Luigi Volpi di Misurata succeeded Ferraris. His main company was the electrical company Società Adriatica di Elettricità. From 1921 to 1922 the president of Assonime was Silvestri. In the years 1922-1924 the office was held by Conti, who was followed by Alberto Pirelli, son of Giovanni Battista, who held the position until 1945.

Confindustria was formed as an apolitical association. Olivetti, aiming to achieve consensus among the members of the association, decided that Confindustria did not support explicitly any political parties (Belloni, 2011, chapters 1 and 2 ). This resolution was soon disputed in 1911, when a government monopoly of life assurances was planned, and in 1913 when the government threatened to expel president Craponne from Italy for public nuisance because he was embarking on a lockout of the automobile industry in Turin in reaction to workers' strikes. In 1915 Confindustria officially took an interventionist position with regard to the war. In the elections of 1919 Olivetti became deputy in the ranks of the right wing of the Liberal Party and, henceforth, effectively acted as a hinge between the industrial and the political classes.

We have now covered the ground necessary to understand why Confindustria made a stand for fascism immediately after the March on Rome.

The anti-union bias, which from 1920 increasingly characterized the fascist movement, undoubtedly appealed to Italian magnates. The wave of strikes that began in the spring of 1919 as a reaction to the heavy economic crisis that beset Italy in the wake of World War One, resulted in the occupation of metallurgic factories throughout Italy in September 1920. Workers demanded not only a wage rise and an eight-hour working day, but also the establishment of workers committees in the factories. These committees, they insisted, should take active part in the company management.

The Giolitti government (June $16^{\text {th }}, 1920$ - July $4^{\text {th }}, 1921$ ) remained neutral and refrained from calling out the police in order to free the factories (such as for example FIAT in Turin) that were occupied. Instead, Giolitti resolved to wait for the realization of a compromise solution between workers and industrialists.

Olivetti set out Confindustria's intransigent position against workers committees in March 1920, during a meeting of Confindustria delegates in Milan. Olivetti's position was grounded on matters of principle and practice: the former in relation to the revolutionary bias of the proposal; the latter arose from the fact that the workers committees were to be self-governing bodies, so industrialists could not negotiate collective agreements, as in the case of trade unions.

Probably, Confindustria's intransigence was not free from political opportunism, with
the industrialists hoping for some government benefits in order to sweeten the search for a compromise solution (Vivarelli, 1992, vol. II. pp. 592-646). As we know, the first financial provisions of the Giolitti government caused a widespread outcry in industrial and financial circles. On September $24^{\text {th }} 1922$, the government passed laws according to which 1 ) the state took upon itself the extra profits generated by the war; 2 ) a parliamentary committee would conduct an inquiry into the war expenses; 3 ) the rate of probate duty would become more progressive; 4) the motor vehicle excise duty would increase; 5) it was obligatory to register all financial bonds, with the exception of government securities.

With these measures, Giolitti aimed to better the conditions of the working classes in order to pave the way to the abrogation of the 'political price' of bread. Nevertheless, his economic policy had deflationary effects and no provision had been made about customs policy and farm aid.

In such a strained political situation, the occupation of factories was not just a matter of public order. In the end, the government encouraged a resolution of the industrial disputes that favoured the workers. On September $20^{t h} 1922$ the trades unions (Fiom and C.G.L.) and Confindustria drew up an agreement. The terms agreed granted an improvement in the economic and working conditions of the workers and, more importantly, the possibility of introducing "workers' control" inside the factories.

Giolitti's choice of neutrality had overlooked the fact that the workers' demands followed in the wake of the Russian Revolution and, for industrialists, the establishment of something like workers committees inside their factories could appear as the first step towards the abrogation of private property. As we have already seen, in the general context of parliamentary weakness, Mussolini took advantage of the industrialist's perception of a communist threat and was able to present the PNF to the public as an opponent of union demands and as a means of maintain public order by means of the fascist action squads.

In recent years, historical research has enriched our knowledge of the origin of the flow of capital that financed Mussolini's political project in its initial stages. According to De Felice (1966b, p. 277), Il Popolo d'Italia, the newspaper founded in 1914 by Mussolini in Milan, was financed by capital from some French political circles and also a group of Italian industrialists interested in Italy's entry into the War. These Italian industrialists were Ferdinando Maria Perrone (his Ansaldo was an iron and steel business), Esterle (his Edison was an electrical industry), Giovanni Agnelli, the founder of FIAT, Emilio Bruzzone (his Unione Zuccheri was a sugar industry) and Vittorio Emanuele Parodi (the owner of shipping company). Our survey of the pages of Popolo d'Italia in search of the companies who bought advertising space, allows us to add Società italiana per le lampade eletteriche Z (which was a company of the Edison group), Pirelli, Officine Meccaniche Miani Silvestri, Migone (which was a chemical industry) to the financing group of Mussolini. We remind the reader that in 1914 Esterle was the president of Assonime, while Giovanni Battista Pirelli and Silvestri headed Confindustria in the years from 1919 to 1920.

Archival research has proved that Banca Commerciale Italiana (hereafter, COMIT) provided official financial support to Mussolini's newspaper (Fabre, 2003, Barbone, 2003).

The question of the extent of Italian magnates' support for Mussolini is controversial; without any presumption of completeness, we would like to offer a few remarks. Probably
the initial support for Mussolini's political project by some Italian magnates arose out of the possibility of an increase in profits due to the job order for the war. On the other hand, support of Mussolini during the days of the March on Rome appears to relate to the desire for stable government. On October $28^{\text {th }} 1922$, a group of magnates that included Alberto Pirelli, Olivetti, Conti, and Benni met Mussolini in Milan. There are many different versions of the meeting, but the official statement issued by Confindustria on November $1^{\text {st }} 1922$ is unquestionable ${ }^{[12}$

The financial policy of the first Mussolini government leaned toward laissez-faire. One of the first act of the government was to revoke the law of 1922 on financial bonds. The minister De Stefani simplified the taxation system and cut down the rate of duties on profits and on new industrial constructions in order to foster the accumulation of capital. With the aim of reaching a break-even point, he pursued a policy of retrenchment in the administration of the national railways and postal services. In November 1923, 65.000 temporary state employees were dismissed (Toniolo, 1980, chapter II).

However, the rescue of Ansaldo, Banco di Roma (a bank) and Ilva (a metallurgic business) did not fit the laissez-faire economic policy of the first Mussolini government. In the case of Ansaldo, the government implemented the measures worked out by the Facta government and disbursed subsidies to Ansaldo. But the rescue of Banco di Roma by way of a handout was an initiative of the Mussolini government. In the case of Ilva, the rescue was made by two banks: COMIT and Credito Italiano. The government reduced the amount of the debts of Ilva to the state for non-payment of taxes and some prepaid orders that had not been met.

The years of the first Mussolini government were characterized by rapid industrial growth generated by an increase in investment and exports, which was nevertheless realized by means of a policy of low wages that had the result of promoting labor intensive manufacturing and making Italy less competitive in the international context in the following years.

## 4. Dataset characteristics: Il Sole and IMITA.db

Our empirical analysis is based on daily stock prices from the Milan Stock Exchange (MSE, hereinafter) covering the period from July, 1922 to February, 1923. Being an exploration into the early twentieth century, we highly depend on local data sources. In particular, data comes from the financial newspaper 'Il Sole: organo ufficiale della Camera di commercio e industria di Milano ${ }^{13}$ Besides daily price quotations, this specialised publication contains a weekly summary with additional data concerning, for example, the nominal value of each security, as well as the performance of Italian state bonds.

[^4]Moreover, as regards complementary firm characteristics for those enterprises operating in the MSE, like industry classification, regional origin, a synthetic balance sheet, as well as the composition of the Board of Directors, we have used the 'IMITA.db' database ${ }^{14]}$ This database contains a digitalization and codification of a series of Yearbooks published by Credito Italiano (1919, 1921, 1923, 1926) and Associazione fra le società italiane per azioni (1928, 1937), including firm-level data for some benchmark years (e.g. 1921, 1927, 1936). ${ }^{15}$ Query capabilities allowed us to perform specific search operations by different criteria, and download one database record at a time. Hence, once the list of business firms operating in the MSE has been defined, specific search and download operations have been performed.

Afterwards, both data sources ('Il Sole' and 'IMITA.db') have been merged into a unified relational database, matching firms in the financial newspaper with those appearing in IMITA. Given the different labels employed by each data source, in some cases, this matching operation has required to proceed with great care ${ }^{16}$

## 5. Identification of connected firms

A pervasive feature of Italian capitalism, already present at the beginning of the $20^{\text {th }}$ century, consists in "the presence of a dense network of interests taking the form of frequent interlocking relationships among the large firms" (Colli, 2006, p. 831). Thus, in order to identify those firms operating in the MSE connected to the PNF, we have built and analysed a network with the structure of interlocking directorates.

Specifically, we proceeded as follows. First, by using the IMITA database, we have identified the people belonging to the Corporate Board of each firm in the dataset. Second, we computed a distance matrix whose elements are the number of people that each pair of firms had in common. Based on such a distane matrix, we implemented and refined a community detection algorithm known as 'spectral bisection for modularity maximization' (developed by Newman, 2006a,b; Leicht and Newman, 2008) to identify firm clusters.

We identified ten such clusters, of which only one showed returns significantly higher than the market model average ${ }^{17}$

The list of connected firms, belonging to cluster $1\left(C L_{1}\right)$, is reported in Table 1; while the composition of non-connected clusters, from cluster 2 to cluster 10, is reported in Table 2. Looking at the individuals enabling key connections among firms in each cluster, we identified a set of people who actually had close connections to Mussolini. ${ }^{18}$

Thus, the logic of our empirical strategy may be termed as follows. On the basis of an unsupervised statistical learning algorithm we unconvered the community structure of the

[^5]graph of interlocking directorates of Italian firms operating in the MSE. Then, we studied whether any of these clusters (bond together thanks to individuals participating in different corporate boards) outperformed the market on the event of Mussolini's rise to power. As it turned out, only one cluster of firms had this feature. When studying the individuals at the basis of this cluster, we could assert that they had indeed a connection to the Fascist environment. Thus, a machine learning algorithm together with historiographic analysis of individuals emerging from it allowed us to establish a link between political connections and stock market returns.

Figure 1 depicts the graph of the Italian MSE Corporate Network reflecting interlocking directorates.

Table 1: Clusters of Firms according to the shared members of their respective Corporate Boards
(Benchmark year: 1921; Cluster 1 identifies firms connected to the Fascist environment)

| Ticker | Descriptor | ATECO | ATECO-Desc | Cluster |
| :---: | :---: | :---: | :---: | :---: |
| Agr_FonRust | ISTITUTO DI FONDI RUSTICI SOCIETÅ AGRICOLA INDUSTRIALE ITALIANA | A01 | Agriculture | 1 |
| FB_Distillerie | DISTILLERIE ITALIANE | DA15 | Food-beverages | 1 |
| FB_Eridiana | ERIDANIA SOCIETÀ INDUSTRIALE | DA15 | Food-beverages | 1 |
| FB_Gulinelli | ZUCCHERIFICIO E DISTILLERIA ALCOOLS GULINELLI | DA15 | Food-beverages | 1 |
| FB_IndZuc | SOCIETÀ ITALIANA PER L'INDUSTRIA DELLO ZUCCHERO INDIGENO | DA15 | Food-beverages | 1 |
| FB_MolAltaIt | MOLINI ALTA ITALIA | DA15 | Food-beverages | 1 |
| FB_Raffinerie | SOCIETÀ LIGURE LOMBARDA PER LA RAFFINAZIONE DEGLI ZUCCHERI | DA15 | Food-beverages | 1 |
| Cot_Trobaso | COTONIFICIO DI TROBASO | DB17 | Textiles | 1 |
| Cot_Turati | COTONIFICIO FRANCESCO TURATI | DB17 | Textiles | 1 |
| Cot_Venez | COTONIFICIO VENEZIANO | DB17 | Textiles | 1 |
| Tess_CascSeta | FILATURA DEI CASCAMI DI SETA | DB17 | Textiles | 1 |
| Tess_UnManiff | UNIONE MANIFATTURE | DB17 | Textiles | 1 |
| Chi_Bonelli | FABBRICHE ITALIANE MATERIE COLORANTI BONELLI | DG24 | Chemicals | 1 |
| Equip_Ansaldo | ITALIANA GIO. ANSALDO \& C. | DK29 | Machinery-equipment | 1 |
| Elett_Adriatica | SADE SOCIETÀ ADRIATICA DI ELETTRICITÀ | E40 | Electricity-gas | 1 |
| Elett_UnEsEl | UNES UNIONE ESERCIZI ELETTRICI | E40 | Electricity-gas | 1 |
| Tran_VeneteS | VENETA PER COSTRUZIONE ED ESERCIZIO DI FERROVIE SECONDARIE ITALIANE | I60 | Land-transport | 1 |
| Fin_BdI | BANCA D'ITALIA | J65 | Finance | 1 |
| Fin_BdRoma | BANCO DI ROMA | J65 | Finance | 1 |

Source: Own computations based on IMITA.db

## 6. An event-study on stock market returns

Once connectedness has been established, to measure its effect on stock market returns we followed the event-study methodology (MacKinlay, 1997). Our event window covered the March on Rome. ${ }^{19}$ More precisely, a 21-day event window is employed, comprised of 10

[^6]Table 2: Clusters of Firms according to the shared members of their respective Corporate Boards
(Benchmark year: 1921)

| Clusters of Other Firms |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Ticker | Descriptor | ATECO | ATECO-Desc | Cluster |
| Min_Elba | ELBA SOCIETA ANONIMA DI MINIERE E DI ALTI FORNI | CB13 | Metal-ores | 2 |
| Tess_Targetti | LANIFICIO TARGETTI | DB17 | Textiles | 2 |
| Tess_Tosi | MANIFATTURA TOSI | DB17 | Textiles | 2 |
| Tss_ManDini | MANIFATTURE TOSCANE RIUNITE | DB17 | Textiles | 2 |
| Chi_Elettroc | SOCIETÀ ITALIANA DI ELETTROCHIMICA | DG24 | Chemicals | 2 |
| Chi_Montecat | MONTECATINI | DG24 | Chemicals | 2 |
| Met_Ilva | ILVA ALTI FORNI E ACCIAIERIE D'ITALIA | DJ27 | Basic-metals | 2 |
| TE_Reggiane | OFFICINE MECCANICHE ITALIANE | DM35 | Transport-equip | 2 |
| Elett_Terni | TERNI SOCIETÀ PER L'INDUSTRIA E L'ELETTRICITÀ | E40 | Electricity-gas | 2 |
| RT_Rinasc | LA RINASCENTE SOCIETÀ PER L'ESERCIZIO DI GRANDI MAGAZZINI | G52 | Retail-trade | 2 |
| Tran_FerMed | SOCIETÀ ITALIANA PER LE STRADE FERRATE DEL MEDITERRANEO | I60 | Land-transport | 2 |
| Fin_BCItal | BANCA COMMERCIALE ITALIANA | J65 | Finance | 2 |
| Fin_Brasital, Fin_EspItalAm | SOCIETÀ PER L'ESPORTAZIONE E PER L'INDUSTRIA ITALO AMERICANA | J65 | Finance | 2 |
| Cer_RichGin | CERAMICA RICHARD GINORI | DI26 | Non-metallic-mineral | 3 |
| Chi_SNIA | SNIA VISCOSA SOCIETȦ NAZIONALE INDUSTRIE APPLICAZIONI VISCOSA | DG24 | Chemicals | 4 |
| Met_Metalli | METALLURGICA ITALIANA | DJ27 | Basic-metals | 4 |
| MV_FIAT | F.I.A.T. | DM34 | Motor-vehicles | 4 |
| TE_MianiSilv | OFFICINE MECCANICHE | DM35 | Transport-equip | 4 |
| Elett_LigTosc | SOCIETÀ LIGURE TOSCANA DI ELETTRICITÀ | E40 | Electricity-gas | 4 |
| Elett_Vizzola | VIZZOLA SOCIETÀ LOMBARDA PER DISTRIBUZIONE DI ENERGIA ELETTRICA | E40 | Electricity-gas | 4 |
| Tran_LibTries | NAVIGAZIONE LIBERA TRIESTINA | I61 | Water-transport | 4 |
| Tcom_Marconi | SOCIETÀ ITALIANA SERVIZI RADIOTELEGRAFICI E RADIOTELEFONICI | I64 | Post-Telecomm | 4 |
| Chi_PirelliC | PIRELLI \& C. | J65 | Finance | 4 |
| Fin_CredItal | CREDITO ITALIANO | J65 | Finance | 4 |
| MV_Bianchi | FABBRICA AUTOMOBILI E VELOCIPEDI EDOARDO BIANCHI | DM34 | Motor-vehicles | 5 |
| MV_IsFrasc | FABBRICA AUTOMOBILI ISOTTA FRASCHINI | DM34 | Motor-vehicles | 5 |
| Elett_Adamello | GENERALE ELETTRICA DELL'ADAMELLO | E40 | Electricity-gas | 5 |
| Elett_Bresciana | ELETTRICA BRESCIANA | E40 | Electricity-gas | 5 |
| Elett_Conti | SOCIETÀ ANONIMA PER IMPRESE ELETTRICHE CONTI | E40 | Electricity-gas | 5 |
| Elett_Edison | SOCIETÀ GENERALE ITALIANA EDISON DI ELETTRICITÀ | E40 | Electricity-gas | 5 |
| Elett_Negri | SOCIETÀ ELETTRICA RIVIERA DI PONENTE ING. R. NEGRI | E40 | Electricity-gas | 5 |
| Tran_NavGenIt | NAVIGAZIONE GENERALE ITALIANA | I61 | Water-transport | 5 |
| Fin_FerNaz | SOCIETÀ ITALIANA PER LE STRADE FERRATE MERIDIONALI | J65 | Finance | 5 |
| Cot_Merid | MANIFATTURE COTONIERE MERIDIONALI | DB17 | Textiles | 6 |
| Cot_Cant | COTONIFICIO CANTONI | DB17 | Textiles | 7 |
| Cot_Furter | COTONIFICIO FURTER | DB17 | Textiles | 7 |
| Cot_ValSer | COTONIFICIO DELLA VALLE SERIANA | DB17 | Textiles | 7 |
| Cot_ValTicino | COTONIFICIO VALLE TICINO | DB17 | Textiles | 7 |
| Tess_DeAngeli | DE ANGELI FRUA SOCIETÀ PER L'INDUSTRIA DEI TESSUTI STAMPATI | DB17 | Textiles | 7 |
| Tess_Gavardo | LANIFICIO DI GAVARDO | DB17 | Textiles | 7 |
| Tess_Pacch | MANIFATTURA ITALIANA CARLO PACCHETTI | DB17 | Textiles | 7 |
| Tess_Rossi | LANIFICIO ROSSI | DB17 | Textiles | 7 |
| Tess_RossVarz | MANIFATTURA ROSSARI \& VARZI | DB17 | Textiles | 7 |
| Tess_Rotondi | MANIFATTURA ROTONDI | DB17 | Textiles | 7 |
| Met_FrGreg | ALTI FORNI FONDERIE ACCIAIERIE E FERRIERE FRANCHI GREGORINI | DJ27 | Basic-metals | 7 |
| Met_Camona | OFFICINE DI SESTO SAN GIOVANNI \& VALSECCHI ABRAMO | DJ28 | Fabricated-metals | 7 |
| TE_Breda | ITALIANA ERNESTO BREDA PER COSTRUZIONI MECCANICHE | DM35 | Transport-equip | 7 |
| Tess_CanapNaz | LINIFICIO E CANAPIFICIO NAZIONALE | DB17 | Textiles | 8 |
| Man_Mira | FABBRICA CANDELE STEARICHE DI MIRA | DN36 | Manufacturing-nec | 8 |
| Min_Petroli | PETROLI D'ITALIA | CA11 | Petroleum-Gas | 9 |
| Tess_Bernasc | TESSITURE SERICHE BERNASCONI | DB17 | Textiles | 9 |
| Cot_ValOlon | COTONIFICIO VAL D'OLONA OGNA CANDIANI | DB17 | Textiles | 10 |

Source: Own computations based on IMITA.db


Figure 1: Graph of the Italian MSE Coroporate Network reflecting interlocking directorates
(Benchmark year: 1921; Orange nodes represent firms belonging to the connected cluster; Nodes' size reflects degree)
pre-event days, the event day (October $28^{\text {th }}, 1922$ ), and 10 post-event days ${ }^{20}$

[^7]Moreover, as shown in Figure 2, each event window $\left(T_{1}, T_{2}\right]$ has a prior estimation window $\left(T_{0}, T_{1}\right]$, as well as a post-event window $\left(T_{2}, T_{3}\right]$. Their length is established in relation to that of the event window, deciding also upon the level of granularity of stock market data (daily, weekly, monthly) ${ }^{21}$ In particular, our estimation window covers the three-month period before the event window (i.e. July-October, 1922), and we have performed a weekly analysis based on daily data for stock prices.


Figure 2: Time line for an event study. Source: MacKinlay (1997, p. 20)
When the interest lies in testing an hypothesis on the relation between excess returns and firm characteristics, the logic of event studies consists in a three-step procedure: (i) estimate expected (or normal) returns without conditioning on the event taking place (i.e. during the estimation window), (ii) use these point estimates to linearly project abnormal returns (i.e. the difference between actual and estimated normal returns) during the event window, and (iii) adopt a cross-sectional regression approach to study how much of the variation in log-returns is explained by specific firm characteristics like, for example, being politically connected to the Fascist regime. A statistically significant coefficient associated to this feature would measure the value of political connections.

As regards step (i), we have estimated for each security expected returns by means of the market model MacKinlay, 1997, p. 18) ${ }^{22}$ As to step (ii), we computed cumulated abnormal returns (CAR) during the 21-day event window for each security and, finally, as regards step (iii), we estimated the conditional expectation of stock market returns, conditioned to belonging to the cluster of connected firms, as well as to other firm characteristics.

## 7. Methodology, empirical strategy and presentation of results

### 7.1. Computation of basic variables

Log-Returns at time $\tau$ for each security $i$ have been computed as:

$$
R_{i, \tau}=\ln \left(1+\frac{p_{i, \tau+1}-p_{i, \tau}}{p_{i, \tau}}\right), \quad i=1, \ldots, n, \quad \tau \in\left(T_{0}, T_{3}\right]
$$

[^8]where $p_{i, \tau}$ is the closure price of the stock market security $i$ on day $\tau$, and $n=72$ is the number of securities traded in the MSE for which we had all the information required.

The MSE market average log-return $R_{m, \tau}$ has been obtained instead as:

$$
R_{m, \tau}=\frac{\sum_{i=1}^{n} R_{i, \tau} \times M K_{i, \tau}}{\sum_{i=1}^{n} M K_{i, \tau}}, \quad \tau \in\left(T_{0}, T_{3}\right]
$$

where $M K_{i . \tau}$ is the market capitalization of security $i$ at time $\tau$.


Figure 3: Market Return weighted by capitalization for the entire 26-week period (Jul, 1922 - Feb, 1923)
In order to build a measure of market capitalization $M K_{i, \tau}$, we have estimated the number of shares outstanding for each firm. In particular, we computed:

$$
M K_{i, \tau}=\frac{S K_{i}}{N V_{i}} \times p_{i, \tau}, \quad i=1, \ldots, n, \quad \tau \in\left(T_{0}, T_{3}\right]
$$

where $S K_{i}$ is the share capital of the firm and $N V_{i}$ is the nominal value of the security, for the benchmark year adopted.

Moreover, dividend payments per share $\left(D p S_{i}\right)$ for each firm have been estimated combining data on dividends from balance sheet records in IMITA.db and the shares outstanding previously obtained:

$$
D p S_{i}=\frac{N V_{i}}{S K_{i}} \times D I V_{i}, \quad i=1, \ldots, n
$$



Figure 4: Unweighted Market Return for the entire 26-week period (Jul, 1922 - Feb, 1923)
where $D I V_{i}$ is the dividend payments obtained from the balance sheet for 1922 of firm $i$.
Market capitalization $\left(M K_{i, \tau}\right)$ and dividends per share $\left(D p S_{i}\right)$, however, are built from data which has an annual frequency, while our period of interest covers not only JulyDecember, 1922, but also January-February, 1923. As a methdological choice, for data points regarding 1923 we considered more appropriate to use data corresponding to the year 1922. In fact, since we have been considering only the first two months of 1923, using data concerning the whole year 1923, given the nature of the present analysis, would have implied incorporating into our regressions the effect of events taking place way beyond the event window of interest.

### 7.2. Analysis of Abnormal Log-returns and Cumulated Abnormal Log-returns

In concrete terms, to begin with, we considered the following linear probability model for each firm during the three-month estimation window (July-October, 1922):

$$
\begin{align*}
& R_{i, \tau}=\alpha_{i}+\gamma_{i} R_{m, \tau}+\varepsilon_{i, \tau}, \quad i=1, \ldots, n, \quad \tau \in\left(T_{0}, T_{1}\right]  \tag{1}\\
& \text { s.t. } \quad E\left(\varepsilon_{i, \tau} / R_{m, \tau}\right)=0, \quad V\left(\varepsilon_{i, \tau} / R_{m, \tau}\right)=\sigma_{\varepsilon_{i}}^{2}
\end{align*}
$$

which has been estimated using the OLS method, obtaining $\hat{\alpha}_{i}$ and $\hat{\gamma}_{i}$, for each firm $i$.
We have then estimated abnormal log-returns (AR, hereinafter) for firm $i$ at time $\tau$ during the event-window ( $T_{1}, T_{2}$ ] by computing:

$$
\begin{equation*}
A R_{i, \tau}=R_{i, \tau}-\hat{\alpha}_{i}-\hat{\gamma}_{i} R_{m, \tau}, \quad \tau \in\left(T_{1}, T_{2}\right] \tag{2}
\end{equation*}
$$

As rendered clear in equation (2), $A R_{i, \tau}$ "is the disturbance term of the market model calculated on an out of sample basis" (MacKinlay, 1997, p. 20). In fact, point estimates of $\alpha_{i}$ and $\gamma_{i}$ for the period ( $T_{0}, T_{1}$ ] have been used to compute ARs during the event window $\left(T_{1}, T_{2}\right] \cdot{ }^{23}$

Using the aggregation rules specified in MacKinlay (1997), we have computed cumulated abnormal log-returns (CAR, hereinafter) for each firm $i$ during the event window ( $T_{1}, T_{2}$ ]:

$$
C A R_{i}\left(\tau_{1}, \tau_{2}\right)=\sum_{\tau=\tau_{1}}^{\tau_{2}} A R_{i, \tau}, \quad T_{1}<\tau_{1} \leq \tau_{2} \leq T_{2}
$$

as well as ARs and CARs for the group of connnected firms ( $n_{\text {con }}$ ) and for the rest of firms operating in the MSE $\left(n_{\text {ncon }}\right)$ :

$$
\begin{aligned}
& A R_{\text {con }, \tau}=\frac{1}{n_{\text {con }}} \sum_{i=1}^{n_{\text {con }}} A R_{i, \tau}, \quad A R_{\text {ncon }, \tau}=\frac{1}{n_{\text {ncon }}} \sum_{i=1}^{n_{\text {ncon }}} A R_{i, \tau}, \quad \tau \in\left(T_{1}, T_{2}\right] \\
& C A R_{\text {con }}\left(\tau_{1}, \tau_{2}\right)=\sum_{\tau=\tau_{1}}^{\tau_{2}} A R_{\text {con }, \tau}, \quad C A R_{\text {ncon }}\left(\tau_{1}, \tau_{2}\right)=\sum_{\tau=\tau_{1}}^{\tau_{2}} A R_{\text {ncon }, \tau}, \quad T_{1}<\tau_{1} \leq \tau_{2} \leq T_{2}
\end{aligned}
$$

[^9]A note of caution is in place concerning point estimates for ARs and averaging across firms in a setting where there is total clustering, i.e. all firms share the same chronological day for the event study (in our case, the March on Rome). While a multivariate regression model with event-date dummies would be a better model specification (given that otherwise the test statistic for the significance of the ARs may have poor finite sample properties). ${ }^{24}$ it has nevertheless been concluded that "results on specification are not radically altered in experiments where there is clustering in event dates and hence [serial] dependence of the excess return measures" (Brown and Warner, 1985). Thus, we prefer to keep the framework as simple as possible, sticking to our specification in (2).

Tables 4 and 5 report abnormal returns for all connected and non-connected firms, respectively, over the time period considered and in the different time subperiods specified above in Section 6. Table 3 summarizes abnormal returns and comulated abnormal returns for both connected and non-connected firms during the event window. Results are visualized in Figures 5 and 6 .

Table 3: Abnormal Log-Returns (ARs) and Cumulated Abnormal Log-Returns (CARs) for Connected and Other firms during the event window (Oct-Nov, 1922)

| Market model |  |  |  |  |  |
| :---: | ---: | ---: | ---: | ---: | ---: |
| Event time | $A R_{\text {con, } \tau}$ | $C A R_{\text {con }}$ |  | $A R_{\text {ncon }, \tau}$ | $C A R_{\text {ncon }}$ |
| -10 | -0.0016 | -0.0016 |  | 0.0008 | 0.0008 |
| -9 | 0.0002 | -0.0014 |  | 0.0002 | 0.0010 |
| -8 | 0.0061 | 0.0046 |  | -0.0023 | -0.0013 |
| -7 | 0.0006 | 0.0053 |  | 0.0002 | -0.0011 |
| -5 | -0.0045 | 0.0008 |  | 0.0015 | 0.0004 |
| -4 | 0.0054 | 0.0062 |  | -0.0033 | -0.0029 |
| -3 | -0.0072 | -0.0010 |  | 0.0015 | -0.0013 |
| -2 | -0.0030 | -0.0040 |  | 0.0027 | 0.0014 |
| -1 | 0.0089 | 0.0048 | -0.0035 | -0.0022 |  |
| 0 | 0.0203 | 0.0251 |  | -0.0073 | -0.0095 |
| 5 | -0.0013 | 0.0238 |  | 0.0004 | -0.0091 |
| 6 | 0.0040 | 0.0278 | -0.0015 | -0.0106 |  |
| 9 | -0.0024 | 0.0254 |  | 0.0001 | -0.0105 |
| 10 | 0.0033 | 0.0287 |  | -0.0012 | -0.0117 |
| 11 | 0.0014 | 0.0300 | -0.0008 | -0.0125 |  |
| 12 | 0.0033 | 0.0333 | 0.0001 | -0.0124 |  |
| 13 | 0.0009 | 0.0343 |  | 0.0008 | -0.0116 |
| 14 | -0.0106 | 0.0237 |  | 0.0064 | -0.0052 |
| 16 | -0.0036 | 0.0201 |  | 0.0003 | -0.0049 |
| 17 | 0.0083 | 0.0284 | -0.0050 | -0.0099 |  |
| 18 | 0.0028 | 0.0312 |  | 0.0006 | -0.0094 |

Source: Own computations based on Il Sole Financial Newspaper and IMITA.db

As can be seen from Figure 5, the evolution of abnormal returns in the days before the March on Rome was characterized, for both groups, by strong fluctuations; on day zero,

[^10]connected firms' abnormal returns peaked, being much higher than those of non-connected ones. In the following days, ARs started fluctuating again, but in a smoother way; in general, and with the exception of day 14, ARs for connected firms were higher than for non-connected ones ${ }^{255}$


Figure 5: Abnormal Returns for Connected and Other firms during the event window


Figure 6: Cumulated Abnormal Returns for Connected and Other firms during the event window
Figure 6 reports cumulated abnormal returns for both connected and non-connected firms. As can be seen, the former group was characterized, during the event window, by

[^11]higher CARs than non-connected ones, the gap between the two groups opening exactly in correspondence of the March on Rome.

Table 4: Summary of Abnormal Log-Returns (ARs) for connected firms
(21-day event window, Oct-Nov, 1922)

| Ticker | Cluster | ATECO | ARs for the Market model |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\overline{A R}_{i, p r e-e v e n t}$ | $A R_{i, \text { event }}$-1 | $A R_{i, \text { event }}$ | $\overline{A R}_{i, p o s t-e v e n t}$ | $\overline{A R}_{i}$ |
| Equip_Ansaldo | 1 | DK29 | -0.0067 | 0.0262 | 0.0970 | 0.0011 | 0.0039 |
| FB_Gulinelli | 1 | DA15 | 0.0040 | 0.0129 | 0.0657 | 0.0028 | 0.0067 |
| Tess_CascSeta | 1 | DB17 | 0.0019 | -0.0230 | 0.0432 | 0.0098 | 0.0068 |
| Cot_Trobaso | 1 | DB17 | -0.0162 | 0.0298 | 0.0334 | 0.0065 | 0.0003 |
| Elett_Adriatica | 1 | E40 | 0.0007 | 0.0098 | 0.0292 | 0.0011 | 0.0027 |
| Tran_VeneteS | 1 | I60 | -0.0054 | -0.0006 | 0.0292 | 0.0146 | 0.0069 |
| Cot_Venez | 1 | DB17 | 0.0049 | -0.0069 | 0.0260 | -0.0040 | 0.0007 |
| Elett_UnEsEl | 1 | E40 | 0.0003 | -0.0042 | 0.0250 | -0.0015 | 0.0003 |
| Tess_UnManiff | 1 | DB17 | -0.0035 | 0.0218 | 0.0227 | -0.0073 | -0.0030 |
| Fin_BdI | 1 | J65 | -0.0009 | 0.0032 | 0.0159 | 0.0021 | 0.0017 |
| Chi_Bonelli | 1 | DG24 | -0.0164 | 0.0102 | 0.0118 | -0.0114 | -0.0111 |
| FB_Distillerie | 1 | DA15 | 0.0058 | -0.0025 | 0.0057 | 0.0012 | 0.0030 |
| FB_Raffinerie | 1 | DA15 | 0.0023 | -0.0012 | 0.0057 | 0.0001 | 0.0011 |
| FB_IndZuc | 1 | DA15 | 0.0003 | 0.0046 | 0.0054 | -0.0003 | 0.0004 |
| Agr_FonRust | 1 | A01 | 0.0084 | 0.0429 | 0.0050 | 0.0027 | 0.0069 |
| Fin_BdRoma | 1 | J65 | 0.0001 | -0.0006 | -0.0006 | 0.0000 | 0.0000 |
| Cot_Turati | 1 | DB17 | 0.0017 | 0.0146 | -0.0014 | -0.0048 | -0.0012 |
| FB_Eridiana | 1 | DA15 | 0.0036 | 0.0030 | -0.0017 | -0.0008 | 0.0010 |
| FB_MolAltaIt | 1 | DA15 | 0.0056 | 0.0287 | -0.0317 | -0.0014 | 0.0013 |

Source: Own computations based on Il Sole Financial Newspaper and IMITA.db

### 7.3. Cross-sectional effect of connectedness on stock returns

At this point, we estimated the value of Fascist affiliations. Following the methodological blueprint of Ferguson and Voth (2008), we asserted the effect on the cross-section of logreturns of political connectedness for firms operating in the MSE between July, 1922 and February, 1923, considering additional controls.

Before proceeding with the analysis of the results, Table 6 provides some descriptive statistics of the sample used, for connected and non-connected firms, both before and after the March on Rome. The sample includes 70 firms, 19 connected and 51 non-connected.

First of all, we can see that market capitalization was higher, in both periods, for nonconnected firms; however, the gap reduced after the March. Mean dividend yields are also higher for non-connected firms; contrarily to market capitalization, the difference between the two groups deepened after the March. Mean log-returns were higher for connected firms in both time periods; however, whereas the difference between the two groups was smaller before ( 0.0138 as against 0.0105 ), such a difference became wider after the March, with average log-returns for non-connected firms becoming negative ( 0.0063 versus -0.0006 ).

Given the fact that our database includes quite a small number of firms, we used weekly rather than monthly returns. Moreover, in order to keep as much information as possible, we decided to compute average weekly returns, i.e. computing for each week average quotations,

Table 5: Summary of Abnormal Log-Returns (ARs) for non-connected firms

| Ticker | Cluster | ATECO | ARs for the Market model |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\overline{A R}_{i, p r e-e v e n t}$ | $A R_{i, \text { event }}$ - 1 | $A R_{i, \text { event }}$ | $\overline{A R}_{i, p o s t-e v e n t}$ | $\overline{A R}_{i}$ |
| Cot_ValOlon | 0 | DB17 | 0.0035 | 0.0370 | 0.0075 | -0.0111 | -0.0024 |
| TE_Reggiane | 2 | DM35 | -0.0162 | 0.1404 | 0.1045 | 0.0040 | 0.0076 |
| Tss_ManDini | 2 | DB17 | 0.0022 | 0.0414 | 0.0709 | 0.0047 | 0.0087 |
| Min_Elba | 2 | CB13 | 0.0015 | 0.0419 | 0.0636 | 0.0019 | 0.0066 |
| Tran_FerMed | 2 | I60 | 0.0041 | -0.0129 | 0.0380 | 0.0176 | 0.0120 |
| Chi_Montecat | 2 | DG24 | 0.0011 | -0.0145 | 0.0277 | -0.0079 | -0.0031 |
| Tess_Targetti | 2 | DB17 | 0.0067 | -0.0368 | 0.0252 | -0.0096 | -0.0030 |
| Chi_Elettroc | 2 | DG24 | -0.0024 | 0.0191 | 0.0213 | 0.0115 | 0.0070 |
| Fin_BCItal | 2 | J65 | 0.0000 | -0.0035 | 0.0167 | 0.0038 | 0.0026 |
| Fin_Brasital | 2 | J65 | -0.0026 | 0.0118 | 0.0139 | -0.0022 | -0.0009 |
| Elett_Terni | 2 | E40 | -0.0045 | 0.0083 | 0.0116 | 0.0018 | 0.0002 |
| Met_Ilva | 2 | DJ27 | 0.0055 | 0.0012 | 0.0017 | -0.0032 | 0.0005 |
| Tess_Tosi | 2 | DB17 | 0.0030 | 0.0065 | -0.0021 | -0.0097 | -0.0037 |
| RT_Rinasc | 2 | G52 | -0.0158 | 0.0081 | -0.0032 | -0.0007 | -0.0062 |
| Fin_EspItalAm | 2 | J65 | -0.0025 | -0.0074 | -0.0087 | -0.0081 | -0.0059 |
| Cer_RichGin | 3 | DI26 | -0.0103 | 0.0256 | 0.0294 | -0.0032 | -0.0030 |
| MV_FIAT | 4 | DM34 | 0.0010 | 0.0045 | 0.0307 | 0.0045 | 0.0044 |
| Met_Metalli | 4 | DJ27 | 0.0046 | 0.0110 | 0.0206 | -0.0041 | 0.0011 |
| Chi_SNIA | 4 | DG24 | -0.0022 | 0.0306 | 0.0166 | -0.0052 | -0.0013 |
| Tran_LibTries | 4 | I61 | -0.0021 | 0.0068 | 0.0124 | 0.0036 | 0.0020 |
| Fin_CredItal | 4 | J65 | 0.0008 | 0.0041 | 0.0123 | 0.0028 | 0.0026 |
| TE_MianiSilv | 4 | DM35 | 0.0065 | -0.0026 | 0.0123 | -0.0017 | 0.0020 |
| Chi_PirelliC | 4 | J65 | 0.0023 | 0.0009 | 0.0033 | 0.0042 | 0.0033 |
| Elett_LigTosc | 4 | E40 | 0.0012 | 0.0040 | 0.0019 | 0.0071 | 0.0045 |
| Elett_Vizzola | 4 | E40 | 0.0016 | 0.0078 | -0.0018 | -0.0029 | -0.0006 |
| Tcom_Marconi | 4 | I64 | -0.0052 | 0.0206 | -0.0514 | -0.0120 | -0.0097 |
| Fin_FerNaz | 5 | J65 | -0.0018 | 0.0074 | 0.0352 | 0.0078 | 0.0054 |
| MV_Bianchi | 5 | DM34 | 0.0086 | 0.0433 | 0.0200 | -0.0016 | 0.0055 |
| Elett_Conti | 5 | E40 | 0.0008 | 0.0144 | 0.0113 | 0.0003 | 0.0017 |
| Tran_NavGenIt | 5 | I61 | 0.0028 | 0.0041 | 0.0087 | 0.0047 | 0.0041 |
| Elett_Bresciana | 5 | E40 | 0.0054 | 0.0020 | 0.0084 | -0.0005 | 0.0023 |
| Elett_Edison | 5 | E40 | 0.0038 | -0.0010 | 0.0081 | -0.0008 | 0.0014 |
| Elett_Adamello | 5 | E40 | 0.0016 | 0.0265 | -0.0130 | 0.0089 | 0.0059 |
| Elett_Negri | 5 | E40 | -0.0226 | 0.0490 | -0.0279 | -0.0049 | -0.0102 |
| MV_IsFrasc | 5 | DM34 | 0.0054 | 0.0565 | -0.0403 | 0.0047 | 0.0053 |
| Cot_Merid | 6 | DB17 | 0.0056 | 0.0046 | 0.0356 | 0.0005 | 0.0043 |
| Cot_Furter | 7 | DB17 | 0.0001 | 0.0180 | 0.0442 | 0.0035 | 0.0048 |
| Cot_Cant | 7 | DB17 | -0.0054 | 0.0150 | 0.0260 | -0.0037 | -0.0020 |
| TE_Breda | 7 | DM35 | 0.0010 | 0.0157 | 0.0216 | 0.0041 | 0.0043 |
| Tess_Pacch | 7 | DB17 | 0.0140 | 0.0016 | 0.0163 | 0.0002 | 0.0063 |
| Met_Camona | 7 | DJ28 | 0.0003 | 0.0509 | 0.0073 | -0.0005 | 0.0026 |
| Cot_ValTicino | 7 | DB17 | 0.0019 | 0.0038 | 0.0046 | -0.0031 | -0.0005 |
| Tess_DeAngeli | 7 | DB17 | 0.0072 | 0.0052 | 0.0043 | -0.0038 | 0.0012 |
| Tess_Rossi | 7 | DB17 | -0.0070 | 0.0065 | 0.0023 | 0.0000 | -0.0022 |
| Tess_Rotondi | 7 | DB17 | -0.0023 | -0.0020 | -0.0019 | 0.0007 | -0.0007 |
| Met_FrGreg | 7 | DJ27 | 0.0071 | 0.0168 | -0.0031 | 0.0040 | 0.0055 |
| Tess_RossVarz | 7 | DB17 | -0.0034 | 0.0138 | -0.0051 | -0.0094 | -0.0058 |
| Cot_ValSer | 7 | DB17 | -0.0058 | -0.0052 | -0.0188 | -0.0134 | -0.0103 |
| Tess_Gavardo | 7 | DB17 | -0.0028 | 0.0325 | -0.0287 | 0.0055 | 0.0020 |
| Tess_CanapNaz | 8 | DB17 | -0.0043 | 0.0556 | 0.0620 | 0.0196 | 0.0142 |
| Man_Mira | 8 | DN36 | 0.0005 | 0.0084 | -0.0551 | -0.0081 | -0.0063 |
| Min_Petroli | 9 | CA11 | 0.0005 | 0.0022 | 0.0024 | -0.0004 | 0.0002 |
| Tess_Bernasc | 9 | DB17 | 0.0162 | -0.9875 | -0.9861 | 0.0006 | -0.0875 |

[^12]Table 6: Descriptive Statistics


Source: Own computations based on Il Sole Financial Newspaper and IMITA.db
and then computing returns based on such averages ${ }^{[26}$
More specifically, we estimated the following equation $\sqrt{27}$

$$
\begin{equation*}
\log _{\_ \text {ret }}^{t} \text { }=\alpha_{t}+b_{t} \mathrm{CL}_{1, t}+\varepsilon_{t} \tag{3}
\end{equation*}
$$

where $\mathrm{CL}_{1, t}$ is a dummy which takes value 1 for firms in the 'connected' group.
Table 9 shows the results of including into the regressions additional variables: firmslevel market capitalisation and dividend yields, and the market $\beta$ computed against the performance of state bonds. Table 10 also includes sectoral dummies.

[^13]As can be seen from Table 9, introducing market capitalisation, which has an associated coefficient which is significant but equal to zero in both time periods, do not change estimated coefficients: belonging to the connected cluster has the effect of increasing log returns by $0.7 \%$ above the rest of firms. Dividend yields do not significantly affect log-returns before the March on Rome, but they (positively) do after; however, the introduction of this variable do not change estimated coefficient. Also in this case, belonging to $C L_{1}$ increases $\log$ returns by $0.7 \%$ above average. Conversely, the effect of market $\beta$ is positive and significant before the March, increasing log-returns by about $0.6 \%$ with respect to the rest, while it is negative, though not significant, after. Moreover, introducing beta into the estimated equation turns the coefficient associated to $C L_{1}$ significant before the March too: belonging to the connected groups makes log-return grow about $0.4 \%$ more than the remainder of firms. However, this latter effect disappears when sectoral dummies are also introduced into the estimated equation. In fact in this case, as shown in Table 10, the introduction of market $\beta$ do not turn the coefficient associated to $C L_{1}$ significant. However, in all cases considered in the right-most panel of the Table - i.e. concerning the period after the March on Rome - the effect of belonging to connected firms makes log-returns increase by about $0.5 \%$.

Table 10 also reports the coefficients associated to different sectoral dummies, the reference sector being J65, i.e. Financial intermediation ${ }^{28}$ It is interesting to have a look at which sectors are associated to above-average and below-average log-returns both before and after the March on Rome.

Looking to column (4), referring to the period before the March and showing estimations of all variables, three sectors-namely CB13 (Mining of metal ores, 0.0165), DI26 (Manufacture of other non-metallic mineral products (0.0154)), I60 (Land transport; transport via pipelines 0.0078) -are associated to above-average log-returns with $99 \%$ confidence. Sector DK29 (Manufacture of machinery and equipment) shows a significant effect on log-returns only when market $\beta$ is not included among regressors, showing that its effect on log-returns is not sector-specific but simply associated to the fact that firms in the sector are characterised, on average, by an higher value of $\beta$ itself. Moreover, two sectors - CA11 (Extraction of crude petroleum and natural gas -0.0132), DN36 (Manufacture of furniture; manufacturing n.e.c. -0.0074 ) -are characterised by below-average log-returns.

In general, sectoral effects seem weaker in the period after than before; more specifically, three sectors- (Land transport; transport via pipelines 0.0109) , I61 (Water transport 0.0044), I64 (Post and telecommunications 0.0106) -show above-average log-returns, and one -DI26 (Manufacture of other non-metallic mineral products -0.0125)—below-average returns. In this case, the introduction among regressors of market $\beta$ do not alter the significance of the coefficients at the $99 \%$ significance level.

It is worth stressing that while sector I60 is associated to above-average returns both before and after the March, though in the latter case with a smaller effect, firms operating in sector DI26 have significantly above-average returns before the March, which turn

[^14]Table 7: OLS regression, dependent variable: Log-returns. Weekly data. Column week reports results based on weekly averages rather than weekly observations. Standard errors are based on Huber-White heteroscedasticity-consistent estimates and clustered on the level of the firm. $C L_{1}$ is a dummy which takes value 1 for firms belonging to the cluster of connected firms.

|  | Before |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: |
| Constant | mon | tue | wed | thu | fri | sat | week |  |
|  | $0.0125^{* * *}$ | $0.0143^{* * *}$ | $0.0131^{* * *}$ | $0.0097^{* * *}$ | $0.0112^{* * *}$ | $0.0110^{* * *}$ | $0.0104^{* * *}$ |  |
| $C L_{1}$ | $(0.0015)$ | $(0.0016)$ | $(0.0014)$ | $(0.0012)$ | $(0.0014)$ | $(0.0013)$ | $(0.0012)$ |  |
|  | 0.0034 | 0.0043 | 0.0043 | 0.0024 | 0.0023 | 0.0045 | 0.0034 |  |
| N. Obs | $(0.0026)$ | $(0.0028)$ | $(0.0026)$ | $(0.0021)$ | $(0.0024)$ | $(0.0024)$ | $(0.0020)$ |  |
| Constant | 825 | 825 | 900 | 900 | 825 | 975 | 975 |  |
|  | mon | tue | wed | thu | fri | sat | week |  |
|  | $(0.0023$ | $-0.0025^{*}$ | $-0.0023^{*}$ | -0.0013 | -0.0016 | $-0.0030^{*}$ | -0.0007 |  |
|  | $0.0093^{* * *}$ | $(0.0011)$ | $(0.0010)$ | $(0.0010)$ | $(0.0010)$ | $(0.0013)$ | $(0.0009)$ |  |
|  | $(0.0022)$ | $\left(0.00184^{* * *}\right.$ | $0.0067^{* * *}$ | $0.0069^{* * *}$ | $0.0064^{* * *}$ | $0.0065^{* *}$ | $0.0069^{* * *}$ |  |

Source: Own computations based on Il Sole Financial Newspaper and IMITA.db
significantly below-average after.
Table 8: OLS regression based on weekly averages. Dependent variable: Log-returns. Standard errors are based on Huber-White heteroscedasticity-consistent estimates and clustered on the level of the firm. $C L_{1}$ is a dummy which takes value 1 for firms belonging to the cluster of connected firms. mkt cap stands for market capitalization; div yields for dividend yields.

| Constant | Before |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $C L_{1}$ | $C L_{2}$ | $C L_{3}$ | $C L_{4}$ | $C L_{5}$ | $C L_{6}$ | $C L_{7}$ | $C L_{8}$ | $C L_{9}$ | $C L_{10}$ |
|  | 0.0104*** | $0.0106^{* * *}$ | 0.0110*** | $0.0117^{* * *}$ | 0.0122*** | $0.0113^{* * *}$ | 0.0111*** | 0.0114*** | 0.0114*** | 0.0111*** |
|  | (0.0012) | (0.0011) | (0.0010) | (0.0010) | (0.0011) | (0.0010) | (0.0011) | (0.0010) | (0.0010) | (0.0010) |
| $C L_{i}$ | 0.0034 | 0.0029 | 0.0215*** | -0.0035 | -0.0074*** | -0.0028** | 0.0005 | -0.0067 | -0.0047 | 0.0084*** |
|  | (0.0020) | (0.0025) | (0.0010) | (0.0031) | (0.0017) | (0.0010) | (0.0024) | (0.0039) | (0.0073) | (0.0010) |
| N. Obs | 975 | 975 | 975 | 975 | 975 | 975 | 975 | 975 | 975 | 975 |
| Constant | After |  |  |  |  |  |  |  |  |  |
|  | -0.0007 | 0.0015 | 0.0014 | 0.0010 | 0.0015 | 0.0011 | 0.0014 | 0.0013 | 0.0011 | 0.0012 |
|  | (0.0009) | (0.0010) | (0.0008) | (0.0009) | (0.0008) | (0.0009) | (0.0010) | (0.0009) | (0.0009) | (0.0009) |
| $C L_{i}$ | 0.0069*** | -0.0019 | $-0.0244^{* * *}$ | 0.0007 | -0.0028 | 0.0016 | -0.0015 | -0.0064* | -0.0009 | $-0.0048^{* * *}$ |
|  | (0.0014) | (0.0018) | (0.0008) | (0.0017) | (0.0032) | (0.0009) | (0.0017) | (0.0027) | (0.0012) | (0.0009) |
| N. Obs | 982 | 982 | 982 | 982 | 982 | 982 | 982 | 982 | 982 | 982 |

Table 9: OLS regression based on weekly averages. Dependent variable: Log-returns. Standard errors are based on Huber-White heteroscedasticity-consistent estimates and clustered on the level of the firm. $C L_{1}$ is a dummy which takes value 1 for firms belonging to the cluster of connected firms. mkt cap stands for market capitalization; div yields for dividend yields.

|  | Before |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :---: | :---: |
| Constant | $(1)$ | $0.0104^{* * *}$ | $(2)$ | $0.0121^{* * *}$ |  |  |
|  | $(0.0012)$ | $(0.0014)$ | $0.0100^{* * *}$ | $(0.0022)$ |  |  |
| $C L_{1}$ | 0.0034 | 0.0031 | 0.0024 |  |  |  |
|  | $(0.0020)$ | $(0.0019)$ | $(0.0032$ | $0.0037^{*}$ |  |  |
| mkt cap |  | $0.0000^{* *}$ | $0.0000^{* *}$ | $(0.0017)$ |  |  |
|  |  | $(0.0000)$ | $(0.0000)$ | $(0.00000)$ |  |  |
| div yields |  |  | 0.0324 | 0.0265 |  |  |
|  |  |  | $(0.0242)$ | $(0.0192)$ |  |  |
| $\beta$ |  |  |  | $0.0065^{* * *}$ |  |  |
|  |  |  |  | $(0.0011)$ |  |  |
| N. Obs | 975 | 962 | 962 | 962 |  |  |
|  |  | After |  |  |  |  |
| Constant | -0.0007 | -0.0014 | $(7)$ | $(8)$ |  |  |
|  | $(0.0009)$ | $(0.0011)$ | $\left(0.0049^{*}\right.$ | -0.0014 |  |  |
| $C L_{1}$ | $0.0069^{* * *}$ | $0.0069^{* * *}$ | $0.0070^{* * *}$ | $(0.0019)$ |  |  |
|  | $(0.0014)$ | $(0.0014)$ | $(0.0016)$ | $(0.0015)$ |  |  |
| mkt cap |  | $0.0000^{* * *}$ | $0.0000^{*}$ | 0.0000 |  |  |
|  |  | $(0.0000)$ | $(0.0000)$ | $(0.0000)$ |  |  |
| div yields |  |  | $0.0576^{*}$ | $0.0590^{*}$ |  |  |
|  |  |  | $(0.0277)$ | $(0.0262)$ |  |  |
| $\beta$ |  |  |  | -0.0029 |  |  |
|  |  |  |  | $(0.0011)$ |  |  |
| N. Obs | 982 | 969 | 969 | 969 |  |  |

[^15]Log-returns. St heteroscedasticity-consistent estimates and clustered on the level of the firm. $C L_{1}$ is a dummy which takes value 1 for firms belonging to the cluster of connected firms. mkt cap stands for market capitalization; div yields for dividend yields. Sectoral dummies indicated using

|  | Before |  |  |  | After |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Constant | $\begin{aligned} & 0.0054^{* *} \\ & (0.0019) \end{aligned}$ | $\begin{aligned} & 0.0060^{*} \\ & (0.0026) \end{aligned}$ | $\begin{aligned} & 0.0036 \\ & (0.0027) \end{aligned}$ | $\begin{aligned} & 0.0011 \\ & (0.0021) \end{aligned}$ | $\begin{aligned} & 0.0002 \\ & (0.0019) \end{aligned}$ | $\begin{aligned} & -0.0021 \\ & (0.0020) \end{aligned}$ | $\begin{aligned} & -0.0057^{*} \\ & (0.0027) \end{aligned}$ | $\begin{aligned} & -0.0043 \\ & (0.0023) \end{aligned}$ |
| $C L_{1}$ | $\begin{aligned} & -0.0003 \\ & (0.0018) \end{aligned}$ | $\begin{gathered} -0.0003 \\ (0.0018) \end{gathered}$ | $\begin{aligned} & 0.0003 \\ & (0.0015) \end{aligned}$ | $\begin{aligned} & 0.0009 \\ & (0.0013) \end{aligned}$ | $\begin{aligned} & 0.0051^{* *} \\ & (0.0017) \end{aligned}$ | $\begin{aligned} & 0.0049^{* *} \\ & (0.0017) \end{aligned}$ | $\begin{aligned} & 0.0055^{* *} \\ & (0.0021) \end{aligned}$ | $\begin{aligned} & 0.0048^{*} \\ & (0.0019) \end{aligned}$ |
| mkt cap |  | $\begin{aligned} & 0.0000 \\ & (0.0000) \end{aligned}$ | $\begin{aligned} & 0.0000 \\ & (0.0000) \end{aligned}$ | $\begin{aligned} & 0.0000 \\ & (0.0000) \end{aligned}$ | 0.0000 | $\begin{aligned} & 0.0000 \\ & (0.0000) \end{aligned}$ | $\begin{aligned} & 0.0000 \\ & (0.0000) \end{aligned}$ | (0.0000) |
| div yields |  |  | $\begin{aligned} & 0.0520^{*} \\ & (0.0242) \end{aligned}$ | $\begin{aligned} & 0.0484^{*} \\ & (0.0224) \end{aligned}$ |  |  | $\begin{aligned} & 0.0748^{* *} \\ & (0.0286) \end{aligned}$ | $\begin{aligned} & 0.0737^{* *} \\ & (0.0272) \end{aligned}$ |
| $\beta$ |  |  |  | $\begin{aligned} & 0.0040^{* *} \\ & (0.0014) \end{aligned}$ |  |  |  | $\begin{aligned} & -0.0025^{*} \\ & (0.0012) \end{aligned}$ |
| A01 | $\begin{aligned} & 0.0074^{* *} \\ & (0.0022) \end{aligned}$ | $\begin{aligned} & 0.0070^{* *} \\ & (0.0026) \end{aligned}$ | $\begin{aligned} & 0.0052^{*} \\ & (0.0024) \end{aligned}$ | $\begin{aligned} & 0.0055^{* *} \\ & (0.0019) \end{aligned}$ | $\begin{aligned} & 0.0023 \\ & (0.0020) \end{aligned}$ | $\begin{aligned} & 0.0040 \\ & (0.0023) \end{aligned}$ | $\begin{aligned} & 0.0027 \\ & (0.0025) \end{aligned}$ | $\begin{aligned} & 0.0032 \\ & (0.0021) \end{aligned}$ |
| CA11 | $\begin{aligned} & -0.0089^{* * *} \\ & (0.0019) \end{aligned}$ | $\begin{aligned} & -0.0095^{* * *} \\ & (0.0025) \end{aligned}$ | $\begin{aligned} & -0.0125^{* * *} \\ & (0.0027) \end{aligned}$ | $\begin{aligned} & -0.0132^{* * *} \\ & (0.0017) \end{aligned}$ | $\begin{aligned} & 0.0013 \\ & (0.0019) \end{aligned}$ | $\begin{aligned} & 0.0035 \\ & (0.0020) \end{aligned}$ | $\begin{aligned} & -0.0013 \\ & (0.0027) \end{aligned}$ | $\begin{aligned} & -0.0003 \\ & (0.0021) \end{aligned}$ |
| CB13 | $\begin{aligned} & 0.0239^{* * *} \\ & (0.0019) \end{aligned}$ | $\begin{aligned} & 0.0235 * * * \\ & (0.0025) \end{aligned}$ | $\begin{aligned} & 0.0231^{* * *} \\ & (0.0023) \end{aligned}$ | $\begin{aligned} & 0.0165^{* * *} \\ & (0.0022) \end{aligned}$ | $\begin{gathered} -0.0009 \\ (0.0019) \end{gathered}$ | $\begin{aligned} & 0.0010 \\ & (0.0019) \end{aligned}$ | $\begin{aligned} & 0.0012 \\ & (0.0020) \end{aligned}$ | $\begin{aligned} & 0.0057^{* *} \\ & (0.0020) \end{aligned}$ |
| DA15 | $\begin{aligned} & 0.0115^{* *} \\ & (0.0038) \end{aligned}$ | $\begin{aligned} & 0.0111^{* *} \\ & (0.0039) \end{aligned}$ | $\begin{aligned} & 0.0094^{*} \\ & (0.0043) \end{aligned}$ | $\begin{aligned} & 0.0082^{*} \\ & (0.0040) \end{aligned}$ | $\begin{aligned} & 0.0023 \\ & (0.0023) \end{aligned}$ | $\begin{aligned} & 0.0036 \\ & (0.0024) \end{aligned}$ | $\begin{aligned} & 0.0022 \\ & (0.0025) \end{aligned}$ | $\begin{aligned} & 0.0036 \\ & (0.0022) \end{aligned}$ |
| DB17 | $\begin{aligned} & 0.0095^{* * *} \\ & (0.0023) \end{aligned}$ | $\begin{aligned} & 0.0091^{* * *} \\ & (0.0027) \end{aligned}$ | $\begin{aligned} & 0.0070^{*} \\ & (0.0028) \end{aligned}$ | $\begin{aligned} & 0.0036 \\ & (0.0020) \end{aligned}$ | $\begin{aligned} & -0.0010 \\ & (0.0022) \end{aligned}$ | $\begin{aligned} & 0.0008 \\ & (0.0022) \end{aligned}$ | $\begin{gathered} -0.0014 \\ (0.0024) \end{gathered}$ | $\begin{aligned} & 0.0013 \\ & (0.0022) \end{aligned}$ |
| DG24 | $\begin{aligned} & 0.0116^{*} \\ & (0.0056) \end{aligned}$ | $\begin{aligned} & 0.0113^{*} \\ & (0.0056) \end{aligned}$ | $\begin{aligned} & 0.0125^{*} \\ & (0.0054) \end{aligned}$ | $\begin{aligned} & 0.0102^{*} \\ & (0.0043) \end{aligned}$ | $\begin{aligned} & 0.0043 \\ & (0.0033) \end{aligned}$ | $\begin{aligned} & 0.0051 \\ & (0.0035) \end{aligned}$ | $\begin{aligned} & 0.0073 \\ & (0.0045) \end{aligned}$ | $\begin{aligned} & 0.0087^{*} \\ & (0.0043) \end{aligned}$ |
| DI26 | $\begin{aligned} & 0.0271^{* * *} \\ & (0.0019) \end{aligned}$ | $\begin{aligned} & 0.0266^{* * *} \\ & (0.0025) \end{aligned}$ | $\begin{aligned} & 0.0271^{* * *} \\ & (0.0024) \end{aligned}$ | $\begin{aligned} & 0.0154^{* * *} \\ & (0.0040) \end{aligned}$ | $\begin{aligned} & -0.0231^{* * *} \\ & (0.0019) \end{aligned}$ | $\begin{aligned} & -0.0211^{* * *} \\ & (0.0019) \end{aligned}$ | $\begin{aligned} & -0.0203^{* * *} \\ & (0.0022) \end{aligned}$ | $\begin{aligned} & -0.0125^{* * *} \\ & (0.0033) \end{aligned}$ |
| DJ27 | $\begin{aligned} & 0.0093^{*} \\ & (0.0047) \end{aligned}$ | $\begin{aligned} & 0.0090 \\ & (0.0049) \end{aligned}$ | $\begin{aligned} & 0.0112^{*} \\ & (0.0049) \end{aligned}$ | $\begin{aligned} & 0.0097^{*} \\ & (0.0039) \end{aligned}$ | $\begin{aligned} & -0.0048 \\ & (0.0039) \end{aligned}$ | $\begin{aligned} & -0.0036 \\ & (0.0041) \end{aligned}$ | $\begin{aligned} & -0.0004 \\ & (0.0046) \end{aligned}$ | $\begin{aligned} & 0.0007 \\ & (0.0037) \end{aligned}$ |
| DJ28 | $\begin{aligned} & 0.0023 \\ & (0.0019) \end{aligned}$ | $\begin{aligned} & 0.0018 \\ & (0.0025) \end{aligned}$ | $\begin{aligned} & 0.0006 \\ & (0.0024) \end{aligned}$ | $\begin{aligned} & 0.0030 \\ & (0.0019) \end{aligned}$ | $\begin{aligned} & 0.0018 \\ & (0.0019) \end{aligned}$ | $\begin{aligned} & 0.0040^{*} \\ & (0.0020) \end{aligned}$ | $\begin{aligned} & 0.0026 \\ & (0.0022) \end{aligned}$ | $\begin{aligned} & 0.0015 \\ & (0.0016) \end{aligned}$ |
| DK29 | $\begin{aligned} & 0.0150^{* * *} \\ & (0.0022) \end{aligned}$ | $\begin{aligned} & 0.0144^{* * *} \\ & (0.0027) \end{aligned}$ | $\begin{aligned} & 0.0162^{* * *} \\ & (0.0025) \end{aligned}$ | $\begin{aligned} & 0.0058 \\ & (0.0035) \end{aligned}$ | $\begin{aligned} & -0.0058^{* *} \\ & (0.0020) \end{aligned}$ | $\begin{aligned} & -0.0034 \\ & (0.0025) \end{aligned}$ | $\begin{aligned} & -0.0004 \\ & (0.0033) \end{aligned}$ | $\begin{aligned} & 0.0066 \\ & (0.0039) \end{aligned}$ |
| DM34 | $\begin{aligned} & 0.0027 \\ & (0.0025) \end{aligned}$ | $\begin{aligned} & 0.0027 \\ & (0.0024) \end{aligned}$ | $\begin{aligned} & 0.0032 \\ & (0.0018) \end{aligned}$ | $\begin{aligned} & -0.0004 \\ & (0.0019) \end{aligned}$ | $\begin{aligned} & -0.0104 \\ & (0.0073) \end{aligned}$ | $\begin{aligned} & -0.0103 \\ & (0.0059) \end{aligned}$ | $\begin{aligned} & -0.0092 \\ & (0.0053) \end{aligned}$ | $\begin{aligned} & -0.0068 \\ & (0.0046) \end{aligned}$ |
| DM35 | $\begin{aligned} & 0.0009 \\ & (0.0031) \end{aligned}$ | $\begin{aligned} & 0.0005 \\ & (0.0034) \end{aligned}$ | $\begin{aligned} & -0.0014 \\ & (0.0034) \end{aligned}$ | $\begin{gathered} -0.0014 \\ (0.0034) \end{gathered}$ | $\begin{aligned} & -0.0001 \\ & (0.0020) \end{aligned}$ | $\begin{aligned} & 0.0015 \\ & (0.0018) \end{aligned}$ | $\begin{aligned} & -0.0008 \\ & (0.0023) \end{aligned}$ | $\begin{aligned} & -0.0003 \\ & (0.0016) \end{aligned}$ |
| DN36 | $\begin{aligned} & -0.0059^{* *} \\ & (0.0019) \end{aligned}$ | $\begin{aligned} & -0.0064^{*} \\ & (0.0025) \end{aligned}$ | $\begin{aligned} & -0.0087^{* * *} \\ & (0.0025) \end{aligned}$ | $\begin{aligned} & -0.0074^{* * *} \\ & (0.0018) \end{aligned}$ | $\begin{aligned} & -0.0018 \\ & (0.0019) \end{aligned}$ | $\begin{aligned} & 0.0003 \\ & (0.0020) \end{aligned}$ | $\begin{aligned} & -0.0035 \\ & (0.0025) \end{aligned}$ | $\begin{gathered} -0.0038^{*} \\ (0.0018) \end{gathered}$ |
| E40 | $\begin{aligned} & 0.0000 \\ & (0.0022) \end{aligned}$ | $\begin{aligned} & -0.0002 \\ & (0.0024) \end{aligned}$ | $\begin{gathered} -0.0009 \\ (0.0023) \end{gathered}$ | $\begin{aligned} & 0.0001 \\ & (0.0016) \end{aligned}$ | $\begin{aligned} & 0.0017 \\ & (0.0024) \end{aligned}$ | $\begin{aligned} & 0.0027 \\ & (0.0020) \end{aligned}$ | $\begin{aligned} & 0.0022 \\ & (0.0021) \end{aligned}$ | $\begin{aligned} & 0.0020 \\ & (0.0015) \end{aligned}$ |
| G52 | $\begin{aligned} & -0.0064^{* *} \\ & (0.0019) \end{aligned}$ | $\begin{aligned} & -0.0066^{* *} \\ & (0.0022) \end{aligned}$ | $\begin{aligned} & -0.0040 \\ & (0.0024) \end{aligned}$ | $\begin{aligned} & -0.0013 \\ & (0.0020) \end{aligned}$ | $\begin{aligned} & -0.0010 \\ & (0.0019) \end{aligned}$ | $\begin{aligned} & 0.0002 \\ & (0.0016) \end{aligned}$ | $\begin{aligned} & 0.0040 \\ & (0.0023) \end{aligned}$ | $\begin{aligned} & 0.0024 \\ & (0.0021) \end{aligned}$ |
| I60 | $\begin{aligned} & 0.0152^{* * *} \\ & (0.0023) \end{aligned}$ | $\begin{aligned} & 0.0147^{* * *} \\ & (0.0028) \end{aligned}$ | $\begin{aligned} & 0.0119 * * * \\ & (0.0031) \end{aligned}$ | $\begin{aligned} & 0.0078^{* * *} \\ & (0.0016) \end{aligned}$ | $\begin{aligned} & 0.0071^{*} \\ & (0.0035) \end{aligned}$ | $\begin{aligned} & 0.0092^{*} \\ & (0.0036) \end{aligned}$ | $\begin{aligned} & 0.0077^{* * *} \\ & (0.0022) \end{aligned}$ | $\begin{aligned} & 0.0109^{* * *} \\ & (0.0021) \end{aligned}$ |
| I61 | $\begin{aligned} & -0.0046 \\ & (0.0040) \end{aligned}$ | $\begin{aligned} & 0.0002 \\ & (0.0019) \end{aligned}$ | $\begin{gathered} -0.0002 \\ (0.0018) \end{gathered}$ | $\begin{aligned} & 0.0009 \\ & (0.0013) \end{aligned}$ | $\begin{aligned} & 0.0007 \\ & (0.0035) \end{aligned}$ | $\begin{aligned} & 0.0050^{* * *} \\ & (0.0014) \end{aligned}$ | $\begin{aligned} & 0.0048^{* *} \\ & (0.0015) \end{aligned}$ | $\begin{aligned} & 0.0044^{* * *} \\ & (0.0011) \end{aligned}$ |
| I64 | $\begin{aligned} & 0.0040^{*} \\ & (0.0019) \end{aligned}$ | $\begin{aligned} & 0.0034 \\ & (0.0026) \end{aligned}$ | $\begin{aligned} & 0.0058^{*} \\ & (0.0027) \end{aligned}$ | $\begin{aligned} & 0.0043^{*} \\ & (0.0018) \end{aligned}$ | $\begin{aligned} & 0.0036 \\ & (0.0019) \end{aligned}$ | $\begin{aligned} & 0.0059 * * \\ & (0.0020) \end{aligned}$ | $\begin{aligned} & 0.0095^{* * *} \\ & (0.0027) \end{aligned}$ | $\begin{aligned} & 0.0106^{* * *} \\ & (0.0019) \end{aligned}$ |
| N. Obs | 975 | 962 | 962 | 962 | 982 | 969 | 969 | 969 |

## Appendix A. A historiographic analysis of prominent individuals within the cluster of connected firms

## Appendix A.1. Lodovico Mazzotti Biancinelli

Lodovico Mazzotti Biancinelli's entrepreneurial activities began in 1900, when he and a partner founded a company that operated as selling agent in connection with COMIT. In 1904, having wound up this company, Mazzotti Biancinelli became fiduciary of the COMIT at the MSE. In 1909 he was nominated president of the MSE, an office he retained until 1920.

In these years, Mazzotti Biancinelli also commenced his activities of stock gambling and also land reclamation in some provinces of Northern Italy. Initially, his main business related to the sugar industry. Between 1910 and 1920 his name appeared on the boards of almost a dozen companies in this sector, together with other well-known stock gamblers. This circumstance leads us that sometimes their profits were due to the watering of stock (Romani, 2008).

In the years preceding World War One, Mazzotti Biancinelli started to expand his range of business. From 1910 he was on the board of Ilva and, from 1914, on that of the bank Credito Agrario Bresciano.

In August 1911, in the face of financial difficulties besetting the entire metallurgic sector, the government pushed six of the major companies within the sector (Elba, Ilva, Savona, Ligure Metallurgica, Ferriere Italiane and Alti Forni di Piombino) to enter into an agreement for a unique management of their factories. This was the so-called Consorzio Ilva. The idea was that Ilva, headed by Attilio Odero, would manage the factories of the pool for a period of eleven years and six months while each company would have a stake in operating profits according to the productive efficiency of their respective factories. The capital of this pool amounted to 130 million lire, of which 96 million lire was financed by the Bank of Italy, COMIT and Credito Italiano (Cerioni, 2001). The eight factories of the group manufactured the entire Italian production of iron ore and cast iron and $58 \%$ of Italian steel.

In 1916 Mazzotti Biancinelli became vice-president of the Credito Agrario Bresciano. Under his management, the main business of the bank shifted rapidly from the agricultural to the industrial sector. Specifically, the bank started to finance those companies in which Mazzotti Biancinelli was interested: SADE, Isotta Fraschini, Società elettrica Milano, Cotonificio Veneziano, Società elettrica Riviera di Ponente, Fabbriche italiane materie coloranti Bonelli, Cotonificio Turati, Officine meccaniche, and many others. Because of this kind of operation, in 1919 Mazzotti Biancinelli was compelled to resign from the bank.

In 1918 Mazzotti Biancinelli helped Max Bondi in his takeover of Ilva. Prior to the establishment of Consorzio Ilva, Bondi headed the Alti Forni di Piombino and was on the boards of Eridania, the Società romana per la fabbricazione dello zucchero, Elba and many others. Once he gained majority control of Ilva, Bondi changed the company name from Alti Forni di Piombino to Ilva altiforni e accierie d'Italia. Under this new name now operated the old Ilva, Savona, Ligure Metallurgica, and Ferriere Italiane, while Elba remained an independent company (Carparelli, 1978). Bondi's management was disastrous and, as we have seen in section 3, Mussolini's first government, breaking its laissez-faire economic policy,
rescued Ilva by reducing the amount of its debt to the state but allowing COMIT and Credito Italiano to gain majority control of the company.

## Appendix A.2. Giuseppe Da Zara

Giuseppe Da Zara started his career during the 1880s in the insurance sector. While still young, he gained a seat on the board of Assicurazioni Generali, one of most ancient and prestigious Italian companies in the insurance business. Between 1901 and 1909 Da Zara was deputy director of this company, and then (until 1922) director. In 1911 Da Zara was a leading figure in the campaign against the government's plan to establish a monopoly of life assurances.

At the same time, Da Zara expanded his interests to include the banking sector (from 1900 he was on the board of the Società Bancaria Milanese, a bank that aimed to counter the predominance of COMIT and Credito Italiano at the national level) as well as the metallurgic sector. From the early 1900s, he was on the board of Terni and then on that of Elba and Ilva during the years of Consorzio Ilva.

Da Zara's connection to Giuseppe Volpi da Misurata continued for many years. Their points of contact ranged from SADE to a group of companies operated in Veneto, such as Società veneta per la costruzione ed esercizio di ferrovie secondarie (a railway company), the Banca veneta di depositi e conti correnti (a bank), and the Società veneziana di navigazione a vapore (a steam navigation company) (Segreto, 1987).

After the end of the World War One, Da Zara was implicated in the financial collapse of Banca Italiana di Sconto because of his position in Società Bancaria Milanese. At the end of the trial of 1922-1923 he was acquitted of any wrong doing. He died suddenly in 1923.

## Appendix A.3. Giuseppe Volpi di Misurata

At the end of nineteenth century, Giuseppe Volpi was operating in the Balkans as a dealer in agricultural products, insurance agent and mining agent. In 1900 an encounter with Giuseppe Toeplitz, then manager of the branch of COMIT in Venice, triggered a career in finance. In 1915 Toeplitz was nominated member of the board of COMIT and in 1917 he became chief executive of the bank (a post he occupied until 1933).

Volpi's early entrepreneurial activities were financed by Toeplitz. He banked on a web of personal relationships in the political and financial circles of Venice (Da Zara, for example, represented a link with Venetian Jewish finance). Broadly, Volpi and this group aimed for the Balkan market, a plan of financial expansion shared by Toeplitz for COMIT (Tamborra, 1974).

In 1900 Volpi, with the financial aid of this group, founded the Società Italiana per l'utilizzazione delle forze idrauliche del Veneto (an electrical company) and, in 1905, SADE. In both cases, the financial support of COMIT was crucial: in the first case COMIT subscribed $18 \%$ of the initial capital; in the other $16 \%$. In the following years, SADE progressively became the primary holding of the group and at the end of World War One SADE was the third largest electrical Italian company for capital capacity Petri and Reberschack, 1993).

In 1906 Volpi and his group extended their interest to the hotel industry with the establishment of the Compagnia Italiana Grandi Alberghi (hereafter, CIGA); once again COMIT shared nearly $20 \%$ in the initial capital of the society.

During these years, COMIT operated in the Balkans with the Regia interessata dei tabacchi and the Sindacato italo-montenegrino, which were both founded in 1903, and the Compagnia di Antivari (1905). In 1907, COMIT founded the Società Commerciale d'Oriente, which represented a sort of Montenegrin branch of the bank. The strategist of these operations was undoubtedly Volpi who, over the years, had stabilized his economic relations in the Balkans and expanded his economic interests to Turkey.

At the end of World War One, Volpi acted as government delegate on several international commissions. In December 1920 he obtained the aristocratic title of count because of services rendered to Italy and, in June 1921, he became governor of Libya, which country he succeeded in stabilizing. Thanks to this political (and military) success he acquired 2000 hectares of land close to Misurata and in recognition of his efforts was allowed to add "di Misurata" to his aristocratic title.

Historical research has recently established that in the years 1920-1922 Volpi financed successively the fascist movement of Venice and then the local PNF (Piva, 1977; Albanese, 2001).

From 1921 to 1922 Volpi held the office of president or vice-president of twenty societies, among them three electrical companies (SADE, Società Italiana per l'utilizzazione delle forze idrauliche del Veneto and S.I.V.), financial companies such, as for example, the Credito Industriale, and industrial companies such as CIGA. Moreover, he was on the boards of 46 societies, among them COMIT, Assicurazioni Generali, and Unione Esercizi Elettrici.

On July $13^{\text {th }} 1925$ Volpi replaced De Stefani as the Minister of Finance.

## Appendix A.4. Emilio Bruzzone

Bruzzone headed the Ligure lombarda, a Genoa sugar business. As we saw in section 3, he belonged to the group who first financed Mussolini's Popolo d'Italia.

The Italian sugar industry was mainly located in Genoa. The first development of this sector in Italy was linked with the emergence of the refining industry. In the first half of the nineteenth century Italian production was modest and from 1870 almost $50 \%$ of imported sugar arrived in Genoa. This circumstance favoured the birth of the sugar refining industry in Genoa. The introduction of a duty on imported sugar in the 1870s gave the impetus to national production and, effectively, to those Genoese industrialists who already operated in the sugar refining sector. In 1914, 13 out of 26 companies operating in the sugar sector had their seats in Genoa.

The sector was characterized by a strong concentration and the companies, which in 1903 established the Unione Zuccheri, acted as a cartel. By means of cross shareholdings, Ligure lombarda, together with Eridania, held the majority control of 16 other companies and, through them, of 30 factories. Ligure lombarda and Eridania controlled $61 \%$ of Italian plants and $53 \%$ of national production. The Società italiana per l'industria dello zucchero indigeno was up there with them. This latter society, which was controlled by Erasmo Piaggio and Emilio Maraini, together with Fabbrica Lendinarese, which was exclusively
owned by Maraini, had a nominal capital of 22.57 million lire, managed ten factories with an annual production of 47,000 tons of sugar that amounted to $21 \%$ of the national production (Tonizzi, 2001).

## Appendix A.5. Benedetto Acquarone

Giacomo Acquarone was one of the founders of Eridania in Genoa in 1899; he remained on the board of the company until 1902. In May 1922 his son, Benedetto Acquarone, who had inherited his father's shares, entered onto the board of Eridania, on which was already sitting his uncle, Serafino Cevasco, as managing director. Acquarone gained work experience at the San Giorgio, an electrical-mechanical industry in Genoa (Bianchi Tonizzi, 1988).

Acquarone and Cevasco implemented the vertical integration of sugar-beet production and sugar refining and production and its by-products (such as leaven, manna sugar and alcohol). Moreover, they worked together on some Italian mechanical factories in order to start up production of the industrial equipment necessary for refining and producing sugar on a large scale.

In the first months of 1923 Aldo Finzi. ${ }^{29}$ vice-minister for Home Affairs, got in touch with representatives of industry in order to ask for financial support for the founding of a new Fascist newspaper in Rome, Il Corriere d'Italia. On April $14^{\text {th }}$ 1923, with funds obtained from Ilva, Piaggio, Eridania, Ansaldo, and Odero, Finzi established the publishing house La vita d'Italia editrice, which published Il Corriere d'Italia (Canali, 2009, 78-85). Finzi not only held a bundle of shares in the company but managed the newspaper with Filippo Filippelli ${ }^{30}$

On November $20^{\text {th }} 1930$, Acquarone and Cevasco realized the merger of Eridania with Ligure lombarda. The new company, named Eridania zuccherifici nazionali, controlled Distillerie italiane and Saccarifere lombarda, and managed 21 sugar refineries in addition to the plants for the manufacturing of the by-products. Its social capital amounted to 120 million lire and the value of plants amounted to 400 million lire.

## Appendix B. Statistical Companion

[^16]Table B.11: Level-3 Ateco (1991) Sector Classification

| Code | Label | Description |
| :---: | :---: | :---: |
| A01 | Agriculture | Agriculture |
| A02 | Forestry | Forestry |
| B05 | Fishing | Fishing |
| CA10 | Coal-lignite-peat | Mining of coal and lignite; extraction of peat |
| CA11 | Petroleum-Gas | Extraction of crude petroleum and natural gas |
| CB13 | Metal-ores | Mining of metal ores |
| CB14 | Other-mining | Other mining and quarrying |
| DA15 | Food-beverages | Manufacture of food products and beverages |
| DB17 | Textiles | Manufacture of textiles |
| DB18 | Wearing-apparel | Manufacture of wearing apparel; dressing and dyeing of fur |
| DC19 | Leather-footwear | Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear |
| DD20 | Wood | Manufacture of wood and of products of wood and cork |
| DE21 | Pulp-paper | Manufacture of pulp, paper and paper products |
| DE22 | Publishing-printing | Publishing, printing and reproduction of recorded media |
| DF23 | Refined-petroleum | Manufacture of coke, refined petroleum products |
| DG24 | Chemicals | Manufacture of chemicals and chemical products |
| DH25 | Rubber-plastic | Manufacture of rubber and plastic products |
| DI26 | Non-metallic-mineral | Manufacture of other non-metallic mineral products |
| DJ27 | Basic-metals | Manufacture of basic metals |
| DJ28 | Fabricated-metals | Manufacture of fabricated metal products |
| DK29 | Machinery-equipment | Manufacture of machinery and equipment |
| DL30 | Office-machinery | Manufacture of office machinery and computers |
| DL31 | Electrical-machinery | Manufacture of electrical machinery and apparatus |
| DL32 | Communication-equip | Manufacture of radio, television and communication equipment and apparatus |
| DL33 | Precision-equip | Manufacture of medical, precision and optical instruments, watches and clocks |
| DM34 | Motor-vehicles | Manufacture of motor vehicles, trailers and semi-trailers |
| DM35 | Transport-equip | Manufacture of other transport equipment |
| DN36 | Manufacturing-nec | Manufacture of furniture; manufacturing n.e.c. |
| E40 | Electricity-gas | Electricity, gas, steam and hot water supply |
| E41 | Water | Collection, purification and distribution of water |
| F45 | Construction | Construction |
| G50 | Repair-fuel | Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel |
| G51 | Wholesale-trade | Wholesale trade and commission trade |
| G52 | Retail-trade | Retail trade |
| H55 | Hotels-restaurants | Hotels and restaurants |
| I60 | Land-transport | Land transport; transport via pipelines |
| I61 | Water-transport | Water transport |
| I62 | Air-transport | Air transport |
| I63 | Supporting-transport | Supporting and auxiliary transport activities |
| I64 | Post-Telecomm | Post and telecommunications |
| J65 | Finance | Financial intermediation |
| J66 | Insurance | Insurance and pension funding |
| K70 | Real-estate | Real estate activities |
| K71 | Renting-machinery | Renting of machinery and equipment |
| K74 | Other-business-acts | Other business activities |
| M80 | Education | Education |
| N85 | Health | Health and social work |
| O92 | Recreation-culture | Recreational, cultural and sporting activities |
| O93 | Other-services | Other service activities |

Reference Table Metadata (Identifiers, Descriptors, Industry Classification, Foundation Year) and Summary Indicators for 1922 (Nominal Value, Share Capital, Assets, Dividend)
Panel (A). Firms listed in the MSE with full data availability

| $\begin{aligned} & \text { Id-Orig } \\ & \text { [1] } \\ & \hline \end{aligned}$ | $\begin{gathered} \text { Id-Soc } \\ \hline[2] \\ \hline \end{gathered}$ | IMITA.db-identifiers Descriptor [3] | $\begin{gathered} \text { Headquarters } \\ \hline 4] \end{gathered}$ | $\begin{array}{\|c\|} \text { Ateco } \\ {[5]} \end{array}$ | De Luca (2002) Descriptor $[6]$ | $\begin{gathered} \text { IISole } \\ \text { Weekly Id } \\ {[7]} \\ \hline \end{gathered}$ | $\begin{gathered} \text { IISole } \\ \text { Daily Id } \end{gathered}$ $[8]$ | Found. <br> Year <br> $[9]$ | $\begin{gathered} \hline \text { MSE } \\ \text { Listed } \\ {[10]} \\ \hline \end{gathered}$ | $\begin{gathered} \text { MSE } \\ \text { Cancel } \\ \text { [11] } \\ \hline \end{gathered}$ |  | Balance sh Share-Cap <br> [13] | $\begin{gathered} \hline \text { heet and MSE da } \\ \text { Outs-Shares } \\ {[14]} \\ \hline \end{gathered}$ | ta (in thsd. Assets <br> [15] | $\begin{array}{c\|} \hline \text { d. LRA) } \\ \text { Dividend } \\ {[16]} \\ \hline \end{array}$ | $\begin{aligned} & \hline \text { MSE } \\ & \text { Ticker } \\ & {[17]} \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10310 | $1914$ | ISTITUTO DI FONDI RUSTICI SOCIETÀ AGRICOLA INDUSTRIALE | ROMA(RM) | A01 | Fondi Rustici - Agricola Industriale Italiana | Istituto Fondi Rustici | Fon. Rust. | 1905 | 1905 | 1955 | 0.200 | 4500 | 225000 | 68051 | 3600 | Agr_FonRust |
| 21495 | 25902 | Petrol ditala | MILANO(MI) | CA11 |  |  | Petroli | 1906 | 1924 | 1958 |  | 10000 |  | 13927 | 750 | Min Petroli |
| 7870 | 9667 | ELBA SOCIETA ANONIMA DI MINIERE E DI ALTI FORNI | RomA(RM) | CB13 | Elba - Miniere Alti Forni | Min. Alti Fomi (Elba) | Elba | 1899 | 1902 | 1931 | 0.040 | 20000 | 500000 | 61552 | 400 | Min_Elba |
| 7217 | 8895 | distilerie italane | MILANO(MI) | DA15 | Distillerie Italiane | Distillerie Italiane | Distillerie | 1905 | 1905 | 1968 | 0.100 | 50000 | 500000 | 100288 | 6000 | FB_Distillerie |
| 8256 | 10111 | ERIDANIA SOCIETA INDUSTRIALE | genovalge) | DA15 | Eridania (poi Finanziaria Agroindustriale) | «Eridania» | Eridania | 1899 | 1902 | 1995 | 0.150 | 45000 | 300000 | 95448 | 6000 | FB_Eridiana |
| 351 | 38120 | ZUCCHERIFICIO E DISTILLERIA ALCOOLS GULINELLI | ferrapalfe) | DA15 | Zuccherificio e Distilleria Alcools Gulinelli | Zucch. Dist. Gulinelli | Gulinelli | 1905 | 1906 | 1930 | 0.050 | 40000 | 800000 | 9110 | 8000 | FB_Gulinelli |
| 27896 | 337 | SOCIETA ITALIANA PER L'INDUSTRIA DELLO ZUCCHERO INDIGENO | RomA(RM) | DA15 | Italiana Industria Zuccheri | It. Ind, Zucch. Indig. | Ind. Zuc. | 18 | 1904 | 1936 | 0.150 | 4000 | 266667 | 7773 | 5600 | FB_IndZuc |
| 19639 | 23646 | MOLINI ALTA ITALA | genovalge) | DA15 | Molini Alta Italia | Molini Alta Italia | Mol. A. It. | 1899 | 1899 | 1924 | 0.100 | 15000 | 150000 | 23501 | 1800 | FB_MoliAlalt |
| 17835 | 33993 | SOCIETA LIGURE LOMBARDA PER LA RAFFINAZIONE DEGLI ZUCCHER | GENOVA(GE) | DA15 | Ligure Lombarda Raffinazione Zuccheri | Lig. Lomb. Raff. Zucc | Raffinerie | 1872 | 1882 | 1943 | 0.200 | 50000 | 250000 | 95639 | 000 | FB_Raffinerie |
| 6543 | 7950 | cotonificio cantoni | MILANO(MI) | DB | Cotonificio Cantoni (poi Cantoni ITC) | Cotonificio Cantoni | Cot. Cant. | 1872 | 1872 | 1998 | 0.625 | 2000 | 32000 | 6680 | 2000 | Cot_Cant |
| 17410 | 8130 | COTONIFICIO FURTER | MILANO(MI) | DB17 | Cotonificio Furter | Cotonificio Furter | Furter. | 1901 | 1904 | 1946 | 0.100 | 5000 | 50000 | 11873 | 552 | Cot_furter |
| 18768 | 22659 | MANIFATTURE COTONIERE MERIDIONALI | NAPOLINA) | DB17 | Manifatture Cotoniere Meridionali | Filan. Coton. Meridio | Cot. Mer. | 1913 | 1920 | 1965 | 0.100 | 80000 | 800000 | 165777 | 4800 | Cot_Merid |
| 6631 | 8079 | Cotonificio ditrobaso | MILANO(MI) | DB17 | Cotonificio di Trobaso | Cotonificio di Trobaso | Trobaso | 1905 | 1905 | 1928 | 0.050 | 12000 | 240000 | 24513 |  | Cot_Trob |
| 6693 | 8103 | COTONIFICIO FRANCESCO TURAT | MILANO(MI) | DB17 | Cotonificio Francesco Turati (poi Cotonificio Vittorio Olcese, dopo Cotonificio OIcese-Veneziano, quindi Olcese) | Cotonificio Turati | Turati | 1904 | 1908 | 2005 | 0.200 | 20000 | 100000 | 35976 | 3500 | Cot_Turati |
| 6738 | 8264 | COTONIFICIO VAL D'OLONA OGNA CANDIANI | MARNATE <br> (BUSTO ARSIZIO) <br> (VA) | DB17 | Cotonificio Val d'Olona (Ogna Candiani) | Cotonificio Val. Ol. Ogna Can. | V. Olonn. | 1903 | 19 | 1939 | 0.200 | 1200 | 6000 | 3422 | 1500 | Cot_Valolon |
| 6570 | 7998 | COTONIFICIO DELLA VALLE S | gazzanicaibg | DB17 | Cotonificio Valle Seriana | Cotonificio Valle Seriana | v. Ser. | 1888 | 1888 | 1935 | 0.250 | 12000 | 48000 | 40255 | 1680 | Cot Valser |
| 6746 | 8282 | cotonificio valle ticino | MILANO(MI) | DB17 | Cotonificio Valle Ticino | Cotonificio Val Ticino | v. Ticin. | 1905 | 1907 | 1968 | 0.100 | 9000 | 90000 | 12046 | 1080 | Cot Valticino |
| 6748 | 8294 | cotonificio veneziano | venezia(ve) | DB17 | Cotonificio Veneziano | Cotonificio Veneziano | Venez. | 1882 | 1903 | 1931 | 0.075 | 30000 | 400000 | 109846 | 6000 | Cot venez |
| 29756 | 36163 | Tessiture seriche bernasconi | CERNOBBIO(CO | DB17 | Tessiture Seriche Bernascon | Tess. Ser. Bernasconi | Bernasc. | 1899 | 1899 | 1969 | 0.075 | 15000 | 200000 | 42299 | 2400 | Tess_Bernasc |
| 17872 | 21496 | LINIFICICO E CANAPIFICIO | MILANO(MI) | DB17 | Linificio e Canapificio Nazionale | Lanif. E Canap. Naz. | Lin. C. N. | 1873 | 1876 | 2008 | 0.250 | 50000 | 200000 | 126385 | 000 | Tess_CanapNaz |
| 9710 | 31718 | FILATURA DEI CASCAMI DI SETA | MILANO(MI) | DB17 | Filatura Cascami Seta (poi Cascami 1872, dopo Santavaleria Finanziaria, quind | Filat. Cascami seta | Casc. Seta | 1872 | 1880 | 1998 | 0.300 | 60000 | 200000 | 107640 | 10000 | Tess_Cascseta |
| 7032 | 33 | DE ANGELI FRUA SOCIETA PER L'INDUSTRIA DEI TESSUTI STAMPATI | MILANO(MI) | DB17 | De Angeli-Frua | Ital. Tessuti Stamp. | De Angeli | 1899 | 1903 | 1992 | 0.250 | 3250 | 130000 | 1068 | 77 | Tess_D |
| 17416 | 20959 | lanificio di gavardo | MILANO(MI) | DB17 | Lanificio di Gavardo | Lanificio di Gavardo | Lan. Gav. | 1889 | 1899 | 1978 | 0.250 | 10000 | 40000 | 38484 | 1920 | Tess_Gavardo |
| 18807 | 22629 | manifatture toscane riunite | LIVORNO(L) | DB17 | Manifatture Toscane Dini (poi Manifatture Toscane Riunite) | Manif. Toscana Dini | Man. Dini | 1905 | 1918 | 1931 | 0.100 | 15000 | 150000 | 27573 |  | Tess_ManD |
| 21152 | 22481 | MANIFATTURA ITALIANA CARLO PACCHETT। | MILANO(MI) | DB17 | Manifattura Italiana C. Pacchetti (poi Pacchetti) | C. Pacchetti e C. | pacch. | 1905 | 1905 | 1994 | 0.100 | 1200 | 120000 | 171 | 1440 | Tess_Pacch |
| 17371 | 21045 | Lanificio rossi | MILANO(MI) | DB17 | Lanificio Rossi (poi Lanerossi) | Lanificio Rossi | Rossi | 1873 | 1873 | 1979 | 1.350 | 44550 | 33000 | 135700 | 4620 | Tess Rossi |
| 18718 | 22577 | MANIFATTURA ROSSARI \& VARZI | GALLIATE(NO) | DB17 | Manifattura Rossari e Varzi | Manif. Rossari-Varzi | Ross.V | 1900 | 1904 | 1975 | 0.250 | 20000 | 80000 | 46239 | 3200 | Tess_Ross Varz |
| 18721 | 22586 | MANIFATTURA ROTONDI | MILANO(MI) | DB17 |  | $\cdots$ | Rotondi | 1902 | 1926 | 1922 |  | 15000 |  | 49472 | 2100 | Tess_Rotondi |
| 29848 | 21054 | LANIFICIO TARGETTI | MILANO(MI) | DB17 | Lanificio Nazionale Trezzi Dario (poi Lanificio Targetti, quindi Tilane ed infine Profing) | Lanificio Naz. Targetti | Targetti | 1899 | 1900 | 1981 | 0.200 | 6000 | 30000 | 20715 | 60 | Tess_Targetti |
| 18751 | 22635 | MANIFATTURA TOSI | BUSTO ARSIZIO <br> (VA) | DB1 | Manifattura Tosi | Manif. Tosi Busto A. | Tosi. B. | 1898 | 1899 | 1973 | 0.125 | 18000 | 144000 | 52490 | 360 | Tess_Tosi |
| 486 | 37093 | UNIONE MANIFATTURE | PARABIAGO(MI) | DB17 | Cotonificio Muggiani (poi Unione Manifatture) | Un. Man. (Già Mugg.) | Un. Maniff | 1903 | 1903 | 1993 | 0.100 | 18000 | 180000 | 53692 | 4500 | Tess_UnMan |
| 65 | 10926 | FABBRICHE ITALIANE MATERIE COLORANTI BONELLI | MILANO(MI) | DG24 | Fabbriche Italiane Materie Coloranti Bonelli | Materie color. Bonelli | Boneli | 1915 | 1919 | 1929 | 0.100 | 30000 | 300000 | 56290 |  | Chi_Bonelli |
| 27721 | 33540 | societa italana di | ROMA(RM) | DG24 | Italiana di Elettrochimica | Ital. Elettroch. Roma | Elettroc. | 1899 | 1902 | 1928 | 0.070 | 21000 | 300000 | 46458 |  | Chi_Elettroc |


| Id-Orig $[1]$ | Id-Soc [2] | IMITA.db-identifiers Descriptor $[3]$ | $\begin{aligned} & \text { Headquarters } \\ & \quad[4] \end{aligned}$ | Ateco [5] | De Luca (2002) Descriptor $[6]$ | IISole Weekly Id [7] | IISole Daily ld [8] | $\|$Found. <br> Year <br> 199 | $\begin{aligned} & \text { MSE } \\ & \text { Listed } \\ & {[10]} \end{aligned}$ | $\begin{gathered} \text { MSE } \\ \text { Cancel } \\ \text { [111] } \\ \hline 10 \end{gathered}$ | $\begin{gathered} 1922 \mathrm{~B} \\ \begin{array}{c} \text { NV } \\ {[122]} \\ \hline \end{array} \\ \hline \end{gathered}$ | Balance sh Share-Cap [13] | eet and MSE da Outs-Shares [14] | ta (in thsd. <br> [15] | $\begin{gathered} \hline \text { 1. LRA) } \\ \text { Dividend } \\ {[16]} \\ \hline[1 \end{gathered}$ | $\begin{aligned} & \hline \text { MSE } \\ & \text { Ticker } \\ & {[17]} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 19857 | 23958 | MONTECATINI | MILANO(MII) | DG24 | Montecatini | A. G. Ind. Min. Montec. | Montecat. | 1888 | 1900 | 1967 | 0.100 | 200000 | 2000000 | 399623 | 30000 | Chi Montecat |
| 25152 | 30095 | SNIA VISCOSA SOCIETA NAZIONALE INDUSTRIE APPLICAZIONI VISCOSA | TRRINO(TO) | DG24 | Snia Viscosa (poi Snia BPD, ora SNIA) | Nav.In Com. S. N. I. C. | S.N.I.A. | 1917 | 1920 |  | 0.100 | 175000 | 1750000 | 378494 |  | Chi_SNIA |
| 477 | 32229 | CERAMICA RICHARD GINORI | MILANO(MI) | 126 | Ceramica Richard Ginori (poi S.C.I. Pozzi-Richard Ginori, dopo Finanziaria Pozzi-Ginori) | Ceram. Richard-Gin. | Rich. Gin. | 1873 | 1877 | 1994 | 0.250 | 10000 | 40000 | 872 | 600 | Cer_RichGin |
| 25339 | 30334 | ALTI FORNI FONDERIE ACCIAIERIE E FERRIERE FRANCHI GREGORINI | BRESCIA(BS) | DJ27 | Alti Forni Gregorini (poi Alti Forni Fonderie Acciaierie Ferriere Franchi Gregorini) | Franchi Gregorini | Fr. Greg | 1905 | 905 | 1930 | 0.050 | 30450 | 609000 | 120992 | - | Met_FrGreg |
| 16475 | 14942 | ILVA ALTI FORNI E ACCIAIERIE D'ITALIA | GENOVA(GE) | D27 | Ilva Alti Forni Acciaierie d'Italia (poi Italsider) | IIva Alti Fomi. Acc. | Ilva | 1897 | 1918 | 1983 | 0.010 | 150000 | 15000000 | 661054 | 13 | Met_Iva |
| 19255 | 34131 | metallurgica italiana | MILANO(MI) | DJ27 | SMI (ora KME Group) | Metallurg. It. Roma | Metalii | 1886 | 1897 |  | 0.100 | 40000 | 400000 | 18705 | 211 | Met_Metalil |
| 20543 | 25131 | OFFICINE DI SESTO SAN GIOVANNI \& VALSECCHI ABRAMO | MILANO(MI) | D128 | Officine Sesto S. Giovanni \& Valsecchi Abramo | Offic. Sesto S. Giov. | Camona | 1906 | 1905 | 1925 | 0.100 | 5000 | 50000 | 9024 | -- | Met_Camona |
| 26059 | 38217 | ItAlana GIo. Ansaldo \& C. | ROMA(RM) | DK29 | Italiana Gio. Ansaldo \& C. | Gio. Ansaldo e C. | Ansaldo | 1903 | 1905 | 1923 | 0.250 | 500000 | 2000000 | 969301 |  | Equip Ansaldo |
| 7825 | 30834 | FABBRICA AUTOMOBILI E VELOCIPEDI EDOARDO BIANCH | MILANO(MI) | DM34 | Fabbrica Automobili e Velocipedi E. Bianchi (poi | Aut. Evel. E. Bianchi | Bianchi | 1905 | 1907 | 1971 | 0.050 | 14000 | 280000 | 25582 | 1960 | MV_Bianchi |
| 8575 | 10483 | F.IA.T. | TORINO(TO) | DM34 |  |  | F.I.A.T. | 1899 | 1924 |  |  | 200000 |  | 423052 | 15000 | MV_FIAT |
| 8920 | 10592 | FABBRICA AUTOMOBILI ISOTTA FRASCHINI | MILANO(MI) | DM34 | Fabbrica Automobili Isotta Fraschini | Aut. Isotta-Fraschin | Is. Frasc | 1904 | 1905 | 1949 | 50 | 3600 | 00 | 22575 | 0 | MV_ISFrasc |
| 9907 | 2 | ITALIANA ERNESTO BREDA PER COSTRUZIONI MECCANICHE | MLLANO(MI) | M35 | Italiana Ernesto Breda per Costruzioni Meccaniche (poi Finanziaria Ernesto Breda) | Cost. Mecc. E. Breda | Breda | 1899 | 1904 | 1994 | 0.250 | 100000 | 400000 | 215437 | 9000 | TE_Breda |
| 20650 | 2489 | Ficine meccaniche | MILANO(MI) | DM35 | Officine Meccaniche gia Miani e Silvestri | Off. Mecc. Miani Silv. | Miani Sil. | 1899 | 1899 | 1935 | 0.100 | 40000 | 40000 | 6922 | 00 | TE_Mianisilv |
| 2384 | 25004 | OFFICIIE MECCANICHE ITALIANE | REGGIO EMILIA (RE) | DM35 | Reggiane-Officine Meccaniche Italiane | Off. Mecc. Reggiane | Reggiane | 1904 | 1907 | 1951 | 0.005 | 25000 | 5000000 | 89674 | 1500 | TE_Reggiane |
| 8932 | 10614 | FAbBrica Candele steariche di MIRA | MIRA(VE) | DN36 | Fabbrica Candele Steariche Mira | Candele stear. Mira | Mira | 1905 | 1905 | 1925 | 0.100 | 14000 | 140000 | 56882 | 1400 | Man_Mira |
| 1067 | 32931 | GENERALE ELETTRICA DELL'ADAMELLO | MILANO(MI) | E40 | Generale Elettrica dell'Adamello (poi Generale Elettrica Cisalpina) | Elettr. Dell'Adamello | Adamello | 1907 | 1911 | 94 | 0.200 | 84993 | 424965 | 196574 | 6400 | Elett_Adamello |
| 3690 | 30180 | SADE SOCIETA ADRIATICA DI ELETTRICITÀ | VEnEziA(VE) | 40 | SADE - Adriatica Elettricita | Adr. Elettr. Venezia | Adriatica | 1905 | 1906 | 1965 | 0.100 | 0000 | 100000 | 1166 | 1000 | Elett_Adriatica |
| 7914 | 32594 | eletrica bresciana | BRESCIA(BS) | E40 | Elettrica Bresciana | Elettrica Bresciana | Bresciana | 1905 | 1907 | 1964 | 0.100 | 40000 | 400000 | 125953 |  | Elett_Bresciana |
| 26350 | 31674 | SOCIETA ANONIMA PER IMPRESE ELETTRICHE CONTI | DOMODOSSOLA (NO) | E40 | Imprese Eletriche Conti | Imprese elettr. Conti | Conti | 1901 | 1907 | 1927 | 0.250 | 79000 | 316000 | 160152 | 70 | Elett_Conti |
| 9861 | 32955 | SOCIETA GENERALE ITALIANA EDISON DI ELETTRICITȦ | MILANO(MI) | E40 | Edison (gia Generale Italiana Edison di Elettricita, poi Montedison) | Gen. It. Edison d'Elettr | Edison | 188 | 1895 | 1990 | 300 | 00 | 52000 | 253200 | 15360 | Elett_Edison |
| 28067 | 34015 | SOCIETA LIGURE TOSCANA DI ELETTRICITȦ | LVORNO(L) | E40 | Ligure Toscana di Eletricita | Lig. Toscana d'Elet. | Lig. Tosc. | 1905 | 1912 | 1933 | 0.200 | 78400 | 392000 | 116110 | 7056 | Elett_LigTosc |
| 5035 | 32692 | SOCIETA ELETTRICA RIVIERA DI PONENTEING. R. NEGRI | GENOVA(GE) | E40 | Elettrica Riviera di Ponente Ing. R. Negri (poi Cieli - Compagnia Imprese Elettriche Liguri) | Elett. Pon. Ing. Negri | Negri | 1905 | 1906 | 1967 | 0.200 | 110000 | 550000 | 179148 | ${ }^{-}$ | Elett_Negri |
| 29586 | 35955 | TERNI SOCIETA PER L'INDUSTRIA E L'ELETTRICITȦ | ROMA(RM) | E40 | Alti Forni Acciaierie e Fonderie di Terni (poi Terni-Societa per l'Industria e l'Elettricita) | Alti Fomi F. A. Temi | Temi | 1884 | 1895 | 1983 | 0.400 | 14133 | 285332 | 30403 | 7133 | Elett_Termi |
| 30371 | 37003 | UNES UNIONE ESERCIZI Elettricl | MILANO(MI) | E40 | UNES - Unione Esercizi Elettrici | Unione eserc. Elettr. | Un. Es. El. | 1905 | 1905 | 1964 | 0.050 | 42000 | 840000 | 83446 | 5460 | Elett UnEsEI |
| 31165 | 34039 | vizzola societa lombarda per DISTRIBUZIONE DI ENERGIA ELETTRICA | MILANO(MI) | E40 | Vizzola - Lombarda Distribuzione Energia Elettrica | Lomb. distr. ener. El. | Lan. Viz. | 1897 | 1902 | 1965 | 0.500 | 45150 | 90300 | 81035 | 5195 | Elett_Vizzola |
| 17100 | 20585 | LA RINASCENTE SOCIETA PER L'ESERCIZIO DI GRANDI MAGAZZINI | MILANO(MI) | G52 | La Rinascente | «La Rinascente» | Rinasc. | 1917 | 1921 | 2003 | 0.040 | 90000 | 2250000 | 164408 | 0 | RT_Rinasc |
| 19578 | 33804 | SOCIETȦ ITALIANA PER LE STRADE FERRATE DEL MEDITERRANEO | MILANO(MI) | 160 | Italiana Strade Ferrate Mediterraneo (ora Mittel) | Ferr. Mediterranee | Fer. Med. | 1885 | 1885 | -- | 0.850 | 93443 | 109933 | 373363 | 3204 | Tran_FerMed |
| 30814 | 34783 | VENETA PER COSTRUZIONE ED ESERCIZIO DI FERROVIE SECONDARIE ITALIANE | PADOVA(PD) | 160 | Veneta Imprese e Costruzioni Pubbliche (poi Veneta Costruzione ed Esercizio Ferrovie Secondarie) | Ven. S. Eserc. Ferr. | Venete S . | 1872 | 1886 | 1964 | 0.200 | 24000 | 120000 | 76541 | 0 | Tran_Venetes |
| 26320 | 24211 | NAVIGAZIONE LIBERA TRIESTINA | TRIESTE(TS) | 161 | -- | -- | Lib. Tries. | 1906 | 1906 | 1937 | - | 100000 | -- | 257598 | 0 | Tran_LibTries |


| \| Id-Orig $[1]$ | Id-Soc [2] | IMITA.db-identifiers Descriptor [3] |  | $\left.\begin{gathered} \text { Ateco } \\ {[51} \end{gathered} \right\rvert\,$ | De Luca (2002) Descriptor $[6]$ | $\begin{gathered} \text { IISole } \\ \text { Weekly Id } \\ {[7]} \end{gathered}$ | $\begin{gathered} \hline \text { IISole } \\ \text { Daily Id } \\ \text { [8] } \\ \hline \text { any } \end{gathered}$ | $\|$Found. <br> Year <br> Ya <br> [9] | $\begin{aligned} & \text { 1 MSE } \\ & \text { Listed C } \\ & {[10]} \end{aligned}$ | $\begin{gathered} \text { MSE } \\ \text { Cancel } \\ \text { [111] } \end{gathered}$ | $\begin{gathered} 1922 \mathrm{~B} \\ \begin{array}{c} \text { NV } \\ {[12]} \end{array} \\ \hline \end{gathered}$ | Balance sh Share-Cap <br> [13] | eet and MSE da Outs-Shares <br> [14] | ata (in thsd Assets <br> [15] | $\begin{gathered} \text { d. LRAA } \\ \text { Dividend } \\ {[16]} \end{gathered}$ | $\begin{gathered} \hline \text { MSE } \\ \text { Ticker } \\ {[17]} \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20058 | 24200 | NAVIGAZIONE GENERALE ITALIANA | GENOVA(GE) | 161 | Navigazione Generale Italiana (gia Florio e Rubattino) | Nav. Gen. Italiana | Nav. G.I. | 1881 | 1880 | 1949 | 0.500 | 150000 | 300000 | 429395 | 9300 | Tran_NavGentit |
| 27828 | 33898 | SOCIETA ITALANA SERVIZI RADIOTELEGRAFICI E RADIOTELEFONICI | ROMA(RM) | 164 | Marconi's Wireless Telegraph co. | Marconi's Wireless | Marconi | 1921 | 1912 | 1923 | 0.025 | 300 | 12000 | 318 | 0 | Tcom_Marconi |
| 21672 | 26123 | PIRELI \& C. | MILANO(MI) | j65 | Pirelli \& C. | Pirelli \& C. | Pirelli | 1883 | 1922 |  | 0.500 | 120000 | 240000 | 180449 | 9600 | Chi_Priellic |
| 2212 | 2584 | banca commercial italana | MILANO(MI) | J65 | Banca Commerciale Italiana | Banca Commerc. Ital. | B.C. Ital. | 1894 | 1898 | 1935 | 0.500 | 348786 | 697572 | 6675949 | 41854 | Fin_ BCital |
| 2231 | 2620 | banca ditalla | ROMA(RM) | J65 | Banca Nazionale nel Regno d'Italia (ora Banca d'Italia) | Banca d'talia | B. d'talia | 1893 | 1894 | 1936 | 0.600 | 180000 | 300000 | 17646199 | 18000 | Fin_BdI |
| 2607 | 3207 | banco di roma | ROMA(RM) | J65 | Banco di Roma | Banco di Roma | B. Roma | 1880 | 1905 | 1935 | 0.100 | 150000 | 1500000 | 3806432 | 0 | Fin_BdRoma |
| 28319 | 34389 | SOCIETA PER L'ESPORTAZIONE E PER L'INDUSTRIA ITALO AMERICANA | MILANO(MI) | j65 | Italiana d'Esportazione E. Dell'Acqua (poi Societa per l'Esportazione e l'Industria Italo Americana) | Esport. Italo-Amer. | Brasital | 1889 | 1900 | 1934 | 0.200 | 18000 | 90000 | 24112 | 1980 | Fin_Brasital, Fin_EspltalAm |
| 6813 | 8402 | Credito italiano | MILANO(MI) | J65 | Credito Italiano | Credito Italiano | Cred. Ital. | 1870 | 1895 | 1935 | 0.500 | 300000 | 600000 | 4682393 | 27000 | Fin_Credital |
| 2721 | 33813 | SOCIETA ITALIANA PER LE STRADE FERRATE MERIDIONALI | FIRENZE(FI) | J65 | Italiana Strade Ferrate Meridionali (poi Bastogi-I.R.B.S., ora Bastogi) | Ferr. Meridionali | Fer. Naz. | 1862 | 1863 | -- | 0.500 | 219585 | 439170 | 1104053 | 6067 | Fin_FerNaz |
| Panel (B). Firms listed in the MSE without full data availability |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { Id-Orig } \\ & {[1]} \end{aligned}$ | Id-Soc [2] | IMITA.db-identifiers <br> Descriptor <br> [3] | Headquarters <br> [4] | $\begin{gathered} \text { Ateco } \\ {[5]} \end{gathered}$ | De Luca (2002) Descriptor [6] | $\begin{gathered} \text { IISole } \\ \text { Weekly-Id } \end{gathered}$ [7] | $\begin{gathered} \hline \text { IISole } \\ \text { Daily-ld } \\ {[8]} \\ \hline \end{gathered}$ | Found. Year [9] | $\begin{aligned} & \text { MSE } \\ & \text { Listed C C } \\ & \text { C10] } \end{aligned}$ | $\begin{array}{c\|} \hline \text { MSE } \\ \text { Cancel } \\ {[11]} \end{array}$ | $\begin{gathered} 1922 \mathrm{~B} \\ \mathrm{NV} \mathrm{~S} \\ \mathrm{Ni} 12] \end{gathered}$ | Balance sh Share-Cap <br> [13] | eet and MSE da Outs-Shares <br> [14] | (in thsd Assets [15] | $\begin{aligned} & \text { d. LRA) } \\ & \text { Dividend } \\ & \text { Dind } \end{aligned}$ [16] | $\begin{gathered} \hline \text { MSE } \\ \text { Ticker } \\ {[17]} \end{gathered}$ |
| 28346 |  | SOCIETA PER LA BONIFICA DEI TERRENI FERRARESI E PER IMPRESE AGRICOLE | TORINO(TO) | A01 | Bonifica Terreni Ferraresi | Bonif. Terr. Ferraresi | -- | 1872 | 1902 | -- | 0.200 | 32700 | 163500 | 62401 | 3270 |  |
| 19824 | 23920 | MONTE AMIATA SOCIETA MINERARIA PER AZION | ABBADIA SAN SALVATORE(SI) | CB13 | Monte Amiata (poi SIFA, ora Finmeccanica) | Min. Moro. M. Amiata | -- | 1897 | 1920 | -- | 0.050 | 16200 | 324000 | 34232 | -- |  |
| 1185 | 1387 | amideria italana | MILANO(MI) | DA15 | Amideri Italiana | Amideria It., Milano |  | 1906 | 1906 | 1940 | 0.080 | 1136 | 14200 | 2576 | 170 |  |
| 14820 | 17852 | industria budella affini | MILANO(MI) | DA15 | Industria Budella e Affini | Indus. Budella e affini | $\cdots$ | 1906 | 1907 | 1931 | 0.100 | 1000 | 10000 | 2296 | 120 |  |
| 19666 | 34181 | MOLINI E PASTIFICIO PANTANELLA | romatrm) | DA15 | Molini Pastificio Pantanella | Molini e Past. Pantanella | $\cdots$ | 1882 | 1898 | 1931 | 0.125 | 10000 | 80000 | 29890 | 680 |  |
| 20924 | 25230 | OLIERIE E SAPONERIE MERIDIONALI | Bari(ba) | DA15 | Oliere e Saponerie Meridionali | Oliere e Sapon. Mer. | $\cdots$ | 1905 | 1908 | 1923 | 0.085 | 8000 | 94118 | 17119 |  |  |
| 26924 |  | SOCIETA DI MACINAZIONE MOLINI CERTOSA | MILANO(MI) | DA15 | Macinazione Molini Certosa | Macin. Certosa nuove | -- | 1889 | 1903 | 1980 | 0.250 | 5500 | 22000 | 23167 | 400 |  |
| 6755 | 8307 | cotonificio verbanese | MILANO(MI) | DB17 | Cotonificio Verbanese | Cotonificio Verbanese | $\cdots$ | 1906 | 1907 | 1931 | 0.200 | 2500 | 12500 | 9867 | 250 |  |
| 6913 | 8537 | CUCIRIII CANTONI COATS | MILANO(MI) | DB17 | Cucirini Cantoni Coats (poi Coats Cucirini, ora Ciccolella) | Fil. Cucir. Cantoni | -- | 1890 | 1896 | -- | 0.125 | 25000 | 200000 | 58572 | 3890 |  |
| 15454 | 18548 | Industrie riunite di flati | MILANO(MI) | DB17 | Industrie Riunite Filati (gia Tosi e Albini) | Ind. Riunite Filati | -- | 1901 | 1904 | 1925 | 0.250 | 5000 | 20000 | 17022 | 700 |  |
| 18958 | 22879 | FABBRICA MAGLIERIE P. MARTINENGO | MILANO(MI) | DB17 | Martazz) <br> Martinengo e Tazzini (poi | Martinengo e Tazzini | -- | 1907 | 1912 | 1931 | 0.130 | 2704 | 20800 | 7126 | 406 |  |
| 25898 | 30280 | IL truciolo | CARPI(MO) | DB18 | II Tuciolo | «ll Truciolow, Milano | $\cdots$ | 1904 | 1905 | 1934 | 0.100 | 2400 | 24000 | 13864 | 168 |  |
| 18655 |  | MANIFATTURA ITALIANA CINGHIE MASSONI \& MORONI | MILANO(MI) | DC19 | Manifattura Italiana Cinghie Massoni \& Moroni | Manif. Massoni e Moroni | -- | 1906 | 1921 | 1955 | 0.100 | 3000 | 30000 | 6807 | -- |  |
| 3088 | 30439 | BORTOLO LAZZARIS STABILIMENTI PER L'INDUSTRIA DEL LEGNO | SPRESIANO(TV) | DD20 | Bortolo Lazzaris | An. Bortolo Lazzaris | -- | 1907 | 1920 | 1923 | 0.070 | 5600 | 80000 | 14436 | 0 |  |
| 12205 | 17538 | IGAP IMPRESA GENERALE D'AFFISSIONI E PUBBLICITȦ | MILANO(MI) | DE22 | Impresa Generale Affissione e Pubblicita | Imp. Gen. Affiss. Pub. | - | 1905 | 1908 | 1934 | 0.100 | 1500 | 15000 | 3678 | 105 |  |
| 18028 | 31417 | Lubrificanti ernesto reinach | MILANO(MI) | DF23 | Lubrificanti Emesto Reinach | Lubr. Ern. Reinach | - | 1905 | 1905 | 1934 | 0.100 | 3500 | 35000 | 16836 | 455 |  |
| 392 | 457 | ACHILLE BRIOSCHI \& C. | MILANO(MI) | DG24 | Achille Brioschi \& C. (poi A. Brioschi, quindi Brioschi Finanziaria, ora Brioschi Sviluppo Immobiliare) | Achille Brioschi \& C. | $\cdots$ | 1907 | 1914 | - | 0.100 | 3500 | 35000 | 5896 | 512 |  |
| 19398 | 31498 | MIGONE \& C. | MILANO(MI) | DG24 | Migone \& C. (poi Immobiliare Orefici) | Migone \& C. | -- | 1899 | 1900 | 1961 | 0.100 | 1950 | 19500 | 4526 | 127 |  |
| 26537 | 31929 | TENSI | MILANO(MI) | DG24 | Tensi - Carta Fotografica e Affini | Tensi ( carta fote aff.) | $\cdots$ | 1906 | 1922 | 1934 | 0.100 | 6250 | 62500 | 13100 | 750 |  |
| 27942 | 33844 | SOCIETA ITALIANA PRODOTII AZOTATI | ROMA(RM) | DG24 | Italiana Prodotti Azotati | Ital. Prodotti azotati | -- | 1904 | 1906 | 1931 | 0.150 | 9900 | 66000 | 18115 | -- |  |
| 9938 | 37058 | UNIoNe italiana cementi | TORINO(TO) | D126 | Unione Italiana Cementi | Uniione Ital. Cementi | -- | 1906 | 1920 | 1932 | 0.050 | 25000 | 500000 | 41378 | 1500 |  |


| IMITA.db-identifiers |  |  |  |  | De Luca (2002) Descriptor [6] | IISole Weekly Id [7] | IISole Daily Id [8] | $\left\|\begin{array}{ccc}\text { Found. } & \text { MSE } & \text { MSE } \\ \text { Year } & \text { Listed } & \text { Cancel } \\ {[9]} & {[10]} & {[11]}\end{array}\right\|$ |  |  | 1922 Balance sheet and MSE data (in thsd. LIRA) |  |  |  |  | $\begin{gathered} \text { MSE } \\ \text { Ticker } \\ {[177]} \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Id-Orig <br> [1] | Id-Soc $[2]$ | Descriptor <br> [3] | Headquarters <br> [4] | Ateco [5] |  |  |  |  |  |  | 1922 NV [12] | Share-Cap <br> [13] | Outs-Shares [14] | Assets Dividend [15] [16] |  |  |
| 10939 | $30997$ | SOCIETA ANONIMA GALOTTI PER MATERIALE DA COSTRUZIONE | BOLOGNA(BO) | D126 | Galotti per Materiale da Costruzione | An. Galotti (Mat. Cos) | -- | 1907 | 1912 | 1928 | 0.100 | 2580 | 25800 | 4495 | 181 |  |
| 321 | 12264 | FONDERIA MILANESE DI ACCIAIO | MILANO(MI) | DJ27 | Fonderia Milanese Acciaio (poi Fonderie Acciaierie Milanesi Vanzetti e quindi Acciaierie Crucible Vanzetti) | Fond. Milan. Acciaio | -- | 1895 | 1905 | 1934 | 0.100 | 5000 | 50000 | 11112 | -- |  |
| 338 | 390 | ACCIAIERIE E FERRIERE LOMBARDE FALCK | MILANO(MI) | DJ27 | Acciaierie e Ferriere Lombarde Falck (poi Falck) | Acc. Ferr. Lombarde | -- | 1906 | 1907 | 2001 | 0.200 | 40000 | 200000 | 98208 | 147 |  |
| 16986 | 20429 | LA MAGONA D'ITALIA | FIRENZE(FI) | DJ27 | La Magona d'Italia | «La Magona d'Italia» | -- | 1900 | 1905 | 1997 | 0.200 | 20000 | 100000 | 59217 | 2200 |  |
| 24583 | 33729 | ITALIANA PER CONDUTTORI ELETTRICI ISOLATI E PRODOTTI AFFINI | LIVORNO(LI) | DL31 | Italiana Conduttori Elettrici Isolati Prodotti Affini | Ital. Cond. El. Isolati | -- | 1906 | 1918 | 1955 | 0.140 | 4991 | 35650 | 12282 | 0 |  |
| 79 | 95 | A. REJNA | MILANO(MI) | DM34 | A. Rejna (poi Rejna) | A. Rejna | -- | 1906 | 1907 | 1998 | 0.040 | 8000 | 200000 | 20450 | 800 |  |
| 16139 | 19403 | ITALA FABBRICA DI AUTOMOBILI | TORINO(TO) | DM34 | Fabbrica Automobili Itala | Automobili Itala | -- | 1904 | 1922 | 1928 | 0.025 | 12500 | 500000 | 75629 | -- |  |
| 19932 | 20476 | LA MOTOMECCANICA | MILANO(MI) | DM34 | La Motomeccanica - Brevetti Ing. Pavesi | La Moto-Aratrice | -- | 1914 | 1918 | 1923 | 0.125 | 1000 | 8000 | 14436 | -- |  |
| 25376 | 30378 | AUTOMOBILI DIATTO | TORINO(TO) | DM34 | Fabbrica Automobili Diatto | Fabbrica Aut. Diatto | -- | 1905 | 1920 | 1924 | 0.005 | 10000 | 2000000 | 38271 | --- |  |
| 19789 | 25083 | OFFICINE MONCENISIO | TORINO(TO) | DM35 | Officine Moncenisio (gia Bauchiero) | Off. Mecc. Moncenisio | -- | 1906 | 1920 | 1943 | 0.100 | 20000 | 200000 | 27106 | 1400 |  |
| 17877 | 32370 | SOCIETA DEL LINOLEUM | MILANO(MI) | DN36 | Linoleum | Linoleum | -- | 1898 | 1905 | 1965 | 0.100 | 4500 | 45000 | 14577 | 405 |  |
| 7960 | 32152 | SOCIETA BRIOSCHI PER IMPRESE ELETTRICHE | MILANO(MI) | E40 | Brioschi per Imprese Elettriche (poi Elettrica Piacentina) | Brioschi per imp. El. | -- | 1907 | 1921 | 1946 | 0.250 | 20000 | 80000 | 41295 | 2000 |  |
| 10573 | 31743 | FORZE IDRAULICHE DI TREZZO SULL'ADDA BENIGNO CRESPI | MILANO(MI) | E40 | Forze Idrauliche Trezzo Adda Benigno Crespi | Forze Idr. B. Crespi | -- | 1904 | 1905 | 1938 | 0.250 | 10000 | 40000 | 21994 | 1000 |  |
| 11069 | 32933 | GENERALE ELETTRICA DELLA SICILIA | TAORMINA(ME) | E40 | SGES - Generale Elettrica Sicilia | Gen. Elettr. Sicilia | -- | 1903 | 1921 | 1972 | 0.100 | 45320 | 453200 | 122538 | 4079 |  |
| 26881 | 32406 | SOCIETA DELLE FORZE IDRAULICHE DEL MONCENISIO | TORINO(TO) | E40 | Forze Idrauliche Moncenisio | Forze Idr. Moncenis. | -- | 1900 | 1908 | 1924 | 0.100 | 40000 | 400000 | 181482 | -- |  |
| 27519 | 33295 | SOCIETA INDUSTRIALE ITALIANA | ROMA(RM) | E40 | Industriale Italiana | Industr. Ital. (Roma) | -- | 1905 | 1921 | 1930 | 0.100 | 24000 | 240000 | 29257 | - -- |  |
| 26770 | 32243 | SOCIETA COLONIALE ITALIANA SCI | MILANO(MI) | G51 | Coloniale Italiana | Coloniale Italiana | -- | 1899 | 1903 | 1928 | 0.100 | 4000 | 40000 | 13740 | 400 |  |
| 27857 | 33713 | SOCIETA ITALIANA PEL COMMERCIO DELLE MACCHINE ED ISTRUMENTI AGRARI | PIACENZA(PC) | G51 | Italiana Commercio Macchine e Istrumenti Agrari | Macchine Agr. Piac. | -- | 1902 | 1905 | 1928 | 0.075 | 2250 | 30000 | 16749 | 225 |  |
| 5039 | 7031 | CIGA COMPAGNIA ITALIANA DEI GRANDI ALBERGHI | VENEZIA(VE) | H55 | Compagnia Italiana Grandi Alberghi (poi Cigahotels, dopo CIGA) | Gr. Alberghi-Venezia | Gr. Alber. | 1906 | 1906 | 2000 | 0.050 | 12000 | 240000 | 31205 | 2400 |  |
| 28463 | 34594 | SOCIETA ROMANA TRAMWAYS OMNIBUS | ROMA(RM) | 160 | Romana Tramways-Omnibus | Romana Tram Omn. | -- | 1884 | 1905 | 1928 | 0.175 | 8400 | 48000 | 17923 | 0 |  |
| 30340 | 37078 | UNIONE ITALIANA TRAMWAYS ELETTRICI | GENOVA(GE) | 160 | Unione Italiana Tranvie Elettriche | Un. It. Tram. Genova | -- | 1895 | 1905 | 1931 | 0.500 | 23000 | 46000 | 77591 | 1150 |  |
| 30733 | 34759 | VARESINA PER IMPRESE ELETTRICHE | VARESE(VA) | 160 | Varesina per Imprese Elettriche | Varesina Impr. Elettr. | -- | 1894 | 1902 | 1942 | 0.085 | 12325 | 145000 | 24779 | 761 |  |
| 17940 | 21591 | LLOYD SABAUDO | GENOVA(GE) | 161 | Lloyd Sabaudo | Lloyd sabaudo | -- | 1906 | 1918 | 1934 | 0.250 | 60000 | 240000 | 247279 | 3600 |  |
| 18329 | 22067 | MAGAZZINI GENERALI MILANESI | MILANO(MI) | 163 | Magazzini Generali Industrie Diverse | Mag. Gen.In Diverse | -- | 1920 | 1920 | 1923 | 0.100 | 3000 | 30000 | 4449 | 0 |  |
| 2228 | 2612 | BANCA D'AMERICA E D'ITALIA | ROMA(RM) | J65 | Banca dell'Italia Meridionale (poi Banca d'America e d'Italia) | Banca dell'It. Merid. | -- | 1917 | 1921 | 1930 | 0.100 | 50000 | 500000 | 371154 | 3000 |  |
| 16045 | 19270 | ISTITUTO ITALIANO DI CREDITO MARITTIMO | ROMA(RM) | J65 | Istituto Italiano Credito Marittimo | Ist. Ital. Credito Mar. | Cr. Marit. | 1916 | 1920 | 1935 | 0.100 | 90000 | 900000 | 234631 | 4875 |  |
| 5623 | 6871 | COMPAGNIA FONDIARIA REGIONALE | MILANO(MI) | K70 | Compagnia Fondiaria Regionale | Comp. Fond. Reg. | $\cdots$ | 1917 | 1921 | 1939 | 0.100 | 16343 | 163430 | 23314 | 981 |  |
| 16109 | 19360 | ISTITUTO ROMANO DI BENI STABILI | ROMA(RM) | K70 | Istituto Romano Beni Stabili | --- | Rom. B. S. | 1904 | 1904 | 1979 | -- | 60000 | -- | 80158 | 4500 |  |
| 28074 | 34029 | SOCIETA LOMBARDA DI BENI | MILANO(MI) | K70 | Lombarda Beni Stabili | Lombar. Beni Stabili | $\cdots$ | 1905 | 1905 | 1925 | 0.100 | 1250 | 12500 | 2194 | 50 |  |
| 29231 | 31917 | SUVINI ZERBONI | MILANO(MI) | 092 | Suvini-Zerboni | Suvini e Zerboni | $\cdots$ | 1905 | 1905 | 1938 | 0.100 | 2554 | 25540 | 7424 | 308 |  |


| MSE Ticker | Cluster | Before |  |  | After |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | mkt_cap | div yield | _return | mkt_cap | div_ | g_return |
| Cot_ValOlon | 0 | 18040462 | 0.0834 | 0.0196 | 19360000 | 0.0778 | -0.0036 |
| Tran_FerMed | 2 | 17154481 | 0.1878 | 0.0225 | 24466082 | 0.1313 | 0.0115 |
| Tess_Tosi | 2 | 36163200 | 0.1001 | 0.0209 | 41443385 | 0.0870 | 0.0086 |
| Fin_BCItal | 2 | 604074994 | 0.0693 | 0.0036 | 641828395 | 0.0652 | 0.0053 |
| Elett_Terni | 2 | 130296720 | 0.0549 | 0.0088 | 136150426 | 0.0524 | 0.0035 |
| Chi_Montecat | 2 | 301087179 | 0.1001 | 0.0189 | 344857692 | 0.0871 | 0.0004 |
| Chi_Elettroc | 2 | 18477692 | 0.0000 | 0.0039 | 19267308 | 0.0000 | 0.0000 |
| TE_Reggiane | 2 | 26336538 | 0.0571 | 0.0073 | 27631410 | 0.0543 | 0.0000 |
| Min_Elba | 2 | 26430769 | 0.0536 | 0.0293 | 30447115 | 0.0460 | -0.0007 |
| RT_Rinasc | 2 | 91694712 | 0.0000 | -0.0010 | 88042788 | 0.0000 | -0.0008 |
| Fin_EspltalAm | 2 | 44913115 | 0.0442 | 0.0131 | 46602115 | 0.0425 | -0.0010 |
| Tess_Targetti | 2 | 5991769 | 0.1009 | 0.0232 | 6904154 | 0.0870 | -0.0028 |
| Tss_ManDini | 2 | 10696346 | 0.0960 | 0.0145 | 11952115 | 0.0855 | -0.0053 |
| Fin_Brasital | 2 | 31069154 | 0.0638 | 0.0067 | 29919692 | 0.0663 | -0.0068 |
| Met_llva | 2 | 179692308 | 0.0193 | 0.0245 | 182740385 | 0.0188 | -0.0105 |
| Cer_RichGin | 3 | 17094359 | 0.0359 | 0.0325 | 16577308 | 0.0377 | -0.0230 |
| Elett_LigTosc | 4 | 80455487 | 0.0877 | 0.0019 | 91481744 | 0.0773 | 0.0100 |
| Fin_Credital | 4 | 387704615 | 0.0697 | 0.0058 | 423993846 | 0.0637 | 0.0046 |
| Chi_Pirellic | 4 | 121584923 | 0.0790 | 0.0008 | 127092769 | 0.0756 | . 0041 |
| Tcom_Marconi | 4 | 2831585 | 0.0000 | 0.0094 | 2590477 | 0.0000 | 0.0038 |
| MV_FIAT | 4 | 471176923 | 0.0318 | 0.0064 | 519151282 | 0.0289 | 0.0029 |
| TEMMianiSilv | 4 | 39999487 | 0.1001 | 0.0108 | 42783077 | 0.0935 | -0.0011 |
| Elett_Vizzola | 4 | 76565138 | 0.0679 | 0.0064 | 77614818 | 0.0669 | -0.0014 |
| Met_Metalli | 4 | 43464615 | 0.0049 | 0.0125 | 47728974 | 0.0044 | -0.0066 |
| Fin_FerNaz | 5 | 129024768 | 0.0470 | 0.0040 | 147992689 | 0.0411 | 0.0081 |
| Elett_Adamello | 5 | 90634683 | 0.0706 | 0.0005 | 98464390 | 0.0650 | 0.0070 |
| Tran_NavGenlt | 5 | 156756154 | 0.0594 | 0.0056 | 168914423 | 0.0551 | 0.0049 |
| Elett_Edison | 5 | 240173785 | 0.0640 | 0.0090 | 263198554 | 0.0584 | 0.0045 |
| Elett_Negri | 5 | 68037115 | 0.0000 | 0.0000 | 64044327 | 0.0000 | 0.0019 |
| Elett_Conti | 5 | 87677036 | 0.0749 | 0.0025 | 91665523 | 0.0717 | 0.0016 |
| Elett_Bresciana | 5 | 33922564 | 0.0000 | 0.0083 | 34587436 | 0.0000 | -0.0072 |
| MV_Bianchi | 5 | 20291385 | 0.0967 | 0.0120 | 21954154 | 0.0893 | -0.0076 |
| MV_IsFrasc | 5 | 1049908 | 0.0000 | 0.0060 | 895292 | 0.0000 | -0.0261 |
| Cot_Merid |  | 53083077 | 0.0905 | 0.0084 | 56539487 | 0.0849 | 0.0027 |
| Tess_DeAngeli | 7 | 56889667 | 0.1355 | 0.0087 | 61416667 | 0.1258 | 0.0114 |
| Met FrGreg | 7 | 26835819 | 0.0000 | 0.0073 | 29768779 | 0.0000 | 0.0031 |
| Tess_Pacch | 7 | 14834769 | 0.0973 | 0.0170 | 18181385 | 0.0792 | 0.0026 |
| Met_Camona | 7 | 5486410 | 0.0697 | 0.0077 | 5769551 | 0.0663 | 0.0020 |
| Cot-Furter | 7 | 9118654 | 0.0608 | -0.0026 | 8502115 | 0.0650 | 0.0017 |
| TE_Breda | 7 | 95886667 | 0.0939 | 0.0007 | 97800256 | 0.0920 | 0.0013 |
| Tess_Rossi | 7 | 66365962 | 0.0697 | 0.0087 | 69179254 | 0.0668 | 0.0010 |
| Tess_Rotondi | 7 | 22635000 | 0.0931 | 0.0144 | 23669231 | 0.0889 | 0.0005 |
| Cot_Cant | 7 | 33110154 | 0.0610 | 0.0229 | 37957538 | 0.0528 | 0.0005 |
| Tess_RossVarz | 7 | 37584000 | 0.0858 | 0.0203 | 39753846 | 0.0807 | -0.0042 |
| Cot_ValTicino | 7 | 14370462 | 0.0753 | 0.0151 | 14233154 | 0.0762 | -0.0051 |
| Tess_Gavardo | 7 | 35526154 | 0.0545 | 0.0091 | 35649231 | 0.0541 | -0.0069 |
| Cot_ValSer | 7 | 28715692 | 0.0597 | 0.0226 | 30808000 | 0.0547 | -0.0100 |
| Man_Mira | 8 | 15364641 | 0.0912 | -0.0005 | 14114333 | 0.0992 | -0.0016 |
| Tess_CanapNaz | 8 | 118798974 | 0.0675 | 0.0100 | 136525128 | 0.0591 | -0.0087 |
| Min_Petroli | 9 | 7190513 | 0.1044 | -0.0035 | 6719744 | 0.1119 | 0.0014 |
| Tess_Bernasc | 9 | 28276923 | 0.0849 | 0.0168 | 33035769 | 0.0727 | -0.0009 |
| N_ncon $=51$ |  |  |  |  |  |  |  |


| mkt_cap | After |  |  |
| ---: | ---: | ---: | :---: |
| div_yield | log_return |  |  |
| 60633029 | 0.0594 | 0.0075 |  |
| 10949231 | 0.0000 | 0.0192 |  |
| 14064308 | 0.0000 | 0.0103 |  |
| 31592308 | 0.1109 | 0.0030 |  |
| 50823333 | 0.1183 | 0.0036 |  |
| 121698718 | 0.0822 | 0.0050 |  |
| 6932846 | 0.0897 | 0.0038 |  |
| 2724808 | 0.0000 | -0.0006 |  |
| 66672436 | 0.0901 | 0.0080 |  |
| 117882308 | 0.0509 | 0.0086 |  |
| 81462564 | 0.0983 | 0.0084 |  |
| 112674329 | 0.0498 | 0.0115 |  |
| 78272308 | 0.0230 | 0.0044 |  |
| 106757853 | 0.0562 | 0.0043 |  |
| 441726923 | 0.0408 | 0.0057 |  |
| 156000000 | 0.0000 | 0.0001 |  |
| 154104359 | 0.0650 | 0.0100 |  |
| 42511038 | 0.1060 | -0.0010 |  |
| 19371462 | 0.0000 | 0.0081 |  |


|  |  | Before |  |  |
| :---: | :---: | :---: | :---: | :---: |
| MSE Ticker | Cluster | mkt_cap | div_yield | og_return |
| Agr_FonRust | I | 51679327 | 0.0697 | 0.0125 |
| Chi_Bonelli | 1 | 9296154 | 0.0000 | 0.0126 |
| Cot_Trobaso | 1 | 13805846 | 0.0000 | 0.0048 |
| Cot_Turati | 1 | 28567179 | 0.1230 | 0.0183 |
| Cot_Venez | 1 | 45542051 | 0.1319 | 0.0158 |
| Elett_Adriatica | 1 | 110200000 | 0.0909 | 0.0081 |
| Elett UnEsEl | 1 | 57902385 | 0.0945 | 0.0083 |
| Equip_Ansaldo | 1 | 2500077 | 0.0000 | 0.0201 |
| FB_Distillerie | 1 | 58264744 | 0.1032 | 0.0162 |
| FB_Eridiana | 1 | 102728077 | 0.0586 | 0.0146 |
| FB_Gulinelli | 1 | 70782051 | 0.1131 | 0.0107 |
| FB_IndZuc | 1 | 95529692 | 0.0588 | 0.0126 |
| FB_MolAltalt | 1 | 59622500 | 0.0306 | 0.0326 |
| FB_Raffinerie | 1 | 98896795 | 0.0608 | 0.0126 |
| Fin_Bdl | 1 | 401669231 | 0.0448 | 0.0054 |
| Fin_BdRoma | 1 | 156201923 | 0.0000 | -0.0001 |
| Tess_CascSeta | 1 | 116750769 | 0.0861 | 0.0213 |
| Tess_UnManiff | 1 | 43019308 | 0.1049 | 0.0175 |
| Tran_VeneteS | 1 | 15624215 | 0.0000 | 0.0183 |
| N_con $=19$ |  |  |  |  |
| Average |  | 80978017 | 0.0616 | 0.0138 |


| MSE/IMITA.db AverageAssetsShare-Cap |  |
| :---: | :---: |
| [14] $=[99 / 44$ | $=[101 / 5$ |
|  | 9.95 |
| 1.61 | 2.05 |
| 5.47 | 3.46 |
| 7.35 | 8.39 |
| 3.86 | 4.20 |
| 15.51 | 16.07 |
| 4.53 | 3.46 |
| 9.90 | 7.67 |
| 1.56 | 2.05 |
| 132.48 | 136.13 |
| 3.28 | 4.03 |
| 4.81 | 7.11 |
| 6.31 | 3.55 |
| 6.21 | 7.27 |
| 5.77 | 6.93 |
| 16.25 | 12.56 |
| 7.67 | 8.52 |
| 0.12 | 0.22 |
| 22.74 | 14.17 |
| 14.89 | 10.96 |


Reference Table: [Sector Details] Number of Firms, Assets and Share Capital for ATECO Sectors in IMITA.db and Milano Stock Exchange (MSE), Year: 1922


Panel (B). Sectors for which there are no firms in the MSE with full data

| ATECO | Descriptor | $\begin{gathered} N \\ {[1]} \end{gathered}$ | Industry-Total |  | Industry-Average |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Assets <br> [2] | Share Capital <br> [3] | Assets <br> [4] | [5] |
| A02 | Forestry | 5 | 31473 | 21560 | ${ }^{\text {[ }} 6295$ | 4312 |
| B05 | Fishing | 8 | 64959 | 14540 | 8120 | 1818 |
| CA10 | Coal-lignite-peat | 17 | 182639 | 100995 | 10743 | 5941 |
| CB14 | Other-mining | 38 | 232181 | 137093 | 6110 | 3608 |
| DB18 | Wearing-apparel | 31 | 201408 | 86505 | 6497 | 2790 |
| DC19 | Leather-footwear | 36 | 241143 | 119137 | 6698 | 3309 |
| DD20 | Wood | 31 | 165119 | 74338 | 5326 | 2398 |
| DE21 | Pulp-paper | 30 | 307645 | 123713 | 10255 | 4124 |
| DE22 | Publishing-printing | 52 | 199313 | 81652 | 3833 | 1570 |
| DF23 | Refined-petroleum | 6 | 88270 | 19775 | 14712 | 3296 |
| DH25 | Rubber-plastic | 5 | 308605 | 160510 | 61721 | 32102 |
| DL30 | Office-machinery | 1 | 1233 | 1000 | 1233 | 1000 |
| DL31 | Electrical-machinery | 44 | 495015 | 234129 | 11250 | 5321 |
| DL32 | Communication-equip | 3 | 86495 | 14000 | 28832 | 4667 |
| DL33 | Precision-equip | 8 | 51264 | 16044 | 6408 | 2006 |
| E41 | Water | 17 | 188957 | 118140 | 11115 | 6949 |
| F45 | Construction | 53 | 525404 | 171728 | 9913 | 3240 |
| G50 | Repair-fuel | 1 | 2254 | 1000 | 2254 | 1000 |
| G51 | Wholesale-trade | 205 | 2162714 | 643299 | 10550 | 3138 |
| H55 | Hotels-restaurants | 60 | 216672 | 102570 | 3611 | 1710 |
| 162 | Air-transport | 1 | 233 | 200 | 233 | 200 |
| 163 | Supporting-transport | 46 | 252782 | 120200 | 5495 | 2613 |
| J66 | Insurance | 82 | 1496045 | 173529 | 18244 | 2116 |
| k70 | Real-estate | 180 | 1130189 | 647458 | 6279 | 3597 |
| k71 | Renting-machinery | 2 | 10886 | 4930 | 5443 | 2465 |
| K74 | Other-business-acts | 7 | 23946 | 10250 | 3421 | 1464 |
| M80 | Education | 5 | 10239 | 5726 | 2048 | 1145 |
| N85 | Health | 5 | 13469 | 8133 | 2694 | 1627 |
| 092 | Recreation-culture | 28 | 203172 | 115073 | 7256 | 4110 |
| 093 | Other-services | 17 | 64553 | 32865 | 3797 | 1933 |
|  | Sub-Total | 1024 | 8958277 | 3360092 |  |  |
|  | \% IMITA.db Total | 35.1 | 9.3 | 18.4 |  |  |
|  | IMITA.db Total | 2917 | 95829263 | 18273712 |  |  |

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[^0]:    ${ }^{\pi}$ Research output corresponding to Inet Grant No. INO1400003. This paper is still work in progress, hence this version is preliminary, please do not cite without authors' permission. Comments, critiques and suggestions are kindly welcomed.

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    ${ }^{4}$ See, for example, Shleifer and Vishny (1994); Khwaja and Mian (2005); Faccio et al. (2006); Bunkanwanicha and Wiwattantang (2009); Boubakri et al. (2012).
    ${ }^{5}$ See, for example, Roberts (1990); Agrawal and Knoeber 2001); Fisman (2001); Johnson and Mitton (2003); Li et al. (2008); Civilize et al. (2015).

[^1]:    ${ }^{6}$ At the beginning of the $20^{\text {th }}$ century, the Italian bank system was a peculiar mix of traits from the Anglo-Saxon market-oriented model and the German model of the universal bank.
    ${ }^{7}$ For a general description of the characteristics of Italian industry during the interwar period see Amatori and Brioschi (1997); Amatori and Colli (1999); Amatori et al. (2011).

[^2]:    ${ }^{8}$ On this bank crisis see Asso and De Cecco (1994).
    ${ }^{9}$ The increase in exports during the first Mussolini government was due to the positive international economic climate as well as depreciation of the lira exchange rate (De Cecco, 1993).

[^3]:    ${ }^{10}$ At that time the Ministry of Defence was named Ministero per la Guerra.
    ${ }^{11}$ On Matteotti's assassination see Canali 2004, 2009).

[^4]:    ${ }^{12}$ See Rossi $\sqrt{1955}$ ) and Belloni $(\sqrt{2011})$ for two different reconstructions of the meeting.
    ${ }^{13}$ The daily newspaper 'Il Sole' was founded in 1865 on the initiative of a group of small entrepreneurs in the textiles sector. In 1905, representatives of the machinery and banking sectors became shareholders in the newspaper. From its beginning, one of the main functions of the newspaper was to acquaint dealers with trends on the stock exchanges, in commodities markets, and the performance of companies and of market prospects. For this reason, soon after its foundation 'Il Sole' became an official organ of the chamber of commerce of Milan.

[^5]:    ${ }^{14}$ IMITA.db (IMprese ITAliane Data Base) has been created by a consortium of Universities (including Siena, Bocconi, Bologna and Firenze), and supported by the Italian Ministry of Education, University and Research (MIUR) and the National Research Council (CNR). The database is freely accessible at: http://imitadb.unisi.it/en/home.asp.
    ${ }^{15}$ See Giannetti and Vasta (2006); Colli (2006); Colli and Vasta (2010) for details.
    ${ }^{16}$ Useful information in this regard has been gathered from De Luca (2002).
    ${ }^{17}$ See section 6 below for a detailed econometric specification of this statement.
    ${ }^{18}$ See Appendix A for for a historiographic analysis of prominent individuals within the cluster of connected firms.

[^6]:    ${ }^{19}$ Following MacKinlay (1997), by event window we mean a brief time period associated to pieces of news which are supposed to influence stock market dynamics.

[^7]:    ${ }^{20}$ Given that not all securities were traded in each day, the length of the pre-event and post-event days of the event window have been adjusted on a firm basis $5^{\circ}$ as to cover the same period for all firms, whenever

[^8]:    possible.
    ${ }^{21}$ See Brown and Warner 1980,1985 on how to deal with monthly or daily information in connection to a very short event window.
    ${ }^{22}$ We adopted this model as a first approximation, though it is clear that the joint distribution of stock prices is not even asymptotically normal, but rather, it exhibits fat tails and follows a power law (see, e.g. Buchanan, 2008). It might be also possible to try other specifications, for example, instead of defining abnormal returns using the conditional expectation, these could be defined on the basis of the conditional median (i.e. the 0.5 quantile).

[^9]:    ${ }^{23}$ The estimation window $\left(T_{0}, T_{1}\right]$ goes from the beginning of the time period considered (July 1922) to ten days before the March on Rome. Thus, ARs have been computed for the period consisting of ten days before to ten days after the event day (October $28^{\text {th }}, 1922$ ). There are, however, some missing days in the dataset due to sundays, holidays and vacations. By ten days we mean ten working days of the stock exchange.

[^10]:    ${ }^{24}$ For a detailed discussion see MacKinlay (1997, p. 27).

[^11]:    ${ }^{25}$ It is worth stressing again that ARs have been computing on the basis of individual firm-level regressions in which the only independent variable is average market returns. As will be seen in the next Section, there are other variables, and specifically market capitalization, market beta and industrial sector of activity which influences market returns themselves. In particular, some sectors were characterized, during the period considered, by above- or below-average returns independently of connectedness of firms.

[^12]:    Source: Own computations based on Il Sole Financial Newspaper and IMITA.db

[^13]:    ${ }^{26}$ As already stressed above, some days are missing due to holidays and vacations. Using average weekly returns rather than picking a specific day of the week and computing returns against the same day of the following one allows to avoid missing observations. However, in order to check robustness of such a choice, we also computed returns using the alternative method, and then run regressions for each possible choice. Results are shown in Table 7. Looking at the top panel of Table, concerning the period before the March on Rome, results are qualitatively very close to each other in the different cases considered, i.e. picking as a reference point each single day of the week and weekly averages: the constant is the only significant coefficient, while the one associated to the dummy indicating connected firms is always positive but not significant. The bottom panel, concerning the period after the March on Rome, displays some more heterogeneity. More specifically, the intercept is significant for the case of Tuesday, Wednesday and Saturday, while it is not for the other days and for weekly averages. However, the coefficient associated to the connected-firms dummy is significant and positive in all cases. At the light of these considerations, it seems reasonable to take weekly averages as our reference point, given the fact that the number of observations for the period following the March on Rome is much higher than that which could be obtained by pocking any other day ( 982 as against 901 which is the highest number of observation for the case of single days).

    Table 8 compares the results shown in Table 7, and based on weekly averages, to those obtained by estimating the same equations for the other clusters. In the period before the March on Rome, two clusters ( $C L_{3}$ and $C L_{10}$ ) show significantly higher-than-average; however, these two clusters include one single firm each, i.e. Ceramica Richard Ginori and Cotonificio Val d'Olona, respectively. Parallely, two clusters (CL5 and $C L_{6}$ ) significantly lower-than-average $\log$ returns; $C L_{6}$ also consists of one firm only: Manifatture Cotoniere Meridionali. As to the period after the March on Rome, $C L_{1}$ is the only group showing higher-than-average returns; on the contrary, log-returns of clusters $C L_{3}, C L_{8}$ and $C L_{10}$ are significantly lower-than-average.
    ${ }^{27}$ Standard errors are based on Huber-White heteroscedasticity-consistent estimates and clustered on the level of the firm.

[^14]:    ${ }^{28}$ Table B. 11 reports the Code, Label and Description associated to the sector classification adopted by IMITA.db, i.e. Level-3 Ateco (1991) which is the Italian version of Eurostat Nace Rev. 1

[^15]:    Source: Own computations based on Il Sole Financial Newspaper and IMITA.db

[^16]:    ${ }^{29}$ Finzi joined the Fascist Action Squads in 1920. In 1921 he was elected deputy and he was one of the most resolute opponent to Patto di Pacificazione with the Socialist Party. On June $13^{\text {th }} 1922$, together with other Fascists he attacked the communist deputy, Francesco Misiano. He was implicate in the Matteotti assassination and Mussolini compelled him to resign, even though he was not brought to trial (Canali, 2004).
    ${ }^{30}$ The Corriere d'Italia closed after Matteotti's assassination because its director, Filippelli, was arrested for abetment in the kidnapping and assassination of Matteotti (Canali, 2004).

