Factors in Top Executive Turnover: An Empirical Analysis of Italian Listed Firms

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This paper aims to study the existing link between CEOs turnover and several variables that could explain the exit of a CEO. The survey takes performance measures into account as main variables. Besides performance variables the study includes: ownership structure variables; variables that highlight personal features of a CEO and the composition of the board; firm variables. The number of sampled Italian companies ranges from 134 to 218 over the period 1996-2002. Accounting returns explain the turnover much better than market measures of performance; CEOs of state-owned firms change more frequently than others; the stake of minority shareholders is positively related to the turnover; the presence of syndicates negatively affects the turnover. In Italy, accounting returns "count" much more than market-based performances. [JEL Classifications: G32; G34; J63; L14]

1. - Introduction

CEOs (chief executive officer) normally tend to change according to a natural evolving process of a company regardless of the performances obtained. Yet in some instances changing the CEO is a common solution in response to bad performances. For their nature this sort of turnovers are called "disciplinary". A board

of directors that works efficiently with respect to supervision and monitoring on management should facilitate such changes. Recently disciplinary changes showed a significant impact on media because of the popularity of the companies involved (e.g. Enron, WorldCom, Xerox, Cirio, Parmalat, etc.) and financial scandals that often run along with the change.

Corporate governance rules help to increase effectiveness and efficiency of decision-making process insuring a lean and balanced distribution of the powers. On the other hand such rules improve the quality of the control activities performed by both internal (i.e. board of directors and board of auditors) and external bodies (i.e. auditing companies and the authority in charge of control).

The general purpose of the researches on this subject is to identify and test several determinants of the CEO turnover. The major analysis pertains verifying whether or not poor accounting-based and market-based performances of a company account for the decision of a CEO to step down. The general purpose of the present paper is to verify if the action of the board of directors is driven by efficiency and welfare of the shareholders.

This paper, that belongs to the branch of studies that analyses efficiency of the board of directors, enriches the debate with the following issues:

a) It shapes and tests most common variables and hypotheses, formulated by international literature, in the Italian context. It also provides an interpretation of the findings in an Italian business perspective with respect to ownership structure, stock market and governance. It must be noticed that Italian firms have not been investigated as much as U.S. firms by studies of the above branch of studies;

b) unlike Italian studies quoted (Barontini, Caprio, 2002; Brunello *et* al., 2003): it covers a more recent interval of years; it adopts more original explanatory variables; it shows partially different results and hypotheses.

We can assess whether the management that should look after shareholders' welfare, on the ground of bad shares performances, stays on office or new managers become appointed. Besides shares market value, a shareholder cares about profits generated, that

once distributed, comprise the liquidity due to the shareholders. Managers should therefore be assessed and judged in function of both shares value and accounting-based performances.

If the assumptions are confirmed by empirical data we will find a negative relation between turnover and performance. The present study relies on three indicators of accounting-based performances: ROI (return on investment, unadjusted measurement), ROE (industry-adjusted return on equity) and a dummy variable that becomes 1 or 0 respectively as the firm generates losses or profits; two market measures of performance: the annual stock returns (market-adjusted) and the industry-adjusted market to book value of equity.

CEO turnover might be influenced by some extra variables, called accessory variables, that don't have a direct relationship to the firm performance. Yet these variables might both support the explanatory power of performance variables and explain why a CEO steps down.

The following are the accessory variables:

1) variables that mirror the ownership structure (points 6, 7, 8, 9, paragraph 5);

2) variables that mirror personal features of the CEO and composition of the board (points 10, 11, paragraph 5);

3) variables reflecting the type of firm (point 12, paragraph 5).

A brief explanation of the hypotheses underlying the accessory variables follows:

With respect to the percentage of common shares held by largest shareholder, two hypotheses may be tested: whereas on the one hand the presence of a controlling shareholder would facilitate the turnover due to the right of the shareholders' meeting to fire an incapable CEO, on the other hand in presence of a controlling shareholder there could be economic, personal and family ties with the CEO or being the CEO himself that hamper the turnover.

With reference to the stake of minority shareholders, a well coordinated and joint action of outside blockholders (for the definition of outside blockholders see point 7, paragraph 5) may have some sort of impact on CEO facilitating the turnover. If this

is the case, there should be a positive correlation between CEO turnover and the weight of outside blockholders.

The existence of shareholder pacts among the main shareholders, whose purpose is to stabilize the ownership structure (block syndicate) or the exercise of the right to vote in the shareholders' meeting (voting syndicate), might negatively affect the top executive turnover rate.

It is harder making hypotheses that account for a higher or lower turnover for publicly-owned companies (state-owned firms and municipal concerns). In this case, the CEO has no personal or family relationships with the largest shareholder. This might promote the top executive turnover. Given the relationship between the top management and the central and local governments (the Minister of Economy or the chiefs of the local governments appoint the majority of directors and then the CEO), the turnover, in these companies, could be pegged to the changes in the central (i.e. Ministry of Economy) and local governments (i.e. city council, provinces etc.).

Turnover rate may also increase with respect to the average age of the CEOs, due to the possibility of illness, death or retirement. However, the third explanation doesn't hold if the largest shareholder is CEO of the company. In this case, company policy may lack a fixed age for retirement, as the long-term leadership of one person maintains the image of stability towards the investors and serves the economic interests of the CEO himself.

Just as the variable reflecting the presence of outside blockholders, so should be the variable that pertains to the weight of independent members within the board. Independent directors with active attitudes consisting in neutral recommendations, opinions and evaluations, can comprise a factor of discipline for the CEO.

The following paragraphs deal with the following issues: 2nd, the role and functions of the board of directors and management; 3rd, the causes and solutions of agency costs; 4th, the empirical data collected; 5th, the description of the sample and variables adopted; 6th, an illustration of results attained; 7th, conclusions and further surveys linked to the present paper.

2. - Role and Functions of the Board of Directors and Management

Corporate Governance is a system of written regulations, best practices well regarded by the market, principles and procedures which aim at shareholders' protection[1]. Corporate governance aims at securing the best possible distribution of tasks, rights and responsibilities among internal bodies (i.e. board of directors, board of auditors and shareholders' meeting) and external bodies (i.e. supervisory authorities, auditing companies, firms charged with the task of organizing and running regulated markets etc.). Doing so corporate governance benefits both shareholders, by maximizing the firm's value, and stakeholders. Given the recent financial scandals, those companies with a careful corporate governance tend to be better regarded by investors. This is even truer in case of finances incoming from institutional investors. This good standing is unquestionably strengthened once the company decides to raise funds in the market, even more in adverse market conditions. However an excessive regulation might hinder the management, slowing down the decision-making process.

Governance systems of the so called "managerial firms" are comprised of two bodies, closely linked by functions, roles and competences: the board of directors and the management itself.

The board of directors is a collegial body that, by law (art. 2380-bis of the Civil Code), wields the power of firm's management. In reality, only few members of the board take part in the operating management of the company: those directors that are either delegated all or some powers by the board (apart from those the law says are in charge of the board) or that have an executive role within the company (e.g. general manager, chief financial officer etc.). Both the types of directors are called executive directors. These directors resemble in some respects U.S.

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[1] SHLEIFER A. - VISHNY R. (1997) provide an effective and concise notion of corporate governance: «*Corporate governance deals with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment*».

inside directors. However it must be said that inside directors' roles and origins are different to the Italian executive directors. The former type is typically a member of the top management that has spent much of his career within the company itself and reached the top of managerial hierarchy, then becomes appointed by the CEO to join the board. Mace (1986) and Lorsch-MacIver (1989) argue that in the U.S. companies the board is dominated by the CEO who appoints managers to join the board. On account of such way of appointing, the boards of U.S. corporations are mainly made up of insiders rather than outsiders[2]. This accounts for the reluctance of American literature that deals with efficiency of the board to consider the board as means to reduce agency costs. In the last years this characteristic seems to have changed: the weight of outsiders has increased but there is no evidence about the improvement of firms' performance. On the contrary, Bhagat, Black (1999) find opposite results: better performance in the firms with few outsiders. Although Italian CEOs are members of the management they don't represent it overall as the largest shareholder proposes their candidacy. These directors are very much linked to the main shareholder and look after his interests in the board. It's not unusual that a CEO is appointed with few or no years of experience as manager within the firm itself. Parrino (1997) found that the case above occurred only in 2.66% of sampled U.S. companies.

Directors that are not part of the managerial team and haven't got delegated powers by the board are called non-executive directors. Non-executive directors usually outnumber executive. In 2002 the average number of non-executive directors in companies listed on MTA (Italian regulated securities market) was 6.8, while executive directors added up to 3.5 (Consob, 2002). Effective non-executive directors are constantly kept up with the activities of the executive directors, especially the CEO. What said holds theoretically yet not operationally. Non-executive directors are often linked to largest shareholder by economic, family and

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[2] Professionals that have never held an executive position in the company where they become appointed.

intimate ties[3]. This sort of relationships weakens the role of non-executive directors. The problem can be tackled through non-executive directors independent from the largest shareholder and executive directors. Given the high ownership concentration within Italian firms and that the largest shareholder proposes the candidacy, the solution presented above seems unconvincing. It must be said that the candidacy alone doesn't imply a lack of independence of the directors. The independence must be seen in light of the existing relationships with the largest shareholder, executive directors, the firm and the subsidiary-affiliated firms. The "vote by list" method, widely adopted by publicly-owned companies, is an alternative to secure a presence of independent directors. By December 2002, 35 out of 218[4] sampled firms listed on MTA had the "vote by list" system in their statutory books. The "vote by list" might create some problems if a minimum number of held shares is required to present the lists. If no minority shareholder holds a significant stake, a coordination among small shareholders to reach the minimum required is needed. However, this solution generates costs for those that coordinate the action of the shareholders that in turn only reap advantages. The free riding issues hinder the coordination among shareholders. Minority shareholders' rights face alike problems (Bianchi *et* al., 2002).

The management is the second player in a system of corporate governance. This is the set of offices existing in a company from the top to the bottom of the managerial hierarchy. Each role has its own independence in making decision within respective areas that differ in size according to the manager's rank. At the top of management we find the CEOs. From the foregoing we can say that the management rather than the board looks after the actual day by day running of the firm.

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[3] American literature calls "gray directors" those who have an economic relationship other than employer-employee with the company itself, the largest shareholder, the controlled firms and the executive directors.

[4] Data from statutory books of the firms and annual reports on corporate governance.

3. - Agency Costs: Causes and Tools to Reduce their Relevance

The general theory of agency (Jensen, Meckling, 1976) analyses the relationship between shareholder (principal) and manager (agent) as well as the related issues that might arise in case of a diluted ownership.

In a firm marked by a diluted ownership the situation is as follows: managers run the firm holding a small or nil amount of shares. Thus a separation between control and ownership occurs as the latter is spread among many holders that don't interfere in the firm's running and whose main power is the right to vote. On the ground of that, managers might have other aims than creating value for shareholders that bear the agency costs: 1) managers don't invest in order to maximize shares' value; 2) shareholders need to monitor managers' choices and pay for the related costs.

Jensen (1986) points to free cash flow (hereafter, FCF) as a further cause of agency costs: managers of firms that show a high FCF might spend the extra-cash in unprofitable investments. Small growth opportunities can also be cause of agency costs related to an excess of FCF: firms that show few investment opportunities are exposed more to managers waste funds in projects with negative net present value. Moreover as the growth opportunities are small the FCF might be significant. Therefore, a high FCF and few investment opportunities are independent causes of agency costs as well as interrelated variables that might trigger one another.

Solutions to agency costs can be found in the following: 1) grant of managerial stock incentives that aim to curb consequences of separation between ownership and control; 2) the distribution of cash (i.e. dividends and share repurchases) to shareholders and creditors (i.e. debt is an alternative method of disgorging FCF) is a tool that aims to take cash off managers' possession[5] (Jensen, 1986; Berger *et* al., 1997); 3) the board of directors that should monitor managers' activities.

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[5] For an additional understanding on managerial stock incentives and payout policy see: LAMBERT R.A. *et* AL. (1989); MORCK R. *et* AL. (1988); DENIS D.J. *et* AL. (1997*a*); SMITH JR. C.W. - WATTS R.L. (1992); GAVER J.J. - GAVER K.M. (1993); BAGWELL L. - SHOVEN J. (1988); DITTMAR A.K. (2000); FENN G.W. - LIANG N. (2001); ROZEFF M.S. (1982).

Some American authors point out the contradictions in managerial ownership: Morck *et* al. (1988) argue that managerial ownership can make the replacement of a poorly-performing CEO more difficult, on the ground of some attributes that express the power of top executive such as: stature within the firm, status as the firm's founder, greater inside board representation, the employment of fewer professional managers, the right to vote and other non-quantifiable measures of power; Mikkelson, Partch (1989 and 1997); Shivdasani (1993); Cotter, Zenner (1994); Denis, Denis (1995); Denis *et* al. (1997a) highlight that greater levels of managerial ownership may inhibit the external corporate control market and, in so doing, reduce the effectiveness of internal monitoring effort.

Agency costs also exist in presence of a concentrated ownership (the Italian case) on account of two factors: private benefits for controlling shareholders[6] and the control-enhancing devices[7]. Controlling shareholder can abuse of this power skewing the advantages against minority shareholders that end up not benefiting from the flow itself, therefore the largest shareholder carries out an appropriation of value to the detriment of minority shareholders. The devices above enable us to minimize the "integrated ownership"[8] (Brioschi *et* al., 1990; Barca *et* al., 1994). The degree of separation between ownership and control must be measured according to "integrated ownership". For instance, the Pesenti family controlled Italcementi spa (operational firm) through Efiparind BV (holding) and Italmobiliare spa (sub-holding) by December 2003. The indirect and integrated stake added up respectively to 26.81% and 10.06%[9].

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[6] Private benefits are cash and goods' flows generated by a firm that only benefit the controlling shareholder or firms under his control rather than contribute to the performances of the firm.

[7] These devices enable the owner to control a great deal of voting shares, along with the respective economic activities, through small financial means. The main control-enhancing devices are: non-voting shares; pyramidal groups; links of stakes within one or more groups.

[8] The amount of cash flows that an external shareholder, in a group of firms, would receive. In other words it is measured by the sum of the direct and indirect ownership.

[9] Data from annual statements and reports on operations.

In presence of both concentrated and diluted ownership the source of agency costs stays the same. However the aim is achieved not through splitting the ownership but through control-enhancing devices. In this case a conflict of interests involves controlling and minority shareholders.

4. - International Empirical Evidence

All the studies (Table 1), consistently with the assumption that the board of directors is efficient with respect to the measures of performance, find a significant negative correlation between top executive turnover and various measures of performance (accounting-based and market-based measures of performance). The studies that analyse the performance shown by the company one or more years prior to (BC, PA, KS, K) and the same year of the substitution (BC, PI, K) find the strongest correlation between stock returns with a lag of one year and turnover. Yet this conclusion can't be generalized: PI's study shows that stock returns measured on the very same year of the substitution have a stronger explanatory power than those of the year before. By contrast stock returns considered in BC on the same year of the turnover never show a significant statistical correlation to this event. However, in BC the best results date three years prior the substitution. BC argue that stock returns anticipate accounting-based performances. Conversely K argues that both the avenues of returns are capable to explain CEO turnover. Yet K measures the turnover over 2-year periods and the returns over the contemporaneous and previous 2-year intervals. Only MP's study finds a non-significant negative correlation to stock returns. In KS the link between stock returns and turnover is negative and statistically significant if we focus on non-routine turnovers[10].

The relation between turnover and accounting measures of performance, regardless of the variable adopted, is both significant and negative. Only in BC, the annual change in total turnover does

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[10] The president loses his position and does not remain on the board.

not account for the change of executive directors. PA's study, that includes the origin of the incoming CEO, finds that as the firm underperforms industry performance, the likelihood that an outside candidate is appointed increases steady. Even if the new CEO is an inside candidate and the replacement is forced the coefficient is negative but smaller than in the case of an outsider CEO. MP consider whether the market for corporate control is "active" or "passive". A "passive" market for corporate control produces a smaller sensitivity of turnover to performances (accounting-based and market-based), according to the expectations. BC's study shows a higher turnover rate and a higher sensitivity of the turnover to accounting returns as the company deals in financial services.

With reference to the assessment of the turnover's probability, the studies that estimate the implied changes in probability of turnover using performance variables measured through "position indicators" (e.g. interquartile range, difference between the 90th and 10th percentile, etc.) show little variations of turnover's probability: DDS find a decrease in probability of turnover in correspondence of an improvement of performance of 1.5% (using stock returns); 3.9% for KS and 3% respectively using stock returns and ROA; 1.22% for BC using a stock return with a three-year lag to the turnover and 1.74% using the current ROE; 6% for MP using ROA but only in the period with an "active" market for corporate control. This result confirms the crucial role of the market for corporate control. BGP's study shows a reduction in turnover's probability as big as 10.6%, the most significant one, in correspondence of an increase of stock returns as big as the difference between the 75th and 25th percentile. Assuming that the CEO is not the controlling shareholder (i.e. the dummy variable called "CEO ownership" equals 0), then the figure adds up to 22.2%. Conversely the implied change in probability of turnover is nil if the dummy variable equals 1.

K analyses the implied change in probability of turnover, adopting the standard deviation as "dispersion measure": a two-standard-deviation decline in stock returns is associated with an increase in the likelihood of CEO turnover of 17.4%. The presence

Table 1
EMPIRICAL STUDIES CONSIDERED

empirical studies (reference)	year	sample, interval of years and statistical method
Barontini, Caprio (BC)	2002	All the firms listed on the Milan Stock Exchange, examined from 1976 to 1996. Maximum number: 244 (1992); minimum number: 124 (1977). Statistical method: OLS and LOGIT.
Brunello *et* al. (BGP)	2003	60 firms listed on the Italian Stock Exchanges, selected excluding: banks, insurance companies, financial holdings companies, state-owned firms and firms listed for only part of the period (1987 - 1997). Statistical method: PROBIT.
Denis *et* al. (DDS)	1997*b*	1394 U.S. firms covered by the VLIS (Value Line Investment Survey) as of year-end 1984, over the period 1985 - 1988. Statistical method: LOGIT.
Kang, Shivdasani (KS)	1995	270 non-financial Japanese firms covered in the 1984 volume of Moody's International Report, examined from 1985 to 1990. Statistical method: LOGIT.
Kaplan (K)	1994	1st sample: 119 Japanese firms included in Fortune magazine's list of the 500 largest foreign industrials in 1980. 2nd sample: 146 U.S. firms with the highest sales on Fortune's list of the 500 largest industrials in 1980. The samples were examined from 1980 to 1988. Statistical method: OLS and LOGIT.
Mikkelson, Partch (MP)	1997	240 industrial firms included in the CRSP (Centre for Research in Security Prices) that were publicly traded at the end of 1983 and 1988. The 1st sample was examined from 1984 to 1988, the 2nd sample was examined from 1989 to 1993. Statistical method: LOGIT.
Parrino (PA)	1997	31 CEOs who were in office throughout the 1970 - 1989 period. The data about CEOs were collected in the 1989 *Forbes* compensation survey. Statistical method: MULTINOMIAL LOGIT.
Pigé (PI)	1996	222 non-financial firms listed on the Paris Stock Exchange over the period 1985 - 1989. They were selected in the universe of the listed firms in 1971 that were still listed in 1990. Statistical method: OLS and LOGISTIC.

of outliers, influencing arithmetic mean and standard deviation, can also account for such increase. Therefore a two-standard-deviation change in performances might turn out far bigger value than if obtained through "position indicators". BC also use the same method as K and obtain higher variations: the stock return with a three-year lag to the turnover shows an increase in the likelihood of turnover as big as 3.38%, while the current ROE adds up to 4.07%.

With respect to the ownership structure variables, DDS and MP find a statistically significant negative relation between CEO turnover and the stake of directors and officers. These results suggest a confirmation of Morck's *et* al. (1988) hypotheses on the managerial entrenchment.

BC and PI show a positive and significant relation between turnover and the percentage of common shares held by the largest shareholder. This result would confirm the theory exposed in the first paragraph (i.e. a strong controlling shareholder can make the turnover easy). BGP don't find any evidence with respect to this variable. BGP find no evidence that supports theoretical hypothesis concerning the monitoring role of outside blockholders[11]. On the contrary, the presence of a second large shareholder would hinder CEO turnover. The following two explanations account for such phenomenon: 1) being the sample made up of Italian companies that notoriously have a concentrated ownership, second shareholder has little monitoring power; 2) second shareholder might be bound to the largest shareholder through formal pacts, intimate and family relationships and links of stakes. DDS, in regard to the variable that highlights the presence of outside blockholders, find a regression coefficient that is both significant and positive. Conversely, DDS find no proof that the presence of institutional investors promotes the turnover of poorly-performing CEOs.

None of the three studies (i.e. DDS, MP, KS) that assess the weight of independent directors show a statistically significant

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[11] In BGP the proxy of outside blockholders is the size of the stake held by the second largest shareholder.

evidence that backs up the hypothesis above (see paragraph 1). With respect to the age of CEOs all the studies, except BGP's study, show a significant and positive coefficient. The features of the firms sampled by BGP may account for the non-significant correlation between age and CEO turnover. In these firms when the owner coincides with the CEO the retirement age could be inexistent. PA shows a strong positive link between turnover and age as the CEO is an inside candidate and/or the turnover is voluntary. The link weakens if the new CEO is appointed from outside the firm (i.e. another firm within the industry or another industry). The regression coefficient even changes sign if the turnover is forced. It might be that a substitution with an inside candidate occurs more often on account of the natural changes that occur at the top of U.S. firms. On the other hand, bad performances account for the so called "forced" substitutions regardless of the outgoing CEO's age.

With respect to the variable that expresses the number of years that the CEO spent on office, the results don't confirm any hypothesis: BC, DDS and KS, consistently with the hypothesis that an increase of the years spent by the CEO within the firm reflects a smaller turnover likely on account of the intimate and reputable links to shareholders, obtain negative regression coefficients. Nevertheless, these coefficients are never significant; BGP's study always shows positive and significant coefficients[12].

As the CEO is the firm's founder or a member of the founding family, according to DDS and PA's findings, the likelihood of CEO turnover decreases steady.

With respect to the firm's size, the studies don't point to a one way conclusion: BC, MP and BGP find no evidence. By contrast, DDS show a negative and significant relation between size and CEO turnover. It might be argued that the result is due to the higher efficiency of the board in small firms, whose boards are generally smaller, that determines a more frequent turnover. Conversely, PA's results contradict DDS and confirm the researches

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[12] The result is explained as follows: rather than be sacked in the midst of his office, whose legal tenure is three years, it's easier not to renew a CEO when the mandate is expired.

of Jensen and Murphy (1990), whose hypothesis is that the CEOs of U.S. large companies tend to hold a small stake in the firm, and of Parrino (1990) that finds a positive correlation between the size and the percentage of outside directors in the board[13].

5. - Sample, Variables and Empirical Method

The starting sample is made up of 237 firms listed on the Italian Regulated Stock Exchange (MTA) by December 31st 2002. From this universe I have excluded: foreign companies on account of the insufficient information available; companies listed for less than one year, on account of the brief span of time and related information; companies no longer listed by December 31st 2002 on account of the insufficient information available. The survey covers the 7-year period 1996 - 2002. After this selection my open pooled sample consists of 1,211 firm-years involving a different number of firms each year (Table 2).

The *dependent variable* ($TURNO_{i,t}$), expressed as the turnover of either the CEOs and/or chairmen of the boards (if a firm has no CEO or the chairman wields executive powers), is a dichotomous variable that equals 1 in correspondence of a turnover, and 0 otherwise[14]. A turnover occurs when: *a)* one or more CEOs leave the board; *b)* one or more CEOs lose the executive position but not necessarily the directorship. Substitutions within a year since a non-ordinary event, such as a

TABLE 2

NUMBER OF COMPANIES ENCOMPASSED IN THE SAMPLE

Years	1996	1997	1998	1999	2000	2001	2002
number of companies	134	143	152	166	191	207	218

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[13] Yet DDS and PA adopt different proxy variables, respectively, the natural logarithm of total assets and the natural logarithm of sales.

[14] The replacement of CEOs has been observed by December 31st of each year.

change of control, have been taken off from the sample. Information concerning turnover comes from Consob (the Italian supervisory authority for markets and securities) and Calepino dell'Azionista.

The following is a description of the *independent variables*:

1) RET0, RET1, RET2, RET3: annual stock returns as the sum of the percentage capital gain and of the dividend yield respectively in the same year of and in the year prior to the turnover, with a lag of two and three years[15]. Returns have been measured through continuous capitalization and adjusted by subtracting a market index from the raw measurement. Market index results from the average of stock returns, in a given year, registered for all the firms of the sample.

2) MB0, MB1, MB2: annual industry-adjusted market to book value of equity registered, respectively, in the same year of the turnover and with a lag of one and two years. The adjusted measure has been computed by dividing the raw measurement by the median value of market to book value of the firms belonging to the same industry as the firm considered. The classification in sectors has been done according to Mediobanca industry codes.

3) ROE0, ROE1, ROE2, ROE3[16]: annual equity capital profitability measured, respectively, in the same year of and in the year prior to the turnover, with a lag of two and three years. The ratios are computed as follows: net profit of year n scaled by the mean of equity capital computed in the year n and $n-1$. The adjusted measures have been computed by subtracting, from the raw measurements, the median performance measure of all firms belonging to the same industry as the firm considered.

4) ROI0, ROI1, ROI2, ROI3: return on investment measured by EBIT[17] (earnings before interest and taxes) scaled by net

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[15] The prices and the market capitalization have been surveyed in the last securities trading day of each year.

[16] Accounting-based performances (ROE, ROI and LOS) refer to annual statements closed by December 31st of each year and adopted by April 30th of following year.

[17] EBIT = revenues from sales ± change in inventories (finished goods, semifinished products, raw materials) – cost of raw materials and services + other

operating invested capital (NOIC[18]). ROI has been calculated for only industrial, commercial and services firms excluding financial firms (banks, insurance companies, financial holding companies, leasing companies and other financial brokers) for accounting reasons[19]. In the regressions, these variables have been considered as missing values by financial firms. For the aforesaid reason the number of observations is smaller[20].

5) LOS0, LOS1, LOS2, LOS3: dummy variable that equals 1 in presence of losses, otherwise it becomes 0.

6) 1°SH: percentage of common shares held by the largest shareholder.

7) BLOCK: percentage of common shares held by outside blockholders. They are defined as those holders of at least 2% of the firm's common shares that are neither related to management nor the largest shareholder through family relationships and/or voting syndicates[21].

8) SYND: dummy variable that takes value 1 in presence of a block syndicate and/or a voting syndicate among the main shareholders, and 0 otherwise. I have also taken the existing pacts among the shareholders of the controlling company into account.

9) PUB: dummy variable that becomes 1 if a public institution (i.e. city council, Ministry of Economy etc.) is the largest shareholder, otherwise becomes 0[22].

10) AGE: the variable takes, as value, the age or the average age of the CEO should they be more than one on office. Should

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operating income and revenues – personnel costs – amortization of tangible and intangible fixed assets + additions to internally produced fixed assets – other operating costs.

[18] NOIC = trade receivables + inventories (finished goods, semifinished products, raw materials) + other non-financial current assets + tangible and intangible fixed assets – trade payables – other non-financial current liabilities – reserve for employee severance indemnities.

[19] For ROI variables the adjustment in order to consider the industry effect has produced bad results on account of the small size of the sample that makes the setting of the sectors very difficult and non-significant.

[20] For these variables the firms included in the sample are: 61 (1996); 68 (1997); 74 (1998); 86 (1999); 103 (2000); 115 (2001); 124 (2002).

[21] The largest shareholder is never included in the calculation of the variable.

[22] I take the "ultimate owner" into account and not the direct owner.

it be there a turnover, the variable becomes a value which is the age of the outgoing CEO or the mean with more than one CEO.

11) IND: dummy variable that equals 1 as the number of independent directors in the board outnumbers a given figure[23], otherwise 0.

12) FIN: dummy variable that becomes 1 as the firm deals in the financial services[24].

Accounting data are extracted from the annual statements provided by the chambers of commerce and R&D database of Mediobanca; market data are provided by the Borsa Italiana spa (Italian Stock Exchange) and Calepino dell'Azionista; ownership structure's data (since 1998) and the data concerning CEO's age are collected from the Consob web site and AIDA database. For the years 1996 and 1997 these data are provided by researches and studies department of Consob; data on the independency of directors are extracted from annual reports on corporate governance, Il Sole 24 Ore online and research engines. The link existing between CEO turnover and the explanatory variables is assessed through logistic regressions[25].

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[23] For a board of directors up to 8 members: 2 independent directors or more; for a board between 9 and 14 members: 3 independent directors or more; for a board greater than 14 members: 4 independent directors or more.
Data extracted from Instructions for the regulation of regulated markets under the control of Borsa Italiana spa in the chapter that regulates the number of independent directors for companies that belong to the STAR section.
[24] Insurance companies and credit brokers (banks, leasing companies, etc.) have been included within the category of financial services companies.
[25] The logistic model enables us to directly estimate the likelihood of an event occurring. The model fits the dependent variables that can have only two values and then the assumptions necessary for hypotheses testing in regression analysis are necessarily violated. For example, it is unreasonable to assume that the distribution of errors is normal. The logistic model can be written as follows:

$$\text{Prob (TURNO)} = \frac{e^{B_0 + B_1 X_1 + B_2 X_2 + \ldots B_n X_n}}{1 + e^{B_0 + B_1 X_1 + B_2 X_2 + \ldots B_n X_n}}$$

where: B_0, B_1, B_2, B_n, are coefficients estimated from the data; X_1, X_2, X_n are the independent variables.

6. - Results

The average age of Italian, French and American CEOs differs little. For the USA: K finds an age of 58.30; MP 57 and 56 years, respectively, at the start and end of the period during an active market for corporate control. For the France, PI finds an age of 57.40. The age results lower than that of Japanese presidents, as K and KS show an average age, respectively, of 65.10 and 61.84. Turnover rate is also alike to U.S. firms: K finds a rate of 12.14% including takeovers and 10.35% excluding changes due to death or illness; DDS find the highest rate of 11.20%, with managers holding up to 1% of the ownership, and lowest rate of 3.40% if the managerial ownership is between 40% and 50%, excluding changes due to death, illness and retirement. However, the turnover rate is lower than in Japanese firms: KS find a rate of 13.46%; K a rate of 15.03% including takeovers and 14.86% excluding changes due to death or illness.

Table 4 and 5 show, consistently with expectations, a negative and significant correlation between accounting measures of performance (i.e. adjusted ROE and unadjusted ROI) and CEOs turnover, at the 1% and 5% level. The variables ROE and ROI result significant up to three years prior to the change. This means that the turnover often coincides with the legal end of the office (i.e. three years) rather than as immediate consequence of bad performances. The variable LOS0, that points out the loss produced in the same year as the substitution, has a noticeably significant correlation (i.e. at the 1% level) to the turnover. This highlights that a loss, in a given fiscal year, represents a strong incentive to the CEO to resign from the office. The variables LOS1 and LOS2 show to be significant only on multivariate regressions at the 5% level. Unlike accounting measures of performance, market-based measures of performance (i.e. RET and MB) show little (RET1) or no link to turnover (RET2, RET3 and all the variables of MB), apart from the variable RET0. The latter scores a significant negative relation at the 1% level in multivariate regressions and at the 5% level in simple regressions. I point out that the results are less robust without the adjustment of the ROE

variables in order to consider the industry effect: the size of coefficients as well as the implied changes in probability of turnover are smaller and the statistical robustness is worse. This result matters as highlights the right appraisal of accounting measures of performance that are weighed with reference to industry performance, on account of the business risk.

The features of Italian market and firms, that are often managed by the largest shareholder or a member of the controlling family, may account for the remarkable difference between market-based and accounting-based measures of performance. If this is the case the shares' value fails to reflect the true value of the firm, from the point of view of controlling shareholder, because of number of causes among which the private benefits. Thus market-based performance is little taken into account for a prospective change at the top. A further explanation is a little reliance on the growth of value reported by Italian firms, both for the high concentration of ownership, that weakens the role of the market as referee by reducing the probability of a takeover threat, and for the traditional perspective of Italian entrepreneurs more oriented to accounting than to the financial markets.

A remarkable increase in implied change in probability of turnover stands out, simulating a two-standard-deviation decline in ROI from its mean[26]. This highlights the high intensity of the link between turnover and performance of operating business[27].

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[26] I tried to insert in the same regression two measures of performance, one is accounting-based and the other is market-based, in order to check if this could improve the explanatory power of the model and the statistical robustness of the coefficients: the results were bad. The two variables often show a high correlation producing a loss of significance of one of them (usually the market-based performance).

As further explanation of both bad results found with reference to variables RET1, RET2 and RET3 and good results found for all accounting-based performances (ROE and ROI) there could be a serial correlation of accounting returns: current ROE may be associated to turnover as well as lagged variables. I tried to test this hypothesis by inserting all measures of performance (ROE, ROI and RET) in the same regression: RET0 confirms its significance but at the 10% level; ROE and ROI variables reduce their explanatory power except ROE0, ROE2 and ROI2. This finding confirms some serial correlation of accounting returns. The matrix of the correlations between the variables confirms what I said above.

[27] The estimate of the implied change in probability of turnover associated with a two-standard-deviation decrease in the performance has also been

Table 3

DESCRIPTIVE STATISTICS

Variables	Mean	Median	Std. deviat.
ROE0 (unadjusted measure %)	6.9639	6.3297	16.0024
ROE1 (unadjusted measure %)	7.3638	6.4764	12.2330
ROE2 (unadjusted measure %)	6.9681	6.0880	12.0624
ROE3 (unadjusted measure %)	6.4465	5.7280	13.5159
ROI0 (%)	16.0553	11.9635	22.0054
ROI1 (%)	16.4175	12.1714	21.8612
ROI2 (%)	17.0354	12.3585	22.7327
ROI3 (%)	15.3453	12.3574	18.2574
RET0 (unadjusted measure %)	2.6679	1.7858	41.3445
RET0 (adjusted measure %)	0	–1.9358	34.5449
RET1 (unadjusted measure %)	3.8495	1.7632	41.2898
RET1 (adjusted measure %)	0	–2.2926	30.7222
RET2 (unadjusted measure %)	13.1699	10.4716	37.7824
RET2 (adjusted measure %)	0	–3.1125	33.4041
RET3 (unadjusted measure %)	13.6262	12.0313	39.0819
RET3 (adjusted measure %)	0	–2.5136	33.7967
MB0 (unadjusted measure)	2.6536	1.5239	4.5355
MB1 (unadjusted measure)	2.6438	1.5212	4.5626
MB2 (unadjusted measure)	2.6318	1.5663	4.3644
AGE (years)	57.8144	58	8.5027
1°SH (%)	45.3138	51	22.3994
BLOCK (%)	8.8684	4.7810	10.9928
TOP EXECUTIVE TURNOVER RATE (%)			
(with takeovers)	12.5915		
(without takeovers)	9.5572		
TOP EXECUTIVE TENURE (years)			
(with takeovers)	7.9418		
(without takeovers)	10.4633		

In spite of the non-significant results for *FIN* variable (CEOs of both financial and non-financial firms show a similar turnover), I have studied the link between *FIN* and *ROE* in depth according

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conducted in the multivariate regressive model (Table 5), assuming that all other independent variables remain constant at their respective means, with the following results: ROE0 = 6.82%; ROE1 = 6.94%; ROE2 = 11.66%; ROE3 = 5.84%; ROI0 = 12.86%; ROI1 = 12.12%; ROI2 = 17%; ROI3 = 10.30%; LOS0 = 9.62%; LOS1 = 6.81%; LOS2 = 6.86%; RET0 = 6.60%; RET1 = 4.28%.

TABLE 4

RESULTS OF SIMPLE REGRESSIONS (*)

Var.	B_0	P-value (B_0)	B_1	P-value (B_1)	Nr. obs.	R^2(NK)	ΔPROB
ROE0	−1.9146	0.0000	−0.0162	0.0011	1,147	2.90%	6.75%
ROE1	−1.8099	0.0000	−0.0192	0.0095	1,135	2.50%	6.21%
ROE2	−1.7568	0.0000	−0.0326	0.0000	1,135	4.10%	11.50%
ROE3	−1.7414	0.0000	−0.0165	0.0116	1,125	2.30%	6.06%
ROI0	−1.6443	0.0000	−0.0267	0.0003	588	5.30%	17.77%
ROI1	−1.6521	0.0000	−0.0258	0.0007	584	5.00%	16.79%
ROI2	−1.5480	0.0000	−0.0311	0.0002	576	6.40%	22.86%
ROI3	−1.5644	0.0000	−0.0278	0.0004	554	5.60%	15.36%
LOS0	−1.9848	0.0000	0.6454	0.0024	1,162	2.60%	8.68%
LOS1	−1.8479	0.0000	0.4066	0.0762	1,160	1.80%	5.52%
LOS2	−1.8169	0.0000	0.4221	0.0676	1,152	1.90%	5.88%
LOS3	−1.7761	0.0000	0.2822	0.2202	1,140	1.60%	3.86%
RET0	−1.7594	0.0000	−0.0062	0.0164	1,134	2.10%	6.21%
RET1	−1.7913	0.0000	−0.0049	0.0923	1,021	2.10%	4.01%
RET2	−1.6983	0.0000	−0.0026	0.3537	943	2.20%	2.41%
RET3	−1.8668	0.0000	0.0014	0.6602	871	1.30%	−1.06%
MB0	−1.7206	0.0000	−0.0635	0.2774	1,152	1.50%	3.52%
MB1	−1.6707	0.0000	−0.0779	0.2060	1,146	1.70%	4.35%
MB2	−1.6655	0.0000	−0.0597	0.3454	1,047	1.80%	2.97%
AGE	−3.1982	0.0000	0.0244	0.0120	1,163	2.30%	5.88%
PUB	−1.8659	0.0000	0.8547	0.0012	1,163	2.70%	13.27%
1°SH	−1.9523	0.0000	0.0040	0.2814	1,157	1.50%	2.37%
BLOCK	−1.9293	0.0000	0.0153	0.0276	1,160	2.00%	4.63%
SYND	−1.7043	0.0000	−0.3496	0.0886	1,160	1.80%	−4.02%
FIN	−1.7698	0.0000	−0.0517	0.7901	1,163	1.30%	−0.63%
IND	−1.8404	0.0000	0.0918	0.5833	1,163	1.40%	1.12%

(*) VAR.: independent variable; B0: constant of the regressive model; B1: regression coefficient; P-value: significance level for the *Wald* statistic, which has a chi-square distribution, concerning coefficients B0 and B1; Nr. obs.: number of data included in the model; R^2(NK): measure of goodness of fit of the model (Nagelkerke R^2); ΔPROB: implied change in probability of turnover assuming a two-standard-deviation change from mean in the independent variable. For dichotomous variables has been simulated a switch from 0 to 1 in its value. Each regression contains seven time dummies.

TABLE 5

RESULTS OF MULTIVARIATE REGRESSIONS (*)

Reg. Nr. perf.	B_0	perf.	age	synd	pub	fin	ind	1° sh	block
				Independent variables					
1) ROE0 6.30%	-4.0754 (0.0000)	-0.0168 (0.0010)	0.0307 (0.0026)	-0.1845 (0.4196)	0.7887 (0.0050)	0.1179 (0.5841)	-0.0789 (0.6710)	0.0045 (0.2876)	0.0153 (0.0377)
2) ROE1 6.10%	-3.9433 (0.0000)	-0.0221 (0.0041)	0.0296 (0.0035)	-0.1758 (0.4415)	0.8594 (0.0020)	0.1255 (0.5582)	-0.0322 (0.8625)	0.0050 (0.2349)	0.0133 (0.0778)
3) ROE2 7.30%	-3.7732 (0.0000)	-0.0335 (0.0000)	0.0284 (0.0054)	-0.2235 (0.3271)	0.7957 (0.0052)	0.1430 (0.5048)	-0.0665 (0.7205)	0.0049 (0.2458)	0.0135 (0.0760)
4) ROE3 5.60%	-3.6315 (0.0000)	-0.0163 (0.0174)	0.0266 (0.0087)	-0.2454 (0.2784)	0.8411 (0.0031)	0.0622 (0.7690)	-0.0337 (0.8550)	0.0042 (0.3170)	0.0142 (0.0622)
5) ROI0 9.30%	-1.8476 (0.0629)	-0.0217 (0.0045)	0.0029 (0.8485)	-0.7178 (0.0691)	0.7577 (0.0128)		0.1993 (0.4369)	-0.0048 (0.5237)	0.0115 (0.2812)
6) ROI1 9.20%	-1.6069 (0.1095)	-0.0205 (0.0091)	0.0003 (0.9841)	-0.7771 (0.0584)	0.8206 (0.0072)		0.1668 (0.5205)	-0.0056 (0.4532)	0.0083 (0.4563)
7) ROI2 9.90%	-1.4840 (0.1412)	-0.0252 (0.0030)	-0.0014 (0.9260)	-0.7051 (0.0877)	0.7699 (0.0133)		0.1065 (0.6850)	-0.0043 (0.5636)	0.0112 (0.3220)
8) ROI3 9.60%	-1.4130 (0.1674)	-0.0210 (0.0102)	-0.0032 (0.8414)	-0.7861 (0.0678)	0.8186 (0.0095)		0.1489 (0.5777)	-0.0042 (0.5736)	0.0069 (0.5698)
9) LOS0 6.30%	-4.0880 (0.0000)	0.7259 (0.0012)	0.0298 (0.0034)	-0.2077 (0.3613)	0.8615 (0.0020)	0.1609 (0.4581)	-0.0689 (0.7090)	0.0039 (0.3572)	0.0158 (0.0297)
10) LOS1 5.40%	-3.8942 (0.0000)	0.5063 (0.0352)	0.0288 (0.0045)	-0.2323 (0.3041)	0.8497 (0.0022)	0.1520 (0.4794)	-0.0369 (0.8408)	0.0042 (0.3216)	0.0141 (0.0576)
11) LOS2 5.50%	-3.7996 (0.0000)	0.4956 (0.0406)	0.0282 (0.0054)	-0.2517 (0.2655)	0.8642 (0.0019)	0.1471 (0.4927)	-0.0475 (0.7961)	0.0040 (0.3430)	0.0138 (0.0653)
12) RET0 5.70%	-3.6900 (0.0000)	-0.0070 (0.0095)	0.0235 (0.0229)	-0.1898 (0.4181)	0.8762 (0.0016)	0.1391 (0.5262)	-0.0303 (0.8706)	0.0067 (0.1360)	0.0166 (0.0296)
13) RET1 5.30%	-3.4304 (0.0000)	-0.0052 (0.0829)	0.0234 (0.0276)	-0.3265 (0.1789)	0.8170 (0.0049)	0.0196 (0.9314)	-0.0269 (0.8876)	0.0041 (0.3638)	0.0110 (0.1670)

(*) The first column presents regressions and measures of performance (PERF.) adopted in each regression; B_0: constant of the regressive model; PERF.: identifies the regression coefficient of the performance variable adopted whose name is reported in the first column; the values reported in parentheses, under each coefficient, express the significance level for the *Wald* statistic; the percentage in the first column expresses the value of the Nagelkerke R^2 that is a measure of goodness of fit of the model. All regressions include seven time dummies.

to the considerable weight of financial firms in the sample (in 2002 they were 46) by creating two sub-samples. On both sub-samples I have conducted separate regressions with regard to each ROE variable. The results show that the implied change in probability of turnover, assuming a two-standard-deviation decline in ROE, is higher in the sub-sample of financial firms: 8.70% for financial firms, 6.94% for non-financial firms using ROE0. In order to strengthen the evidence that shows a higher sensitivity of turnover to performance for financial firms, I have included in the simple regressive model an interactive variable that is the product of FIN and ROE (FIN*ROE). The findings (Table 6) confirm what I said above: the negative and significant coefficient of the interactive variable highlights a higher sensitivity of turnover to accounting returns for financial firms[28].

With respect to the accessory variables, some conclusions can be drawn: AGE is positively and significantly linked to the turnover, but only in the overall sample. The regressions that include ROI variables (i.e. regressions from 5 to 8 of Table 5), that only consider non-financial firms, show that the age is not linked to the turnover. The diversity of the results can be explained by the fact that banks, insurance companies and other financial brokers have experienced professionals that are generally elder persons. Besides, holding companies, that are often controlled by a family, can be led by elder shareholders and founders. If, like in the present study, turnover involves more frequently these subjects the tie between AGE and turnover will be strong[29]: turnover can occur on account of events as death, illness and retirement.

BLOCK variable shows a positive and significant (at the 5% and 10% level) relation to the turnover in the overall sample, in spite of the high ownership concentration of Italian companies. A

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[28] The variables ROE1, ROE2 and ROE3 produce qualitatively similar results both in the estimate of turnover's probability and in the regressions.

[29] CEOs of financial companies average the age of 59.96, while CEOs of non-financial companies score 56.87 on average (P-value: 0.0000). Using the median rather than the mean, the difference is even bigger: 61 is the median age of financial companies' CEOs, 57 is the median age of non-financial companies' CEOs.

TABLE 6
REGRESSION WITH INTERACTIVE VARIABLE (*)

B0	ROE0	FIN*ROE0
−1.9052	−0.0133	−0.0454
(0.0000)	(0.0105)	(0.0468)

(*) B0: constant of the regressive model; ROE0 and FIN*ROE0: independent variables; the values reported in parentheses express the significance level for the *Wald* statistic concerning each coefficient. The regression includes seven time dummies.

significant weight of outside blockholders contributes to increase the turnover, according to the hypotheses made.

PUB variable shows that firms whose largest shareholder is a public authority achieve a significantly higher turnover rate than the other sampled firms. CEOs of a publicly-owned firm have a 13.27% higher probability to step down than in a privately-owned firm. In order to overcome the difficulties in explaining this result I have studied both the changes at the top of the Ministry of Economy and the dates of the elections from 1996 to 2002: no direct link stands out (over the period 1996-2002 there were 7 Ministers of Economy – 6 of the Centre-Left and 1 of the Centre-Right – and 2 general elections: in April 1996 and in May 2001. Turnover in the state-owned firms "reminds" the changes of the Ministers of Economy but the link with them is quite accidental. For example: in 1996 and 1997 the turnover involved only the CEOs of Alitalia, Finmeccanica and Italgas; in 2001: Alitalia and Saipem were involved but not Eni that controlled Saipem directly; in 2002: Enel and Finmeccanica changed their CEOs; CEOs of Eni and Autostrade changed in 1998. The foregoing reasoning also means to municipal concerns).

SYND variable, in non-financial firms, shows that the existence of syndicates among main shareholders stabilizes the running of the company and reduces the turnover. Yet the negative relation is weak (at the 10% level). Deleting the IND variable from the model the significance of SYND rises to 5%: the two variables are correlated. In detail, I find a negative relation between IND and SYND which means a lower incidence of independent

directors whenever the main shareholders are linked by a syndicate, likely as most directors represent the interests of shareholders that join the pact. The other variables (i.e. 1°SH[30], FIN and IND) don't provide a relevant evidence[31].

7. - Conclusions

The main findings can be highlighted in the following points:
— Accounting returns are the best determinants to explain CEO turnover. A statistically significant negative correlation (i.e. almost always at the 1% level) between the turnover and accounting measures of performance, especially ROE and ROI, is found. ROE and ROI are significant up to three years prior to the change, confirming that poor accounting returns generally don't cause an immediate turnover. Often the CEO is left in office for the 3-year term (i.e. the legal tenure). The turnover also shows a higher sensitivity to the performance (ROE) for the sub-sampled financial firms. Market-based performances show a notably inferior explanatory power than accounting returns. The current stock return is the only market-based performance that shows a good statistical significance (i.e. at the 1% and 5% level).

— CEO's age is positively related to the turnover. The older the CEO, the higher the likelihood of turnover becomes. This result is not consistent with the findings in non-financial firms (see the footnote number 31 too).

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[30] The use of discrete values for the 1°SH variable (0, if the largest shareholder holds less than 20% of firm's common shares; 1, if the largest shareholder holds between 20% and 50% of common shares; 2, if the largest shareholder holds more than 50% of common shares) confirms the positiveness of the regression coefficients but does not improve the statistical significance.

[31] In order to explain more clearly both the non-significance of the link between the turnover and the variables AGE (only for non-financial firms) and 1°SH and the change of sign of the coefficient for 1°SH in the overall sample (positive) and in the sample of non-financial firms (negative), I tried to check if both the presence of personal, family and economic ties between the CEO and the controlling shareholder and the coincidence in the same person of both offices (CEO and controlling shareholder) could hinder the turnover. Yet the difficulties in detecting both the right identity of the controlling shareholder and the economic and intimate ties with the CEO did not allow me to find reliable results. I point out this analysis for a future widening of the study in presence of more complete and reliable information.

— PUB variable shows that turnover rate is remarkably higher in publicly-owned firms than in privately-owned firms. Yet the replacements are not concentrated in specific years but they are distributed over the 7-year period quite evenly: there is no direct link between turnover and elections or changes at the top of the Ministry of Economy;

— BLOCK variable points to a positive and significant relation to the turnover, despite a sometimes weak level of significance (i.e. at the 10% level). This result points to an active attitude of outside blockholders, in spite of the high ownership concentration of Italian firms. The results do not hold for non-financial firms;

— 1°SH variable shows a positive correlation to the turnover in the overall sample and a negative correlation in the sample of non-financial firms. Yet it is never statistically significant and therefore insufficient to draw reliable conclusions (see the footnote number 31 too);

— SYND variable, in non-financial firms, shows a statistically significant negative correlation to the turnover. The existence of a syndicate among the main shareholders contributes to stabilize the running of the company reducing the turnover.

An investigation into prospective links existing between firm performance and the rewards of CEOs and executive directors would be an interesting follow-up to this study. It would help to unveil the role of compensation in the improvement of the firm performance[32]. An event study of how the market reacts to the appointment or substitution of a CEO could be a further interesting analysis.

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[32] Only since 1999 listed firms have been requested to provide information concerning compensation to directors and general managers (see the regulation for issuers issued by Consob).

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