On the Price of Different Classes of Shares *

1. The spread between the prices of shares with identical rights to dividends but different voting rights

According to an established principle of financial economics, share prices should reflect the present value of future dividends, discounted by the interest rate and an appropriate risk premium.[1] If this occurs, the market is said to have the property of "fundamental valuation efficiency" (see Tobin, 1984, p. 2). The variability of prices is then due to new information on (the probability distribution of) future dividends or to changes of the discount rate.

Empirical testing of the efficiency proposition is troublesome, since neither expectations nor the risk premium are observable. Only the risk–free interest rate is observable in the bond market.

Therefore, empirical tests resort to indirect methods. A very intense debate has developed on the test proposed by Shiller (1981), based on the bounds that the variance of actual prices should respect, if they are estimates of the expected value of future dividends. Shiller's conclusion is negative: the variance considerably exceeds these bounds; market prices cannot be viewed as efficiently reflecting fundamentals.

Rather than discussing this issue (see, among others, Kleidon, 1986; Merton, 1987), it is our concern here to observe that those who reject efficiency ascribe the excess variability of stock prices to speculative bubbles, fads or similar phenomena (see Keynes, 1936,

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[1] See MILLER and MODIGLIANI (1961). The term "future dividends" must obviously include whatever is distributed to shareholders (for instance shares of controlled firms or option rights on shares or convertible bonds issued by controlled firms). It is also easy to take into account the free distribution of shares of the company itself in terms of dividend stream (if g shares are distributed for each existing share, the dividend attributable to each existing share from then on is equal to $1+g$ per share dividends).

ch. 12; Shiller, 1981 and 1984; Summers, 1986). Neither the opponents nor the supporters of efficiency (or at least those who maintain that the empirical evidence is not convincing) investigate *whether stock prices may rationally reflect further elements in addition to future dividends.*

In fact, the experience of several countries, including Italy, shows that market prices of different types of shares may diverge, and sometimes considerably so. The most common difference concerns voting rights: stocks can bear full, limited or no voting rights. The ranking of prices is usually, though not necessarily, the same as that of voting rights (full voting shares have the highest price).[2]

Lease, Mc Connell and Mikkelson (1983) considered all companies with two classes of shares outstanding and actively traded over the period 1940-1978. End-of-month quotations were looked at. On average, for companies with full voting and non-voting shares, the price of the former class of shares exceeded that of the latter by 3.79 per cent. For companies with full voting and limited voting shares, the price difference averaged 6.95 per cent; excluding one company, this difference drops to 1.91 per cent.[3]

In Italy, the spread is considerably wider. At the end of 1985, the price of non-voting shares was on average 81 per cent of the price of voting shares; it was 61 per cent in August 1986 and 65 per cent in December 1986.[4] As a percentage of the price of non-voting shares, the spread was respectively 23.4, 63.9 and 53.8 per cent. For some stocks and for long periods this spread exceeded, and still exceeds, 200 per cent.[5]

Economic theory does not seem to have devoted sufficient at-

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[2] In Italy, companies can issue ordinary shares (with voting rights in all shareholders' meetings), preferred shares (with voting rights only in special meetings) and non-voting shares. Preferred and non-voting shares have priority and/or entitle to a surplus in the distribution of dividends. It is then possible for these shares to be priced more (and not less) than ordinary shares. For the U.S. see LEASE, MC CONNELL and MIKKELSON (1983, pp. 441-3).

[3] In a subsequent and more analytical study (1984), limited to a sample of six companies, the same authors find a wider average spread and remarkable variations over time.
LEVY (1983) carried out a similar analysis of 18 companies quoted on the Israeli market, where shares differences are due to a *different number* of *equal* rights. The spread between prices varied from −5.07 to +137.23 per cent; the average for all companies was +45.5 per cent.

[4] See BANCA D'ITALIA (1987), p. 285.

[5] See MEDIOBANCA (1988), pp. 284-291, for a complete picture of the non-voting share prices traded on Italian stock exchanges (as a percentage of the prices of the corresponding ordinary share) on June 30, 1988. The previous issue (1987, pp. 294-301) pictures the situation on June 30, 1987.

tention to the magnitude and determinants of these different valuations. This paper analyses this issue in two steps. First, we consider a *stable* situation, where the distribution of shares between "majority" and "minority" shareholders is fixed. Second, we consider an *unstable* situation where the possibility of changes in the distribution of shares is explicitly considered.

In both cases, for simplicity, only two classes of shares are considered. They both entitle the holder to the same dividend payments and payments in liquidation, but while the first has full voting rights in all shareholders' meetings, the second class has no voting rights at all.[6]

2. Analysis of the "stable" case

Let the term "stable" denote a situation in which:

— one or more investors or firms own more than 50 per cent of the voting shares;

— in the case of more investors or firms, this "majority" group is assumed to be bound to a syndicate or other agreement ensuring its perfect coherence of purpose and behaviour;

— the group as a whole does not aim at increasing or decreasing the percentage of shares it owns; transactions between members of the group are carried out through private negotiations outside the stock market.

Under the above assumptions, ordinary shares are not traded in the stock market among majority shareholders, nor between them and minority shareholders, but only among minority shareholders (who form an "open" group: existing shareholders may leave and new ones may enter).

In this context, how can we explain a market price for voting (henceforth defined as ordinary) shares systematically higher than that of other classes of shares?

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[6] The following analysis neglects the superior rights to dividends and payments in liquidation of non-voting shares with respect to ordinary shares.

If we assume that share prices reflect the present discounted value of all future payments, any systematic price difference between share classes must be attributed to a corresponding difference in their future payment streams.[7] To understand the origin of the higher yield on voting shares, two kinds of benefits may be considered.

a) The right to choose directors and managers and to direct their activities toward profit maximization. If the majority group is composed of one or more companies, maximization of the profits of the controlled firm may also be pursued by exploiting synergies with the controlling firm(s). These and other similar rights, if efficiently exercised, create benefits akin in nature to "public goods". In fact they accrue to all shareholders irrespective of their voting rights, since all classes of shares bear equal rights to dividend payments.

b) The possibility of directing managers' activity (for instance concerning the company's buying and selling policies) so that majority shareholders may derive "private goods" benefits which do not accrue to other shareholders. Extending the analysis to non-pecuniary benefits, we can also mention the sense of authority and power deriving from the control of a large company.

Given their "public goods" nature, benefits under *a*) accrue also to shareholders outside the majority group, with voting and non-voting shares, and therefore cannot explain the price difference between the two share classes.

With respect to the benefits under *b*), it is possible that, if they stem from synergies between the controlled firm and the controlling group, benefits to the latter go together with benefits to the former. A common course of action and tight cooperation may form a positive-sum game, improving the profitability of both parties.

However, beyond a point, the benefits to the controlling group are likely to conflict with the interest of the controlled company and consequently of the minority shareholders. The precise measure of this limit can only be assessed after a (legal as well as economic)

analysis of each case and with a wide region of uncertainty. Consider, for instance, the difficulty of determining the range within which a transfer price can be considered fair.

In this respect, the contrast between the U.S. and the Italian cases is meaningful. Spreads of some 3.8 or 1.9 per cent are completely different from the 23.4 per cent or 53.8 or 63.9 (let alone 200) per cent figures. In the U.S., the spread can be attributed to the economic benefits which legally accrue to majority shareholders. In Italy, unless we assume an enormous abuse on the part of majority shareholders or a very high valuation of the non-pecuniary benefits stemming from the power of control in itself, the explanation under *b*) does not seem satisfactory.

Moreover, benefits under *b*) do not accrue to all holders of ordinary shares, but only to those who are in the majority group. Therefore, *these benefits cannot explain the market spread between the price of ordinary shares* (traded, under the above assumptions, only among minority shareholders) *and that of non-voting shares. At most they can account for the price spread between ordinary shares traded within the majority group* (bearing what is sometimes called a "majority premium") *and all other shares, with and without voting rights.*[8]

Points *a*) and *b*) cannot therefore account for the spread between ordinary and non-voting shares, which remains, under stability assumptions, an open issue.

3. A digression: takeovers

Prior to analysing the unstable situation, it is necessary to outline the typical process of transition from one ownership structure to another through ordinary share trading (takeover).

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[7] "Any systematic difference between the prices of the two classes of common stocks in our sample must reflect differences in their future benefit streams... Thus, for example, evidence that a class of common stock with superior voting rights trades at systematically higher prices than an ostensibly identical class of stock with inferior voting rights is consistent with the hypothesis that control over the firm's activities grants the controlling class of securityholders some opportunity to receive a higher payoff than the non-controlling class of securityholders in at least some states of nature" (LEASE, MC CONNELL and MIKKELSON, 1983, pp. 440-1). "The precise form of these indirect payoffs is unknown" (*ibidem*, p. 470).

[8] "Since open market share prices reflect the *marginal* value of a vote, the open market price spread between superior and inferior voting shares is unlikely to capture the control value of a substantial block of superior voting stock. For example, in the extreme case where a majority of the superior voting class is certain to be owned forever by a single blockholder, the remaining superior voting shares are effectively perfect substitutes for non-voting stock and should be priced accordingly in the capital market. The substantial concentration of voting rights in dual class firms suggests that the marginal value of a board vote revealed by open market trades among dispersed stockholders is unlikely to reveal the full value of control rights in these companies" (DE ANGELO and DE ANGELO, 1985, p. 56).

Let us consider a situation where a coalition of "incoming" share-holders owns N_0 ordinary shares of a company, an amount not sufficient to ensure a majority, for which N_1 ($>N_0$) ordinary shares are required. Let:

P_0 = present discounted value (per share) of dividends under the current management;

P_1 = present discounted value (per share) of dividends under the management of the new coalition;

P_1^* = present discounted value (per share) of dividends under the management of the new group plus the payoff to this group from its influence on the company's activity (see section 2 above, under b),

where[9] $P_1^* > P_1 > P_0$. The difference $P_1^* - P_1$ is thus a measure of the "majority premium". Now let's consider two possibilities:

a) the new group buys at P_0 the remaining $(N_1 - N_0)$ shares, with a capital gain of $(P_1^* - P_0) N_1$.

b) Before the new group is able to carry out any purchase, the market realizes its plans and its willingness to pay a price possibly higher than P_1^*. The price P_{max} that would eliminate any capital gain for the new group is given by the equation:

$$(P_1^* - P_0) N_0 = (P_{max} - P_1^*) (N_1 - N_0)$$

so that

$$P_{max} = \frac{N_0 (P_1^* - P_0)}{N_1 - N_0} + P_1^* \tag{1}$$

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[9] Many economists share the view that a takeover aims at replacing the existing management with a new management that should increase profits. Opinions are divided, however, on the causes of such increase in profits (improved efficiency, restructuring, economies of scale, coordination and synergies with other companies, increase of the degree of concentration and monopoly power in the industry, new wage bargaining, tax advantages, etc.).

BRADLEY et al. (1983), on the contrary, argued that a takeover has mainly an information effect, providing the market with new elements to evaluate the (unchanged) profitability of the firm. Consequently, share price increases persist (at least in part) even when the takeover is not successful (see Jensen, ed., 1983).

In other cases, the takeover may be due to a raider aiming at splitting the company's assets and, through unfair sales or mergers, at favouring himself or some groups of his concern at the expenses of minority shareholders. Such actions may be opposed by minority shareholders, as mentioned at the end of section 2 above. When such an action is ineffective, it is possible that, due to this kind of expropriation, the open market price of the minority shares will decrease after the takeover instead of rising. In this case $P_1 < P_0$ instead of $P_1 > P_0$.

For a more detailed analysis of these issues, see the collections of essays edited by Jensen (1983) and Varian (ed.) (1988).

If all "small" shareholders formed a coalition, and if the new group knew that no other group (not even the coalition it faces) can improve the company's profitability, there would arise a situation of bilateral monopoly and the resulting price would be set between P_0 and P_{max}. Even in the absence of a coalition, it may occur that small shareholders do not sell any share at P_1^*, hoping to induce the new group to offer a higher price. In this case, each small shareholder faces a kind of prisoner's dilemma; the price will increase until the "cheating" shareholders have sold $(N_1 - N_0)$ shares.

The actual price of the $(N_1 - N_0)$ shares will be ultimately determined by the type of takeover — takeover bid, tender offer, purchase on the open market, private trade of minority blocks of shares, etc. — and by the players' behaviour; at any rate, the price will be set between P_0 and P_{max}.[10]

However, it is important to point out that prices higher than P_1 may rationally occur only before the new group purchases the desired shares. After the acquisition, if the coalition is sufficiently tight, i.e. if a stable situation is reestablished, there is no reason for a shareholder outside the majority group to pay a price higher than P_1, the present value of future dividends.

4. The "unstable" situation

We now turn to the "unstable" situation, where no coalition is firmly in control of the majority of voting shares. For example, it may happen that the group holding more than 50 per cent of the shares does not form a tight coalition; by quitting the group or selling their shares, one or more members could reduce the remaining block under 50 per cent. Or it may happen that a sufficiently large coalition is formed among the other shareholders, so that the group which in the past determined (because of the dispersion or the absenteeism of other votes) the outcomes of shareholders' meetings may lose control.

In contrast with the stable case, in the unstable situation a takeover is possible and the ordinary shares owned by dispersed shareholders

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[10] For further remarks on the formation of prices at which shares are traded under the various forms of takeover see BRADLEY (1980) and COMMENT and JARRELL (1987).

may become attractive for the purpose of forming or changing a majority. Therefore, the market takes into account not only that ordinary shares reflect a stream of future dividends with a present value P_0, but also that, should a takeover occur, the corresponding value would increase to P_1 and, furthermore, that the shares could be sold to the new group, during the takeover period, at a price higher than P_1.

Formally, define:

— π_i the probability of a takeover in year i ($i = 1,2,...,$);
— P_T the price ($P_0 < P_T < P_{max}$) at which, in case a takeover occurs, the new group would buy the ($N_1 - N_0$) shares it needs;
— q the probability for a dispersed share to be sold at P_T, *i.e.* to be one of the ($N_1 - N_0$) shares bought by the entrant group;
— r the rate of interest.

The price P_V of a voting share is defined as the sum of P_0 and the discounted mathematical expectation of the greater compensation realized in the case of a takeover for the two reasons mentioned above [11] (in all the following formulae the summation index goes from 1 to infinity):

$$P_V = P_0 + \Sigma (P_1 - P_0) \pi_i (1 + r)^{-i} + \Sigma (P_T - P_1) \pi_i q (1 + r)^{-i} \quad (2)$$

On the other hand, also the non-voting share benefits from the takeover, but only because of the increase of the present value of future dividends from P_0 to P_1. Its value is:

$$P_{NV} = P_0 + \Sigma (P_1 - P_0) \pi_i (1 + r)^{-i} \quad (3)$$

This simple model may be extended in various directions, for example by formulating hypotheses[12] about the market evaluation of P_1 and P_T (or their probability distributions), π and q.

Even in its basic form, the model shows that:

— ordinary shares as well as non-voting shares may be valued at

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[11] "Given rational expectations pricing, open market share values will be discounted to reflect the joint probability that both (i) an acquisition will occur and (ii) the transaction terms will provide greater per share compensation for public stockholders of the superior voting class" (DE ANGELO and DE ANGELO, 1985, p. 60).

[12] Further hypotheses may concern the following issues: whether the possibilities of takeover in different years are mutually exclusive or, after a takeover, another one may occur; whether the probability denoted by q is identical for all small shareholders, or some shareholders are less "small" than others, owning blocks of shares large enough to be engaged in bilateral negotiations at a price higher than the open market valuation; whether P_1, P_T and q are variable over time, and so on.

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a price higher than that (P_0) reflecting the dividends expected under the current management;

— ordinary shares, even when owned by dispersed shareholders, may be valued at a higher price than non-voting shares.

As an aside concerning the excess volatility debate, it is worth pointing out that the above model allows for changes in the price of ordinary shares completely unrelated to variations in the expectations of future dividends or in the discount rate. It is sufficient to assume that the probability of a takeover is particularly high in a given year k. Before year k the stock price reflects, and appropriately discounts, the term

$$(P_T - P_1) \pi_K q.$$

After year k, this term disappears, apart from an increase in the "fundamental" component from P_0 to P_1 if the takeover has taken place. More generally, stock prices may vary because of an innovation in the information available to the market concerning not only the present value of the expected dividend stream, but also the probability of a takeover and the prices at which it might occur.

5. The magnitude of the spread: the Italian case

The model described in the previous section explains the existence of a spread between the price of ordinary and non-voting shares. Can it also account for the magnitude of the spread as observed in the Italian experience?

First,[13] substituting (3) into (2) we get:

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[13] Another test of the model could be carried out on a sufficiently long time series of prices of the two (or more) share classes issued by the same company. If the model is correct, the price spread between ordinary and limited or non-voting shares should gradually widen just before a majority is formed, reshuffled or transferred; reach a peak (related to the price paid by the new group) when such an event occurs, and decline considerably immediately afterwards. Since the model is formulated in expectations terms, it could not be rejected also when the above pattern occurs as the effect of anticipations of such events, proved by news in the press or other evidence, and not fulfilled *ex post*.

The issue of non-voting shares in the Italian stock market is very recent and the available time series are not long enough for a meaningful test of the model. However, there are companies whose ordinary and preferred shares have been traded on the open market for a considerable time span. An empirical investigation based on this data has been undertaken and its results will be reported in a future paper.

$$P_V - P_{NV} = (P_T - P_1) \, q \sum \pi_i (1 + r)^{-i} \qquad (2')$$

The price spread between ordinary and non-voting shares is then determined by the product of three terms. For the first term, $P_T - P_1$, an upper bound can be found: if P_T can at most take the value of P_{max} given by (1), then

$$P_T - P_1 \leqslant \frac{N_0}{N_1 - N_0} (P_1^* - P_0) + P_1^* - P_1 \qquad (4)$$

From (4) we can see that the upper bound of the spread $P_T - P_1$ is negatively correlated to the number of shares the new group wants to buy $(N_1 - N_0)$ relative to those already in its possession (N_0), and positively correlated to the increase in profitability (as measured, in terms of present value, by the spread $P_1^* - P_0$, thereby including the "majority premium") expected from the takeover by the new group.

The second term in (2'), q, denotes the probability for a dispersed share to be sold at P_T. Then, if N is the overall number of ordinary shares,

$$\frac{N_1 - N_0}{N - N_0} \leqslant q \leqslant 1.$$

The lower bound applies if all the shares not owned by the new group are dispersed, whereas $q = 1$ if there is another group of shareholders, hostile to the new group and not willing to sell its block of shares, so that all dispersed shares, if offered to the new group, will be bought.

Finally, as for the third term in (2'), ruling out repeated takeovers implies $\sum \pi_i \leqslant 1$. It follows that, for $r > 0$,

$$\sum \pi_i (1 + r)^{-i} < 1.$$

To give a more operational content to the foregoing analysis, we now consider in some detail a situation which is relevant for a number of companies and for long periods in the Italian stock market: when the price of an ordinary share is three (sometimes more) times as high as that of the corresponding non-voting share. More precisely, our aim is to calculate, for a given range of variation of the other parameters, *what "takeover premium" $P_T - P_1$, expressed as a multiple of the "fundamental value", P_1, could account for a ratio of the ordinary to the non-voting share price of 3*.

Dividing both sides of (2') by P_{NV} and using our assumption that $P_V = 3P_{NV}$, we get:

$$2 = \frac{P_T - P_1}{P_{NV}} \, \alpha \, q \qquad (5)$$

where

$$\alpha \equiv \sum \pi_i (1 + r)^{-i}.$$

The simulation is summarized in Table 1, where three values for α and four for q are considered. The fourth column shows the values for $(P_T - P_1)/P_{NV}$ obtained from (5).

Moreover, since (3) can be written as

$$P_{NV} = P_0 + \alpha \, (P_1 - P_0), \qquad (3')$$

TABLE 1

TAKEOVER PREMIUM CORRESPONDING TO $P_V = 3P_{NV}$ E $P_1 = 2P_0$

(1)	(2)	(3)	(4)	(5)	(6)
α	q	αq	$\dfrac{P_T - P_1}{P_{NV}}$	$\dfrac{P_{NV}}{P_1}$	$\dfrac{P_T - P_1}{P_1}$
0.25	0.25	0.0625	32	0.625	20
"	0.50	0.125	16	"	10
"	0.75	0.1875	10.6	"	6.6̄
"	1,00	0.25	8	"	5
0.50	0.25	0.125	16	0.75	12
"	0.50	0.25	8	"	6
"	0.75	0.375	5.3	"	4
"	1,00	0.50	4	"	3
0.75	0.25	0.1875	10.6	0.875	9.3̄
"	0.50	0.375	5.3	"	4.6̄
"	0.75	0.5625	3.5	"	3.1̄
"	1,00	0.75	2.6	"	2.3̄

assuming a particular value for the ratio of P_1 to P_0, it is possible to express P_{NV} as a function of P_1 (and obviously α). To take an (admittedly) optimistic case, suppose that the takeover could double the firm's profitability, so that $P_1 = 2P_0$ and (3') becomes

$$P_{NV} = 0.5 \ (\ 1 + \alpha \ ) \ P_1 \qquad\qquad (6)$$

Using (6), we derive columns (5) and (6). The latter shows the ratio $(P_T - P_1)/P_1$.

Column (6) may be read as follows: for a wide range of values of α and q and given $P_1/P_0 = 2$, *the takeover price should include, in addition to the "fundamental value" of the share P_1, a "premium" between 2 and 20 times such value in order to account for a ratio of the ordinary share price to the non-voting share price of 3.* With $P_1/P_0 < 2$, the results in columns (5) and (6) would be even higher.

Is it plausible for the premium to be 5, 10 or 20 times the fundamental value of the share? *Prima facie*, (4) gives a positive answer. In order to obtain a large increase in the price of the marginal shares, the only requirement is that the number $(N_1 - N_0)$ of desired shares is much smaller than the number of those already owned. If two groups own 49.9 per cent of ordinary shares each and fight to acquire the remaining 0.2 per cent, they could be prepared to offer apparently absurd prices.

However, this is an extreme case; for example, in the takeover battle for the Société Générale de Belgique, the best known recent episode of a takeover, the last offer of the (unsuccessful) incoming group (8000 Belgian francs) was less than twice the price at which the market settled when the battle was over (5000/5500 francs), a price which can be viewed as reflecting P_1.

Moreover, it is always possible to assign a (Bayesian) prior probability to the event of a takeover, a probability that, in the actual (Italian) extreme cases of a valuation ratio of 3, is likely to be very low, given the available information on the present ownership structure of the companies concerned. The most meaningful values, within the range of variation of the parameters considered in Table 1, should then correspond to $\alpha = 0.25$. (Industrial analysts might well go further and assign a value to the probability that there exists a group able to manage the firms concerned more profitably than the existing majority, with the prospect of a value P_1 considerably higher than the value P_0 corresponding to the *status quo*.)

On the basis of the above remarks, we are able to conclude that the takeover premia shown in column (6) of Table 1 seem too large. It is difficult to account for a ratio of the ordinary share price to the non-voting share price of 3; the spread between the two prices, which should rationally be related to the mathematical ex-

pectation of the takeover premium, is found to be puzzlingly overvalued.[14]

6. The possibility of undervaluation of non-voting shares

Prior to concluding, it is important to point out that the steps followed so far suffer from a serious limitation. The underlying assumption was that the price of non-voting shares correctly reflects the expectation of future dividends based on the available information [see (3)]. Therefore, a too high spread between the two open market prices is ascribed to an excess valuation of the probability of takeover, included only in the valuation of the ordinary shares [see (2')].

This set-up is limited, because the undervaluation of the non-voting shares is observationally equivalent to the overvaluation of the ordinary shares.

Since the expectations of future dividends contribute to P_V as well as to P_{NV} [see (2) and (3)], it is difficult to believe that the market systematically undervalues these expectations only when setting the price of the non-voting shares and not also when setting that of the ordinary shares. However, we have already questioned the tenet of market efficiency and agreed that in some cases the magnitude of the price spread lacks a theoretical justification, so that we cannot reject the hypothesis that it is attributable, at least in part, to a different valuation of the common components of the two classes of shares.

For example, assuming segmented markets and an insufficient presence of rational *arbitrageurs* able to eliminate profit opportunities arising from price spreads, it is possible that shareholders with non-voting shares consist of less informed, less forward-looking and less professional investors. They would then be in a situation of uncertainty *à la* Knight rather than of risk. This could lead them to underestimate the prospect of a takeover, on which the second term in (3) is based, to view the shares as if they were similar to bonds and to concentrate on the current dividend, ignoring its likely evolution.

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[14] The fact that, as highlighted in section 1, on the U.S. stock market the spread is considerably lower, whereas the occurrence of takeovers is more frequent, adds to the difficulty of giving a rational interpretation to the Italian case.

A point can be made in support of the hypothesis of undervaluation of non-voting shares with respect to their "fundamental value". When the two classes of shares are issued by a holding company, and the shares of the affiliated companies are also traded in the stock market, it is possible to compute, as in the case of investment funds, the "theoretical" price of the holding company's shares corresponding to the market price of its portfolio, after deduction of the estimated capital gains tax to be paid in case of sale.[15]

In such cases, the non-voting share price in the Italian stock market is usually lower (whereas the ordinary share price is higher) than the "theoretical" price, supporting the hypothesis of a "discount" in the valuation of the former class of shares.

To sum up, the *magnitude* of the spread between the prices of ordinary and non-voting shares observed on the Italian stock market cannot, in many cases, be accounted for. The decrease of such spread may occur through a decrease in the ordinary share price, an increase in the non-voting share price, or a combination of the two. Spreads resulting in a price ratio of 3 will be explained *ex post* only if the future evolution of the Italian stock market justifies the very high valuation of the elements (probability of takeover, fraction of dispersed shares bought by the incoming group, level of takeover premia) to which the higher valuation of ordinary shares with respect to non-voting shares may be ascribed.

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[15] The "theoretical" price is obtained by dividing the equity value by the overall number of ordinary and non-voting shares. The estimate of the capital gains tax, an uncertain future element, is largely arbitrary.

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