INTERNATIONAL JOURNAL OF BUSINESS, 15(1), 2010 ISSN: 1083−4346

Does the Choice of the Method for Combining Listed Companies Have an Impact on Their Valuation?

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ABSTRACT

This article has three parts. The first part reviews the basic principles of the stock-market regulatory law in France and the specific financial features of tender offers; the second part focuses on a review of the literature in relation with the subject of this article and the third part offers a series of empirical tests concerning the level of premium offered in tender offers.

JEL Classification: G12, G34

Keywords: Corporate control; Tender offers; Valuation

I. INTRODUCTION

The first part of this article reviews the features of the general regulations of the Financial Markets Authority that must be considered when discussing tender offers. This regulatory context leads us to distinguish the normal from the simplified proceedings, according to the bidder's financial interest and control on its target before launching the operation. In addition, the type of shareholders' payment leads to a distinction between tender offers in cash and in shares, each of which expresses the objectives and constraints of the bidder.

The second part presents a review of the literature devoted to valuation in the context of takeover bids. In particular, it refers to value creation and transfers of wealth between shareholders, on the one hand of the bidder and, on the other hand, of the target.

The third part focuses on empirical studies. They are based on an analysis of the combinations between listed French companies in the non-financial sector during the 1999-2004 period. This study establishes that the levels of premiums, in relation to the target's latest stock-exchange quotation prior to the announcement of the operation, are not significantly affected by the type of payment (cash or shares). But a takeover bid under the simplified proceedings is better valued higher than a tender offer in the normal proceedings. Lastly, the premiums seen in squeeze outs are not significantly different from those encountered in tender offers. Then, the lower the level of premium in relation to the results of a multi-criteria analysis is offered, the more sophisticated is the valuation method. An approach based on net assets—revalued or estimated—then emerges as the best guideline for determining the offer price. This suggests the existence of an uncertainty premium in approaches based on analogical methods (listed peer groups multiples) and discounted cash flows.

II. REGULATORY ASPECTS OF TAKEOVER BIDS

According to the general regulations of the Financial Markets Authority, a combination between listed companies involves several stages: the first is the launching of the bid, which can take place either under the normal proceedings or under the simplified proceedings. Should a competing bid appear, the bidder may also raise its own bid and face a stock-market battle. Moreover, a tender offer in cash, as a tender offer in shares, may be followed by a withdrawal offer from the quotation, and possibly by a squeeze-out. The first phase of a takeover bid is the submission by the bid's presenting financial firm to the Financial Markets Authority (AMF) of a document describing the bidder's objectives and intentions, the number and nature of the target company's securities that it already holds alone or jointly, or that it has independent access to, as well as the date and the terms on which their acquisition has been or can be carried out, the price (for a tender offer in cash) or the exchange ratio (for a tender offer in shares) at which the bidder is offering to acquire the securities, the information employed to establish these items, the terms of payment or exchange proposed and any suspensive conditions affecting the execution of the operation. In assessing the admissibility of the draft bid, the AMF considers the bidder's objectives and intentions, the price or the exchange ratio, according to usually-accepted valuation criteria, the features of the target

company, the nature, features, and market for the securities offered in exchange and the suspensive conditions imposed by the bidder.

When the bidder acting alone or jointly holds less than half of the capital or of the voting rights in the target company, only the normal proceedings for a tender offer is applicable. The timetable for the bid is set according to the publication date either of the joint bid documents prepared by the bidder and the target company, or of the responding document prepared by the target company. The period between the date of this publication and the closing date is twenty-five market days, but the tender period can be extended to thirty-five market days. No minimum price is mentioned by the AMF. The simplified takeover bid proceedings can be employed when the bid is issued by a shareholder who already holds, either directly or indirectly, alone or jointly, in the meaning of Article L.233-10 of the French Commercial Code, at least half of the capital and voting rights in a company. In that case the minimum price of the shares corresponds to the average of the last 60 prices on the stock exchange, weighted by the daily volumes of transactions.

III. HIGHLIGHTS FROM THE LITERATURE

The financial literature concerning the market for corporate control casts light on the motivations for launching a takeover bid, the justification for the premium paid by the bidder, and the return provided to the investors. Singh (1971) notes that takeover bids, which appeared in the mid 1950s, constitute an alternative to direct mergers, in the sense that they allow the bidder of the operation to address the shareholders of the target company directly, without having to hold prior discussions with its management. Over and above the advantages of synergy, the concentration of companies through takeover bids thus appears to represent a way of correcting management decisions that may be harmful to the company. During the 1980s, takeover bids became a standard method for acquiring companies in the United Kingdom and the United States. For example, Mitchell and Mulherin (1996) report that about a quarter of listed American companies were the object of a hostile takeover during this period. But only friendly takeovers, i.e. ones negotiated with the target's management, were regularly crowned with success. Thus, Schwert (2000) states that hostile takeovers account for only 30% of all transactions. This relatively small proportion should not, however, lead to underestimate hostile takeovers, as the terms of certain friendly takeovers might not have been accepted by the target's management if it had not been threatened by an unsolicited bid. Outside the United Kingdom and the United States, takeover bids were far from widespread in the 1980s, and hostile takeovers almost unknown. Holmström and Kaplan (2001) note that takeover bids, mostly friendly in nature, experienced an unprecedented boom in the United States during the 1990s; moreover, hostile takeovers were extremely rare, outside the United Kingdom, until the end of the 1990s. In 1999 only, unsolicited bids began to multiply in continental Europe, notably with the Vodafone-Mannesmann operation.

Many empirical studies have addressed the return on shares around the date the bid is announced. They all show that this type of operation creates value for the target's shareholders. The work of Andrade et al. (2001) and Brunner (2002) establish that the shareholders of a target record a 15 to 30% exceptional return. McCahery et al. (2004) reach the same conclusions concerning the English market, while Goergen and

Rennelboog (2004) and Campa and Hernando (2004) find that the exceptional return is only 10% on the European continental markets. The results are less conclusive for shareholders in the company that initiates the operation. Thus, Goergen and Renneboog (2004) and Schwert (1996) report positive returns while Andrade et al. (2001) find negative returns. In any event, the returns range between –5% and +5%. Moreover, Mitchell and Stafford (1998), find, on the one hand, returns which are not significantly unusual for shareholders of the bidder, and on the other hand, a lack of significant difference in terms of return according to the method employed for the operation (payment in cash versus payment in securities). In sum, a bid does create shareholder value, mainly to the benefit of the shareholders of the target. Some studies based on the analysis of accounting data attempt to identify factors to explain the creation of shareholder value by comparing the performance of the bidder and of the target before and after the launching of a takeover bid. Once again, the results are contradictory. Thus Healy et al. (1992) find an improvement in the operating cash flows of the combined company, compared to its peers, and Lichtenberg and Siegel (1989) report an increase in its productivity. On the other hand, McGuckin and Nguyen (1995), like Schoar (2002), show that a takeover bid is not followed by a significant improvement in performance. Finally, Ravenscraft and Scherer (1987) show that the target's performance deteriorates after the launching of a takeover bid.

The value creation depends on the price which is offered to the target’s shareholders. The following section examines the level of the premium over different valuation approaches according to the type of tender offer.

IV. EMPIRICAL STUDIES

A. Confidence Limits of Offered Premiums

1. Methodology

The market capitalization is the main valuation reference enabling an assessment of the financial terms of a takeover bid. This section examines the premiums offered in financial operations carried out on French companies between 1999 and 2004 for which tender documents approved by the COB are available on the AMF’s website. Operations concerning financial institutions like Crédit Agricole's for Crédit Lyonnais were excluded from the study: the concentration level already achieved in the banking sector and the resulting scarcity effect leads to extreme levels of premiums. The premiums discussed below are taken from the COB (or AMF) documents and have not been recalculated. We have thus analyzed 22 tender offers in cash under the normal proceedings, 54 tender offers in cash under the simplified proceedings 10 tender offers in shares for a total of 86 takeover bids. In addition 43 squeeze-outs were examined. 2 tender offers under the simplified proceedings were also identified. They were nevertheless excluded from the study, in view of the statistical insignificance of such a small sample.

In accordance with AMF recommendations, the premiums were calculated by comparing the price offered in each operation to the last quoted stock-exchange price before the suspension of listings, and to the average price for one month, two months, three months, six months, and 12 months preceding the announcement of the bid. We

thus have a list of six premiums per operation. After having listed each of the six premiums per operation studied, the mean premiums per category of operation were calculated. The mean premiums were calculated on the basis of a sample of operations. Consequently, conclusions may be drawn from this study only in terms of confidence limits.

From a statistical viewpoint, the confidence limit of a mean m is obtained by using the property for which the variable $Z = \overline{X} - m / \frac{S}{\sqrt{n}}$ obeys a Student's law with n-1 degrees of freedom, where $\overline{X}$ is the empirical mean obtained from a sample composed of observations $X_1, X_2, \ldots X_N$; n is therefore equal to the number of observations; $\overline{X} = \frac{1}{n} \sum_{i=1}^{n} X_i$; S is the standard deviation found for the sample, hence: $S = \sqrt{\frac{1}{n-1} \sum_{i=1}^{n} (X_i - \overline{X})^2}$. A table of Student's law provides a figure for the real number b that satisfies: P[Z<b] = 1-α. Then: $b = F^{-1}(1 - \frac{\alpha}{2})$ where F is the distribution function of Student's law. Thus for a confidence level of 95%, α = 5% and $b = F^{-1}(1 - \frac{0,05}{2}) = F^{-1}(0,975)$ obtained from a direct reading of Student's table. Once b is known, m can be isolated: $P[\overline{X} - b.\frac{S}{\sqrt{n}} < m < \overline{X} + b.\frac{S}{\sqrt{n}}] = 1 - \alpha.$

2. Description of the Data

Appendix 1 shows, for each transaction (tender offer, in cash or in share, in the normal or in the simplified proceedings and squeeze outs), the date on which the market was informed of the subsequent start of the operation, the name of the bidder and of the target, the valuation of 100% of the equity implied by the offer price and the premiums offered in relation to the last quotation before the suspension of listings and in relation to the mean quotations.

3. Results

Table 1 presents, for each transaction modality, the average (or mean), the standard deviation and the 95% confidence interval of the premium regarding the last spot price, the average prices (1 month, 2 months, 3 months, 6 months, 1 year), and the valuation issued from traditional approaches: listed peer groups, DCF, sum of the parts (SotP) or net asset value (NAV).

For example, taking all tender offers into account (except tender offers in shares in the simplified proceedings) it can be stated, with a 5% chance of error, that the average premium (corresponding to the simple mean of the premiums) with respect to the last quotation before suspension of the listings of the targeted companies lies between 17% and 33%.

Table 1
Summary of confidence limits of premiums offered in the studied tender offers and squeeze outs

	Premium over								
	Spot	1M	2M	3M	6M	1Y	Listed peers	DCF	SotP or NAV
Tender offers in cash - normal proceedings only									
Average	9%	17%	29%	21%	21%	22%	59%	7%	1%
Standard deviation	33%	35%	30%	39%	42%	47%	56%	16%	na
Confidence limits at 95%									
Inf	-5%	2%	17%	5%	3%	3%	35%	0%	na
Sup	22%	31%	42%	37%	38%	42%	82%	13%	na
Tender offers in cash - simplified proceedings only									
Average	31%	34%	37%	35%	35%	34%	45%	29%	13%
Standard deviation	40%	36%	39%	38%	39%	39%	43%	56%	23%
Confidence limits at 95%									
Inf	2%	17%	5%	3%	3%	14%	0%	20%	0%
Sup	31%	42%	37%	38%	42%	39%	13%	44%	0%
Tender offers in cash - normal and simplified proceedings									
Average	25%	28%	35%	31%	31%	30%	49%	23%	12%
Standard deviation	39%	37%	36%	39%	40%	42%	47%	50%	23%
Confidence limits at 95%									
Inf	16%	20%	27%	22%	22%	20%	39%	12%	7%
Sup	34%	37%	43%	39%	40%	39%	60%	34%	17%
Tender offers in shares - normal proceedings only									
Average	25%	19%	15%	22%	26%	19%	96%	-	-11%
Standard deviation	21%	16%	23%	24%	19%	24%	102%	-	-
Confidence limits at 95%									
Inf	12%	10%	1%	7%	14%	4%	32%	na	na
Sup	38%	29%	29%	37%	38%	34%	159%	na	na
Squeeze outs only									
Average	26%	30%	23%	33%	33%	35%	45%	25%	28%
Standard deviation	35%	29%	28%	36%	35%	31%	49%	33%	21%
Confidence limits at 95%									
Inf	17%	22%	15%	23%	24%	26%	31%	15%	22%
Sup	36%	38%	31%	43%	43%	43%	58%	34%	34%
All tender offers (except tender offers in shares - simplified proceedings)									
Average	25%	27%	31%	29%	30%	29%	51%	23%	11%
Standard deviation	37%	35%	34%	37%	38%	40%	50%	50%	23%
Confidence limits at 95%									
Inf	17%	20%	24%	22%	22%	20%	41%	12%	6%
Sup	33%	35%	38%	37%	38%	37%	62%	33%	16%

B. Analysis of the Significance of Differences between Premiums Offered in Relation to the Last Quotation before the Suspension of Listings

1. Methodology

The confidence limits in the preceding section suggest that the average offered price is equal, for a tender offer in cash (under the normal or simplified proceedings), to the average offered price in a tender offer in shares. In the same context, the confidence limits for the average premiums offered by category of operation suggest that the premium in a simplified bid is different from that offered under the normal proceedings (tender offer in cash and in shares). Finally, bearing in mind the need to obtain a confirmation from an independent expert of the offered price in a squeeze-out, it is possible to imagine that the average level of premium may be noticeably different in a squeeze-out and in a tender offer in which the shareholders of the target company are free to tender their securities to the bidder or to retain them. These three comments made on a sample of operations may be extended to all the operations by conducting a test of significance of the difference between two means.

2. Description of the Data

Table 2 repeats the means for premiums offered by category of operation, based on the data analyzed in the preceding sections: tender offers in cash under the normal and simplified proceedings, tender offers in shares in the normal proceedings, tender offers in cash under the simplified proceedings, tender offers under the normal proceedings, squeeze-outs and all tender offers (except those in shares under the simplified proceedings).

Table 2
Summary of premiums offered in the studied tender offers and squeeze outs

	Premium over					
		Mean				
	Spot	1M	2M	3M	6M	1Y
Tender offers in cash - normal and simplified proceedings	25%	28%	35%	31%	31%	30%
Tender offers in shares - normal proceedings	25%	19%	15%	22%	26%	19%
Tender offers (cash and shares) - normal proceedings	14%	18%	23%	21%	22%	21%
Tender offers in cash - simplified proceedings	31%	34%	37%	35%	35%	34%
All tender offers (except in shares in the simplified proceedings)	25%	27%	31%	29%	30%	29%
Squeeze outs	26%	30%	23%	33%	33%	35%

The data used for the analysis of significant differences between mean premiums offered in relation to the last quotations before suspension of listings are shown in the first column of this table.

3. Description of the Test

The proposed test can take two forms. It will be a traditional Student's test if the standard deviations of the premiums being compared are equal; if the standard deviations of the premiums being compared are different, an Aspin-Welch test should be employed. In this regard, it is necessary to conduct firstly a comparison test of the standard deviations of the premiums. For this purpose we use the property for which the variable $T = \frac{S_x^2}{S_y^2}.\frac{\sigma_Q^2}{\sigma_P^2}$ obeys a Fisher-Snedecor law for parameters $n_p - 1$ and $n_Q - 1$.

S_X^2 = square of the standard deviation of premiums found for a first sample.

S_Y^2 = square of the standard deviation of premiums found for a second sample.

σ_P^2 = variance of the premiums for all the operations the first sample.

σ_Q^2 = variance of the premiums for all the operations from the second sample.

n_P= size of the first sample and n_Q = size of the second sample. The test for standard deviations boils down to assume that $\sigma_P^2 = \sigma_Q^2$. Under this assumption: $T_0 = \frac{S_X^2}{S_Y^2}$ obeys F(n_P-1, n_Q-1). We then calculate, using the compared samples, the number t_0 that satisfies: $t_0 = \frac{S_X^2}{S_Y^2}$. The table for the Fisher-Snedecor law provides the value of the real number c, such that P[T>c] = 5% where T obeys the law F(m,n). Thus, if $t_0 > c$, the assumption of equality of standard deviations must be rejected, with a 5% chance of being wrong.

$$\text{Let } T = \frac{\overline{X} - \overline{Y} - (m_P - m_Q)}{\sqrt{\frac{(n_P - 1)S_X^2 + (n_Q - 1)S_Y^2}{n_P + n_Q - 2}}.\sqrt{\frac{1}{n_P} + \frac{1}{n_Q}}}.$$ T obeys a Student's law with n_P+n_Q-2 degrees of freedom. Thus, assuming $m_P=m_Q$, $T_0 = \frac{\overline{X} - \overline{Y}}{\sqrt{\frac{(n_P - 1)S_X^2 + (n_Q - 1)S_Y^2}{n_P + n_Q - 2}}.\sqrt{\frac{1}{n_P} + \frac{1}{n_Q}}}$ obeys a Student's law with n_P+n_Q-2 degrees of freedom. Using the compared samples, we then calculate the number:

$t_0 = \dfrac{\overline{X} - \overline{Y}}{\sqrt{\dfrac{(n_P - 1)S_X^2 + (n_Q - 1)S_Y^2}{n_P + n_Q - 2}} \cdot \sqrt{\dfrac{1}{n_P} + \dfrac{1}{n_Q}}}$. It is also possible to calculate the value of the real number c such that $P[-c<T<c] = 1 - \alpha$, hence : $c = F^{-1}(1 - \dfrac{\alpha}{2})$ where F is the distribution function of Student's law. Thus for a confidence level of 95%, $\alpha = 5\%$ and $c = F^{-1}(0{,}975)$ which can be obtained directly from the Student's law table. Consequently, if $-c < t_0 < c$, then the assumption of equality of means may be accepted with a 5% chance of error. If the unknown standard deviations are different, the Aspin-Welch test can be used. Let $T = \dfrac{\overline{X} - \overline{Y}}{\sqrt{\dfrac{S_X^2}{n_P} + \dfrac{S_Y^2}{n_Q}}}$; T obeys a Student's law with n degrees of freedom, where:

$n = \dfrac{\left(\dfrac{S_X^2}{n_P} + \dfrac{S_Y^2}{n_Q}\right)^2}{\left(\dfrac{S_X^2}{n_P}\right)^2 / (n_P - 1) + \left(\dfrac{S_Y^2}{n_Q}\right)^2 / (n_Q - 1)}$. The decision rule is the same as in the Student's test.

4. Results

A. Comparison Test of Mean Premiums for Tender Offers in Cash and in Shares

Table 3 repeats the information employed in the test for variances:

Table 3
Fisher-Snedecor test for equality of variances of premiums for tender offers in cash and in shares

Tender offer in	Cash	Shares
Mean	9%	25%
Variance	11%	4%
Observations	21	10
Number of degrees of freedom	20	9
F stat	2.42	
F critical one-tail	2.94	

This table indicates that the estimator of the mean premium is 9% for tender offers in cash and 25% for tender offers in shares. Also, the estimator of the variance of the premiums is 11% for tender offers in cash and 4% for tender offers in shares. These estimators were calculated on the basis of the empirical observation of $n_P = 21$ tender offers in cash and $n_Q = 10$ tender offers in shares. Assuming the variances are equal, the variable T_0 obeys a Fisher-Snedecor law with $n_P - 1 = 20$ and $n_Q - 1 = 9$ degrees of freedom. Moreover the value t_0 taken by T_0 (called "F stat" in the table above) for our samples of operations is equal to $S_X^2 / S_Y^2 = 2.42$. Furthermore, assuming that the variances are equal, the probability that T_0 be greater than 2.94—this number is called the "F critical one-tail" in the table above—is only 5%. Thus as t_0 is less than 2.94, we may conclude, with a 5% chance of error, that the variances of premiums on tender offers in cash and in shares are not significantly different. For testing the equality of the means, this implies a Student's test, as presented in Table 4.

Table 4
Student test for equality of means of premiums for tender offers in cash and in shares

Tender offer in	Cash	Shares
Mean	9%	25%
Variance	11%	4%
Observations	21	10
Number of degrees of freedom	29	
t stat	-1.41	
T critical two-tail	2.05	

The estimators of means and variances were calculated on the basis of the empirical observation of $n_P = 21$ tender offers in cash and $n_Q = 10$ tender offers in shares. We find that, assuming equality of the means, the variable T_0 obeys a Student's law with $n_P + n_Q - 2 = 21 + 10 - 2 = 29$ degrees of freedom. Moreover, based on the samples, t_0 (called "t Stat" in the table above) is equal to -1.41. In addition, the critical value of t for a bilateral test is 2.05. Consequently, if the mean premiums are equal, there is a 95% chance that t lies between -2.05 and +2.05. As t_0 falls within this interval we may conclude, with a 5% chance of error, that the premiums of tender offers in cash and in shares are not significantly different.

B. Comparison Test of Mean Premiums in Normal and Simplified Proceedings

Table 5 repeats the information employed in the test for variances.

Table 5
Fisher-Snedecor test for equality of variances means in simplified and normal proceedings

Tender offer in	Cash/simplified proceedings	Cash and shares / normal proceedings
Mean	31%	14%
Variance	16%	9%
Observations	51	31
Number of degrees of freedom	50	30
F stat	1.75	
F critical one-tail	1.76	

Assuming that the variances are equal, the probability that T_0 be greater than 1.76 - this number is called the "F critical one tail" in the above table - is only 5%. Thus as t_0 is less than 1.76, we may conclude, with a 5% chance of error, that the standard deviations of bid premiums under the normal and simplified proceedings, are not significantly different. For testing the means, this implies a Student's test which is presented in Table 6.

Table 6
Student test for equality of means in simplified and normal proceedings

Tender offer in	Cash/simplified proceedings	Cash and shares / normal proceedings
Mean	31%	14%
Variance	16%	9%
Observations	51	31
Number of degrees of freedom	80	
t Stat	2.13	
T critical two-tail	1.99	

According to this table, if the mean premiums are equal, there is a 95% chance that t be between -1.99 and +1.99. As t_0 (equal to 2.13) lies outside this interval, we may conclude, with a 5% chance of error, that the premiums for bids under the normal proceedings and under the simplified proceedings are significantly different.

C. Comparison Test for Mean Premiums Obtained from Squeeze-outs and Tender Offers

Table 7 repeats the information employed in the test for variances.

Table 7
Fisher-Snedecor test for the equality of variances of premiums in squeeze-outs and in tender offers

	Squeeze outs	Tender offers
Mean	26%	25%
Variance	12%	14%
Observations	43	82
Number of degrees of freedom	42	81
F stat	0.88	
F critical one-tail	0.63	

Assuming that the variances are equal, the probability that T_0 be greater than 0.63 is only 5%. Thus as t_0 is greater than 0.63, we may conclude, with a 5% chance of error, that the standard deviations of the premiums in squeeze-outs and in tender offers are significantly different. The test for means then becomes an Aspin-Welch test as presented in Table 8.

Table 8
Aspin-Welch test for the equality of means of premiums for squeeze-outs and tender offers

	Squeeze outs	Tender offers
Mean	26%	25%
Variance	12%	14%
Observations	43	82
Number of degrees of freedom	91	
t Stat	0.26	
T critical two-tail	1.99	

According to the above table, if the mean premiums are equal, there is a 95% chance that t lies between -1.99 and +1.99. As long as t_0 (equal to 0.26) falls within this interval we may conclude, with a 5% chance of error, that the premiums offered in squeeze-outs and tender offers are not significantly different.

D. Premiums Offered in Relation to Various Valuation Approaches

The tender documentation approved by the AMF usually shows premiums offered under traditional valuation approaches, in particular listed peer groups, DCF, and NAV or SotP. Appendix 2 presents, for each tender offer, the premiums offered in relation to these approaches. As shown, we can state, with a 5% chance of error, that the average premium over the valuation obtained from listed peer groups lies between 41% and 62%, taking all tender offers into account (except tender offers in shares in the

simplified proceedings). The average premium offered over the DCF valuation ranges between 12% and 33%.

V. CONCLUSION

Table 9 repeats the levels of premiums in relation to the last quotation before suspension of listings, and the results of tests of assumptions at the 5% threshold.

Table 9
Summary of the results of the tests of assumptions

	# of Obs.	Ave. premium	95% confidence limits		Test of assumption	
			Low	High	Test	Result
Tender offers in cash - normal and simplified proceedings	76	25%	16%	22%	Student	No significant Difference
Tender offers in shares - normal proceedings	10	25%	12%	38%		
Tender offers (cash and shares) - normal proceedings	32	14%	3%	24%	Student	Significant Difference
Tender offers in cash - simplified proceedings	54	31%	21%	42%		
All tender offers (except in shares in the simplified proceedings)	86	25%	17%	33%	Aspin Welch	No significant difference
Squeeze outs	43	26%	17%	36%		

It shows that the method for combining listed companies (cash versus share offer) has no significant impact on the level of premium and therefore on the valuation of the target. It also shows that the premiums are higher in simplified proceedings than in normal ones perhaps because of the willingness of the bidder to be easily allowed by the AMF to launch a bid whereas a conflict of interest might be suspected, the target being controlled by the bidder.

Moreover, the low level of premium over the NAV or SotP - as presented in the table below - demonstrates that this approach constitutes the principal criterion for establishing the offered price. Since the SotP and the NAV represent the most sophisticated approaches to valuation, this suggests that the offered price in a tender offer in cash includes an uncertainty premium in relation to the other valuation approaches.

Table 10
Summary of premiums on traditional valuation approaches for tender offers in cash

Tender Offer	Listed peers	DCF	SotP / NAV
Normal process	59%	7%	1%
Simplified process	45%	29%	13%

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Appendix 1

Features and premiums on tender offers in cash

Announcement date	Kind of transaction	Premium over								
		Spot	Average					Listed peers	DCF	SotP or NAV
			1 M	2 M	3 M	6 M	1 Y			
29/11/1999	TO Cash - Normal proc	10%	43%	45%	48%	64%	84%	-	-	-
09/12/1999	TO Cash - Normal proc	-	30%	-	29%	37%	54%	41%	17%	-
09/12/1999	TO Cash - Normal proc	84%	79%	78%	79%	83%	82%	-	-	-
25/04/2000	TO Cash - Normal proc	-47%	-49%	-	-57%	-59%	-63%	-	-16%	-
11/07/2000	TO Cash - Normal proc	4%	9%	-	15%	22%	20%	21%	-	-
06/09/2000	TO Cash - Normal proc	13%	32%	-	42%	32%	22%	48%	-	-
15/09/2000	TO Cash - Normal proc	13%	33%	-	57%	28%	37%	13%	-	-
25/10/2000	TO Cash - Normal proc	3%	0%	-2%	-3%	-18%	-13%	123%	-	-
12/01/2001	TO Cash - Normal proc	21%	29%	-	28%	49%	69%	126%	29%	-
21/02/2001	TO Cash - Normal proc	25%	30%	-	43%	59%	67%	-	-	-
23/03/2001	TO Cash - Normal proc	21%	27%	-	32%	7%	-15%	-	22%	-
25/01/2002	TO Cash - Normal proc	4%	46%	55%	54%	42%	32%	56%	-	-
28/03/2002	TO Cash - Normal proc	52%	62%	72;25%	82%	95%	119%	186%	-	-
04/06/2002	TO Cash - Normal proc	9%	9%	11%	13%	14%	10%	5%	-3%	-
19/08/2002	TO Cash - Normal proc	1%	18%	-	17%	22%	15%	27%	14%	-
11/12/2002	TO Cash - Normal proc	-1%	1%	-	4%	3%	-9%	4%	-8%	-
18/02/2003	TO Cash - Normal proc	4%	8%	-	10%	10%	9%	-	-	1%
09/07/2003	TO Cash - Normal proc	17%	12%	11%	17%	16%	14%	-	-	-
17/07/2003	TO Cash - Normal proc	-90%	-91%	-	-93%	-93%	-92%	-	-	-
20/02/2004	TO Cash - Normal proc	7%	20%	-	19%	16%	25%	-	-	-
04/02/2005	TO Cash - Normal proc	12%	6%	6%	6%	7%	7%	89%	-	-
23/07/2003	TO Cash - Normal proc	18%	18%	-	17%	17%	17%	26%	-1%	-
03/02/2000	TO Cash - Simplif proc	-19%	-	-17%	-	-17%	-19%	-	-12%	-
11/02/2000	TO Cash - Simplif proc	1%	10%	-	-1%	2%	6%	-	-	-
28/02/2000	TO Cash - Simplif proc	-	-	-	-	-	-	-	-	-
03/05/2000	TO Cash - Simplif proc	4%	4%	0%	4%	0%	6%	-	-	-
15/06/2000	TO Cash - Simplif proc	11%	24%	-	34%	37%	49%	-	-	-
23/06/2000	TO Cash - Simplif proc	26%	28%	-	35%	50%	90%	-	-	-
27/06/2000	TO Cash - Simplif proc	17%	-	-	-	-	-	-	-	-
06/07/2000	TO Cash - Simplif proc	59%	72%	72%	75%	81%	78%	63%	-	-
16/10/2000	TO Cash - Simplif proc	96%	115%	115%	98%	117%	143%	-	-	5%
03/11/2000	TO Cash - Simplif proc	8%	9%	-	12%	16%	14%	25%	-	-7%
10/11/2000	TO Cash - Simplif proc	2%	22%	25%	26%	33%	48%	-	-	-5%
07/12/2000	TO Cash - Simplif proc	16%	13%	-	15%	-	13%	59%	-	-
08/02/2001	TO Cash - Simplif proc	45%	41%	-	52%	45%	32%	41%	8%	-
26/04/2001	TO Cash - Simplif proc	6%	5%	-	6%	7%	9%	-	-	-
27/04/2001	TO Cash - Simplif proc	33%	31%	31%	31%	31%	50%	-	-	-
09/05/2001	TO Cash - Simplif proc	5%	3%	22%	19%	32%	31%	9%	-	-
25/06/2001	TO Cash - Simplif proc	45%	-	-	-	-	-	-	2%	-
27/06/2001	TO Cash - Simplif proc	62%	19%	-	20%	28%	56%	19%	2%	-
04/07/2001	TO Cash - Simplif proc	26%	19%	-	22%	32%	34%	-	-	44%
09/07/2001	TO Cash - Simplif proc	18%	24%	-	28%	37%	35%	45%	-	-
18/07/2001	TO Cash - Simplif proc	41%	43%	-	37%	33%	20%	26%	3%	-
02/08/2001	TO Cash - Simplif proc	-8%	-2%	-	0%	2%	4%	22%	-	0%
22/10/2001	TO Cash - Simplif proc	44%	73%	-	40%	21%	8%	-	-	-
27/11/2001	TO Cash - Simplif proc	16%	20%	-	38%	39%	14%	23%	-	-12%
27/12/2001	TO Cash - Simplif proc	55%	55%	-	51%	49%	45%	59%	31%	-
15/01/2002	TO Cash - Simplif proc	23%	28%	-	34%	43%	50%	5%	-	-
05/03/2002	TO Cash - Simplif proc	13%	19%	17%	15%	31%	-3%	-	-	-
14/03/2002	TO Cash - Simplif proc	9%	9%	-	14%	18%	23%	25%	6%	-
25/03/2002	TO Cash - Simplif proc	23%	39%	40%	38%	-	-	-	-	-
11/04/2002	TO Cash - Simplif proc	38%	38%	-	35%	32%	22%	158%	-	74%
26/06/2002	TO Cash - Simplif proc	-12%	9%	-	-29%	-44%	-44%	2%	9%	20%
05/09/2002	TO Cash - Simplif proc	27%	32%	-	40%	52%	65%	-	0%	46%
10/09/2002	TO Cash - Simplif proc	213%	167%	-	133%	87%	-	40%	134%	20%
09/10/2002	TO Cash - Simplif proc	-	5%	-	3%	9%	20%	-	6%	27%
10/10/2002	TO Cash - Simplif proc	45%	47%	46%	46%	48%	46%	-	5%	41%
17/10/2002	TO Cash - Simplif proc	41%	37%	-	35%	24%	13%	-	-	-12%
01/11/2002	TO Cash - Simplif proc	-1%	0%	-1%	-1%	-	-	40%	-	-
25/11/2002	TO Cash - Simplif proc	49%	66%	-	50%	22%	-	6%	17%	4%
29/11/2002	TO Cash - Simplif proc	-8%	-8%	-8%	-9%	-30%	-	74%	-	-
		33%	34,8%	62,2%	76,5%	100%	-	64%	32%	20%
05/12/2002	TO Cash - Simplif proc						6,25%			
28/01/2003	TO Cash - Simplif proc	47%	50%	-	47%	47%	44%	-	-	0%
04/04/2003	TO Cash - Simplif proc	30%	38%	-	25%	21%	19%	16%	3%	-
02/06/2003	TO Cash - Simplif proc	100%	93%	102%	112%	114%	105%	103%	40%	16%
24/06/2003	TO Cash - Simplif proc	47%	84%	-	164%	166%	126%	-	29%	5%
09/10/2003	TO Cash - Simplif proc	28%	-	-	52%	65%	45%	16%	3%	-
07/11/2003	TO Cash - Simplif proc	146%	120%	-	118%	-	-	118%	-	0%
14/11/2003	TO Cash - Simplif proc	3%	3%	-	14%	21%	17%	-	23%	-
12/12/2003	TO Cash - Simplif proc	-1%	0%	-	0%	-1%	0%	-	-	-18%
15/12/2003	TO Cash - Simplif proc	12%	11%	-	13%	14%	28%	19%	-	-
02/01/2004	TO Cash - Simplif proc	-	67%	46%	58%	89%	103%	11%	9%	-
07/01/2004	TO Cash - Simplif proc	62%	-	69%	-	69%	66%	4%	12%	-
01/03/2004	TO Cash - Simplif proc	9%	2%	-	0%	-15%	-43%	168%	249%	-
06/04/2004	TO Cash - Simplif proc	8%	1%	-	-	-1%	-4%	76%	47%	-
08/06/2004	TO Cash - Simplif proc	8%	9%		7%	8%	14%	19%	-	0%

Appendix 2

Features and premiums on tender offers in shares and squeeze outs

Announcement date	Kind of transaction	Premium over								
		Spot	Average					Listed peers	DCF	SotP or NAV
			1 M	2 M	3 M	6 M	1 Y			
17/07/2000	TO in shares - normal proc	15%	14%	17%	19%	23%	17%	-	-	-
20/10/2000	TO in shares - normal proc	13%	19%	23%	22%	20%	8%	-	-	-
27/03/2001	TO in shares - normal proc	62%	32%	42%	40%	34%	-	-	-	-
31/05/2001	TO in shares - normal proc	22%	-10%	-21%	-28%	-	-	168%	-	-
27/06/2001	TO in shares - normal proc	56%	-	-	61%	68%	72%	-	-	-11%
13/07/2001	TO in shares - normal proc	10%	19%	15%	20%	8%	6%	-	-	-
19/06/2002	TO in shares - normal proc	5%	7%	-	5%	6%	11%	-	-	-
02/08/2002	TO in shares - normal proc	20%	31%	-	9%	11%	-8%	-	-	-
17/10/2003	TO in shares - normal proc	3%	21%	-	31%	32%	27%	23%	-	-
17/04/2000	TO in shares - normal proc	40%	43%	-	37%	33%	20%	-	-	-
27/06/2001	Squeeze out	7%	45%	-	24%	28%	3%	79%	12%	-
22/10/2001	Squeeze out	140%	-	-	-	-	-	-	1%	30%
09/04/2002	Squeeze out	38%	40%	-	37%	35%	36%	19%	13%	-
17/06/2002	Squeeze out	29%	36%	34%	27%	-	-	-	42%	-
21/06/2002	Squeeze out	0%	5%	5%	4%	-	-	-	-	-
12/07/2002	Squeeze out	64%	76%	-	62%	43%	-	25%	107%	-
16/07/2002	Squeeze out	-	-	-	-	-	-	59%	31%	-
17/07/2002	Squeeze out	9%	9%	11%	13%	14%	10%	18%	-3%	-
18/07/2002	Squeeze out	0%	-	-	-	-	33%	48%	-	-
26/07/2002	Squeeze out	24%	31%	-	37%	54%	65%	-	-	-
29/08/2002	Squeeze out	10%	10%	-	5%	10%	13%	16%	-	0%
06/09/2002	Squeeze out	28%	20%	19%	17%	6%	10%	46%	72%	-
12/09/2002	Squeeze out	-	38%	-	-	-	22%	158%	-	75%
20/09/2002	Squeeze out	6%	5%	11%	10%	4%	-	-	12%	-
10/10/2002	Squeeze out	-	-	-	-	-	-	-	0%	46%
20/02/2003	Squeeze out	45%	47%	46%	46%	48%	46%	-	5%	41%
12/03/2003	Squeeze out	9%	9%	10%	11%	13%	-	87%	50%	-
27/03/2003	Squeeze out	-3%	-2%	-	1%	2%	-9%	26%	14%	-
07/04/2003	Squeeze out	-	-	-	-	-	-	244%	31%	-
08/04/2003	Squeeze out	38%	43%	-	39%	42%	50%	-	42%	-
11/04/2003	Squeeze out	1%	2%	2%	1%	1%	1%	60%	4%	-
06/06/2003	Squeeze out	4%	16%	-	27%	26%	11%	18%	9%	-
19/06/2003	Squeeze out	47%	84%	-	164%	166%	126%	12%	-	5%
09/07/2003	Squeeze out	-10%	-12%	-5%	1%	14%	24%	18%	7%	22%
24/07/2003	Squeeze out	2%	11%	-	19%	-	27%	51%	0%	47%
04/08/2003	Squeeze out	146%	120%	-	118%	-	-	71%	-16%	-1%
04/09/2003	Squeeze out	25%	22%	-	-	-10%	-	23%	14%	-
16/09/2003	Squeeze out	-	-	-	-	-	-	-	-	-
22/09/2003	Squeeze out	100%	93%	102%	112%	114%	105%	80%	-2%	16%
26/09/2003	Squeeze out	43%	41%	46%	41%	35%	45%	69%	39%	-
29/10/2003	Squeeze out	12%	15%	-	22%	25%	36%	7%	0%	-
30/10/2003	Squeeze out	3%	80%	-	76%	71%	72%	21%	-	-
12/11/2003	Squeeze out	33%	40%	-	40%	50%	47%	91%	141%	23%
17/11/2003	Squeeze out	23%	4%	4%	3%	-	2%	-	-	16%
18/11/2003	Squeeze out	15%	20%	-	13%	21%	38%	19%	21%	-
19/11/2003	Squeeze out	44%	42%	-	39%	36%	-	13%	-	-
06/01/2004	Squeeze out	67%	47%	-	60%	75%	87%	5%	9%	-
08/01/2004	Squeeze out	1%	64%		81%	84%	58%	59%	39%	-
03/02/2004	Squeeze out	1%	3%	11%	-	18%	37%	-	29%	25%
11/02/2004	Squeeze out	1%	35%	-	35%	35%	33%	2%	4%	-
04/05/2004	Squeeze out	1%	3%	-	4%	4%	-	26%	25%	-
17/05/2004	Squeeze out	2%	1%	-	0%	2%	12%	11%	-	-
28/05/2004	Squeeze out	8%	5%	-	0%	0%	3%	-	-	25%
01/06/2004	Squeeze out	-	0%	-	0%	4%	-12%	6%	72%	-
04/06/2004	Squeeze out	5%	13%	-	14%	15%	16%	10%	10%	-
29/06/2004	Squeeze out	17%	21%	23%	26%	33%	43%	-	-	-
11/07/2004	Squeeze out	65%	52%		36%	32%	32%	-	-	-
14/07/2004	Squeeze out	18%	19%	-	-	38%	61%	23%	4%	55%
10/07/2002	Squeeze out	21%	25%	-	34%	46%	35%	-	-	-