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Mass Media, Spin-Offs and Investor Behaviour: Role of *The Wall Street Journal*



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Abstract

This study investigates the impact that the dissemination, the semantic aspects of the news published between 2000 and 2013 in *The Wall Street Journal (WSJ)* and the attention level of investors produce on stock prices of companies involved in spin-off deals.

The results of the empirical analysis developed through an event study on a sample of 179 listed companies demonstrate that: *i*) prominent newspapers can influence stock trends without even providing any new information; *ii*) publication of rumours is found to generate a supplementary-return in the symmetrical windows; *iii*) companies implementing spin-off operations and experimenting high investor attention levels demonstrate substantial first-day returns and under-performance of stocks in the long-term; *iv*) when it comes to the semantic aspect of the news, CAAR proves to be amplified around the announcement date when the press «speaks positively» of the operation.

Keywords: Spin-off; Mass Media; Investor Behaviour; Restructuring; Event Study.

JEL Codes: G14; G34.

1 Introduction

In incomplete financial markets, the dissemination of new information relating to listed and non-listed companies (including news) has an impact on stock prices.

Several studies have highlighted the fact that spin-off announcements produce positive abnormal returns (Chemmanur and Liu, 2011; Veld and Veld-Merkoulova, 2009; Chemmanur and Yan, 2004; Veld and Veld-Merkoulova, 2004; Desai and Jain, 1999; Daley *et al.*, 1997; Cusatis *et al.*, 1993; Rosenfeld, 1984; Miles and Rosenfeld, 1983; Hite and Owers, 1983) that are further amplified in relation to: *i*) spin-off size; *ii*) improvement of industrial focus; *iii*) existence of information asymmetry; *iv*) regulatory and tax advantages; *v*) connection with M&A or takeover deals.

This study aims at investigating the effect exerted by the media on investor behaviour following a spin-off announcement, comparing it with the effect created by rumours published by *The Wall Street Journal*.

I chose to examine the media variable since it is fundamental in the production and circulation of news in financial markets. To this purpose I analyzed the impact that the

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dissemination, the semantic aspect of news published between 2000 and 2013 in *The Wall Street Journal* (*WSJ*), and investor attention levels produce on stock prices of companies involved in spin-off deals at the time of their announcement. The same analysis was subsequently carried out for spin-off deals, whose news was published in the *WSJ* before the announcement date (rumours): in this case, analysis was conducted on the date of news publication in the *WSJ* in order to verify whether the announcement effect had already been registered by the market – given the news «leak» about the same spin-off deal.

In order to quantify media influence, I decided to analyze *The Wall Street Journal* as it ranks as the first financial daily newspaper for number of copies sold (according to Editor&Publisher) and to deal with spin-off news in particular, given the growing recent use of this disinvestment deal due to the current financial crisis. Since they enhance the industrial focus and release the hidden economic value of very diversified firms, spin-off deals are back in fashion and are the subject of growing media coverage.

This paper intends to make three major contributions. Firstly, the analysis accounts for the possibility that investor behaviour is influenced both by the contents and tone of press news. Secondly, in order to provide stability, reproducibility and accuracy in measuring contents and tone for a large number of news items, I have applied text analysis techniques. Finally, the paper considers spin-off deals and their interaction with the media role in spreading spin-off news, whereas previous studies assessing stock reaction to announcements focused on different variables, as spin-off scope and spin-off operation purposes.

The present paper is structured as follows:

Section 2 reviews literature on the effect of spin-off announcements on investor behaviour (2.1) and the role of media in the process of news dissemination (2.2). Section 3 outlines the methodology: Section 3.1 describes text analysis methodology; section 3.2 analyses the investor attention index; finally, Section 3.3 illustrates event study methodology adopted in measuring stock reaction to spin-off news. Section 4 describes the sample. Section 5 presents the results. Section 6 draws the conclusions.

2 Literature Review

2.1 Spin-Offs and Abnormal Return

The topic of corporate restructuring (intended as a set of activities aimed at ownership reorganization, operations turnaround and disinvestment deals) is an issue that has once again become topical, particularly in the specialized media, as a result of the difficulties endured by companies during the recent financial slump. Spin-offs fall into the category of disinvestment deals. Specifically, a spin-off occurs when a part or all of a company's assets (called parent company) is spun off into a separate and independent company whose shares are distributed to existing shareholders, often without any tax implications for the parent company. The distinguishing feature of a spin-off compared to other restructuring deals is the absence of cash flow for both the parent company and for the spin-off.

In perfect and complete markets, spin-off announcements should not change the company's value except when investors expect benefits in terms of future cash flows aris-

ing from the elimination of negative synergies through the spin-off deal. However, even when benefits are not expected, a spin-off deal can lead to an increase in firm value due to incomplete markets (Hakansson, 1982).

Several studies have concurred that spin-off announcements generate positive abnormal returns (Chemmanur and Liu, 2010; Veld and Veld-Merkoulova, 2009; Chemmanur and Yan, 2004; Veld and Veld-Merkoulova, 2004; Krishnaswami and Subramaniam, 1999; Desai and Jain, 1999; Daley *et al.*, 1997; Cusatis *et al.*, 1993; Rosenfeld, 1984; Miles and Rosenfeld, 1983; Hite and Owers, 1983). Moreover, some scholars have observed higher positive abnormal returns at the time of the spin-off announcement when:

- the spin-off is of large scope (Veld and Veld-Merkoulova, 2009; Chemmanur and Yan, 2004; Miles and Rosenfeld, 1983; Hite and Owers, 1983);
- the spin-off is industrial focus-increasing because it allows the hidden economic value of very diversified firms (Veld and Veld-Merkoulova, 2009; Veld and Veld-Merkoulova, 2006; Chemmanur and Yan, 2004; Krishnaswami and Subramaniam, 1999; Desai and Jain, 1999; Daley *et al.*, 1997);
- there is a strong information asymmetry between parent company management and outside investors because of existing moral hazard problems (Chemmanur and Liu, 2010; Veld and Veld-Merkoulova, 2006; Krishnaswami and Subramaniam, 1999; Habib *et al.*, 1997);
- the spin-off deal is made to benefit from regulatory or fiscal advantages or as a deal not subjected to taxation (Veld and Veld-Merkoulova, 2009; Krishnaswami and Subramaniam, 1999; Desai and Jain, 1999);
- the spin-off deal is made to ease a M&A operation or a takeover deal (Chemmanur *et al.*, 2010; Chemmanur and Yan, 2004; Cusatis *et al.*, 1993; Hite and Owers, 1983).

Another field of research on this topic analyzes the behavioural, psychological and emotional reasons in corporate finance operations, as spin-off deals (Fairchild, 2014; Shefrin, 2002; Desai and Jain, 1999; Cusatis *et al.*, 1993). Behavioural (Shefrin, 2002) and emotional corporate finance (Fairchild, 2014) consider the effect of investor and manager emotions respectively, on investment and corporate finance decision-making. Particularly in relation to corporate restructuring operations (*i.e.* spin-off operations), authors demonstrate that deal announcements have a very positive impact on stock prices for a moral hazard problem.

2.2 Media and Investor Behaviour

Spin-offs as a form of disinvestment operations have become increasingly common in recent years because of the financial crises since they enhance industrial focus and release the hidden economic value of diversified firms; also due to the widespread belief that their announcement may generate positive abnormal returns. This has also produced an intense debate in the media, to the point that one can suppose that media may influence abnormal returns following a spin-off announcement: news concerning spin-offs – for instance regarding M&A operations, as well as other corporate reorganization operations or, more generally, corporate news – can play a significant role in the investment selection process by influencing investor behaviour.

Should information assume such a pivotal function when it comes to the efficiency of financial markets, the media is thus fundamental as far as news production and distribution is concerned.

The way information is communicated affects individual behaviour, as shown by several cognitive studies (Baumeister *et al.*, 2001; Rozin and Royzman, 2001; Shoemaker and Reese, 1996; Gibson and Zillmann, 1994; Reeve, 1992; Brief and Motowidlo, 1986). Some of these works (Baumeister *et al.*, 2001; Rozin and Royzman, 2001; Fiske and Taylor, 1991; Brief and Motowidlo, 1986) analyse how people's perceptions change according to news content: negative news has a bigger impact on an individual perception compared to positive ones, despite equal emphasis in the news release. Therefore, news and media influence people's behaviour, and that of investors in particular: when making a choice, they act according to news contents and the way in which information is delivered, thus modifying stock price trends on the financial market. Deephouse (2000) observes that mass-media can fulfil two different – often not conflicting – functions in the financial markets. First, media acts as an *information broker* by simply spreading information *passively*; second, it represents an *active participant*, whose comments allow players operating in the market to better assess their investment choices. These two different media functions are often complementary. However – according to paradigms of behavioural and emotional finance that consider the decision-making process of real-world investors and traders as based upon bounded rationality, satisfaction and emotions (Fairchild, 2014) – the second function often dominates in the financial markets. For this reason, in this study I consider the media as an active participant in financial news disclosure.

The media can affect investor behaviour to a different extent, depending on whether it manages to capture their attention (Pollock *et al.*, 2008; Barber and Odean, 2008; Shiller, 2005; Hong *et al.*, 2004; Barber and Odean, 2003) by advertising certain stocks more than others (Lehavy and Sloan, 2008; Huberman, 2001; Kang and Stulz, 1997): in theory, a shock in investor attention levels may influence trends in financial markets. Several empirical studies focus on this relationship (Chemmanur and Yan, 2011; Gao and Oler, 2011; Da *et al.*, 2011; DellaVigna and Pollet, 2009; Barber and Odean 2008; Cohen and Frazzini, 2008; Peng *et al.*, 2007; Fehle *et al.*, 2005; Huberman and Regev, 2001). Chemmanur and Yan (2011) assert that a rise in the level of attention in investors can cause a temporary increase in stock returns, while it can simultaneously decrease future profits, both in the short and in the long term. Gon and Oler (2011) compare the returns of companies for which takeover operations are anticipated by rumours with those where they are not. The authors observe that when acquisition operations are preceded by rumours, these are ensued by significant reactions both in returns and trading volumes.

Within the event study methodology, Johnson *et al.* (2005) analysed the impact created by the publication of administrative committee ratings in the *Business Week* magazine. Research confirmed their initial hypothesis: the publication of governance news (positive or negative) has an even greater impact compared to the governance information publicly released by the companies on their abnormal stock returns.

Huberman and Regev (2001) compare the impact of the news published in *The New York Times* to the effect produced by the same news – published over the previous five-

month period – in *Nature* magazine and in several other popular newspapers – including *The Times*. Results show how daily newspapers can influence stock prices, even without distributing new information, hence confirming the crucial role they play on investor attention: indeed, despite being first-hand news, the impact of the news regarding company returns published in *Nature* magazine is much less significant when compared to the reaction triggered by the news published in *The New York Times*.

In this perspective, the first two research hypotheses are:

H1: the circulation of spin-off news in The Wall Street Journal increases the effect that spin-off announcements have on the investor behaviour, reflected in stock price variations.

H2: When spin-off news publication in the WSJ is previous to spin-off announcements (rumours), then the announcement effect on investor behaviour is lower than that of spin-off news publications in the WSJ.

Furthermore, the media may have an impact on financial markets inasmuch as they are able to capture the attention of investors, making information available and finally fostering interaction among investors, increasing chances of their investment in the stock market (Hong *et al.*, 2004). Barber and Odean (2003) maintain that, given the difficulty in seeking stocks to purchase, people tend to opt for those stocks capable of grasping their attention. In a study undertaken in 2008, the same authors empirically describe the effects deriving from the capacity that a piece of news has to attract investor attention, influencing their buying decision processes. After observing the behaviour of approximately 10,000 individual investors and 43 institutional investors over a 5-year span, Barber and Odean (2008) observe how individual investors, who appear to be generally less informed, tend to become net buyers of stocks during «the days of great attention», that is, the days in which: *i*) the underlying company is quoted in newspapers; *ii*) trading volume is higher than usual; *iii*) the previous day is characterized by a high daily return. Conversely institutional investors, who are more informed, tend to act as net sellers on these very same days. Following this line of research, Pollock *et al.* (2008) have examined how the media and investors allocate their attention and how they consider public businesses involved in an initial public offering on the day subsequent to the operation. As a result, growing attention towards the enterprise involved in IPO influences financial market trends.

Da *et al.* (2011) find that within companies involved in IPO operations, stock returns are strongly influenced by investor attention, measured as a proxy of number of Google research.

Based on these studies, the third research hypothesis is:

H3: the spin-off announcement effect on stock prices appears to increase for those deals with high investor attention levels, during the week of the announcement.

The methods of news disclosure, if considered in its semantic meaning (that is, the positive or negative connotation of news contents, and the strong or weak tone used), influence investor behaviour (Carretta *et al.*, 2011; Dell'Acqua *et al.*, 2010; Niehaus and Zhang, 2009; Tetlock *et al.*, 2008; Tetlock, 2007; Doukas *et al.*, 2005). The study of Carretta *et al.* (2011) is of particular relevance as far as the impact of news semantics on markets are concerned. For that which regards the Italian market, a relationship was discovered between investor behaviour, the tone used (strong or weak) and the content (positive or negative) of corporate governance news published by *Il Sole 24 Ore*, the

Italian specialised press. In order to examine the positive or negative value of news and its tone, authors used text analysis methods. They then constructed an event study to evaluate the impact of such news on stock prices. The analysis asserted that the tone used upon news release has a positive influence on cumulative abnormal returns in fruitful enterprises: this assumption lies in the idea that investors, influenced by the tone used in news concerning successful companies, tend to buy their stocks. The same study also observed how certain themes have a greater impact on stock returns of the companies involved than others.

Tetlok *et al.* (2008) and Tetlock (2007) identified a connection between news related to certain companies published in *The Wall Street Journal* and the subsequent trend in stock quotations. More specifically, these studies identified a statistically significant relationship between the value of the news concerning single companies and trading volume, returns and price volatility of their stocks. In addition Tetlock (2007) observed that the media pessimism level, when unusually high or low, forecasts high market trading volumes. According to Tetlock *et al.* (2008), the percentage of negative connotations in the news regarding a certain company announces a variation in its profitability index. Rindova *et al.* (2006) show how the media's role is crucial in constructing and consolidating firm celebrity, depending on the quantity of news surrounding a certain company and the positive or negative tones employed in the news. These aspects concerning the relation between how news disclosure influences investor behaviour (Liu *et al.*, 2016; Redhead, 2008; Nofsinger, 2005; Hong *et al.*, 2002) are also part of a new field of research: namely emotional finance (Fairchild, 2014) that analyzes the effects of emotions on investor decision-making.

Liu *et al.* (2016) analyzed all 886,000 trading decisions and 1,234,822 instant messages of 30 professional day traders from December 2007 to December 2008. Linguistically inferring the emotional states of traders from instant messages, they find that emotions expressed in online communications reflect the same distribution of emotions found in controlled experiments conducted on traders. Furthermore, the authors observed that expressed online emotions predict the profitability of actual trading behaviour. Relative to their baselines, traders who expressed little emotion or traders who expressed high levels of emotion made relatively unprofitable trades. Conversely, traders expressing moderate levels of emotional activity made relatively profitable trades.

Redhead (2008) considers the effect of economic, financial, psychological and sociological factors on the behaviour of financial markets, particularly in the hi-tech bubble and crash context of the late 1990s and early 2000s. Nofsinger (2005) notes that communication is an important facet of human interaction because it spreads information and also has the power of persuasion. Nofsinger refers to the herding model developed by Hong, Kubik and Stein (2002), which considers social and non-social investors. The authors find that social investors are more likely to participate in the stock market and to develop a social multiplier effect.

Taking this research field into account, the last hypothesis is:

H4: the semantic aspect of spin-off news, considered in terms of negative vs. positive content and of its tone (strong or weak), increases the effect of the announcement on investor behaviour.

3 Methods

This section describes the research methods used in the paper. First, the text analysis methodology used to examine the information content of spin-off news has been outlined. Second, the investor attention index has been estimated in order to verify whether investor attention levels had an abnormal trend during the spin-off announcement week and, finally, the event study employed to assess news impact on stock market returns is described.

3.1 Text Analysis

In order to allow the stability, reproducibility and accuracy of content and tone of communication measurements for a large number of spin-off news, I applied text analysis (Stone *et al.*, 1966) using the Harvard IV Psycho Social language dictionary and WordSmith 4 software (Scott, 2004).

All spin-off news analysed was extracted from the *Factiva* database, which was published in *The Wall Street Journal* between 2000 and 2013 and only refers to quoted societies (approximately 105, for a total of 94,383 words).

In determining the value of news contents (positive/negative) and tone (strong/weak), the scale of judgment proposed by Osgood *et al.* (1957) was adopted.

Content is defined as the degree to which the news has a positive or negative meaning. A value of 1 means that spin-off news has the highest positive content while a value of -1 means that it has the highest negative content.

In order to estimate news content, the formula adopted is the following:

$$(P - N)/W$$

where P and N are respectively the number of positive and negative words within the news, according to Harvard IV Psycho-Social dictionary classification; W stands for the overall amount of words contained in the document examined. The value thus obtained ranges between -1 (entirely negative news) and 1 (entirely positive news).

Tone is defined as the degree to which the news is expressed in a strong or weak manner. A value of 1 means that corporate governance news has the strongest tone of communication, whereas a value of -1 means that it has the weakest tone.

In order to assess the tone of communication, the following formula has been adopted:

$$(F - D)/W$$

where F and D are respectively the number of strong and weak words within the news, according to Harvard IV Psycho-Social dictionary classification; W stands for the overall amount of words contained in the document examined. The value thus obtained ranges between -1 (entirely weak news) and 1 (entirely strong news).

3.2 Investor Attention Index

In order to verify whether the level of investor attention proven to be abnormal during spin-off announcement (and rumours) week, the *ASVI* (*Abnormal Search Volume Index*) indicator proposed by Da *et al.* (2011) was employed. This measurement is based on the *SVI* (*Search Volume Index*) index, publicly available on Google Trends (<http://www.google.com/trends/>) to the companies selected for this analysis. According to Da *et al.* (2011), the argument behind the use of this instrument for attention level measurement is that when someone uses a search engine, they are likely to be paying attention to the subject of their research. Furthermore, the percentage of Internet users accessing Google on 31 December 2014 was equal to 73.07% (source: <http://www.alexa.com>).

Several studies support the efficiency of this instrument in predicting attention levels (Da *et al.*, 2011; Choi and Varian, 2009).

The weekly *SVI* index series has been downloaded for each company examined. In order to increase the accuracy of the analysis, it was decided to consider Google searches for selected companies through *tickers*, paying attention to the presence of potential *noisy tickers*. This decision was taken since identifying research frequency using the company name might pose problems for two reasons: to begin with, people may research the same company using several possible variations of its name. Finally, a «finance and financial services» filter was applied to the research category so as to download the historical series and the variation of research over time, expressed as a growth percentage compared to the first date on the graph (or compared to the first date in which data was made available).

According to the study of Da *et al.* (2011), the *ASVI* index is defined as:

$$ASVI_t = \log(SVI_t) - \log[\text{Median}(SVI_{t-1}, \dots, SVI_{t-8})]$$

Where:

$\log(SVI_t)$ represents the logarithm of the *SVI* index during week t ;

$\log[\text{Median}(SVI_{t-1}, \dots, SVI_{t-8})]$ represents the logarithm of the *SVI* index median during the preceding 8 weeks.

3.3 Event Study

An *event study* approach (Campbell *et al.*, 1997) is used to assess whether the stock returns of firms influenced by spin-off news demonstrate abnormal returns (*AR*) around the announcement and news dates (t). Similar to previous studies (Carretta *et al.*, 2011; Tetlock *et al.*, 2008; Tetlock, 2007; Antweiler and Frank, 2004), this paper postulates that a small number of investors personally observes business activities, while most investors collect second-hand information. With this in mind, my analysis examines whether abnormal returns occur at the time of news release inherent to the event in the *WSJ*, prior to the actual announcement issued by the company itself.

The first step is the estimation of *AR*, namely forecast errors of a specific normal return-generating mode. I estimated daily *AR* using market model regressions by applying OLS-

regression methodology for time series of one full trading year (252 trading days), previous to the most remote event window (Carretta *et al.*, 2011; Mentz and Shiereck, 2008).

$$AR_{j,t} = R_{j,t} - \hat{\alpha}_j - \hat{\beta}_j R_{M,t}$$

Where:

$R_{j,t}$ is the total return, corrected by the dividend of stock j on day t ; $R_{M,t}$ is the market index in the branch which the company belongs to on t day.

In order to verify statistical significance, I decided to follow the approach assumed during a few recent studies (Mentz and Schierek, 2008), suggesting the implementation of Boehmer's *et al.* test statistic (1991) that applies a correction factor to the standard deviation.

When it comes to determining the event window, I use a window previous to the date of the information disclosure [*i.e.* (-1; 0)], the date of information disclosure (announcement/rumour) [*i.e.* (0; 1)] and five ulterior windows [*i.e.* (0; 3), (0; 5), (0; 10), (0; 15) and (0; 20)]. The choice of considering the event window prior to information disclosure allows the determination of whether the information has produced an abnormal effect before the operation announcement, due to the market's ability in anticipating it.

Contemporarily, prediction of event windows following information disclosure provides the opportunity of assessing market reaction over the next stage. The presence of positive abnormal returns in the pre-disclosure stage would imply the presence of «informed» investors; negative abnormal returns in the post-disclosure stage could instead demonstrate the presence of market inefficiencies.

4 Sample

Spin-off deals relevant to our analysis are those surveyed by the *Zephyr – Bureau Van Dijk* database between 2000 and 2013. Only the deals made by listed parent companies, for which the date of the operation announcement (rumour) is unquestionably known, were selected. Such conditions are essential for assessing, through an event study methodology, the abnormal returns of stocks in the companies involved.

For each deal, the time series of parent company returns was extracted from the *Datastream* database. The series of total return prices was used, as it included capitalised dividends over that time; from this series, daily profits were identified using the logarithm for the relationship between the price on day t and the price on day $t - 1$. As far as benchmarks were concerned, sectorial indexes referred to those markets in which analysed companies were quoted: therefore, the results obtained will not concern one single stock market.

Total returns of the chosen benchmarks are extracted from the *Datastream* database. Daily returns were calculated for every index selected, as a logarithm of the relationship between price on day t and price on the day ($t - 1$); this return is used together with the daily stock variation (news subject matter) to estimate both the angular coefficient and the y-intercept of linear regression.

I decided to eliminate operations related to companies whose time series – necessary for an evaluation of the market model over a of 252-day time span – were unavailable; the final sample is made up of 179 companies, illustrated in Table 1.

Table 1: Sample distribution

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | Total |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Europe | 1 | | | 2 | 2 | 4 | 6 | 3 | 4 | 2 | 4 | 4 | | 1 | 33 |
| North America | 1 | 2 | 3 | 3 | 4 | 10 | 5 | 8 | 14 | 9 | 6 | 21 | 3 | 2 | 91 |
| Australia and New Zealand | | | | 2 | | | 2 | 2 | 1 | | 1 | 1 | | | 9 |
| India | | | | | 6 | 4 | 1 | | 4 | 5 | 2 | 2 | | | 24 |
| East Asia | | | | | 8 | 2 | 1 | 2 | 1 | | 3 | 5 | | | 22 |
| Total | 2 | 2 | 3 | 7 | 20 | 20 | 15 | 15 | 24 | 16 | 16 | 8 | 3 | 3 | 179 |

Source: Author's adjustment of *Zephyr* data.

Only a small number of operations took place between 2000 and 2003; they increased between 2004 and 2011, ultimately slowing down again over the past two years. This trend mirrors the impact of the economic crisis and confirms the fact that such operations are widely employed in an economic downturn. When it comes to the geographical connotation of the parent company, a certain preponderance of North American companies was noticed, followed by European, Indian and East Asian companies. Market reaction to the operation announcement, intended as a press release, was observed in relation to a few variables; doing so helped in understanding whether the news publication, its semantic aspect and investor attention levels contribute towards value creation or to value destruction for shareholders.

To begin with, the sample is divided into spin-off operations announced on *The Wall Street Journal* and operations that on the contrary were not mentioned. The sample turns out to be made up of 93 operations published in *The Wall Street Journal* and 86 operations that did not appear in the same newspaper. Spin-off operations disclosed by *The Wall Street Journal* appear to be roughly half of the overall sample size. This trend can be reasonably explained by the media's choice of publishing only spin-off announcements involving more relevant companies. As far as publication in *The Wall Street Journal* is concerned, according to existing literature, it is deemed necessary to observe the very moment in which the aforesaid takes place.

According to the date of publication, the following instances were identified:

i) 69 events in which the news was published on a date prior or on the announcement date (so-called rumours);

ii) 24 events in which the news appeared in *The Wall Street Journal* on the same date or on a date following the announcement date, but no later than a trading week afterwards.

As for the semantic aspect of the news analysed from the point-of-view of its positive/negative content and its strong/weak tone, and according to the measurements of sentiment employed, the following instances stand out:

i) 33 events in which the content – concerning the spin-off deal – was positive; 48 cases in which it was negative and 12 cases in which it was impossible to define the value of the news contents examined;

ii) 63 events in which the tone of the spin-off news was classified as strong, 22 events in which, conversely, the tone was identified as weak and 8 cases in which it was impossible to classify the communication tone of news.

According to the measurement of investor attention levels employed, a distinction can be made between 85 spin-off operations which recorded an abnormal level of Google searches during the announcement week, and another 94 operations in which this did not occur.

Finally, in order to verify whether, in the case of rumours about spin-off operations, the impact on the returns on the date of the announcement appeared less significant than the effect on the day of news disclosure, the empirical test was repeated on those 69 companies subject to rumour, taking the date of news publication in *The Wall Street Journal* as the event date.

5 Results

Table 3 shows the estimated *Cumulative Average Abnormal Returns* (CAARs) in different event windows, referring both to the whole sample and to spin-off operations published in *The Wall Street Journal*.

The results of the significance test (Z-stat) are also reported herein, together with the minimum and maximum value of calculated CAARs and with the percentage of companies experiencing abnormal positive returns.

The analysis was based upon event windows prior to and following the dates of the news announcement and the news disclosure, so to understand whether cumulative abnormal returns are a consequence of market reactions and/or its ability to anticipate news.

With regard to the whole sample (Table 2 – Panel A), for the greater part of the event windows examined, value creation for the shareholders of the involved companies has been highlighted; however, it is only statistically relevant in the event windows (-1.1), (-1.0) and (0.1), where average CAAR values correspond to 1.34%, 1.04% and 0.59%, respectively.

This result confirms the thesis by Veld and Veld-Merkoulova thesis (2004), according to which a spin-off announcement is received positively by the market, generating positive returns on average especially around the date of the announcement.

By observing spin-off operations published in *The Wall Street Journal*, positive CAARs are found in all the event windows examined, except for symmetrical windows (-20. 20) and (-15.15); however, they only just become statistically relevant in the event window (-1.1), (-1.0) and (0.1), with a confidence level of 95% in the first two and of 90% in the window (0.1), identifying values equal to 1.23%, 0.91% and 0.73%, respectively. News disclosure by the press enhances the effect generated by a spin-off announcement, thus confirming Huberman and Regev results (2001).

With reference to the results obtained at the time of coverage in *The Wall Street Journal* (Table 3), when the operation is subjected to rumours (Panel A), positive abnormal returns will be remarked on average in all of the symmetrical windows following announcement date, although they can be considered statistically relevant only in windows (-1.1), (-1.0) and (0.1). Similarly to what occurs when considering whether the news is published by *The Wall Street Journal* (Table 2 – Panel B), the effect produced by the spin-off announcement on the returns of the companies involved appears to be amplified when press discloses the news on a date prior to the announcement, confirming the first research hypothesis.

The same occurs for spin-off operations published in *The Wall Street Journal* within a week from their announcement (Table 3 – Panel B): considering the announcement date as the event date, in the event windows (-1.0) and (0.1) both average and significant cumulative positive returns are displayed.

Table 2: CAARs of whole sample (Panel A) and CAARs of spin-off deals with news publication on *WSJ* (Panel B) related to announcement date

| | CAAR (%) | Z-stat | CAR Min (%) | CAR Max (%) | % CAR Pos ^(b) |
|--|----------|--------------|-------------|-------------|--------------------------|
| Panel A – Whole Sample | | | | | |
| (-20.20) | -0.84% | -0517314 | -8338% | 123.63% | 51.14% |
| (-15.15) | -1.00% | -0.934293 | -77.70% | 104.49% | 48.30% |
| (-10.10) | -0.50% | -0.247096 | -75.01% | 48.77% | 51.14% |
| (-5.5) | 0.26% | 0.224916 | -75.17% | 52.56% | 57.39% |
| (-3.3) | 0.19% | 0.615521 | -74.93% | 34.71% | 52.27% |
| (-1.1) | 1.34% | 3.170220**** | -26.82% | 29.02% | 55.68% |
| (-1.0) | 1.04% | 3.038745*** | -20.17% | 29.50% | 57.39% |
| (0.20) | -0.14% | -0.170534 | -58.28% | 80.23% | 51.70% |
| (0.15) | -0.39% | -0.660276 | -50.34% | 71.48% | 48.30% |
| (0.10) | 0.13% | -0.147061 | -63.06% | 45.95% | 48.30% |
| (0.5) | -0.07% | -0.627445 | -27.97% | 29.43% | 51.70% |
| (0.3) | 0.09% | 0.065811 | -25.23% | 23.68% | 48.86% |
| (0.1) | 0.59% | 2.057647** | -21.22% | 18.28% | 53.41% |
| Panel B – Spin-off deals with news publication on <i>WSJ</i> | | | | | |
| (-20.20) | -0.56% | -0.319283 | -83.38% | 39.45% | 57.78% |
| (-15.15) | -1.21% | -0.900122 | -77.70% | 48.73% | 51.11% |
| (-10.10) | 0.27% | -0.008719 | -75.01% | 48.77% | 54.44% |
| (-5.5) | 0.39% | 0.118444 | -48.89% | 47.58% | 62.22% |
| (-3.3) | 1.02% | 0.991762 | -48.04% | 34.71% | 60.00% |
| (-1.1) | 1.23% | 2.404017** | -26.82% | 29.02% | 60.00% |
| (-1.0) | 0.91% | 2.537416** | -17.66% | 29.50% | 63.33% |
| (0.20) | 0.79% | 0.006232 | -58.28% | 80.23% | 56.67% |
| (0.15) | 0.39% | -0.294240 | -50.34% | 71.48% | 56.67% |
| (0.10) | 1.07% | 0.290697 | -63.06% | 45.95% | 55.56% |
| (0.5) | 0.37% | -0.284600 | -27.97% | 29.43% | 60.00% |
| (0.3) | 0.79% | 0.734088 | -13.57% | 23.68% | 60.00% |
| (0.1) | 0.73% | 1.763277* | -16.63% | 18.28% | 60.00% |

(a) The symbols *, **, and *** represent significance levels of 10%, 5% and 1% respectively.

(b) Percentage of companies with a positive CAR in the sample.

Top and leading newspapers can influence stock trends without even providing any new information. News publication of a spin-off operation, despite not being first-hand as it follows the operation announcement, still contributes towards value creation for shareholders.

In order to verify the second research hypothesis, Table 4 (Panel A) shows the estimated CAARs for spin-off operations published in *The Wall Street Journal* on a date prior to the operation announcement, considering the date of the news publication is the event date. As displayed in the event window (-1.0), a statistically significant positive CAAR – can be observed, with a confidence level of 95%: it thus seems that investors anticipated rumours spreading through the press, highlighting the presence of informed investors on the market. These results might also reveal the occurrence of insider trading activity. Although this is a plausible hypothesis, it seems unlikely. Insider trading usually occurs in secret circumstances (for instance, when negotiating small quantities repeatedly over time) in order to avoid abnormal variations on stock returns that would expose the event to the market before its official announcement, at the same time revealing unlawful activities to the authorities.

In the event windows following rumour publication date, shareholders of those companies involved in spin-off operations are subjected to value destruction. This result implies that, after initial positive reactions (which anticipated the spreading of the news) on the part of investors, shareholders react negatively to the publication of rumours in

Table 3: CAARs of spin-off deals related to news publication date on *WSJ* with announcement date as event date

| | CAAR (%) | Z-stat | CAR Min (%) | CAR Max (%) | % CAR Pos ^(b) |
|--|----------|------------|-------------|-------------|--------------------------|
| Panel A – Spin-off deals with <i>rumours</i> on <i>WSJ</i> | | | | | |
| (-20.20) | -0.21% | -0.216495 | -83.38% | 39.45% | 56.06% |
| (-15.15) | -0.73% | -0.912586 | -66.90% | 48.73% | 46.97% |
| (-10.10) | 0.93% | 0.326834 | -27.92% | 48.77% | 51.52% |
| (-5.5) | 0.75% | 0.212694 | -20.03% | 47.58% | 59.09% |
| (-3.3) | 0.95% | 0.629496 | -13.86% | 34.71% | 57.58% |
| (-1.1) | 1.18% | 2.149921** | -7.81% | 24.29% | 57.58% |
| (-1.0) | 0.54% | 1.851769* | -11.42% | 7.90% | 60.61% |
| (0.20) | 2.26% | 0.626446 | -58.28% | 80.23% | 57.58% |
| (0.15) | 1.86% | 0.421834 | -50.34% | 71.48% | 56.06% |
| (0.10) | 2.57% | 1.506197 | -15.02% | 45.95% | 56.06% |
| (0.5) | 1.17% | 0.342627 | -15.21% | 29.43% | 63.64% |
| (0.3) | 1.21% | 0.904865 | -10.83% | 23.68% | 62.12% |
| (0.1) | 0.94% | 1.649544* | -9.41% | 18.28% | 57.58% |
| Panel B – Spin-off with simultaneous publication on <i>WSJ</i> or following the announcement | | | | | |
| (-20.20) | -4.39% | -1227830 | -42.45% | 6.59% | 50.00% |
| (-15.15) | -4.92% | -1.198316 | -53.08% | 8.75% | 42.86% |
| (-10.10) | -0.87% | -0.370524 | -4.25% | 4.18% | 50.00% |
| (-5.5) | -0.35% | -0.250807 | -4.97% | 6.26% | 50.00% |
| (-3.3) | 1.03% | 1.014460 | -2.39% | 5.91% | 57.14% |
| (-1.1) | 1.33% | 1.619305 | -3.12% | 7.18% | 71.43% |
| (-1.0) | 1.86% | 1.965200** | -2.87% | 7.49% | 71.43% |
| (0.20) | -3.04% | -0.961689 | -41.39% | 9.21% | 42.86% |
| (0.15) | -3.93% | -1.230286 | -49.11% | 6.84% | 50.00% |
| (0.10) | -0.47% | -0.712853 | -7.53% | 5.71% | 50.00% |
| (0.5) | 0.19% | -0.255134 | -3.29% | 7.37% | 64.29% |
| (0.3) | 1.05% | 0.894953 | -2.70% | 5.37% | 78.57% |
| (0.1) | 1.45% | 1.943875* | -2.88% | 6.76% | 78.57% |

(a) The symbols *, **, and *** represent significance levels of 10%, 5% and 1% respectively.

(b) Percentage of companies with a positive CAR in the sample.

The Wall Street Journal as they judge it less reliable than the official announcement of the operation. Such reaction is confirmed for CAARs also found in slot (-1.0): investors have significant reactions to the publication of rumours in *The Wall Street Journal*.

Comparison between cumulative average abnormal returns, announcement date of the spin-off deal and publication of rumours in *The Wall Street Journal* (Table 4 – Panel B) also demonstrate that, in symmetrical event windows with the exception of event window (-1.1), the spreading of rumours generates a supplementary-return. The average CAR displayed in window (-1.0) confirms such reaction: investors respond in a significant manner to rumours publication in *The Wall Street Journal*. Instead, the announcement creating value for shareholders is found in the following windows. Investors in the stages following information coverage seem to be more confident in the announcement, rather than in the publication of rumours. This being an official statement, they feel «reassured» about the fulfilment of the operation. Spin-off deal news produces an impact on investor behaviour not only when the rumour is published in *The Wall Street Journal*, but also when the operation itself is announced: yet, the reaction is more visible at the time of rumours publication, as higher CAAR is achieved compared to the time of the announcement.

The effect triggered by the publication of the news in *The Wall Street Journal* on a date prior to the spin-off announcement is not entirely extinguished: at the time of

Table 4: CAARs of spin-off deals related to rumours date (PANEL A) vs. CAARs of spin-off deals related to announcement date (PANEL B)

| | PANEL A: Rumours Date | | | | | PANEL B: Announcement Date | | | | |
|----------|-----------------------|------------|-------------|-------------|--------------------------|----------------------------|------------|-------------|-------------|--------------------------|
| | CAAR (%) | Z-stat | CAR Min (%) | CAR Max (%) | % CAR Pos ^(b) | CAAR (%) | Z-stat | CAR Min (%) | CAR Max (%) | % CAR Pos ^(b) |
| (-20.20) | 0.30% | -0.067177 | 0.946441 | -77.82% | 61.24% | -0.21% | -0.216495 | -83.38% | 39.45% | 56.06% |
| (-15.15) | 0.48% | -0.060743 | 0.951564 | -61.97% | 46.54% | -0.73% | -0.912586 | -66.90% | 48.73% | 46.97% |
| (-10.10) | 0.76% | 0.153647 | 0.877888 | -73.51% | 48.29% | 0.93% | 0.326834 | -27.92% | 48.77% | 51.52% |
| (-5.5) | 1.26% | 0.586012 | 0.557868 | -59.32% | 56.33% | 0.75% | 0.212694 | -20.03% | 47.58% | 59.09% |
| (-3.3) | 0.68% | 0.342817 | 0.731736 | -55.30% | 60.60% | 0.95% | 0.629496 | -13.86% | 34.71% | 57.58% |
| (-1.1) | 0.71% | 1.024306 | 0.305691 | -42.81% | 33.81% | 1.18% | 2.149921** | -7.81% | 24.29% | 57.58% |
| (-1.0) | 1.75% | 2.193321** | 0.028284 | -21.84% | 30.72% | 0.54% | 1.851769* | -11.42% | 7.90% | 60.61% |
| (0.20) | -3.49% | -2.05457** | 0.039920 | -74.38% | 19.41% | 2.26% | 0.626446 | -58.28% | 80.23% | 57.58% |
| (0.15) | -2.74% | -1.735353* | 0.082678 | -59.54% | 21.31% | 1.86% | 0.421834 | -50.34% | 71.48% | 56.06% |
| (0.10) | -2.17% | -1.656223* | 0.097677 | -61.22% | 17.62% | 2.57% | 1.506197 | -15.02% | 45.95% | 56.06% |
| (0.5) | -1.67% | -1.647443* | 0.099467 | -50.03% | 19.87% | 1.17% | 0.342627 | -15.21% | 29.43% | 63.64% |
| (0.3) | -1.58% | -1.392877 | 0.163657 | -51.34% | 20.30% | 1.21% | 0.904865 | -10.83% | 23.68% | 62.12% |
| (0.1) | -1.21% | -1.250726 | 0.211034 | -43.49% | 19.04% | 0.94% | 1.649544* | -9.41% | 18.28% | 57.58% |

(a) The symbols *, **, and *** represent significance levels of 10%, 5% and 1% respectively.

(b) Percentage of companies with a positive CAR in the sample.

Table 5: CAARs of spin-off deals related to Abnormal Search Volume Index in the week of the announcement

| | CAAR (%) | Z-stat | CAR Min (%) | CAR Max (%) | % CAR Pos ^(b) |
|----------|----------|------------|-------------|-------------|--------------------------|
| (-20.20) | -4.50% | -1.342951 | -83.38% | 39.45% | 51.22% |
| (-15.15) | -3.97% | -1.251138 | -77.70% | 48.73% | 45.12% |
| (-10.10) | -2.41% | -0.762543 | -63.90% | 48.77% | 46.34% |
| (-5.5) | 0.56% | 1.751769* | -48.89% | 47.58% | 53.66% |
| (-3.3) | -0.65% | -0.487374 | -48.04% | 34.71% | 45.12% |
| (-1.1) | 1.19% | 2.249711** | -26.82% | 24.29% | 51.22% |
| (-1.0) | 0.13% | 0.981161 | -20.17% | 13.34% | 50.00% |
| (0.20) | -1.39% | -0.589623 | -58.28% | 44.84% | 50.00% |
| (0.15) | -1.46% | -0.506369 | -50.34% | 43.94% | 47.56% |
| (0.10) | -0.51% | 0.101238 | -29.84% | 38.24% | 45.12% |
| (0.5) | -0.75% | -0.652137 | -25.69% | 29.43% | 45.12% |
| (0.3) | -0.30% | -0.195737 | -25.23% | 23.68% | 45.12% |
| (0.1) | 0.33% | 1.285511 | -21.22% | 18.28% | 50.00% |

(a) The symbols *, **, and *** represent significance levels of 10%, 5% and 1% respectively.

(b) Percentage of companies with a positive CAR in the sample.

the announcement, a positive abnormal cumulative return is indeed usually observed, although a less significant one.

Some investors do not seem to be affected by the publication of news in *The Wall Street Journal* as they are more confident in the announcement of the spin-off operation.

CAARs are also examined, in relation to unusually high levels of investor attention during the spin-off announcement week.

Event windows (-5.5) and (-1.1) demonstrate positive and significant reactions: investor attention levels affect stock returns of the companies involved in spin-off deals, in the week and especially on the day of the announcement.

Similarly to the IPO case, companies implementing spin-off operations and experimenting high investor attention levels demonstrate large first-day returns and long-run stock under-performance, confirming the third research hypothesis (Table 5).

Table 6: CAARs of spin-off deals related to semantic variables

| | CAAR (%) | Z-stat | CAR Min (%) | CAR Max (%) | % CAR Pos ^(b) |
|---|----------|------------------------|-------------|-------------|--------------------------|
| Panel A – Spin off deals with <i>positive</i> content | | | | | |
| (-20.20) | -2.38% | -0.703332 | -62.96% | 20.51% | 60.00% |
| (-15.15) | -2.66% | -1.076720 | -58.08% | 14.40% | 53.33% |
| (-10.10) | -2.53% | -0.840253 | -75.01% | 13.19% | 56.67% |
| (-5.5) | 0.89% | 0.482255 | -39.11% | 10.32% | 76.67% |
| (-3.3) | 1.51% | 1.695908 [*] | -8.26% | 11.12% | 63.33% |
| (-1.1) | 1.05% | 1.847926 [*] | -7.81% | 7.89% | 56.67% |
| (-1.0) | 0.87% | 1.485141 | -8.33% | 7.90% | 63.33% |
| (0.20) | -1.13% | -0.724979 | -46.13% | 11.84% | 53.33% |
| (0.15) | -1.20% | -0.979532 | -39.43% | 10.71% | 56.67% |
| (0.10) | -1.36% | -0.681214 | -63.06% | 11.46% | 63.33% |
| (0.5) | 0.38% | -0.044623 | -27.97% | 10.18% | 73.33% |
| (0.3) | 1.19% | 1.097750 | -5.50% | 10.69% | 66.67% |
| (0.1) | 0.81% | 1.578762 | -4.80% | 6.76% | 60.00% |
| Panel B – Spin off deals with <i>negative</i> content | | | | | |
| (-20.20) | 0.19% | 0.047697 | -83.38% | 39.45% | 54.17% |
| (-15.15) | -0.53% | -0.405499 | -66.90% | 48.73% | 43.75% |
| (-10.10) | 1.81% | 0.772991 | -27.92% | 48.77% | 47.92% |
| (-5.5) | 1.08% | 0.108822 | -20.03% | 47.58% | 52.08% |
| (-3.3) | 1.13% | 0.498692 | -12.35% | 34.71% | 52.08% |
| (-1.1) | 1.50% | 1.654974 [*] | -6.14% | 29.02% | 56.25% |
| (-1.0) | 1.34% | 2.071552 ^{**} | -11.42% | 29.50% | 60.42% |
| (0.20) | 1.26% | 0.262986 | -58.28% | 80.23% | 56.25% |
| (0.15) | 0.37% | -0.079106 | -50.34% | 71.48% | 54.17% |
| (0.10) | 1.96% | 1.010741 | -15.02% | 45.95% | 50.00% |
| (0.5) | 0.38% | -0.315286 | -15.21% | 29.43% | 52.08% |
| (0.3) | 0.37% | 0.104530 | -8.11% | 23.68% | 54.17% |
| (0.1) | 0.54% | 0.922857 | -9.41% | 18.28% | 56.25% |
| Panel C – Spin off deals with <i>strong</i> tone | | | | | |
| (-20.20) | -2.05% | -0.946803 | -83.38% | 39.45% | 58.06% |
| (-15.15) | -2.22% | -1.066975 | -77.70% | 48.73% | 54.84% |
| (-10.10) | -1.28% | -0.600333 | -75.01% | 48.77% | 53.23% |
| (-5.5) | 0.07% | -0.345219 | -48.89% | 47.58% | 62.90% |
| (-3.3) | 0.52% | 0.256656 | -48.04% | 34.71% | 58.06% |
| (-1.1) | 1.24% | 1.751074 [*] | -26.82% | 29.02% | 59.68% |
| (-1.0) | 0.85% | 1.828751 [*] | -17.66% | 29.50% | 59.68% |
| (0.20) | -0.28% | -0.764178 | -58.28% | 80.23% | 58.06% |
| (0.15) | -0.42% | -0.676173 | -50.34% | 71.48% | 56.45% |
| (0.10) | -0.25% | -0.562917 | -63.06% | 38.24% | 50.00% |
| (0.5) | -0.07% | -0.810502 | -27.97% | 29.43% | 56.45% |
| (0.3) | 0.55% | 0.273319 | -13.57% | 23.68% | 56.45% |
| (0.1) | 0.70% | 1.437303 | -16.63% | 18.28% | 59.68% |
| Panel D – Spin off deals with <i>weak</i> tone | | | | | |
| (-20.20) | 4.00% | 1.560605 | -9.84% | 27.93% | 57.89% |
| (-15.15) | 1.86% | 0.784514 | -7.68% | 22.78% | 47.37% |
| (-10.10) | 4.06% | 1.091387 | -8.47% | 30.66% | 52.63% |
| (-5.5) | 2.42% | 1.182641 | -20.03% | 21.02% | 68.42% |
| (-3.3) | 2.55% | 1.150579 | -6.89% | 22.16% | 57.89% |
| (-1.1) | 1.09% | 1.102524 | -6.14% | 8.15% | 57.89% |
| (-1.0) | 1.23% | 1.541175 | -2.87% | 6.76% | 68.42% |
| (0.20) | 4.09% | 1.758887 [*] | -10.24% | 29.06% | 63.16% |
| (0.15) | 2.59% | 1.571363 | -5.73% | 17.06% | 63.16% |
| (0.10) | 4.66% | 2.134155 ^{**} | -5.08% | 45.95% | 73.68% |
| (0.5) | 1.78% | 1.623600 | -11.11% | 10.13% | 78.95% |
| (0.3) | 1.28% | 0.888228 | -6.84% | 13.56% | 73.68% |
| (0.1) | 0.42% | 0.244089 | -9.41% | 6.76% | 57.89% |

(a) The symbols *, **, and *** represent significance levels of 10%, 5% and 1% respectively.

(b) Percentage of companies with a positive CAR in the sample.

Finally CAARs are observed in relation to the positive *vs.* negative content of the news and to the presentation tone adopted in its circulation (Table 6). With regard to the positive news contents (Table 6 – Panel A), positive and statistically relevant cumulative abnormal returns are detected in day 7 and day 3 event windows: when the *WSJ* reports the news of the spin-off operation in a positive way, the impact on stock return for the societies affected by the announcement appears to be greater. In the case of negative news concerning the spin-off (Table 6 – Panel B), positive CAAR is detected in all of the time slots examined, although only statistically significant in the event window (-1.1) and (-1.0). Contrary to expectations, this result is proof that negative news can generally also have a positive impact on the performance of companies involved in spin-off operations: the positive impact seems to prevail in spite of the negative sensations expressed by the media. Similarly, when considering results relative to the communication tone used in the news disclosure, investors react around the date of the spin-off announcement in the case of «vehemently» diffused news (Table 6 – Panel C): indeed, time slots displaying positive CAARs (statistically relevant) are the three-day span following the announcement date and the slot related to the event window. On the contrary, when the news possesses a weak communication tone (Table 6 – Panel D), statistically significant positive average abnormal cumulative returns can be noticed in event windows (0.20) and (0.10): in the cases where less emphasis is placed on spin-off news, the impact on company performance will only appear in the stage immediately following the operation announcement.

This result implies that investor reactions are delayed for the news showing a weak communication tone, so that positive and significant CAARs are registered only in a later stage – namely subsequent to the announcement of spin-off operations.

6 Conclusion

The media plays a relevant role in the process of news disclosure and circulation within financial markets. The semantics, the level of investor attention and the moment in which the news is disclosed may contribute towards shaping investor expectations on the returns of the subjects operating on the market, thereby improving the informational efficiency of the market.

Over the past few years, media coverage has paid special attention to corporate restructuring operations, mainly to spin-off operations, which are back in fashion due to the financial crisis.

This study aimed at assessing whether the effect on company performance triggered by the announcement of spin-off operations can be amplified by the circulation of spin-off news in the following ways: *i*) within the specialized press; *ii*) by the semantic aspect of the news analyzed in terms of positive *vs.* negative content and communication tone (strong *vs.* weak tone); *iii*) by the abnormal attention level of investors.

Using the *Zephyr – Bureau Van Dijk* database, 179 spin-off operations were selected. All of these were conducted between 2000 and 2013 by listed parent companies and the dates of the announcement are unquestionably known. Amongst these operations, 93 were published in *The Wall Street Journal*: the news was obtained from the *Factiva*

database; text analysis methodology defined the positive or negative value of the contents and the expressive tone used.

The results of the analysis carried out as an event study (with observation of abnormal returns on different event windows) demonstrate how the announcement of spin-off operations, when considering the entire sample, generally trigger value creation for the investors of the companies involved, confirming the evidence presented by existing literature according to which announcements of spin-off operations are received in a positive manner by the market, producing positive returns on average, especially around the announcement date, and then return to normal values in the days following the announcement.

The announcement itself has the capability of releasing the economic value hidden within the parent company. Such results prove to be even more evident when related to market reactions in relation to spin-off operations reported in *The Wall Street Journal*: investors seem to appraise stocks coming from companies implementing spin-off operations reported by the press, thus amplifying the effect of the announcement on returns, quite significantly on the day following the announcement itself. As far as publication in *The Wall Street Journal* is concerned, and according to literature examined, it is necessary to identify the moment in which publication takes place. Similarly to what happens when taking into consideration whether the news was published or not in *The Wall Street Journal*, the effect triggered by the announcement of spin-off operations on the returns of the companies involved appears to be amplified when the news is disclosed by the press on a date prior to the announcement. Similarly to takeover deals, the returns of the companies undertaking spin-off operations appear to be influenced by the spreading of rumours.

This effect seems even more evident for spin-off operations published in *The Wall Street Journal* within a week of their announcement: publication of spin-off news, even if not «first-hand» news as it is subsequent to the announcement, contributes *de facto* towards value creations for shareholders.

By comparing the average abnormal cumulative return registered on the date of the announcement with the ones on the date of rumours being published *The Wall Street Journal*, rumour publication is found to trigger a supplementary-return in the symmetrical windows, while in the following windows the announcement creates value for the shareholders.

Investors seem to be more confident with the announcement rather than with the publication of rumours since, being an official statement, the announcement «reassures them» of the fulfilment of the operation. In relation to the event date taken into consideration, news concerning spin-off operations produces an impact on investor behaviour, both at the moment in which rumours are published in *The Wall Street Journal* and when the announcement of the operation itself is released (although the reaction is more evident at the moment of rumour publication, during which average higher CAR is achieved compared to when the operation is announced). However, the market does not completely extinguish the effect triggered by the publication of the news in *The Wall Street Journal* on a date preceding the announcement of the spin-off operation: indeed, at the time of the announcement and although less significant, an abnormal cumulative return is observed. Some investors therefore seem to be indifferent to the publication of the news in *The Wall Street Journal*, placing more confidence in the announcement of the spin-off operation.

The media variable, when it comes to spin-off operations, acquires relevance as it influences investor behaviour. When news of spin-off operations is spread «by the means of the press», irrespective of the time of publication, it causes value creation for shareholders – proving to be even more effective in freeing the economic value hidden within the parent company.

When it comes to the semantic aspect of the news, that is to its positive or negative content, average abnormal returns prove to be amplified around the announcement date when the press «speaks well» of the operation. However, even in the case of news carrying negative content, the market reacts positively to the announcement of the operation: the positive effect triggered by the spin-off announcement seems to prevail against the negative sentiment expressed by the media. As for the communication tone used in the news release, investors seem to react positively in the case of news covered with greater emphasis, and more likely to the news concerning major parent companies. Conversely, in the case of news reported in a weaker tone, the reaction of the investors to spin-off operation announcements is delayed: the emphatic aspect of the news released seems to affect the timing of the reaction more than its impact.

Finally, abnormal attention levels on the side of investor during the week of the announcement affect stock returns for those companies involved in spin-off deals, in the week and especially on the day of the announcement itself.

Hence, the contribution of this study to existing literature is believed to be twofold: to begin with, it broadens existing literature on spin-off operations by taking into account the media variable; it also attempts to increase the number of studies regarding media impact on investor behaviour.

Future developments of this study will include, first of all, trading volumes in the analysis in order to determine whether the media variables also impact on this market variable; then a regression analysis will be implemented, one that considers CAARs as dependent variable and the semantic aspects, investor attention and different control variables (*i.e.* spin-off scope) on the right-side. Moreover, these will also integrate an analysis of variables aimed at establishing whether and in what way investor characteristics can influence the use and the elaboration of the information covered.

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