IS THE MARKET SWAYED BY PRESS RELEASES ON CORPORATE GOVERNANCE? EVENT STUDY ON THE EUROSTOXX BANKS

Marina Brogi *, Valentina Lagasio **

* Management Department, Faculty of Economics, Sapienza University of Rome, Italy
** *Corresponding author* Management Department, Faculty of Economics, Sapienza University of Rome, Italy;
Contact details: Sapienza University of Rome - Piazzale Aldo Moro 5, 00185 Rome, Italy

How to cite this paper: Brogi, M., & Lagasio, V. (2018). Is the market swayed by press releases on corporate governance? Event study on the Eurostoxx banks. *Corporate Ownership & Control, 15(3),* 23-31. http://doi.org/10.22495/cocv15i3art2

Copyright © 2018 The Authors

This work is licensed under the Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC 4.0). http://creativecommons.org/licenses/by-nc/4.0/

ISSN Online: 1810-3057
ISSN Print: 1727-9232

Received: 03.12.2017
Accepted: 28.02.2018

JEL Classification: E52, E58, G14, G21
DOI: 10.22495/cocv15i3art2

Abstract

Are press releases on Corporate Governance price sensitive? What is the impact of Corporate Governance information on stock prices of banks? This paper addresses these questions by applying an event study methodology on 70 press releases published by the Euro area banks listed on the Eurostoxx banks Index, from 2007 to 2016. Systemic shocks are explored as well idiosyncratic ones. Our results show that investment decisions are significantly but negatively influenced by the disclosure of a press release on corporate governance as if this kind of news leads investors to perceive the banks' prospects negatively. The best of our knowledge this is the first paper that investigates European banks press releases on corporate governance. Findings are relevant for banks' management and their disclosure policy. Nonetheless, further research is needed to investigate differences and similarities between an area of governance disclosure and another.

Keywords: Banks, Corporate Governance, Event Study, Press Releases

1. INTRODUCTION

Recent policy interventions from European Central Bank (for example Draghi's "Whatever it takes"[3] , the disclosure of Comprehensive Assessment results[4], cuts and hikes in key interest rates) have produced diverse market reactions (Angeloni & Ehrmann, 2003; Bohl et al., 2008; Hussain, 2011; Fiordelisi & Ricci, 2015; Haitsma et al., 2016).

Nonetheless, changes in stock prices can also be affected by the disclosure of firm-specific information[5] and this is indeed why listed companies must comply specific disclosure requirements. Corporate disclosure can be defined as the information flow that goes from the management of a company to its shareholders and in order to fill the information asymmetries. This can be perceived as a need to mind and fill the gap between managers and shareholders information – well-known as agency (or principal-agent) problem (Fama, 1980; Fama and Jensen, 1981). The aim of corporate disclosure is "to communicate firm performance and governance to outside investors" (Haely & Palepu, 2001). In this paper, we refer in particular to disclosure related to corporate governance, with a specific focus on the banking sector. We expect our findings to be relevant for banks' management, in order to make careful and prudent decisions about the information they are going to disclose. Moreover, our findings are expected to be relevant since the stock market reaction on a bank (and other companies) disclosure – thus how a bank is perceived by investors – has consequences on its valuation and indirectly on its financial soundness. There are many types of bank-specific information that need to be disclosed to stakeholders: e.g. financial information, corporate governance, corporate social responsibility (CSR), merger and acquisition strategies (M&As). Moreover, disclosure takes different forms (Farvaque et al., 2011): e.g. financial reporting (financial statements, business plans, ...), press releases, conferences, road shows. The most timely source of firm-specific information is a firm press release, which can be classified as price sensitive or not in respect of the type of information disclosed (examples of price-sensitive press releases can be: disclosure of interim results, financing issues, M&A decisions). Therefore, is reasonable and interesting to analyse the price sensitiveness of the disclosure of a

[3] at the Global Investment Conference in London, 26 July 2012.
[4] 26 October 2014.
[5] Ryan and Taffler (2002) find that 65% of large stock price changes can be related to firm-specific information.

bank press release as it may change firm's market price and impacts on the bank's market performance.

To answer our research question, the aim of this analysis is to study the impact on stock prices and the related volatility of press releases that contain Corporate Governance information in Euro area banks listed on the Eurostoxx banks index.

Indeed, using an event study methodology on 70 press releases of the whole sample of banks listed on the Eurostoxx Banks Index, from 2007 to 2016, we find that prices and therefore investment decisions are significantly but negatively influenced by the disclosure of a press release on corporate governance, as if this kind of news leads investors to perceive the bank's prospects negatively. This finding contributes to the strand of literature on voluntary disclosure that claims that an important driver of the disclosure and announcements to investors is that firms are inclined to send a signal to the market to obtain economic benefits (Fung et al., 2007; Utrero-Gonzalez & Callado-Munoz, 2016). In this perspective, voluntary disclosure is perceived to be biased by the incentive of the firms to overstate the good and understate their bad practices (Kruger, 2015; Utrero-Gonzalez & Callado-Munoz, 2016).

The best of our knowledge this is the first paper that investigates European banks press releases on corporate governance.

The paper is structured as follows. Section 2 reviews the literature; Section 3 illustrates the sample of the analysis and the model; Section 4 presents the results and Section 5 concludes and discusses policy implications that emerge.

2. LITERATURE REVIEW

Growing attention has been given to market reaction following monetary policy interventions. Nonetheless, literature concerning this issue is recent and leads to mixed results. Moreover, most research focuses on the United States (Haitsma et al., 2016). Studies on Eurozone are few (Fatum & Hutchison, 2002; Petrella & Resti, 2013; Fiordelisi & Ricci, 2015; Haitsma et al., 2016). Indeed, Fatum and Hutchison (2002) investigate ECB intervention and intervention-related “news” on the euro exchange rate; Petrella and Resti (2013) analyze the impact on stock prices of the disclosure of the stress test results by the European Banking Authority (EBA); Fiordelisi and Ricci (2015) assess the value of policy actions in banking starting from Draghi's well-known "Whatever it takes"; Haitsma et al. (2016) analyse the impact of ECB's conventional and unconventional monetary policies on stock market prices.

On the other hand, the role of firm-based information and the impact of financial news has been extensively studied in prior literature (Fama, 1965; Niederhoffer, 1971; Merton, 1987; Ryan & Taffler, 2002). In particular, the earliest studies are well reviewed by Kothari and Warner (2006) and McWilliams and Siegel (1997) which classify the literature by the topic investigated with the event study methodology (Corporate Social Responsibility, Corporate Governance, Joint Ventures, Legislation, Investment and Miscellaneous). In particular, as concerns corporate governance, McWilliams and Siegel (1997) reports Worrell et al. (1993) which investigate market reactions to announcements of the firings of key executives made over 1963-1987 and found that permanent replacements are positively associated with market reactions, whereas other types of firing do not raise investors' reactions. Davidson et al. (1993) find that the announcements of CEO succession in bankrupt firms are associated with positive abnormal returns. Mahoney and Mahoney (1993) focus on antitakeover amendments; Turk (1992) on Managerial response to takeover bids; Chatterjee et al. (1992), Seth (1990), Shelton (1988), Lubatkin (1987), Singh and Montgomery (1987) and Chatterjee (1986) on mergers and acquisitions; Markides (1992) on corporate refocusing; Davidson et al. (1990) analyse the market reaction on the announcements of 367 key executives appointments in a sample of 1986 Fortune 500 companies finding significant and positive market reactions on this kind of information. Lubatkin et al. (1989), Friedman and Singh (1989) and Beatty and Zajac (1987) focus on CEO successions, which using event study methodology show that this kind of corporate governance issues is associated with investors' consideration. Worrel et al. (1986) investigate the market reaction on the announcements of deaths of key executives and obtain significant negative results for a small portion of key executives that are perceived by investors as the most influential. In particular, the authors find that the death of a CEO who is also the chairman of a company is associated with statistically significant negative returns since the event is likely to create a double level of uncertainty. More recently, Donders et al. (1997) examine the implied volatility behaviour of call options around scheduled news announcement days; Tumarkin and Whitelaw (2001) investigate the relationships between Internet message-board activity and abnormal stock returns and trading volume. With a specific focus on corporate governance, Chhaochharia and Grinstein (2007) use an event study to investigate the effect on firm value of the announcement of the amendments to the U.S. stock exchanges’ regulations following the corporate scandals and the subsequent introduction of the Sarbanes Oxley Act, during 2002. Similarly, Utrero-González and Callado-Munoz (2016) examine the effects on performance and firm value of corporate governance regulations, specifically the Spanish Aldama Code of Best practice issued in 2003.

Mittermayer and Knolmayer (2006) is one of the first research which focuses specifically on the information contained in press releases and take them as input to predict stock price changes by showing that press releases "have far more impact on stock prices than other news that often only repeat or comment the basic news contained in press releases". Lately, Henry (2006 and 2008) focuses his analysis on investors’ reactions to the disclosure of earnings press releases. Fahlenbrach et al. (2017) show that surprise independent director departures are subsequently followed by negative events for the companies, such as worse stock and operating performance, earnings restatements, shareholder litigation, extreme negative return event, and worse mergers and acquisitions.

As already mentioned, to the best of our knowledge this paper is original by four different perspectives: i) it investigates banks; ii) the geographical setting is Europe; iii) it uses press releases as sources of news and definition of the events; iv) it focuses on corporate governance. Thus, the contribution to the existing literature may be substantial and the policy implications are relevant.

3. METHODOLOGY

We adopt the event study methodology (Campbell & MacKinlay, 1997; MacKinlay, 1997) since it provides

a precise estimate of the market's response to firms' announcements. Moreover, it enables us to measure the effects of an event on the value of the listed company.

Indeed, the event study is a statistical methodology for conducting an empirical investigation on the relationship between stock prices and specific economic events (Dyckman et al., 1984). Following Kothari and Warner (2006), event studies are "the most successful empirical technique to date for isolating the price impact of the information content of corporate actions". In detail, we analyse whether the stochastic behaviour of stock prices is affected by the disclosure of firm-specific events, which in our case are announcements related to corporate governance of a sample of banks, as specified in the following section.

Given rationality in the marketplace, the effects of an event will be reflected immediately in security prices (MacKinlay, 1997). Indeed, we pose the assumption of "Market Efficiency" (McWilliams & Siegel, 1997). This implies that stock prices incorporate all information available to investors (Fama, 1965); respectively all newly disclosed firm information is instantaneously incorporated into stock prices. In this environment, the disclosure of any price sensitive (and financially relevant) information can be considered as an "event".

3.1. Sample of banks

We test the hypothesis on the 30 banks listed on the Eurostoxx banks index.

The sample is composed of the 30 Euro Area banks of the Eurostoxx index in June 2016 (Table 1) all of which are significant entities supervised by the European Central Bank (ECB) (As of the list provided on 30th September 2015 which includes 120 credit institutions). The index is subject to periodic rebalancing and the composition used for our sample was introduced on 20 June 2016 with the entry of Alpha Bank, the re-entry after a number of years of ABN AMRO, the deletion of Banca Popolare di Sondrio and the substitution of National Bank of Greece with Eurobank Ergasias. The rationale for choosing this sample of banks is twofold. First, from a methodological perspective, since in an event study analysis the parameters of the estimation are derived by regressing the index returns to the stock's returns, thus, having a sample of banks that are contained in the same index makes this process simpler and faster. This is expected to be particularly true if the sample comprises the whole population of stocks that make up the observed index. Second, since the sample comprises banks that are all supervised entities by the ECB, the policy implications are expected to be relevant for both policymakers and practitioners. Indeed, the former may be influenced in defining reporting and disclosing regulatory framework or standards. The latter may consider how the information disclosure is perceived by the market, in order to rethink the content and the ways in which corporate governance information should be communicated to the market.

Table 1. Components of the Eurostoxx bank index

Name	*Country*	*Market Cap 31.12.2015*	*Total Assets 31.12.2015*
BNP Paribas	FR	65,088,295	1,994,193,000
Deutsche Bank	DE	31,157,777	1,629,130,000
Crdit Agricole	FR	28,715,878	1,529,294,000
Banco Santander	ES	65,821,288	1,340,260,000
Socit Gnrale	FR	34,320,317	1,334,391,000
UniCredit	IT	30,671,295	860,433,400
ING	NL	48,178,363	841,769,000
Banco Bilbao Vizcaya Argentaria	ES	42,911,423	750,078,000
Intesa Sanpaolo	IT	49,006,090	676,496,000
Commerzbank	DE	12,022,637	532,641,000
Natixis	FR	16,328,828	500,257,000
ABN AMRO	NL	4,468,854	390,317,000
Caixabank	ES	18,695,008	344,255,500
KBC Groep	BE	24,093,430	252,356,000
Banco de Sabadell	ES	8,920,362	208,627,800
Bankia	ES	12,323,542	206,969,600
Erste Group Bank	AT	12,425,518	199,743,400
Banca Monte dei Paschi di Siena	IT	3,606,458	169,012,000
Banco Popular Espanol	ES	6,581,828	158,649,900
Bank of Ireland	IE	11,003,514	130,960,000
Banco Popolare	IT	4,639,526	120,509,600
Unione di Banche Italiane	IT	5,590,844	117,200,800
Raiffeisen Bank International	AT	3,987,444	114,426,600
Banco Comercial Portugus	PT	2,951,951	74,884,900
Eurobank Ergasias	GR	2,273,439	73,553,000
Mediobanca	IT	7,631,078	70,710,600
Alpha Bank	GR	3,826,834	69,296,200
Banca Popolare dell'Emilia Romagna	IT	3,388,408	61,261,200
Bankinter	ES	5,878,584	58,659,800
Banca Popolare di Milano	IT	4,040,441	50,203,300
Total		*570,549,253*	*14,860,539,600*

Note: Authors' own elaboration on Eurostoxx, Bloomberg and Bankscope data

Total assets of banks in the sample equal 14.86 trillion euro, representing almost 70% of total assets of banks subject to the Single Supervisory Mechanism (SSM) which amounted to 22 trillion euro at the end of the comprehensive assessment[6]. Notwithstanding the fact that it is made up of the largest listed euro area banks, the sample is very heterogeneous in terms of size. Average total assets at the end of 2015 amounted to 501 billion euro

[6] European Central Bank (2014), Aggregate report on the comprehensive assessment, 26th October. *"Note that the following banks did not participate in the comprehensive assessment but will be directly supervised by the ECB as significant institutions: Banco de Credito Social Cooperativo, Banesco Holding Hispania, Banque Degroof S.A., Barclays Bank PLC (Italy), Novo Banco SA, Sberbank Europe AG, Unicredit Banka Slovenija d.d. and VTB Bank AG (Austria)".*

with a standard deviation exceeding 112%. The top 5 banks have total assets exceeding those of the remaining 25.

Breakdown of sample banks by country (Table 2) shows that, in terms of total assets at the end of 2015, French banks make up over a third of the sample, followed by Spanish banks, almost a fifth, and Italian and German banks which represent over 14% of total assets. The average size of banks in the sample varies greatly: French and German banks are much larger than Spanish and Italian banks (average total assets respectively of 1,382 billion euro, 1,090 billion euro, 438 billion euro and 266 billion euro).

Table 2. Total assets of Eurostoxx banks. Breakdown by country

Country	*N. of banks*	*Total Assets 2010*		*Total Assets 2015*		*Average size 2015*	*Std. dev. (%) 2015*
AUSTRIA	2	337,111,100	2.16%	314,170,000	2.11%	157,085,000	38.40%
BELGIUM	1	320,823,000	2.06%	252,356,000	1.70%	252,356,000	0.00%
FRANCE	4	5,319,085,000	34.14%	5,358,135,000	36.06%	1,339,533,750	46.60%
GERMANY	2	2,659,929,000	17.07%	2,161,771,000	14.55%	1,080,885,500	71.73%
GREECE	2	153,986,300	0.99%	142,849,200	0.96%	71,424,600	4.21%
IRELAND	1	167,473,000	1.08%	130,960,000	0.88%	130,960,000	0.00%
ITALY	8	2,287,290,100	14.68%	2,125,826,900	14.31%	265,728,363	119.11%
NETHERLANDS	2	1,626,604,000	10.44%	1,232,086,000	8.29%	616,043,000	51.82%
PORTUGAL	1	98,546,700	0.63%	74,884,900	0.50%	74,884,900	0.00%
SPAIN	7	2,607,799,700	16.74%	3,067,500,600	20.64%	438,214,371	104.08%
Total	*30*	*15,578,647,900*	*100.00%*	*14,860,539,600*	*100.00%*	*495,351,320*	*111.16%*

Note: Authors' own elaboration on Eurostoxx, Bloomberg and Bankscope data

Table 3. Market capitalization and CET 1 of Eurostoxx banks. Breakdown by country (cont. d)

Country	*N. of banks*	*Market Capitalization 2010*		*Market Capitalization 2015*		*CET 1 2010*	*CET 2 2015*
AUSTRIA	2	9,231,384	3.01%	16,412,962	2.88%	8.67%	12.04%
BELGIUM	1	3,483,506	1.14%	24,093,430	4.22%	8.61%	15.76%
FRANCE	4	66,890,812	21.85%	144,453,318	25.32%	11.86%	13.03%
GERMANY	2	33,608,787	10.98%	43,180,414	7.57%	9.99%	15.03%
GREECE	2	2,078,309	0.68%	6,100,272	1.07%	17.18%	29.04%
IRELAND	1	2,470,865	0.81%	11,003,514	1.93%	9.17%	14.92%
ITALY	8	51,009,095	16.66%	108,574,141	19.03%	11.96%	14.51%
NETHERLANDS	2	21,296,062	6.96%	52,647,217	9.23%	11.07%	13.64%
PORTUGAL	1	980,175	0.32%	2,951,951	0.52%	5.51%	16.21%
SPAIN	7	115,145,510	37.61%	161,132,035	28.24%	9.93%	15.02%
Total	*30*	*306,194,506*	*100.00%*	*570,549,253*	*100.00%*	*10.99%*	*14.89%*

Note: Authors' own elaboration on Eurostoxx, Bloomberg and Bankscope data

3.2. Sample of press releases

Banks press releases are hand collected and classified based on their contents.

In particular, the selection process of banks' press releases on corporate governance is performed as follows:

1. Look for the press releases of all the banks of the sample in their respective websites;
2. Run a content analysis in order to select all the press releases related to corporate governance;
3. Ensure substantive relevance of the potential press releases by looking by reading all the press releases and checking for only contents that may have price sensitiveness, following the "fit for purpose" approach by Boaz and Ashby (2003) and Denyer et al. (2008);
4. Consolidate results.

This leads us to identify 70 press releases issued in the period 2007-2016 that report potentially price-sensitive events related to corporate governance (e.g. changes in management board, changes in supervisory board, changes in statutory auditors[7] issued by 18 banks[8] included in the Eurostoxx Banks Index. Table 4 shows the breakdown of the selected press releases by bank and by year of disclosure.

3.3. Model

The Normal (or expected) Return (NR_{it}) of bank *i* at time *t* is defined as the expected return unconditioned by the event taking place. In literature, several models have been employed to estimate the normal return (e.g. Capital Asset Pricing Model (CAPM), Arbitrage Pricing Theorem (APT), multi-factor model). Following MacKinlay (1997), we use a one-factor market model, based on the CAPM findings, since benefits of employing multifactor models and economic models for event studies are not so significant (MacKinlay, 1997).

[7] Note that banks considered in the sample have different Corporate Governance models: (i) *traditional* model (or *horizontal two-tier* model, in which the Shareholders' Meeting appoints both the Board of Directors and the Board of Statutory Auditors. The Board of Directors has the management and the supervisory functions; the Board of Statutory Auditors is in charge of the control function); (ii) *dualistic* model (or *vertical two-tier* model, in which the Shareholders' Meeting appoints the Supervisory Board, in charge of the control and the supervisory functions, that in turn appoints the Management Board, in charge of the management function); and (iii) *monistic* model (or *one-tier* model, in which the company is governed by one corporate body. The Shareholders' Meeting appoints the Board of Directors, that undertakes both management and supervisory functions and selects among its directors the Internal Audit Committee, which has the control function).

[8] Some banks were excluded from the final sample of analysis given the lack of price sensitive press releases or due to the lack of a sufficient length of the historical stock prices data. The latter was decided in order to ensure the suitability of the analysis (MacKinlay, 1997).

Table 4. Sample of press releases

	2007	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*	*Total*
Banco BPM		1	1			1				1	4
Banco Sabadell				1							1
Banco Santander							1	1			2
Bank of Ireland										1	1
Bankia							1	2			3
BBVA										1	1
BNP Paribas	1	2	2	3	2	2	3	1	2	1	19
CaixaBank								1			1
Commerzbank	1	1	1		1						4
Deutsche Bank							1		1	2	4
Erste Group										1	1
Intesa Sanpaolo				2		1	1		1	1	6
KBC Group			1					1			2
Natixis					2	1	2		2	1	8
Raiffeisen Bank					1	1	1				3
Societe Generale									1		1
UBI Banca				2						1	3
UniCredit			1	1		1			1	2	6
Total	*2*	*4*	*6*	*9*	*6*	*7*	*10*	*6*	*8*	*12*	*70*

Note: Authors' own elaboration

We collect stock prices (adjusted for dividends) and calculate related stock returns. The Eurostoxx Banks Index is considered the market index of our analysis. The estimation window of the event study is computed on 252 days in which the markets are open. We choose to consider a long period prior to the announcement in order to minimize the risk that the estimated returns are biased by information about the event. Moreover, we focus on announcement effects over a short horizon since it is the most useful method to provide evidence relevant for understanding corporate policy decisions (Kothari & Warner, 2006). Thus, as the event window, we consider t days around the event date, where $t = (-5, 5)$.

The Abnormal (or unexpected) Return (AR_{it}) for bank i at time t is the difference between the actual stock Return (R_{it}) and a measure of NR_{it} generated by the adopted market model.

For every security i in our sample we thus generate the normal or expected return R_{it} for the period t as:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it} \quad (1)$$

with $E(\varepsilon_{it}) = 0$ and $var(\varepsilon_{it}) = \sigma^2_{\varepsilon_i}$

where R_{mt} is the Eurostoxx, α_i and β_i are the model parameters, ε_{it} is the zero-mean disturbance term and $\sigma^2_{\varepsilon_i}$ is ε_{it} variance, assuming that assets returns are jointly multivariate normal and i.i.d. (independently and identically distributed) through time.

As in Dedmen and Lin (2002) we calculate the daily logarithmic returns as follows:

$$R_t = ln(P_t/P_{t-1}) \quad (2)$$

where P_t is the stock price for time t and P_{t-1} is the stock price in *t-1*.

Single Index Model (SIM) is used to find abnormal returns and Student's t-test is used for analyzing the significance level of abnormal returns. In particular, Expected Returns are computed as:

$$E[R_{it}] = \alpha_{it} + \beta_{it} R_{mt} \quad (3)$$

with R_{it}, α_{it} and β_{it} [9] being respectively the market return on day t, the intercept and the slope of the regression line.

AR_{it} are then computed as:

$$AR_{it} = \widehat{R_{it}} - \widehat{\alpha_i} + \widehat{\beta_i R_{mt}} \quad (4)$$

where the first term is the actual return. We then calculate for each j event the Cumulative Abnormal Returns (CAR_{it}) and assess the statistical significance with robustness checks.

We then calculate the Average Abnormal Return (AAR) for all the shares over the period of the analysis as:

$$AAR_t = 1/n \sum_{i=1}^{n} AR_{it} \quad (5)$$

where AR_{it} is the abnormal return of bank i on day t and n is the sample size.

In order to obtain the total effect of the abnormal returns, we calculate the Cumulative Average Return (CAR) and Cumulative Average Abnormal Return ($CAAR$) over the event window starting at t_1 and ending at t_2:

$$CAR(t_i; t_2) = \sum_{t=t_1}^{t_2} AR_{it} \quad (6)$$

$$CAAR(t_i; t_2) = 1/n \sum_{i=1}^{n} CAR_{t_1,t_2} \quad (7)$$

Lastly, we aim at determining the significance level of the results using a *t*-Student test:

$$t_{AAR} = \sqrt{N}(AAR/\sigma_{AAR}) \quad (8)$$

and

$$t_{CAAR} = \sqrt{N}(CAAR/\sigma_{CAAR}) \quad (9)$$

[9] estimation on historical values – 252 days – of stock returns and market returns.

where N is the event period of observation.

All the statistics above mentioned are used to test the following hypothesis:

H_0: there is no significant relation between the performance of banks' stock prices and a bank press release on corporate governance.

4. RESULTS

Figure A.1, Table A.1 and A.2 report respectively *AAR* and *CAAR*; *t*-values and the results of the analysis. We find that stock market reacts negatively to the announcements as if this kind of news leads investors to perceive the bank's prospects negatively. We are conscious that more appropriate conclusion may be obtained by classifying press releases in respect to their specific contents; nonetheless, the statistic tests lead us to infer different deductions. Table A.2 shows that *t*-value for *AAR* has a negative reaction on the announcement day (at time *t*) – where the Average Abnormal Return is equal to -1.832%. *t*-values for *CAAR* during the event window period are positive only at *t*-3, *t*+3, *t*+5. The other observed *t*-values for *AAR* are negative. Nonetheless, *t*-values of *AAR* are significant at time *t*-2, *t*-1, *t*, *t*+1 and *t*+2 with Average Abnormal Returns -0.285%, -0.321%, -0.105%, -0.098% and -0.148% respectively. Moreover, *t*-values for Cumulative Average Abnormal Returns are significant over the period of analysis.

Thus, investment decisions are significantly but negatively influenced by the disclosure of press releases on corporate governance.

Moreover, over the event window considered, the volume of the traded stocks increases quite constantly (with the biggest increase observed on the announcement day – at time *t* – at 21%). Thus, we observe a positive market reaction in the average volume changes statistics.

This is a second proof that the disclosure of press releases related to corporate governance is relevant for investors and trading decision is significantly influenced.

As a result, we can reject H_0 and assert that a bank press release on corporate governance may significantly impact stock prices.

One possible explanation is that the market anticipates that a change in the CEO – which is one of the main causes for press releases in our sample – leads to lower results in the short run as the new CEO will favour write-offs of any doubtful captions.

5. CONCLUSION

The aim of this paper is to study the impact on stock prices and the related volatility of press releases that contain Corporate Governance information in Euro area banks listed on the Eurostoxx banks index.

As shown in the previous section, results of the analysis are relevant in terms of policy implication, even though there are some limitations related to the proposed model (e.g. the assumptions underlying event study methodology; the use of only one parametric test for testing the significance of AARs and CAARs; the proposed classification of the press releases). Nonetheless, we find significant results that show that the disclosure of press releases on corporate governance influence stock prices. Our results are consistent with the previous literature on the role of firm-based information and the impact of financial news (Fama, 1965; Niederhoffer, 1971; Merton, 1987; Ryan & Taffler, 2002). We find that investment decisions are significantly but negatively influenced by the disclosure of a press release on corporate governance as if this kind of news lead the investors to perceive negatively the bank. This finding contributes to the strand of literature on voluntary disclosure that claims that an important driver of the disclosure and announcements to investors is that firms are inclined to send a signal to the market to obtain economic benefits (Fung et al., 2007; Utrero-Gonzalez & Callado-Munoz, 2016). In this perspective, voluntary disclosure is perceived to be biased by the incentive of the firms to overstate the good and understate their bad practices (Kruger, 2015; Utrero-Gonzalez & Callado-Munoz, 2016).

The event study's methodology has some limitations that should be kept in mind. First of all, the assumption of market efficiency (Fama, 1965) implicit in this methodology is not valid in some cases, thus stock prices may not fully and immediately reflect all the information disclosed to the market. Moreover, under a noisy estimation period, the estimation of parameters is noisy too (Aktas, De Bodt & Cousin, 2007). MacKinlay (1997) reports that there are cases[10] in which the event date is difficult to be precisely identified, leading to a less useful application of this methodology. We overtake this limitation by considering the bank's publication of the press release as an economic event, thus the event date can be precisely identified.

Other limitations are specifically related to technical aspects related to the methodology. For example, the length of the estimation window (that we set as 252 days) is subject to a trade-off between improved estimation accuracy and potential parameter shifts (Sitthipongpanich, 2011). The estimation of expected returns may lead to wrong inference due to positive (negative) bias and may produce upwardly (downwardly) abnormal returns during bull (bear) markets (Kelin & Rosenfeld, 1987; Shih, 1992; Kothari & Warner, 2006; Sitthipongpanich, 2011).

Indeed, the issues here proposed may be deeper investigated in further research. In particular, further research may be conducted using country-specific stock market indices in order to avoid country-specific effects (as of national shocks) that may drive large abnormal returns rather than firm-specific factors.

Nonetheless, the contribution to the existing literature stems from the fact that to the best of our knowledge this is the first paper that investigates the impact on stock prices of European bank's press releases on corporate governance. Findings are relevant for banks' management and their disclosure policy. This calls for further research to investigate differences and similarities between an area of governance disclosure and another.

[10] i.e. "the wealth effects of regulatory changes for affected entities can be difficult to detect using event study methodology. The problem is that regulatory changes are often debated in the political arena over time and any accompanying wealth effects generally will gradually be incorporated into the value of a corporation as the probability of the change being adopted increases" (MacKinlay, 1997).

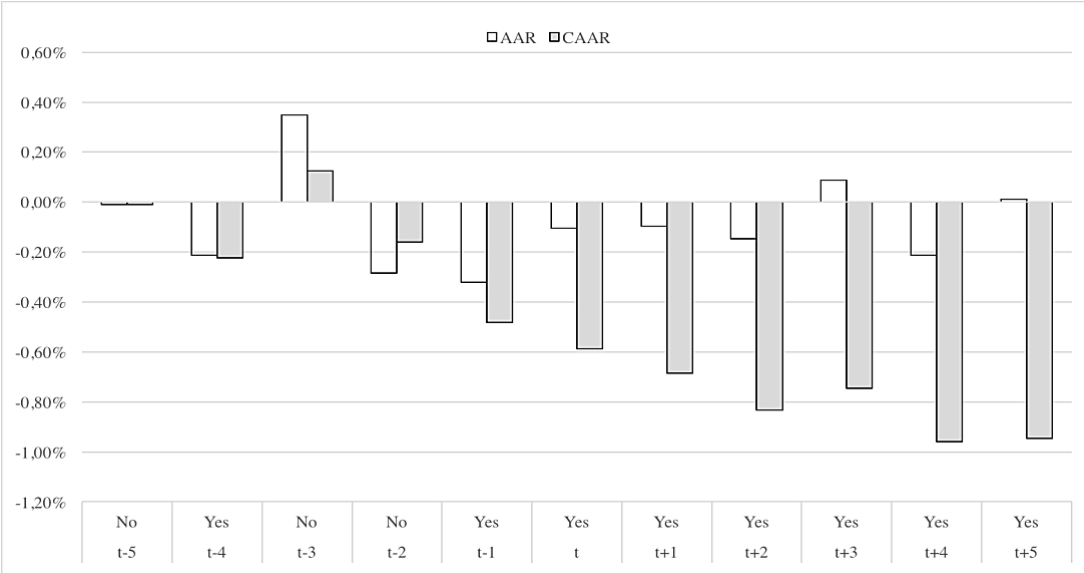
REFERENCES

1. Aktas, N., de Bodt, E., & Cousin, J. G. (2007). Event studies with a contaminated estimation period. *Journal of Corporate Finance, 13(1),* 129-145. https://doi.org/10.1016/j.jcorpfin.2006.09.001
2. Angeloni, I., & Ehrmann, M. (2003). *Monetary policy transmission in the euro area: Any changes after EMU?* Cambridge, UK: Cambridge University Press. https://doi.org/10.1017/CBO9780511492372
3. Altavilla, C., Carboni, G., & Motto, R. (2015). *Asset purchase programmes and financial markets: Lessons from the Euro area* (Working Paper).
4. Beatty, R. P., & Zajac, E. J. (1987). CEO change and firm performance in large corporations: Succession effects and manager effects. *Strategic Management Journal, 8(4),* 305-317. https://doi.org/10.1002/smj.4250080402
5. Bohl, M. T., Siklos, P. L., & Sondermann, D. (2008). European stock markets and the ECB's monetary policy surprises. *International Finance, 11(2),* 117-130. https://doi.org/10.1111/j.1468-2362.2008.00219.x
6. Campbell, J. Y., Lo, A. W. C., & MacKinlay, A. C. (1997). *The econometrics of financial markets* (Vol. 2, pp. 149-180). Princeton, NJ: Princeton University press.
7. Casiraghi, M., Gaiotti, E., Rodano, L., & Secchi, A. (2016). ECB unconventional monetary policy and the Italian economy during the sovereign debt crisis. *International Journal of Central Banking, 12(2),* 269-315.
8. Chatterjee, S. (1986). Types of synergy and economic value: The impact of acquisitions on merging and rival firms. *Strategic Management Journal, 7(2),* 119-139. https://doi.org/10.1002/smj.4250070203
9. Chatterjee, S., Lubatkin, M. H., Schweiger, D. M., & Weber, Y. (1992). Cultural differences and shareholder value in related mergers: Linking equity and human capital. *Strategic Management Journal, 13(5),* 319-334. https://doi.org/10.1002/smj.4250130502
10. Chhaochharia, V., & Grinstein, Y. (2007). Corporate governance and firm value: The impact of the 2002 governance rules. *The Journal of Finance, 62(4),* 1789-1825. https://doi.org/10.1111/j.1540-6261.2007.01257.x
11. Davidson III, W. N., Worrell, D. L., & Cheng, L. (1990). Key executive succession and stockholder wealth: The influence of successorys origin, position, and age. *Journal of Management, 16(3),* 647-664. https://doi.org/10.1177/014920639001600309
12. Davidson III, W. N., Worrell, D. L., & Dutia, D. (1993). The stock market effects of CEO succession in bankrupt firms. *Journal of Management, 19(3),* 517-533. https://doi.org/10.1177/014920639301900301
13. Donders, M. W., & Vorst, T. C. (1996). The impact of firm specific news on implied volatilities. *Journal of Banking & Finance, 20(9),* 1447-1461. https://doi.org/10.1016/S0378-4266(96)00011-8
14. Dyckman, T., Philbrick, D., & Stephan, J. (1984). A comparison of event study methodologies using daily stock returns: A simulation approach. *Journal of Accounting Research, 22,* 1-30. https://doi.org/10.2307/2490855
15. Fahlenbrach, R., Low, A., & Stulz, R. M. (2017). Do independent director departures predict future bad events? *The Review of Financial Studies, 30(7),* 2313-2358. https://doi.org/10.1093/rfs/hhx009
16. Fama, E. F. (1965). The behavior of stock-market prices. *The Journal of Business, 38(1),* 34-105. https://doi.org/10.1086/294743
17. Fama, E. F. (1980). Agency problems and the theory of the firm. *Journal of Political Economy, 88(2),* 288-307. https://doi.org/10.1086/260866
18. Fama, E. F., & Jensen, M. C. (1983). Agency problems and residual claims. *The Journal of Law and Economics, 26(2),* 327-349. https://doi.org/10.1086/467038
19. Farvaque, E., Refait-Alexandre, C., & Saïdane, D. (2011). Corporate disclosure: A review of its (direct and indirect) benefits and costs. *International Economics, 128,* 5-31. https://doi.org/10.1016/S2110-7017(13)60001-3
20. Fatum, R., & Hutchison, M. M. (2002). ECB foreign exchange intervention and the euro: Institutional framework, news, and intervention. *Open Economies Review, 13(4),* 413-425. https://doi.org/10.1023/A:1020669531230
21. Fiordelisi, F., & Ricci, O. (2015). "Whatever it takes": An Empirical assessment of the value of policy actions in banking. *Review of Finance, 20(6),* 2321-2347. https://doi.org/10.1093/rof/rfv053
22. Friedman, S. D., & Singh, H. (1989). CEO succession and stockholder reaction: The influence of organizational context and event content. *Academy of Management Journal, 32(4),* 718-744. https://doi.org/10.2307/256566
23. Fung, A., Graham, M., & Weil, D. (2007). Full disclosure: The perils and promise of transparency. Cambridge, UK: Cambridge University Press. https://doi.org/10.1017/CBO9780511510533
24. Haitsma, R., Unalmis, D., & de Haan, J. (2016). The impact of the ECB's conventional and unconventional monetary policies on stock markets. *Journal of Macroeconomics, 48,* 101-116. https://doi.org/10.1016/j.jmacro.2016.02.004
25. Healy, P. M., & Palepu, K. G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics, 31(1-3),* 405-440. https://doi.org/10.1016/S0165-4101(01)00018-0
26. Henry, E. (2008). Are investors influenced by how earnings press releases are written? *The Journal of Business Communication, 45(4),* 363-407. https://doi.org/10.1177/0021943608319388
27. Henry, E. (2006). Market reaction to verbal components of earnings press releases: Event study using a predictive algorithm. *Journal of Emerging Technologies in Accounting, 3(1),* 1-19. https://doi.org/10.2308/jeta.2006.3.1.1
28. Hussain, S. M. (2011). Simultaneous monetary policy announcements and international stock markets response: An intraday analysis. *Journal of Banking & Finance, 35(3),* 752-764. https://doi.org/10.1016/j.jbankfin.2010.09.002
29. Krüger, P. (2015). Corporate goodness and shareholder wealth. *Journal of Financial Economics, 115(2),* 304-329. https://doi.org/10.1016/j.jfineco.2014.09.008
30. Klein, A., & Rosenfeld, J. (1987). The influence of market conditions on event-study residuals. *Journal of Financial and Quantitative Analysis, 22(3),* 345-351. https://doi.org/10.2307/2330968
31. Lubatkin, M. (1987). Merger strategies and stockholder value. *Strategic Management Journal, 8(1),* 39-53. https://doi.org/10.1002/smj.4250080105
32. Lubatkin, M. H., Chung, K. H., Rogers, R. C., & Owers, J. E. (1989). Stockholder reactions to CEO changes in large corporations. *Academy of Management Journal, 32(1),* 47-68. https://doi.org/10.2307/256419
33. MacKinlay, A. C. (1997). Event studies in economics and finance. *Journal of Economic Literature, 35(1),* 13-39.

34. Mahoney, J. M., & Mahoney, J. T. (1993). An empirical investigation of the effect of corporate charter antitakeover amendments on stockholder wealth. *Strategic Management Journal, 14(1),* 17-31. https://doi.org/10.1002/smj.4250140104
35. Markides, C. C. (1992). Consequences of corporate refocusing: Ex ante evidence. *Academy of Management Journal, 35(2),* 398-412. https://doi.org/10.2307/256379
36. McWilliams, A., & Siegel, D. (1997). Event studies in management research: Theoretical and empirical issues. *Academy of Management Journal, 40(3),* 626-657. https://doi.org/10.2307/257056
37. Merton, R. C. (1987). A simple model of capital market equilibrium with incomplete information. *The Journal of Finance, 42(3),* 483-510. https://doi.org/10.1111/j.1540-6261.1987.tb04565.x
38. Mittermayer, M. A., & Knolmayer, G. F. (2006, December). *Newscats: A news categorization and trading system.* In Data Mining, 2006. ICDM'06. Sixth International Conference on (pp. 1002-1007). IEEE. https://doi.org/10.1109/ICDM.2006.115
39. Niederhoffer, V. (1971). The analysis of world events and stock prices. *The Journal of Business, 44(2),* 193-219. https://doi.org/10.1086/295352
40. Petrella, G., & Resti, A. (2013). Supervisors as information producers: Do stress tests reduce bank opaqueness? *Journal of Banking & Finance, 37(12),* 5406-5420. https://doi.org/10.1016/j.jbankfin.2013.01.005
41. Ryan, P., & Taffler, R. J. (2004). Are economically significant stock returns and trading volumes driven by firm-specific news releases? *Journal of Business Finance & Accounting, 31(1-2),* 49-82. https://doi.org/10.1111/j.0306-686X.2004.0002.x
42. Seth, A. (1990). Value creation in acquisitions: A re-examination of performance issues. *Strategic Management Journal, 11(2),* 99-115. https://doi.org/10.1002/smj.4250110203
43. Shelton, L. M. (1988). Strategic business fits and corporate acquisition: Empirical evidence. *Strategic Management Journal, 9(3),* 279-287. https://doi.org/10.1002/smj.4250090307
44. Shih, F. Y. L. (1992). Dividend announcements under varying market conditions: The case of specially designated dividends. *Journal of Economics and Finance, 16(3),* 143. https://doi.org/10.1007/BF02920316
45. Singh, H., & Montgomery, C. A. (1987). Corporate acquisition strategies and economic performance. *Strategic Management Journal, 8(4),* 377-386. https://doi.org/10.1002/smj.4250080407
46. Sitthipongpanich, T. (2011). Understanding the event study. *Journal of Business Administration, 34(130),* 60-68.
47. Tumarkin, R., & Whitelaw, R. F. (2001). News or noise? Internet postings and stock prices. *Financial Analysts Journal, 57(3),* 41-51. https://doi.org/10.2469/faj.v57.n3.2449
48. Turk, T. A. (1992). Takeover resistance, information leakage, and target firm value. *Journal of Management, 18(3),* 503-522. https://doi.org/10.1177/014920639201800305
49. Utrero-González, N., & Callado-Mu-oz, F. J. (2016). Do investors react to corporate governance news? An empirical analysis for the Spanish market. *BRQ Business Research Quarterly, 19(1),* 13-25. https://doi.org/10.1016/j.brq.2015.04.002
50. Worrell, D. L., Davidson, W. N., & Glascock, J. L. (1993). Stockholder reactions to departures and appointments of key executives attributable to firings. *Academy of Management Journal, 36(2),* 387-401. https://doi.org/10.2307/256528
51. Worrell, D. L., Davidson, W. N., Chandy, P. R., & Garrison, S. L. (1986). Management turnover through deaths of key executives: Effects on investor wealth. *Academy of Management Journal, 29(4),* 674-694. https://doi.org/10.2307/255939

Appendix A. Tables and figures

Figure A.1. AAR and CAAR of the event study



Note: Authors' own elaboration

Table A.1. *t*-values of the event study

Day	*Average change in volume*
t-5	
t-4	9%
t-3	22%
t-2	14%
t-1	2%
t	*21%*
t+1	4%
t+2	5%
t+3	4%
t+4	5%
t+5	7%

Note: Authors' own elaboration

Table A.2. Results of the analysis

Day	*AAR*	*t-values AAR*	*Signif. tAAR*	*CAAR*	*t-values CAAR*	*Signif. tCAAR*	$\sqrt{N}$	*σ AAR*	*σ CAAR*
t-5	-0.01%	-0.188	No	-0.01%	-0.094	No	3.3166	0.0019	0.0038
t-4	-0.21%	-3.712	Yes	-0.23%	-1.962	Yes			
t-3	0.35%	6.052	Yes	0.12%	1.083	No			
t-2	-0.29%	-4.945	Yes	-0.16%	-1.406	No			
t-1	-0.32%	-5.568	Yes	-0.48%	-4.207	Yes			
t	*-0.11%*	*-1.832*	*Yes*	*-0.59%*	*-5.129*	*Yes*			
t+1	-0.10%	-1.696	Yes	-0.69%	-5.982	Yes			
t+2	-0.15%	-2.565	Yes	-0.83%	-7.272	Yes			
t+3	0.09%	1.503	No	-0.75%	-6.516	Yes			
t+4	-0.21%	-3.68	Yes	-0.96%	-8.368	Yes			
t+5	0.01%	0.198	No	-0.95%	-8.268	Yes			

Note: Authors' own elaboration