

FINANÇAS

THE IMPACT OF ECB ANNOUNCEMENTS ON THE EUROZONE FINANCIAL MARKETS

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RESUMO

O presente trabalho analisa a reação dos mercados financeiros, acionista e obrigacionista da zona euro, aos anúncios de política monetária do Banco Central Europeu (BCE).

Tendo por base a abordagem do estudo de eventos, foram analisados 91 anúncios do BCE relativos à política monetária, emitidos durante o período de 1 de janeiro de 2008 a 31 de dezembro de 2012. Os resultados evidenciam o conteúdo informativo dos anúncios de política monetária, sendo apresentada evidência empírica de rendibilidade anormal em torno do dia dos anúncios. Os resultados obtidos apontam ainda no sentido da existência de assimetria de reação dos mercados a boas e más notícias.

Os resultados apresentados neste estudo vão no sentido da existência de reações distintas dos mercados dos diferentes países da zona euro aos mesmos anúncios.

De uma forma geral, os anúncios de política monetária do BCE, apresentam um impacto superior no mercado obrigacionista face ao mercado acionista.

PALAVRAS-CHAVE: mercados financeiros, anúncios do Banco Central Europeu, estudo de eventos.

ABSTRACT

In this work we analyze the reaction of financial markets, shareholders and bondholders of the euro area, to monetary policy announcements by the European Central Bank (ECB).

The research was based on the event study methodology, based on 91 notices relating to monetary policy, issued during the period 1 January 2008 to 31 December 2012.

The results provide some empirical evidence of the information content of monetary policy announcements, as we found evidence of abnormal returns around the announcement day. The results show that markets react differently to good and bad news.

The results also indicate different reactions of different euro zone countries to the same announcements.

In the euro area, the news of ECB monetary policy, have a greater impact on the bond market than on the equity market.

KEYWORDS: financial markets, ECB announcements, event studies.

1. INTRODUCTION

After the financial crisis that emerged in 2007, many monetary policy interventions, supported by new techniques and instruments, have been implemented by central banks. These interventions have played a major role in restoring monetary stability, including the stability of financial and banking systems.

Initially the Euro system as a way of tackling the crisis, it began by reducing interest rates to levels never before seen in euro area countries, but this measure was not enough and a set of unconventional monetary policies were implemented later. After a review of the literature, there are already several studies that have written and debated the magnitude and causes of the global financial crisis, however, Pennathur, Smith, & Subrahmanyam (2014) argue that there has been little attention to the impact of monetary policy interventions on the stock and bond market.

This lack of attention to the impact of monetary policy interventions, especially in the euro area, is particularly interesting to test. This is because, according to policy makers, the effects of monetary policy on financial markets are sufficient to achieve the Euro system's objectives, namely maintaining price stability and sustainable growth (BCE, 2001; Kurov, 2010).

Will the ECB's monetary policy interventions, during the period of financial crisis, have an impact on the financial markets of the euro area?

This article tries to answer this same question, it is an empirical study that aims to perceive the impact of monetary policy in two of the most important financial markets, the stock market and bonds. We will analyze this relationship during the period from January 1, 2008 to December 31, 2012, for some countries of the euro zone, based on a methodology of study of events, in order to determine if stock indexes, as well as the bond market Respond to monetary policy announcements, thus testing the market efficiency hypothesis.

In this study, we sought to contribute to literature in various ways. The first contribution is that our empirical work considers a period more recent than the periods analyzed by previous studies, covering the period from 2008 to 2012. The second contribution is that we study the impact of the monetary policy announcements on two financial markets from Euro zone, the stock and bonds market. Thirdly, we also look at cross-country heterogeneity regarding the impact of ECB announcements as well as the type of monetary policy announcements that have the most impact on the euro area shareholder and bond market (i.e. good ads vs. bad ads).

Overall, this paper presents recent empirical evidence of the precise effect of the ECB's monetary policy announcements on equity and bond markets in the euro area.

The rest of the paper is organized as follows: Section 2 presents a brief historical review of published event studies that analyze the impact of monetary policy announcements on the stock and bond market. Section 3 describes the sample data used in the empirical analysis, as well as the criteria for choosing and classifying the data, and also explains the methodology of the study of events that was used to test the market efficiency hypothesis. Section 4 presents the results and the analysis of the empirical research, and finally in section 6 the main conclusions are presented.

2. LITERATURE

Although there is much literature on the effects of monetary policy, and also on the impact of the ECB's monetary policy announcements, there are few empirical analyzes that include the period of financial crisis and focus on the euro area, as stated Ricci (2015).

Kurihara (2014) was one of the authors who attempted to bridge this absence of specific studies on the impact of the ECB announcements on the Eurozone stock market, its results revealed that the ECB's monetary policy announcements indirectly influence the price of Actions. That is, monetary policy announcements influence future interest rates, and these in turn have an impact on the stock price. Overall it can be said that monetary policy has been effective, and monetary policy announcements have the desired effects, albeit not directly.

Previous studies have dealt with the effects of stock market announcements on different perspectives, from the impact in different sectors, the separation by type of events, impact on value and growth stocks, among others.

Analyzing different policy measures, there are also different reactions on the part of the market, for example many studies report evidence that unexpected cuts in ECB interest rates have repercussions on changes in stock prices such as Hayo & Niehof (2011) and Hussain (2011), who report that unexpected increases in interest rates have a negative impact on the profitability of stocks. Conversely, Fiordelisi, Galloppo, & Ricci, (2014) found that there is no statistically significant effect on the stock market when interest rate cuts occur, but when interest rates remain unchanged or rise, exist a market reaction statistically significant.

The impact of ECB announcements on different sectors is another of the perspectives addressed by some studies, with several authors examining whether the response to unexpected policy changes differs between them, such as Haitsma, Unalmis, & De Haan (2016) and Jansen & Tsai (2010). The results of Jansen & Tsai (2010) indicate that communications and transportation companies are most affected by monetary policy surprises, followed by companies from services, manufacturing, commerce, construction, agriculture, forestry and fisheries.

While some studies on the ECB's monetary policy announcements consider general stock market indices, others examine only market sectors, such as Fratianni & Marchionne (2013) which focused on the banking sector, and concluded that targeted advertisements to the banking system, are associated with positive cumulative abnormal returns, translating into lower risk, while ads targeting specific banks are associated with negative cumulative abnormal returns and consequently greater risks. These last announcements also produce a positive effect on the rates of return before the crisis installs itself, because when the crisis sets in the opposite occurs, that is, the ads are much more regular and the markets have no confidence in them (Fratianni & Marchionne 2013).

Ricci (2015) also focused on assessing the impact of the ECB's monetary policy announcements on the stock price of some of Europe's largest banks. Their results have shown that banks with weaker balances and operating at higher levels of risk are more sensitive to monetary policy interventions (Ricci, 2015).

Another perspective is to examine the impact of monetary policy surprises on value actions and growth and momentum actions, Haitsma, Unalmis, & Haan (2016) concluded that it is the unconventional policies that most affect value actions, and growth stocks are not so affected by this type of stock. With regard to conventional monetary policy actions the results are very similar (Haitsma, Unalmis, & Haan, 2016).

Other studies also consider the temporal window studied, as a determinant factor in market reactions, some of them end up distinguishing the reactions of the stock market to political surprises in the pre-crisis period and in the crisis period. Hayo & Niehof (2011) found no evidence of significant changes between the pre-crisis period and the financial crisis. Haitsma, Unalmis, & De Haan (2016) and Wang & Mayes (2012) countered this hypothesis, arguing that in the pre-crisis period stock price reactions to monetary policy surprises were negative, a pattern that did not maintained whit installation of the crisis.

Some also distinguish the three stages of the financial crisis, as well as the most effective measures in each of the stages, as is the case of Fiordelisi et al. (2014) whereas the expansionist measures are more effective during the subprime crisis and the global financial crisis, the sovereign debt crisis is the most effective measures of political inaction and restrictive measures.

According to Ricci (2015) there are in fact different reactions to similar interventions in the market, the author refers as an example to the provision of liquidity, which exhibits a negative reaction during the period of global crisis and a positive reaction during the sovereign debt crisis.

Finally, some recent studies have examined the impact of the ECB's unconventional monetary policies, finding evidence of greater effectiveness of non-conventional measures on the stock market, rather than conventional measures (Fiordelisi et al., 2014; Haitsma, Unalmis, & De Haan, 2016; Ricci, 2015; Rogers, Scotti, & Wright, 2014).

As in other markets, the response of the bond market to monetary policy announcements is conditioned by several factors such as the type of announcement, the maturity, and the business cycle, as reported by Beber & Brandt, (2010) factors Which have been studied independently by some authors as will be described.

Paiardini (2014) studied the effects of macroeconomic announcements on bond returns to the Italian government bond market, concluding that US announcements have a far greater effect on bond returns than ECB announcements.

Beber & Brandt, (2010) studied the bond market's reaction to different types of news, both good and bad, during periods of economic expansion and recession, and found evidence of a greater impact of bad news on bond returns, in context of expansions. The good news, on the other hand, has a lower impact on the bond market's return in times of recession.

More recent studies, such as that by Falagiarda & Reitz (2015), have examined the extent to which ECB announcements of specific non-conventional monetary policy programs influence Greece, Ireland, Italy, Portugal and Spain's sovereign spreads as opposed to Germany. Its empirical results have shown that the ECB announcements on non-conventional operations are effective in reducing the sovereign spread of the Eurozone countries studied. Falagiarda & Reitz (2015) also concluded that the news about measures aimed at improving liquidity in banking markets affected the sovereign spread of the countries studied, with the exception of Greece. That is to say, there is evidence of the reduction of the risk of sovereign solvency of the five countries considered, with the exception of Greece, since the Greek sovereign crisis developed an isolation in relation to the external factors (González-Hermosillo and Johnson (2014) cited by Falagiarda & Reitz (2015)).

The results also revealed that the events occurring during the period 2010 to 2012 were more effective in reducing the spread of the crisis compared to the events occurring at the beginning of the crisis from 2008 to 2009. When the different types of measures are observed, the Authors conclude that the news on the securities markets program is the one that strongly affected the perceived sovereign risk of the countries studied, whereas the announcements of the definitive currency transactions seem to have a significant impact only in Italy and Spain.

3. DATA AND METHODOLOGY

We analyzed the impact of monetary policy announcements on the euro area shareholder and bond market, considering a period of 5 years, from January 1, 2008 to December 31, 2012.

Initially, we began by collecting the dates of the ECB's monetary policy announcements, dates provided by Falagiarda & Reitz (2015) as regards ECB's announcements of unconventional monetary policy measures, and by Rogers et al. (2014) for monetary policy measures in general, making a total of 91 monetary policy announcements.

In order to understand the different reactions to the ads, we distinguish two types of ads, such as Hayo & Kutan (2005), Beber & Brandt (2010) e Kosmidou, Kousenidis, & Negakis (2015): good and bad news. Good news was the news that generated positive returns on the day of the ad and bad news that generated negative returns on the day of the announcement. It is important to note that the news that were issued on days whose stock exchange negotiations were closed were considered on the trading day immediately following, assuming that the impact of the same news would feel at that time.

In order to assess the impact of the ECB's announcements on the euro area bond and equity market, the methodology of the event study introduced by Fama in 1969 was implemented. This method is quite adequate in assessing the short-term response to monetary policy, with the advantage of being simple, which allows to study a sample with a reduced number of events (Aït-Sahalia, Andritzky, Jobst, Nowak, & Tamirisa, 2012). In this way, it will be seen whether or not prices reflect the information contained in the ECB's news.

The methodology of the study of events is based on the estimate of the abnormal return (AR) that corresponds to the difference between the effective return and the expected return. The abnormal return will be calculated as follows:

$$AR_{i,t} = R_{i,t} - E(R_{i,t}|X_t) \quad (1)$$

Where $AR_{i,t}$, $R_{i,t}$ and $E(R_{i,t}|X_t)$ are respectively the abnormal return of variable i on day t , effective return and expected return of variable i for period t based on the information X_t , conditioners of the model of generation of normal returns. Assuming that $E(R_{i,t}|X_t) = E(R_{i,t})$, then:

$$AR_{i,t} = R_{i,t} - E(R_{i,t}) \quad (2)$$

According to several authors, one of the main points to be taken into account in the study of events is the formula for calculating normal and abnormal returns.

According to Campbell, Lo, & MacKinlay (1997) are three, the main methods for calculating the abnormal returns, however it will be through the market model that we will calculate the abnormal returns. For the calculation and analysis of these, it is necessary to define the window of events, however there is some divergence as to the days of the same, since the literature points to different periods. Thus, in agreement with the study of Aït-Sahalia et al. (2012) and Ricci (2015), the period of the study of events will be 5 days,

subdividing the day before the event, day of the event, and the three days after it, constituting the pre-event window, Event and post-event.

Once the event window is defined, we are able to calculate the abnormal return, defined as:

$$AR_{i,t} = R_{i,t} - \hat{\alpha} - \hat{\beta}R_{m,t} \quad (3)$$

Where $AR_{i,t}$, $R_{i,t}$, $R_{m,t}$, $\hat{\alpha}$ and $\hat{\beta}$ are respectively the abnormal return of variable i on day t , effective return of variable i on day t , return of the market portfolio for period t , and the estimated parameters OLS (Ordinary Least Squares) not skewed of α_i and β_i , and according to Campbell et al. (1997) should be estimated only on the basis of data outside the event window so that no influence of the events on normal performance is exerted.

Under the null hypothesis (H0), that the news does not have any kind of impact on the performance of the returns, the distributive properties of the abnormal return can be used to infer about the event window. In this way, the distribution of the abnormal return of a given observation in the event window is:

$$AR_{i,t} \sim N(0, \sigma^2(AR_{i,t})) \quad (4)$$

Where:

$$\sigma^2(AR_{i,t}) = \sigma^2 u \quad (5)$$

However, according to MacKinlay (1997), observations of abnormal returns must be accumulated in order to draw general conclusions about the event under study. The author also points out that accumulation can be done in two ways, either over time or through titles.

For the realize accumulation of the abnormal returns of the i title over time, is used the cumulative abnormal return (CAR) is used for the period between t_1 and t_2 , where $T_1 < t_1 \leq t_2 \leq T_2$, defined as follows:

$$CAR_i(t_1, t_2) = \sum_{t=t_1}^{t_2} AR_{it} \quad (6)$$

The cumulative abnormal return distribution is defined as:

$$CAR_i(t_1, t_2) \sim N(0, \sigma^2(t_1, t_2)) \quad (7)$$

Where:

$$\sigma^2(t_1, t_2) = (t_2 - t_1 + 1)\sigma_{ii}^2 \quad (8)$$

To aggregate the abnormal returns across securities is used the average abnormal returns \overline{AR} . Given N events, the aggregated abnormal return for the period t is defined as:

$$\overline{AR}_t = \frac{1}{N} \sum_{i=1}^N AR_{it} \quad (9)$$

And its variance is defined as:

$$Var(\overline{AR}_t) = \frac{1}{N^2} \sum_{i=1}^N \sigma_{ii}^2 \quad (10)$$

Aggregating the average abnormal return over the event window, the cumulative average abnormal return for any interval in the event window is defined as:

$$\overline{CAR}(t_1, t_2) = \sum_{t=t_1}^{t_2} \overline{AR}_t \quad (11)$$

And its variance is defined as:

$$Var(\overline{CAR}(t_1, t_2)) = \sum_{t=t_1}^{t_2} Var(\overline{AR}_t) \quad (12)$$

The cumulative mean abnormal return for any interval in the event window can also be defined as:

$$\overline{CAR}(t_1, t_2) = \frac{1}{N} \sum_{i=1}^N CAR_i(t_1, t_2) \quad (13)$$

with

$$Var(\overline{CAR}(t_1, t_2)) = \frac{1}{N^2} \sum_{i=1}^N \sigma_i^2(t_1, t_2) \quad (14)$$

Finally, hypothesis tests are performed in order to validate the obtained results. So to test the null hypothesis that the abnormal returns are zero, we use:

$$\overline{CAR}(t_1, t_2) \sim N(0, Var(\overline{CAR}(t_1, t_2))) \quad (15)$$

$$\theta_1 = \frac{\overline{AR}_t}{\sqrt{Var(\overline{AR}_t)}} \sim N(0,1) \quad (16)$$

$$\theta_2 = \frac{\overline{CAR}(t_1, t_2)}{\sqrt{Var(\overline{CAR}(t_1, t_2))}} \sim N(0,1) \quad (17)$$

4. RESULTS

4.1 DESCRIPTIVE STATISTICS

According to Table 1, we can see that, as expected, the average normal return of stock markets presents negative values for all countries, meaning that in fact the Eurozone countries have the value of their shares negatively affected, by the financial crisis. As far as the bond market is concerned, the returns presented are also mostly negative, however there are some exceptions, namely Belgium, Spain, Greece, Ireland, Italy and Portugal. These positive average returns are due to the fact that the crisis has had a greater impact in these countries, which leads to a greater distrust on the part of investors, with this increase of risk as a consequence, an increase of the rate of their obligations of the treasure.

Table 1- Descriptive Statistics (2008-2012)

Index	Mean	Std. Dev	Min	Máx	Skewness	Kurtosis
Shares						
AT	-0,00055	0,01932	-0,12141	0,09180	-0,11868	3,50206
BE	-0,00058	0,01478	-0,05650	0,06484	-0,10534	1,80582
DE	-0,00019	0,01590	-0,07164	0,10344	0,11113	4,00389
ES	-0,00110	0,01759	-0,07540	0,08129	-0,13678	1,89514
FR	-0,00052	0,01643	-0,06833	0,10095	0,18022	3,10934
GB	-0,00024	0,01367	-0,05481	0,09839	0,18707	4,88896
GR	-0,00126	0,02259	-0,07503	0,10117	0,29984	1,45003
IE	-0,00017	0,02259	-0,06867	0,06435	-0,12238	1,68004
IT	-0,00146	0,01776	-0,06146	0,07749	-0,16606	1,48578
PT	-0,00128	0,01345	-0,07151	0,04593	-0,43671	2,10690
SI	-0,00073	0,01295	-0,08085	0,06997	-0,18546	5,68654
Euro Stoxx 50	-0,00073	0,01653	-0,07312	0,09898	0,11865	3,17891
Bonds						
AT	-0,00072	0,01799	-0,06687	0,12084	0,98491	5,67816
BE	0,00016	0,01595	-0,05062	0,07242	0,66755	2,95654
DE	-0,00130	0,02345	-0,08412	0,09349	0,16837	1,48082
ES	0,00074	0,01727	-0,09910	0,11450	0,23628	4,79643
FI	-0,00108	0,02012	-0,06971	0,06834	0,14925	0,79358
FR	-0,00070	0,01670	-0,07837	0,07787	0,13501	2,25361
GB	-0,00110	0,02150	-0,07632	0,12212	0,36210	2,39232
GR	0,00192	0,02424	-0,13036	0,12697	-0,04266	6,23593
IE	0,00054	0,01842	-0,08975	0,10202	0,29235	5,47788
IT	0,00032	0,01513	-0,06396	0,08633	0,27574	3,24066

PT	0,00083	0,02087	-0,10800	0,13522	0,37804	5,62176
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4.2 STOCK MARKET

Table 2 presents the abnormal returns and cumulative abnormal returns of share markets. The results show abnormal returns on the day of the announcement and also around it, essentially negative returns, except on the second day after the announcement where there is a positive abnormal return. In terms of cumulative abnormal returns, the latter consistently shows negative values as a result of the negative reaction to the ECB's monetary policy announcements.

Table 2 - Abnormal Returns and Cumulative Abnormal Returns – Share Markets (2008-2012)

Dia	<u>AR</u>	<u>CAR</u>
-1	-0,02%	-0,02%
0	-0,04%	-0,06%
1	-0,11%	-0,16%
2	0,03%	-0,13%
3	-0,13%	-0,26%

Analyzing the euro area countries in individual terms, there is no linear trend, since the reactions to the ads vary greatly from country to country. However, there are some countries with similar trends. For example, Portugal, Spain and Italy have mostly positive cumulative abnormal returns, which translate into increases in stock prices. In the other countries, the reactions to the events are mostly negative, since in almost every day of the window events are presented negative abnormal returns, which in terms of the value of the shares translates into a decrease of its price.

Table 3 - Cumulative Abnormal Returns by Day and Country – Share Markets (2008-2012)

Cumulative Abnormal Return	Day				
	-1	0	1	2	3
AT	0,03%	-0,13%	-0,40%	-0,36%	-0,67%
PT	0,14%	0,36%	0,32%	0,48%	0,45%
ES	0,07%	0,43%	0,38%	0,58%	0,61%
FR	-0,03%	0,00%	-0,07%	-0,05%	-0,14%
DE	0,02%	-0,07%	-0,19%	-0,17%	-0,20%
IT	0,15%	0,28%	0,25%	0,44%	0,63%
BE	-0,02%	-0,09%	-0,29%	-0,20%	-0,29%
SI	-0,18%	-0,32%	-0,52%	-0,78%	-1,20%
GB	-0,20%	-0,26%	-0,25%	-0,11%	-0,16%
GR	0,04%	-0,18%	-0,38%	-0,18%	-0,67%
IE	-0,21%	-0,62%	-0,67%	-1,10%	-1,27%
Sample	-0,02%	-0,06%	-0,16%	-0,13%	-0,26%

It is also important to check whether the general trends presented above are linear for all types of news. Thus we consider it relevant to analyze the abnormal returns for the different types of news, good and bad news.

After this analysis, for the period from 2008 to 2012, ads classified as good news show a trend of positive abnormal returns throughout the event window, and on the day of the announcement these returns increase

considerably. Relative to the bad news, this trend is reversed, since both the day before and the 3 days after the event show abnormal returns generally negative, and again it is on the day of the event that the abnormal return is more accentuated, and in this case it is negative.

Analyzing the type of news in terms of cumulative abnormal returns, for the good news, as expected positive accumulated abnormal returns, however on the day of the announcement the values of the accumulated abnormal return are more pronounced effect that is fading in the period. Concerning the bad news, negative accumulated abnormal returns are also observed in the whole event window, but it is on the third day after the event that accumulated abnormal returns are more accentuated.

These results are in line with the conclusions drawn by Hayo & Kutan (2005), who refer to a greater impact of bad news as opposed to good news, also supporting the results of Beber & Brandt, (2010) that in his study of the market reaction of bonds to different types of news, good and bad, during periods of expansion and economic recession, refer to the existence of evidence of a greater impact of bad news on the return of bonds in periods of recession, we find that in the zone's stock market Euro, just as in the bond market, the impact of bad news is greater than good news.

However, there are a number of studies that refer to the lack of an explicit rule about the different impact of good and bad news (Kutan, Muradoglu e Sudjana, 2012; Kosmidou et al., 2014).

4.3 BOND MARKET

Analyzing the mean of the abnormal returns to the window of the event in general terms, it is verified that, as expected, there are abnormal returns on the day of the advertisement and also around the same, returns mostly negative, except on the third day after the announcement of a positive abnormal return, which indicates a positive reaction from the stock market as a result of the ECB's macroeconomic announcements.

Table 4 - Abnormal Returns and Cumulative Abnormal Returns – Bond Markets (2008-2012)

Day	<u>AR</u>	<u>CAR</u>
-1	-0,09%	-0,09%
0	-0,12%	-0,21%
1	-0,17%	-0,38%
2	-0,03%	-0,41%
3	0,16%	-0,25%

In particular terms, this is looking at individual countries, there is no linear trend, because the reactions to the ads differ from country to country.

We can however identify similar behaviors in some countries. In Germany, the United Kingdom, Finland there is a positive reaction to the events, which translates into positive abnormal returns on the very day of the events. In the other countries, the reaction to the events is different, mainly translating into negative abnormal returns, thus creating a greater market risk. The abnormal returns are most marked negatively on the day of the event, except in France, which shows its negative and more pronounced abnormal return on the second day after the event.

Table 5 - Cumulative Abnormal Returns by Day and Country – Bond Markets (2008-2012)

Cumulative Abnormal Return	Day				
	-1	0	1	2	3
AT	-0,07%	-0,10%	-0,17%	-0,13%	-0,01%
BE	-0,34%	-0,82%	-1,16%	-1,16%	-1,13%
FI	0,04%	0,23%	0,23%	0,21%	0,39%
IE	-0,18%	-0,62%	-0,98%	-0,79%	-0,70%
FR	-0,03%	-0,11%	-0,15%	-0,06%	0,14%
IT	-0,46%	-0,74%	-0,93%	-0,65%	-0,54%

GR	0,27%	0,04%	-0,15%	-1,05%	-0,91%
PT	0,15%	-0,27%	-0,66%	-0,64%	-0,53%
DE	-0,01%	0,45%	0,43%	0,40%	0,73%
ES	-0,34%	-0,62%	-0,98%	-0,92%	-0,83%
GB	-0,07%	0,23%	0,36%	0,32%	0,65%
Sample	-0,09%	-0,21%	-0,38%	-0,41%	-0,25%

In order to verify if the type of news influences the general trend verified previously we analyze the abnormal returns for the different types of news, good and bad news.

After this analysis, it is verified for the period from 2008 to 2012, ads classified as good news show a trend of positive abnormal returns throughout the window of the event, and on the day of the announcement these returns increase considerably, reacting to the Event, and then fade. Relative to the bad news, this trend is reversed, since both the day before and the 3 days after the event show abnormal returns generally negative, and again it is on the day of the event that the abnormal return is more accentuated, and in this case negative.

Analyzing the bond market as regards the type of news in terms of cumulative abnormal returns is seen in the good news, as we expected positive cumulative abnormal returns, the results reveal an increasing trend of accumulated abnormal returns throughout the Window of events, and it is on the day of the event that the growth is more accentuated. Relative to bad news, negative accumulated abnormal returns also occur, with the reverse of good news happening, that is, in this case, there is a downward trend along the window of events.

As Beber & Brandt, (2010), who studied the bond market reaction to different types of news, both good and bad, we found evidence of a greater impact of bad news on the bond market's return in times of recession. Supported by Hayo & Kutan (2005), who report a greater impact of bad news on good news. Regarding the classification of news in good and bad, it is important to mention that several studies refer to the lack of an explicit rule about the different impact caused by good and bad news (Kutan, Muradoglu e Sudjana, 2012; Kosmidou et al., 2014).

5. CONCLUSIONS

The ECB's monetary policy announcements are an important and powerful tool as they have the power to move markets, as well as helping central banks achieve their objectives (Kurihara, 2014).

Understanding the impact of monetary policy announcements on financial markets is critical to the calibration of future monetary policy, namely the analysis of returns serves as an indicator of the effectiveness of monetary policy in regulating the economy (Georgiadis & Gräb, 2016; Yin, Yang, & Handorf, 2010).

In this regard we study the reaction of the Eurozone financial markets, the stock market and bonds market, to the ECB's monetary policy announcements. We focus mainly on the analysis of cross-country impacts, as well as on reactions to two types of news, good and bad.

Our results are based on the traditional methodology of event study. This methodology was applied for the period from January 1, 2008 to December 31, 2012 and took into account a set of 91 ECB monetary policy announcements and daily quotes of the main stock indexes of the euro area, as well as daily quotes relating to treasury bonds.

After analyzing the results of the average abnormal returns and average cumulative abnormal returns, as a result of the application of the event study methodology, we find that in fact the ECB monetary policy announcements influence the euro area bond market as was already proven by Kurihara (2014), it was also observed that stock indexes, as well as the prices of treasury bonds, react differently to good and bad news.

As far as the stock market is concerned, our results reveal a greater impact of the bad news on stock prices, rather than the good news, in periods of recession, results that are in line with the conclusions drawn by Hayo & Kutan (2005) and Beber & Brandt, (2010). We also conclude that there is no linear trend in all countries, but there are some countries with similar trends, such as Portugal, Spain and Italy, which have mostly

positive cumulative abnormal returns, which translates into increases in stock prices. In the other countries, the reactions to the events are mostly negative, since in almost every day of the window events are presented negative abnormal returns, which in terms of the value of the shares translates into a decrease of its price.

Regarding the bond market, we also come to the conclusion that bad news has a higher impact on the value of bonds, which is in line with the study by Beber & Brandt, (2010) and Hayo & Kutan (2005). Regarding the analysis in terms of countries we find that, in Germany, United Kingdom, Finland there is a positive reaction to the events, which translates into abnormal positive returns on the day of the events. In the other countries the reaction to the events is opposite, mainly translating into negative abnormal returns, thus, there is a greater market risk. The abnormal returns are more negative on the day of the event, except in France, which shows its negative and more pronounced abnormal return on the second day after the event.

It should also be noted that, as a general rule, in the euro area, the ECB monetary policy news presents, according to our study, a greater impact on the bond market than on the stock market, which is contrary to the results of Hayo e Kutan (2005).

We have identified some limitations in our study that suggest some interesting directions for future research. Initially we can point out the absence of small fractions of data within the period under analysis. The fact that we adopt the traditional methodology of the study of events, which although inherent in the advantages, of simplicity, the hypothesis of the use of a limited number of observations, also presents some limitations. The main limitation of this methodology comes from the specific period of time that was used, from January 1, 2008 to December 31, 2012, since during that period there was an abnormal frequency of political interventions. Another of the inherent limitations of the study is the fact that it analyzes only monetary policy announcements, not considering the effect of other policy interventions (fiscal policy, financial sector policies, and even rescue programs). The selection and classification criteria also limit the present study, since the classification used is somewhat subjective. In addition, it would be interesting to investigate whether the effect of the ECB's announcements depends on the characteristics of the different eurozone countries, identifying the determinants of the different reactions.

Although the present dissertation focuses essentially on the impact of monetary policy decisions on the shareholder and bond market, the impact of these decisions on an individual basis also represents an important topic of study that could be studied and deepened later, since some authors which focused on the study of some of these specific measures of non-conventional monetary policy.

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