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IMPACT OF THE DOMESTIC AND THE US MACROECONOMIC NEWS ON THE ROMANIAN STOCK MARKET

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Abstract: This paper explores the effects of domestic and US macroeconomic announcement on the Romanian stock market. We found that some domestic macroeconomic announcement linked by the monetary policy had a consistent influence on the stock prices evolution. We also identify that some US macroeconomic news have a significant impact on the Romanian stock exchange, a fact explained by the linkages between the Romanian stock market and the international financial markets.

Keywords: Macroeconomic news announcement, Romanian stock market, financial linkages

JEL Classification: E00, G02, G14

1. INTRODUCTION

The macroeconomic variables influence on the capital markets is among the main topics of the financial theory. Several studies revealed a consistent impact of macroeconomics evolution on the financial markets (for example, Hondroyinannis and Papapetrou, 2001; Wongbango and Sharma, 2002; Flannery and Protopapadakis, 2002). In the Efficient Market Hypothesis (EMH) framework there were analyzed the effects of macroeconomic announcement on the capital markets (Fama, 1970; Pearce and Roley, 1985; Bollerslev et al., 2000; Boyd et al., 2005). The information contained by the macroeconomic news could induce significant changes in the investors' expectations (Fama, 1981; Ederington and Lee, 1993). The scheduled macroeconomic news led even to seasonal behaviors on some stock markets (Graham et al., 2003; Nikkinen et al., 2009).

Several articles approached the particularities of the macroeconomics evolution impact on the financial emerging markets (Ibrahim, 1991; Bilson et al., 2001; Murdaroglu et al., 2001; Wongbango and Sharma, 2002). For many of them, the macroeconomic news from industrialized countries have a more consistent influence than the domestic ones (Nasseh and Strauss, 2000; Bilson et al., 2001). In fact, even the stock markets from industrialized countries are often influenced by the international macroeconomic activity. The leading role of United States on the international financial system contributed to a high impact of the macroeconomic announcements from this country on the financial markets from around the world. Nikkinen and Sahlstrom (2004) found that for some European stock markets the influence of US macroeconomic news is more consistent than the domestic macroeconomic news.

In this paper we examine the effects of domestic and US macroeconomic news on the Romanian stock market. In the last decade, the foreign investors active role led to significant

linkages between the Bucharest Stock Exchange (BSE) and the main international financial markets. We employ regressions with dummy variables to identify the possible influences of the macroeconomic announcements from the two countries on an important index of BSE.

The rest of this paper is organized as follows. The second part describes the data and methodology used in our investigation. The third part presents the empirical results and the fourth part concludes.

2. DATA AND METHODOLOGY

In our analysis we employ daily closing values of BET-C, one of the main indexes of BSE. The sample covers a time period from January 2002 to September 2011. We computed the returns of the BET-C using the equation:

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

where:

- R_t is the return on the day t ;
- P_t is the closing market index price on the day t .

We also use dummy variables corresponding to the macroeconomic announcement from Romania and United States. For domestic macroeconomic news we use the following list of variables:

- Central Bank decisions about the monetary policy;
- Consumer Price Index;
- Industrial Production;
- Employment;
- Foreign Trade Balance;
- Gross Domestic Product.

We also use the following variables corresponding to macroeconomic news from United States:

- reports on manufacturing and non-manufacturing of the Institute for Supply Management (NAPM: Manufacturing and NAPM: Non-manufacturing);
- Employment;
- Producer Price Index;
- Retail Sales;
- Consumer Price Index;
- Import and Export Price Index;
- Gross Domestic Product;
- Consumer Confidence;
- Employment Cost Index.

We employ the two series of variables in regressions with dummy variables:

$$R_t = \lambda_0 + \sum_{i=1}^N \lambda_i \text{MACRONEWS}_{i,t} + \varepsilon_t \quad (2)$$

where $\text{MACRONEWS}_{i,t}$ is a dummy variable for i macroeconomic news, taking the value 1 in the days when i occurs and 0 otherwise.

For these regressions we use ARCH terms to correct the heteroskedasticity if Breusch - Pagan and White's tests find it.

3. EMPIRICAL RESULTS

The results of Equation (2), with dummy variables corresponding to the domestic macroeconomic announcement, are presented in the Table 1. We identified a significant impact only for the Central Bank decisions about monetary policy and Consumer Price Index.

Table 1 - Impact of the domestic macroeconomic news announcements on BET-C returns

Variable	Coefficient	Std. Error	z	p-value
const	0.0930837	0.0341439	2.7262	0.00641***
Central Bank decisions about the monetary policy	-0.400093	0.184163	-2.1725	0.02982**
Consumer Price Index	-0.317161	0.146791	-2.1606	0.03072**
Wages	0.0699751	0.140029	0.4997	0.61727
Industrial Production	0.196065	0.181149	1.0823	0.27910
Employment	0.242173	0.240737	1.0060	0.31443
Foreign Trade Balance	-0.0972296	0.190817	-0.5095	0.61037
Gross Domestic Product	0.111716	0.251331	0.4445	0.65668
ARCH(0)	0.101273	0.0254418	3.9806	0.00007***
ARCH(1)	0.238209	0.0336416	7.0808	0.00001***
GARCH(1)	0.753269	0.0305366	24.6678	0.00001***

In the Table 2 there are presented the results of Equation (2) with dummy variables corresponding to US macroeconomic announcement. We found a significant influence for three variables: reports on manufacturing of the Institute for Supply Management, Consumer Price Index and Gross Domestic Product.

Table 2 - Impact of the US macroeconomic news announcements on BET-C returns

Variable	Coefficient	Std. Error	z	p-value
const	0.103582	0.02504	3.8703	0.0001***
NAPM: Manufacturing	0.389021	0.09628	4.0089	0.0001***
NAPM: Non-manufacturing	0.0386258	0.10382	0.3702	0.7111
Employment	0.111073	0.102971	1.0701	0.2908
Retail Sales	-0.064212	0.103602	-0.5594	0.5759
Producer Price Index	0.129962	0.371128	0.3598	0.7196
Import and Export Price Index	-0.141512	0.370164	-0.3817	0.70238
Consumer Confidence	-0.0382537	0.100299	-0.3805	0.7037
Consumer Price Index	0.196248	0.115683	1.6977	0.0898*
Employment Cost Index	0.015925	0.201208	0.0802	0.9371
Gross Domestic Product	-0.341075	0.164821	-2.0428	0.0471**

ARCH(0)	0.05555	0.01438	3.8672	0.0001***
ARCH(1)	0.21425	0.02649	8.0971	0.0001***
GARCH(1)	0.79064	0.02429	32.2351	0.0001***

4. CONCLUSIONS

In this paper we approached the influence of domestic and US macroeconomic news on the Romanian stock market. For both categories of variables we identified some items with significant impact.

In the case of domestic macroeconomic announcement we identified relevant effects for the Consumer Price Index and the Central Bank decisions about the monetary policy. These variables have a direct impact on the monetary situation, having an influence on the stock prices. The announcements about some important variables, such as GDP, Employment, Wages or Industrial Production, have low effects. In general, these variables don't have a major influence on the monetary situation on short term.

For the US macroeconomic news we found a significant impact on BSE for three variables: the reports on manufacturing of the Institute for Supply Management, the Consumer Price Index and the Gross Domestic Product. Such variables have a consistent influence not only on the New York Stock Exchange but also on some important European stock markets (Nikkinen and Sahlstrom, 2004). The financial linkages between these stock markets and BSE could explain this influence.

This investigation could be extended with the analysis of the macroeconomic announcements impact on the volatility of the stock prices. We could also investigate the relation between some macroeconomic news and the seasonal effects from BSE.

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