The Impact of Fed Policy Announcements on Emerging Stock Markets: Evidence from Borsa Istanbul

Ece C.Akdogan, PhD
Deniz Ilalan, PhD
Department of Banking and Finance, Çankaya University, Turkey

Abstract

This paper aims to understand the impact of US nonfarm payroll announcements on emerging stock markets through concentrating on the Turkish Stock Exchange: BIST 100. We not only investigate the impact of each of the three components of the nonfarm payroll data for the whole period under consideration, but also look for possible differences among four sub-periods. A comparative analysis leads us to conclude that it is not the nonfarm payroll which significantly affect BIST 100, but the fact that it is regarded as an important indicator to foresee Fed's policy actions that can alter the capital flows.

Keywords: Fed Policy Announcements, US Nonfarm Payrolls, Emerging Stock Markets

Introduction

Stock returns are believed to fluctuate with the business cycle and the data releases of macroeconomic variables, which not only signal the future state of the economy but also exert important impacts on firms expected cash flows and risk adjusted discount rates. Since macroeconomic variables potentially alter the future consumption and investment opportunities, it is a well-argued fact that macroeconomic news releases and monetary policy announcements affect stock prices. Therefore, the response of stock prices to macroeconomic variables is a vastly researched topic in the literature. Most widely investigated macroeconomic variables include interest rates (Flannery and James 1984, Hodrick 1992), aggregate output and industrial production (Bradley and Jansen 2004), unemployment (Jagannathan et al. 1998, Boyd et al. 2005) and inflation (Fama and Schwert 1977, Fama 1981). Besides, numerous empirical studies focus on multiple macroeconomic variables (Cheng 1995, Pesaran and Timmermann 1995, Chen 2009) and across countries (Asprem 1989, Abugri 2008).

Although the ultimate objectives of monetary policy are expressed in terms of macroeconomic variables such as output, employment, and inflation, the influence of monetary policy instruments on these variables is at best indirect while the most direct and immediate effects of monetary policy actions, such as changes in the federal funds rate, are on the financial markets (Bernanke and Kuttner 2005). On the other hand, movements in the stock market can also significantly affect the macroeconomy and are therefore likely to be an important factor in the determination of monetary policy (Rigobon and Sack 2003). For instance, after markets for securitized credit products collapsed dramatically in the second half of 2007, growth in a number of industrialized economies slowed markedly, suggesting that disorders in financial markets can have important macroeconomic consequences (Gilchrist et al. 2009). Moreover, with the globalization of financial markets which had intense implications for world saving and investment flows, these relationships are evolved into a more complex structure.

Although financial globalization is actually not a new phenomenon, since 1980s, leaded by the rapid developments in the communication sector accompanied with the deregulation and the increased institutionalization of financial markets, it has been observed that financial markets are in an extreme integration process which, in a sense, renders the emergence of a global financial space. This recent wave of financial globalization that has occurred since the mid-1980s has been marked by a flood in capital flows among industrial countries and, more remarkably, between industrial and developing countries (Prasad et al. 2003). Although the usual response to this vast increase in international capital flows to emerging markets is an optimistic one since this development allows the poorer economies to accelerate their growth by borrowing more from abroad, it is also possible that this widespread acceleration of capital account liberalization in the last decades has introduced a very high degree of volatility into the international capital movements which might have rendered capital flows to be an important new negative shock to the world economy, especially to developing ones due to their shallow financial markets (Woo 2000). As the integration of financial markets naturally foster the interdependencies among them, the globalization of financial markets, as also argued by Knight (1998), not only creates the prospect of a more efficient worldwide allocation of savings and investment compared to those times when domestic investment in most countries was constrained by domestic saving but also carries large risks, since instability in one country can now transmit contagion to others. Besides, in today's highly globalized world, a macroeconomic announcement which is "bullish" for one market could be "bearish" for another and vice versa. Since financial capital flows reached

enormous numbers and their impact on global economy is beyond the volume of international trade and international corporations (Popovici 2009), it is no surprise that the monetary policy applications of major economies, especially the United States which is documented as the most influential market in the world (Eun and Shim 1989), can potentially export important implications on global scale, especially for emerging economies, which explains the intense interest of the investors worldwide on the policy announcements of Fed. However, this interdependence among financial markets is quite understudied in the literature where the existing research mainly focuses on the effects of US news for the developed markets with a dearth for emerging ones. For instance, Becker et al. (1995) examine the source of equity market linkages between the US and the UK through concentrating on intraday price movements of stock index futures contracts and conclude that their findings support the hypothesis that the documented international equity market linkages are attributable to the reactions of foreign traders to public information originating from the US. Also Connolly and Wang (1998) study the cross-market equity return and volatility linkages for US, UK and Japan and find that news announcements appear to explain, at least partially, the volatility spillovers among these three markets. In another study, Andersen et al. (2007) examine the response of US, German and UK stock, bond and foreign exchange markets to real-time US macroeconomic news and report that news produces conditional mean jumps indicating that high-frequency stock, bond and exchange rate dynamics are linked to fundamentals. One of the most comprehensive studies on this research topic is provided by Nikkinen et al. (2006) who survey how global stock markets are integrated with respect to the US macroeconomic news announcements through investigating the effect of ten important scheduled US macroeconomic news announcements on 35 local stock markets that are divided into six regions and report that the G7 countries, the European countries other than G7 countries, developed Asian countries and emerging Asian countries are closely integrated with respect to the US macroeconomic news, while Latin America and Transition economies are not influenced by them. Among the few studies that search for the impact of US macroeconomic news on emerging markets is carried out by Andritzky et al. (2007) who focus on bond markets of 12 emerging countries and find that announcements matter less for countries with more clear policies and higher credit ratings. Cakan et al. (2015) also analyze the impacts of US macroeconomic surprises on the volatility of twelve emerging stock markets and find that volatility shocks are persistent and asymmetric indicating that US employment situation and economic growth have an impact on many emerging stock markets where positive US macroeconomic news make many emerging stock markets less volatile. Eichengreen and Gupta (2015)

investigate the impact of Fed's tapering talk on a very large set emerging markets together with Turkey, through focusing on the changes in exchange rates, foreign reserves and equity prices and find that countries with larger and more liquid markets and larger inflows of capital in prior years experienced more pressure on them. For Turkey along with six other markets, their findings indicate a decline of more than 10% in the stock market.

Following the arguments above, this paper is aimed to investigate the impact of US nonfarm payroll announcements on emerging stock markets through concentrating on Turkish Stock Exchange: Borsa Istanbul (BIST 100). Considering the arguments of Becker et al. (1995) who reconcile the US market's influential power to two causes where the first one is attributable to the dominance of the US in the world marketplace and the second arises from a systematic tendency of foreign traders to overreact to the movements of the US market, Turkey represents an ideal setting to search for the effects of Fed's policy announcements as she not only carries almost negligible trade volume with US but also the weight of foreign traders is around 65% with respect to the total trading volume in Turkish stock market. Thus any reported significant effect should be due to the interdependencies among financial markets. The reason why we concentrate on the impact of US nonfarm payroll announcements is explained in the next section. Then the data, methodology and results are provided. Finally, the last section concludes.

US Nonfarm Payrolls

It is widely argued that one of the most important economic indicators for the US economy is the employment situation which is released generally on the first Friday of each month at 8:30 am EST. US Nonfarm Payroll data is a researched, recorded and reported statistics for the previous month by the US Bureau of Labor Statistics which is comprised of the total number of paid US workers of any business[118], the unemployment rate and the estimates on the average hourly earnings of all nonfarm employees. Before its announcement, around 100 economists are asked to declare their conjecture regarding the total number of paid workers, unemployment rate and average hourly wage increases via a questionnaire. Then the mean of these expectations is proclaimed.

One of the reasons that it is usually accepted as the "big one" rests in its timeliness. The markets react very quickly and generally in a very volatile fashion around the time that the nonfarm payroll data is released

[118] Excluding the general government employees, the private household employees, the employees of nonprofit organizations that provide assistance to individuals and the farm employees.

(Beber and Brandt, 2009). Besides it reveals a highly rich information content which can help in forecasting future economic activity. However, our interest in nonfarm payroll data does not arise from its importance for US labor market and thus being a vital indicator for the health of US economy, but instead, due to the facts that US is the most influential market in the world, and Fed links its monetary policy applications to this data via the forward guidance made by its officials.

On May 2013, officials of the Federal Reserve System first began to mention the possibility of tapering its bond purchases (gradually reducing them from the existing $85 billion monthly rate to something lower, presumably as a prelude to phasing them out entirely) as the US economy had become strong enough for Fed to feel confident in reducing the level of security purchases. A milestone to which many observers point is May 22, 2013 on which date Chairman Bernanke raised the possibility of tapering in his testimony to the congress which had a sharp negative impact on economic and financial conditions in emerging markets (Eichengreen and Gupta 2015). Increases in employment mean that work force is growing and newly employed people now have more money to spend on goods and services, which will further fuel the growth. Hence, nonfarm payroll data, especially the total number of paid workers inevitably became important for financial markets throughout the world. During the quantitative easing period, there has been a huge flow of money from developed markets to emerging ones. However, as Fed began to witness some improvements in the US economy and started to mention about tapering, it intimidated the emerging economies since this will cause a decrease in dollar supply in global financial markets. Besides, further improvements in the US economy would also trigger an increase in the Federal Funds Rate as well. Thus, it is quite sensible to expect a negative correlation between the total number of paid workers and the stock index of an emerging market.

On December 18, 2013, eventually Fed declared that it will reduce its purchases of treasury and mortgage-backed securities by $10 billion a month beginning in January 2014. In a news conference, Chairman Ben Bernanke stated that he expects the Federal Open Market Committee (FOMC) to take "further measured steps at future meetings" to reduce the bond purchasing program which had begun in September 2012. Bernanke, speaking at what is likely to be his last news conference before handing over the post to current Vice Chair Janet Yellen, said the FOMC had "seen meaningful, cumulative progress in the labor market". On December 20, 2013, the US Senate voted 59-34 for cloture on Yellen's nomination. On January 6, 2014, she was

confirmed as the chair of the Federal Reserve. Yellen is considered by many on Wall Street to be a "dove[119]".

The Jackson Hole speech of Yellen on August 22, 2014 is of particular interest. In her speech, she stated that inflation has fallen short of their 2 percent objective while the labor market was still very far from any reasonable definition of maximum employment. Moreover, for the recent years, wage inflation had averaged about 2 percent, and there had been little evidence of any broad based acceleration in either wages or compensation. In fact, wages had been about flat, growing less than labor productivity in real terms. This pattern of subdued real wage gains suggested that nominal compensation could rise more quickly without exerting any significant upward pressure on inflation. Besides, since wage movements had historically been sensitive to tightness in the labor market, the recent behavior of both real and nominal wages showed weaker labor market conditions than would be indicated by the current unemployment rate. In summary, although she did not find the increase in average hourly wages sufficient by that time, she tied the timing of raising the Fed fund rates to the improvement in this component of nonfarm payrolls. After this speech, in addition to total number of paid workers, the markets began to take into account the average hourly wage increases as well.

In line with the above-summarized historical Fed policy announcements, it is clear that there exist two dates, which can be regarded as milestones, specifically Bernanke's famous tapering talk and Yellen's Jackson Hole speech, which reshaped the investor's attention worldwide. Therefore, this paper is aimed to investigate the effects of these two declarations on stock returns of emerging markets by focusing on BIST 100.

Data, Methodology and Findings

For the dependent variable, we consider the response of BIST 100 in percentage terms, following the release of the announcement of US nonfarm payroll data for the period 12/2011:12/2015. We consider the deviations from the expected values for total number of paid workers, unemployment rate and average hourly wage increases which comprise the nonfarm payroll as independent variables. Since, rather than the announced number, the deviation from the mean of these expectations of economists are explanatory for stock market movements we employ the deviation between the expected and the announced values, together with their difference which are presented in figures below (Figure 1,2 and 3)

[119] More concerned with unemployment than with inflation

Figure 1: The Expected and the Announced Total Number of Paid Workers and Their Differences between December 2011 and December 2015

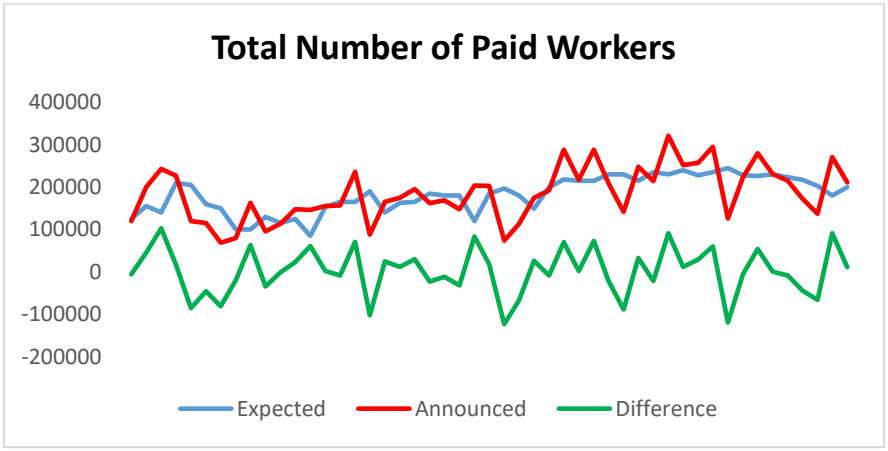


Figure 2: The Expected and the Announced Average Hourly Wage Increases and Their Differences between December 2011 and December 2015

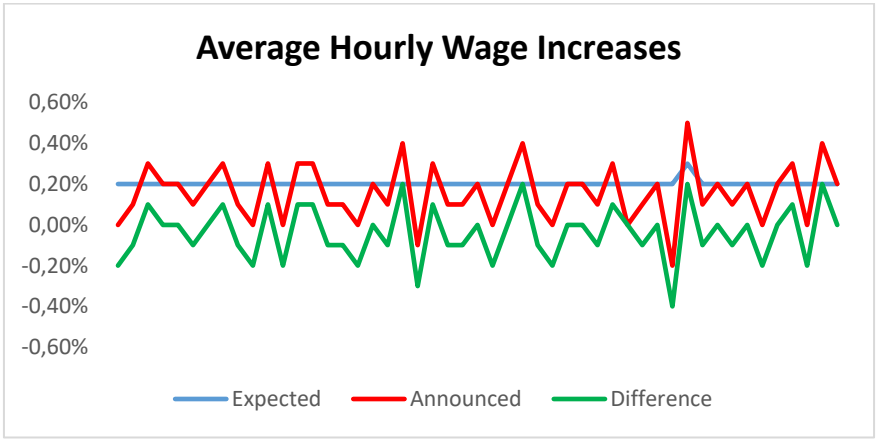
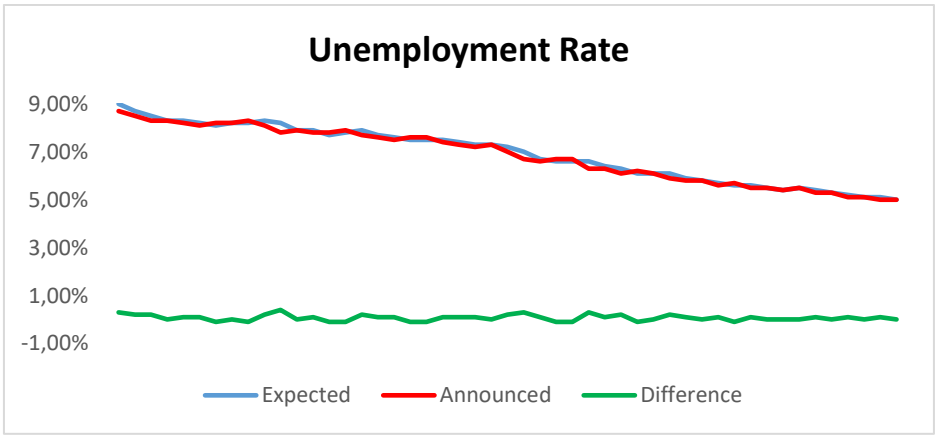


Figure 3: The Expected and the Announced Unemployment Rate and Their Differences between December 2011 and December 2015



As argued by Wasserfallen (1989) such news adds volatility to stock prices which usually happens in a short and speculative manner. Among others, Almeida et. al. (1998), Balduzzi et. al (2001) Hautschand Hess (2002) also argue that nonfarm payroll data announcements have its strongest impact within the first two to four minutes. We, therefore concentrated BIST 100 index on minute basis immediately after the announcement of nonfarm payroll data and analyzed the movements of BIST 100 in either direction till there is a retracement or it goes sideways. We find out that most of the movement is realized within the first five minutes following the announcement (more than 85% of the total data). The weights of the observations within the first 10 minutes are presented in Table 1.

Table 1 Minute Findings

Movement of stock prices without retracement	0 to 1 min	1 to 2 mins	2 to 3 mins.	3 to 5 mins.	5 to 10 mins.
Number of obs.	9	10	9	13	7

In our analysis we applied the following linear regression equation:

$$S_t = \alpha + \beta_1 TN_t + \beta_2 Unemp_t + \beta_3 Wage_t + \varepsilon_t \quad (1)$$

where S_t denotes the movement of BIST 100 in percentage terms within 10 minutes following the announcement. TN_t, $Unemp_t$ and $Wage_t$ refers to the difference between the expected and announced total number of paid workers, unemployment rate, and average hourly wage increases respectively. ε_t is an independent and identically distributed noise term. The descriptive statistics are presented in Table 2 and regression results are summarized in Table 3.

Table 2 Descriptive statistics

Variable	Number of observations	Mean	Std. Dev.	Min.	Max.
NFP	48	0.03172	0.33203	-0.62440	0.73570
Unemployment	48	0.00069	0.00126	-0.00100	0.00400
Wage	48	-0.00042	0.00135	-0.00400	0.00200

Table 3 Regression results

	Whole Sample (12/2011-12/2015)	Before Bernanke (12/2011-05/2013)	After Bernanke (05/2013-12/2015)	Before Yellen (12/2011-08/2014)	After Yellen (08/2014-12/2015)
Constant	-.0.00082 (0.00098)	-0.00126 (0.00077)	-0.00018 (0.00112)	-0.00007 (0.00129)	-0.00076 (0.00101)
Total Number	**-0.00882****	-0.00106	**-0.01940*****	**-0.00575***	-

of Paid Workers	(0.00263)	(0.00166)	(0.00351)	(0.00318)	**0.02029***** (0.00360)
Unemployment Rate	0.26700 (0.70680)	-0.16102 0.44174	0.30196 (0.97491)	0.34253 (0.79224)	-1.22880 (1.47154)
Average Hourly Wage Increases	-0.96672 (0.66494)	-0.19026 (0.57322)	-1.13942 (0.74117)	-0.85304 (0.93060)	- **1.32508***** (0.64768)
Number of observations	48	18	30	33	15
R squared	0.28	0.04	0.59	0.16	0.80

Notes: Sample 1 is the observations between 2011 December-2013 May, Sample 2 is the observations between 2013 May-2015 December, Sample 3 is the observations between 2014 August-2015 December and Sample 4 is the entire sample from 2011 December to 2015 December. *, ** and *** indicate significance at the 10%, 5% and 1% levels, respectively. Standard errors are given in parentheses.

As can be observed from the regression results depicted in Table 3, among the components of nonfarm payroll data, only the deviation in the total number of paid workers is found to have a statistically significant effect on BIST 100 for the whole period under consideration with 5% significance. This finding is somewhat interesting because nonfarm payroll data is claimed to be one of the most important data on global scale and therefore each of its components could be expected to have similar effects. So, in an attempt to investigate the potential sources for this dissimilarity and to examine the effects of Bernanke's and Yellen's speeches, we divided our research period into four sub-periods, specifically the periods before and after Bernanke's famous tapering talk, and the periods before and after Yellen's Jackson Hole Speech and the period in between these talks, after which we repeated our analysis separately for each of the sub-periods under consideration and find that the obtained results for the sub-periods provide conflicting findings. First of all, the deviation in the total number of paid workers is found to have no significant effect on BIST 100 for the sub-period of "before Bernanke's tapering talk". However, when the sub-period of "after Bernanke's tapering talk" is considered, it is found to have a statistically significant adverse impact on BIST 100 with a 1% significance level. Likewise, when the effect of Yellen's Jackson Hole speech is examined, the findings indicate no statistically significant effect of average hourly wage increases until Yellen makes her Jackson Hole speech, while for the post Yellen speech period findings report a statistically significant adverse impact on BIST 100 with 10% confidence level. On the other hand, our findings lack to provide any statistically significant effect of unemployment rate which is widely accepted

as a very important indicator for US economy, for any of the sub-periods under consideration. However, although, in contrast to its importance, we could not detect any statistically significant effect of this component on BIST 100. These controversial results indicate that it is not the nonfarm payroll data itself which significantly affects BIST 100, but the fact that it is regarded as an important indicator to foresee Fed's policy actions by the investors.

A comparison of the obtained results for the whole period and the sub-periods reflects that the nonfarm payroll has become an influential indicator for BIST 100 after it is signalized by Fed. Although the results report a statistically significant inverse effect of the deviation in the total number of paid workers on BIST 100 for the whole period under consideration with 5% significance, this finding arises from the strong impact of this component during post Bernanke's talk period. Since the majority of the observations within our entire data belong to this sub-period for which our results indicate a statistically significant adverse impact of the deviation in the total number of paid workers on BIST 100 with 1% confidence level with no significant affect reported for the period before Bernanke's talk, our findings obtained for the whole period for this component can be argued to be attributable to the dominance of this sub-period in terms of both the number of observations and its strong significance level (in fact its *p* value is almost 0). The same discussion holds for the average hourly wage increases but this time although our results indicate a statistically significant adverse impact of this component on BIST 100 for post Yellen's speech period with 10% significance level, as the majority of the observations belong to the period of before Yellen's speech for which our results indicate no significant effect, the findings for the whole research period lack to report any statistically significant effect of average hourly wage increases. Although the US nonfarm payroll data deemed to be one of the most important announcements as a whole, interestingly markets pay very little attention to the unemployment component probably since it is not emphasized by Fed officials.

Conclusion

It is a well-known fact that macroeconomic news releases and monetary policy announcements affect stock prices. However, as the integration of the financial markets naturally foster the interdependencies among them, the monetary policy applications of major economies, especially the United States, can potentially export important implications for the rest of the world, especially for emerging economies, which explains the intense interest of the investors worldwide on the policy announcements of Fed. However, this interdependence among financial markets is highly

understudied in the literature where the existing research mainly focuses on the effects of US news for the developed markets with a dearth for emerging ones. In an attempt to fulfill this gap and to search for the possible effects of Fed policy announcements, we intended to investigate the impact of US nonfarm payroll on an emerging market stock index, BIST 100. For this purpose, we not only investigate the impact of each of the three components of the nonfarm payroll data, specifically the deviation in the total number of paid workers, the average hourly wage increases, and the unemployment rate, on BIST 100 for the whole period under consideration, but also search for possible differences among four sub-periods that are based on policy announcements of Fed.

The research findings indicate no statistically significant effect of deviation in the total number of paid workers' component on BIST 100 until Bernanke's tapering talk while afterwards it is found to have a statistically significant adverse effect on BIST 100 with 1% significance level. Similarly, our findings do not report a statistically significant impact of average hourly wage increases on BIST 100 until Yellen's speech whereas it is found to have a statistically significant impact with 10% confidence level. Besides, our findings lack to provide any statistically significant effect of unemployment rate for any of the periods under consideration. A comparative analysis of the research results leads us to conclude that it is not the nonfarm payroll and its components themselves which significantly affect BIST 100, but the fact that it is regarded as an important indicator to foresee Fed's policy actions that can alter the foreign currency and capital flows. Whenever an indicator is signalized with a forward guidance from Fed, it statistically starts to affect BIST 100 significantly.

Another finding of this paper rests on the short term impact of these announcements in the sense that most of its effect is observed within the first 5 minutes after the release of the nonfarm payroll data which can help short term trades in shaping their trading strategies.

Although we test the impact of nonfarm payroll and its components on an emerging market stock index BIST 100, as a final note it would be worthy to remind that Turkey is not a major trading partner of US. Actually, the trade volume between these two countries is almost negligible. Thus, our results may significantly deviate for stock markets of emerging economies that have considerable trade relations with the US since they will be exposed to another effect via export-import channel as well which may also lead to some long term effects. Hence, we strongly encourage future research to focus on such issues.

References:

Abugri, B. (2008) 'Empirical relationship between macroeconomic volatility and stock returns: Evidence from Latin American markets', International Review of Financial Analysis, 17(2), 396–410.

Almeida A., C. Goodhart and R. Payne (1998), 'The Effects of Macroeconomic News on High Frequency Exchange Rate Behavior',Journal of Financial and Quantitative Analysis, 33 (3), 383-408.

Andersen T.G., **T. Bollerslev**, **F.X. Diebold**and **C. Vega**, (2005) 'Real-Time Price Discovery in Stock, Bond and Foreign Exchange Markets', NBER Working Paper No. 11312

Andritzky, J. R., G. J. Bannister and N.T. Tamirisa, (2007).'The impact of macroeconomic announcements on emerging market bonds,' Emerging Markets Review, 8(1), 20-37.

Asprem, M. (1989), 'Stock prices, asset portfolios and macroeconomic variables in ten European countries, Journal of Banking and Finance, .Vol. 13 Issues 4-5, pp. 589-612.

Balduzzi P., E. J. Elton, and T. C. Green (2001), 'Economic News and Bond Prices: Evidencefrom the US Treasury Market', Journal of Financial and Quantitative Analysis, 36 (4),523-543.

Beber A., and Brandt M.W. (2009), 'Resolving Macroeconomic Uncertainty in Stock and Bond Markets, Review of Finance, 13: 1-45.

Becker, K.G., J. E. Finnerty and J. Friedman (1995), 'Economic News and Equity Market Linkages Between the US and U.K', Journal of Banking and Finance, Vol. 19 Issue 7, pp.1191-1210.

Bernanke, B. and K. Kuttner, 'What Explains the Stock Market's Reaction to Federal Reserve Policy?', The Journal of Finance, Vol. 45, No 4, pp.1089-1108.

Boyd, J., J. Hu and R. Jagannathan (2005), 'The Stock Market's Reaction to Unemployment News: Why Bad News Is Usually Good for Stocks',The Journal of Finance, Vol. 60, No 2, pp. 649-672.

Bradley, M., and D. Jansen (2004), 'Forecasting With a Nonlinear Dynamic Model of Stock Returns and Industrial Production', International Journal of Forecasting, 20, pp. 321-342.

Cakan, E., N.Doytch and K.Upadhyaya (2015), 'Does US macroeconomic news make emerging financial markets riskier?', Borsa Istanbul Review, 15-1. pp. 37-43

Chen, S. (2009), 'Predicting the bear stock market: Macroeconomic variables as leading indicators', Journal of Banking and Finance, Vol 33, Issue 2, pp. 211-223.

Cheng, A. (1995) 'The UK Stock Market and Economic Factors: A New Approach', Journal of Business Finance and Accounting, 22. pp. 129-142.

Connoly R.A., and F.A. Wang (1998), 'Economic News and Stock Market Linkages: Evidence from the US, UK, and Japan', Proceedings of the Second Joint Central Bank Research Conference on Risk Management and Systemic Risk 01/1998; 1.

Eichengreen, B. and P. Gupta, (2015) 'Tapering Talk: The Impact of Expectations of Reduced Federal Reserve Security Purchases on Emerging Markets'. World Bank Policy Research Working Paper No. 6754.

Eun, C.S. and S. Shim, (1989), 'International transmission of stock market movements', Journal of Financial and Quantitative Analysis, Vol.24, pp.241-256.

Fama, E., and W. Schwert (1977), 'Asset Returns and Inflation', Journal of Financial Economics, 5, pp.115-146.

Fama, E. (1990), 'Stock Returns, Expected Returns and Real Activity', The Journal of Finance, Vol. 45, No 4, pp.1089-1108.

Flannery, M., and C. James (1984), 'The Effect of Interest Rate Changes on the Common Stock Returns of Financial Institutions', The Journal of Finance, Vol. 39, No. 4 pp. 1141-1153.

Gilchrist, S., V. Yankov, and E., Zakrajsek, (2009) 'Credit market shocks and economic fluctuations: Evidence from corporate bond and stock markets,' Journal of Monetary Economics, , vol. 56(4), pp. 471-493.

Hamao, Y., R.W. Masulis and V. Ng (1990) 'Correlations in Price Changes and Volatility across International Stock Markets',Review of Financial Studies, 3 (2): 281-307.

Hautsch N. and D.Hess (2002), 'The Processing of Non-Anticipated Information in Financial Markets: Analyzing the Impact of Surprises in the Employment Report', European Finance Review 6 (2): 133-161.

Hodrick, R. (1992), 'Dividend Yields and Expected Stock Returns: Alternative Procedures for Inference and Measurement', The Review of Financial Studies, Vol 5, No.3, pp. 357-386.

Jagannathan, R., K. Keiichi and H. Takehara (1998), 'Relationship Between Labor-Income Risk and Average Return: Empirical Evidence From The Japanese Stock Market', Journal of Business, 71, pp. 319-347.

Knight, M. (1998), 'Developing Countries and Globalization of Financial Markets', IMF Working Paper WP/98/105.

Lau S.T., T.H. McInish (1993).'Comovements of international equity returns: A comparison of the pre- and post-October 19, 1987, periods',Global Finance Journal 4 (1) 1–19.

Nikkinen, J. and M. Omran, 'Global stock market reactions to scheduled US macroeconomic news announcements' (2006), **Global Finance Journal** 17(1) pp. 92-104.

Peseran, H. and A. Timmermann (1995), 'Predictability of Stock Returns: Robustness and Economic Significance', The Journal of Finance, Vol. 50, No 4, pp.1201-1228.

Popovici, S.M.H. (2009), 'Globalization of financial markets', Sibiu Alma Mater University Journals. Series A. Economic Sciences, Vol. 2 No 1, pp. 11-14.

Prasad E.S., K. Rogoff, S. Wei, and M. A. Kose (2003), 'Effects of Financial Globalization on Developing Countries ', IMF Occasional Paper 220.

Rigobon, R. and B. Sack (2003), 'Measuring the Reaction of Monetary Policy to the Stock Market,' The Quarterly Journal of Economics, vol. 118(2), pp 639-669.

Wasserfallen, W. (1989), 'Macroeconomic news and the stock market'. Journal of Banking and Finance', Vol. 13 Issue 4-5, pp. 613-626.

Woo, W.T. (2000), 'Coping with Accelerated Capital Flows from the Globalization of Financial Markets', ASEAN Economic Review, Vol. 17, No.2, pp. 193-204.