

Journal of Futures Markets / Volume 23, Issue 4 / pp. 315-345

Option volume and volatility response to scheduled economic news releases

John R. Nofsinger  Brian Prucyk 

First published: 24 February 2003

<https://doi.org/10.1002/fut.10064>

Citations: 49

Abstract

In this article, we examine the impact of 21 different types of scheduled macroeconomic news announcements on S&P 100 stock-index option volume and implied volatility. We find that there is a 2-h delay after the announcement before volume increases. However, there is an immediate increase in volatility, which slowly dissipates over several hours. Further analysis shows that most of the high volume and volatility after announcements come from the announcements that are considered bad news. That is, bad news creates high volatility and high volume, whereas good news elicits lower volume and is not associated with higher volatility. These results are not consistent with the predictions of any one model. We also find that the announcements that cause the largest reaction in the equity option market are Consumer Credit, Consumer Spending, Factory Inventories, NAPM, and Non-Farm Payrolls. Six other announcements elicit a mild response. © 2003 Wiley Periodicals, Inc. Jrl Fut Mark 23:315–345, 2003

BIBLIOGRAPHY

Adams, G., McQueen, G., & Wood, R. (1999). The effects of inflation news on high frequency stock returns (Working paper). University of Memphis.

| [Google Scholar](#) |

Almeida, A., Goodhart, C., & Payne, R. (1998). The effects of macroeconomic news on high frequency exchange rate behavior. *Journal of Financial and Quantitative Analysis*, 33, 383–408.

| [Web of Science®](#) | [Google Scholar](#) |

Andersen, T. G., & Bollerslev, T. (1998). Deutsche mark-dollar volatility: Intraday activity patterns, macroeconomic announcements, and longer run dependencies. *Journal of Finance*, 53, 219–265.

| [Web of Science®](#) | [Google Scholar](#) |

Baldazzi, P., Elton, E., & Green, T. C. (2001). Economic news and bond prices: Evidence from the U.S. treasury market. *Journal of Financial and Quantitative Analysis*, 36, 523–544.

| [Web of Science®](#) | [Google Scholar](#) |

Barberis, N., Shleifer, A., & Vishny, R. (1998). A model of investor sentiment. *Journal of Financial Economics*, 49, 307–343.

| [Web of Science®](#) | [Google Scholar](#) |

Broadie, M., & Detemple, J. (1996). American options valuation: New bonds, approximations, and a comparison of existing methods. *Review of Financial Studies*, 9, 1211–1250.

| [Web of Science®](#) | [Google Scholar](#) |

Chan, K., Chung, Y. P., & Johnson, H. (1995). The intraday behavior of bid–ask spreads for NYSE stocks and CBOE options. *Journal of Financial and Quantitative Analysis*, 30, 329–346.

| [Web of Science®](#) | [Google Scholar](#) |

Christensen, B. J., & Prabhala, N. R. (1998). The relation between implied and realized volatility. *Journal of Financial Economics*, 50, 125–150.

| [Web of Science®](#) | [Google Scholar](#) |

Christie-David, R., & Chaudhry, M. (1999). Liquidity and maturity effects around news releases. *Journal of Financial Research*, 22, 47–67.

| [Google Scholar](#) |

Ederington, L. H., & Lee, J. H. (1993). How markets process information: News releases and volatility. *Journal of Finance*, 48, 1161–1191.

| [Web of Science®](#) | [Google Scholar](#) |

Ederington, L. H., & Lee, J. H. (1995). The short-run dynamics of the price adjustment to new information. *Journal of Financial and Quantitative Analysis*, 30, 117–134.

| [Web of Science®](#) | [Google Scholar](#) |

Ederington, L. H., & Lee, J. H. (1996). The creation and resolution of market uncertainty: The impact of information releases on implied volatility. *Journal of Financial and Quantitative Analysis*, 31, 513–539.

| [Web of Science®](#) | [Google Scholar](#) |

| [Google Scholar](#) |

Fleming, J. (1998). The quality of market volatility forecasts implied by S&P 100 Index option prices. *Journal of Empirical Finance*, 5, 317–345.

| [Google Scholar](#) |

Fleming, J., Ostdiek, B., & Whaley, R. E. (1995). Predicting stock market volatility: A new measure. *Journal of Futures Markets*, 15, 265–302.

| [Web of Science®](#) | [Google Scholar](#) |

Fleming, M. J., & Remolona, E. M. (1999). Price formation and liquidity in the U.S. treasury market: The response to public information. *Journal of Finance*, 54, 1901–1915.

| [Web of Science®](#) | [Google Scholar](#) |

Han, L. M., Kling, J. L., & Sell, C. W. (1999). Foreign exchange futures volatility: Day-of-the-week, intra-day, and maturity patterns in the presence of macroeconomic announcements. *Journal of Futures Markets*, 19, 665–693.

| [Web of Science®](#) | [Google Scholar](#) |

Han, L. M., & Ozocak, O. (in press). Risk-return relationships in foreign currency futures following macroeconomic announcements. *Journal of Futures Markets*.

| [Google Scholar](#) |

Hong, H., & Stein, J. (1999). A unified theory of underreaction, momentum trading and overreaction in asset markets. *Journal of Finance*, 54, 2143–2184.

| [Web of Science®](#) | [Google Scholar](#) |

Hull, J. (1997). *Options, futures, and other derivatives*. Upper Saddle River, NJ: Prentice Hall.

| [Google Scholar](#) |

Hull, J., & White, A. (1987). The pricing of options on assets with stochastic volatilities. *Journal of Finance*, 42, 281–300.

| [Web of Science®](#) | [Google Scholar](#) |

Jones, C. M., Lamont, O., & Lumsdaine, R. (1998). Macroeconomic news and bond market volatility. *Journal of Financial Economics*, 47, 315–337.

| [Web of Science®](#) | [Google Scholar](#) |

Kim, O., & Verrecchia, R. E. (1991a). Trading volume and price reactions to public announcements. *Journal of Accounting Research*, 29, 302–321.

| [PubMed](#) | [Web of Science®](#) | [Google Scholar](#) |

Kim, O., & Verrecchia, R. E. (1991b). Market reaction to anticipated announcements. *Journal of Financial Economics*, 30, 273–310.

| [Web of Science®](#) | [Google Scholar](#) |

Kim, O., & Verrecchia, R. E. (1994). Market liquidity and volume around earnings announcements. *Journal of Accounting and Economics*, 17, 41–67.

| [Web of Science®](#) | [Google Scholar](#) |

Lee, C. M. C. (1992). Earnings news and small traders. *Journal of Accounting and Economics*, 15, 265–302.

| [Web of Science®](#) | [Google Scholar](#) |

Lee, C. M. C., & Ready, M. A. (1991). Inferring trade direction from intraday data. *Journal of Finance*, 46, 733–746.

| [Web of Science®](#) | [Google Scholar](#) |

McQueen, G., Pinegar, M., & Thorley, S. (1996). Delayed reaction to good news and the cross-autocorrelation of portfolio returns. *Journal of Finance*, 51, 889–920.

| [Web of Science®](#) | [Google Scholar](#) |

McQueen, G., & Roley, V. (1993). Stock prices, news, and business conditions. *Review of Financial Studies*, 6, 683–707.

| [Web of Science®](#) | [Google Scholar](#) |

Nofsinger, J. (2001). The impact of public information on investors. *Journal of Banking and Finance*, 25, 1339–1366.

| [Web of Science®](#) | [Google Scholar](#) |

Schwert, G. (1981). The adjustment of stock prices to information about inflation. *Journal of Finance*, 36, 15–29.

Schwert, G. (1989). Why does stock market volatility change over time? *Journal of Finance*, 44, 1115–1153.

Shefrin, H., & Statman, M. (1985). The disposition to sell winners too early and ride losers too long: Theory and evidence. *Journal of Finance*, 40, 777–792.

Tkac, P. A. (1999). A trading volume benchmark: Theory and evidence. *Journal of Financial and Quantitative Analysis*, 34, 89–114.

Toft, K. B., & Prucyk, B. (1997). Options on leveraged equity: Theory and empirical tests. *Journal of Finance*, 52, 1151–1180.

Veronesi, P. (1999). Stock market overreaction to bad news in good times: A rational expectations equilibrium model. *Review of Financial Studies*, 12, 975–1007.

Whaley, R. E. (1993). Derivatives on market volatility: Hedging tools long overdue. *Journal of Derivatives*, 1, 71–84.

Citing Literature



[Download PDF](#)

ABOUT WILEY ONLINE LIBRARY

[Privacy Policy](#)

[Terms of Use](#)

[About Cookies](#)

[Manage Cookies](#)

HELP & SUPPORT

Contact Us
Training and Support
DMCA & Reporting Piracy

OPPORTUNITIES

Subscription Agents
Advertisers & Corporate Partners

CONNECT WITH WILEY

The Wiley Network
Wiley Press Room

Copyright © 1999-2025 John Wiley & Sons, Inc or related companies. All rights reserved, including rights for text and data mining and training of artificial intelligence technologies or similar technologies.

WILEY