Research Article

Real-Time Forecasts of Inflation: The Role of Financial Variables

Libero Monteforte ✉, Gianluca Moretti

ABSTRACT

We present a mixed-frequency model for daily forecasts of euro area inflation. The model combines a monthly index of core inflation with daily data from financial markets; estimates are carried out with the MIDAS regression approach. The forecasting ability of the model in real time is compared with that of standard VARs and of daily quotes of economic derivatives on euro area inflation. We find that the inclusion of daily variables helps to reduce forecast errors with respect to models that consider only monthly variables. The mixed-frequency model also displays superior predictive performance with respect to forecasts solely based on economic derivatives. Copyright © 2012 John Wiley & Sons, Ltd.

REFERENCES ⌄

Almon S. 1965. The distributed lag between capital appropriations and expenditures. *Econometrica* **33**: 178–196.

| **Web of Science®** | **Google Scholar** |

Altissimo F, Cristadoro R, Forni M, Lippi M, Veronese GF. 2010. New eurocoin: tracking economic growth in real time. *Review of Economics and Statistics* **92**(4): 1024–1034.

| **Web of Science®** | **Google Scholar** |

Andersen TG, Bollerslev T, Diebold FX, Vega C. 2003. Micro effects of macro announcementsreal-time price discovery in foreign exchange. *American Economic Review* **93**(1): 38–62.

| **Web of Science®** | **Google Scholar** |

Andreou E, Ghysels E, Kourtellos A. 2010. Should macroeconomic forecasters use daily financial data and how? In *6th Workshop on Forecasting Techniques Forecasting Real time and Survey data*, Bundesbank, EABCN and ECB, Frankfurt.

Google Scholar

Ang A, Bekaert G, Wei M.Do macro variables, asset markets or surveys forecast inflation better?*Journal of Monetary Economics* (2007) **54**(4): 1163–1212.

Web of Science® **Google Scholar**

Aruoba SB, Diebold FX, Scotti C. 2009. Real-time measurement of business conditions. *Journal of Business and Economic Statistics* **27**(4): 417–427.

Web of Science® **Google Scholar**

Bernanke BS, Kuttner KN. 2005. What explains the stock market's reaction to federal reserve policy? *Journal of Finance* **60**(3): 1221–1257.

Web of Science® **Google Scholar**

Busetti F, Marcucci J, Veronese G. 2009. Comparing forecast accuracy: a Monte Carlo investigation. Temi di discussione (Economic working papers) No. 723, Banca d'Italia.

Google Scholar

Chong YY, Hendry DF. 1986. Econometric evaluation of linear macro-economic models. *Review of Economic Studies* **53**(4): 671–690.

Web of Science® **Google Scholar**

Clements MP, Galvão AB. 2008. Macroeconomic forecasting with mixed frequency data: forecasting output growth in the United States. *Journal of Business and Economic Statistics* **26**(4): 546–554.

Web of Science® **Google Scholar**

Cristadoro R, Forni M, Reichlin L, Veronese G. 2005. A core inflation indicator for the euro area. *Journal of Money, Credit and Banking* **37**(3): 539–560.

Web of Science® **Google Scholar**

Cristadoro R, Saporito G, Venditti F. 2008. Forecasting inflation and tracking monetary policy in the euro area: does national information help? ECB Working Paper, No. 900.

Google Scholar

Diebold FX, Mariano RS. 1995. Comparing predictive accuracy. *Journal of Business and Economic Statistics* **13**(3): 253–263.

Web of Science® | Google Scholar

Fisher I. 1911. *The Purchasing Power of Money*. Macmillan: New York.

Google Scholar

Forni M, Hallin M, Lippi M, Reichlin L. 2002. The generalized factor model: identification and estimation. *Review of Economics and Statistics* **82**(4): 540–554.

Web of Science® | Google Scholar

Forni M, Hallin M, Lippi M, Reichlin L. 2003. Do financial variables help forecasting inflation and real activity in the euro area? *Journal of Monetary Economics* **50**(6): 1243–1255.

Web of Science® | Google Scholar

Ghysels E, Wright JH. 2009. Forecasting professional forecasters. *Journal of Business, Economics and Statistics* **27**(4): 504–516.

Web of Science® | Google Scholar

Ghysels E, Santa-Clara P, Valkanov R. 2004. The MIDAS touch: mixed data sampling regression models. UNC and UCLA working papers.

Google Scholar

Ghysels E, Santa-Clara P, Valkanov R. 2006. Predicting volatility: getting the most out of return data sampled at different frequencies. *Journal of Econometrics* **131**(1–2): 59–95.

Web of Science® | Google Scholar

Giannone D, Reichlin L, Small DH. 2008. Nowcasting GDP and inflation: the real-time informational content of macroeconomic data releases. *Journal of Monetary Economics* **55**(4): 665–676.

Web of Science® | Google Scholar

Grannan L, Srinivasan S. 2007. Exchange-traded inflation derivatives: a new asset class. Chicago Mercantile Exchange.

Google Scholar

Marcellino M, Schumacher C. 2010. Factor-MIDAS for now- and forecasting with ragged-edge data: a model comparison for German GDP. *Oxford Bulletin of Economics and Statistics* **72**(4): 518–550.

Web of Science®   Google Scholar

Mittnik S, Zadrozny P. 2004. Forecasting quarterly German GP at monthly interval using monthly IFO business condition data. CESifo Working Paper, No. 1203.

Google Scholar

Piazzesi M, Swanson ET. 2008. Futures prices as risk-adjusted forecasts of monetary policy. *Journal of Monetary Economics* **55**(4): 677–691.

Web of Science®   Google Scholar

Stock J, Watson M. 2002. Macroeconomic forecasting using diffusion indexes. *Journal of Business and Economic Statistics* **20**(2): 147–162.

Web of Science®   Google Scholar

Stock JH, Watson MW. 2003. Forecasting output and inflation: the role of asset prices. *Journal of Economic Literature* **41**(3): 788–829.

Web of Science®   Google Scholar

Stock J, Watson M. 2006. Macroeconomic forecasting using many predictors. In *Handbook of Economic Forecasting*, G Elliott, C Granger, A Timmermann (eds). North-Holland: Amsterdam; 515–554.

Web of Science®   Google Scholar

West K. 1996. Asymptotic inference about predictive ability. *Econometrica* **64**(5): 1067–1084.

Web of Science®   Google Scholar

Wolfers J, Gurkaynak RS. 2006. Macroeconomic derivatives: an initial analysis of market-based macro forecasts, uncertainty and risk. CEPR Discussion Paper No. 5466.

Google Scholar

Woodford M. 2003. *Interest and Prices: Foundations of a Theory of Monetary Policy*. Princeton University Press: Princeton, NJ.

Google Scholar

Citing Literature

ABOUT WILEY ONLINE LIBRARY

Privacy Policy

Terms of Use

About Cookies

Manage Cookies

Accessibility

Wiley Research DE&I Statement and Publishing Policies

Developing World Access

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

WILEY