


[Home](#) > [Journal of Asset Management](#) > [Article](#)

An international test of the Fed model

| Paper | Published: 30 June 2007



| Volume 8, pages 86–100, (2007) [Cite this article](#)

[Journal of Asset Management](#)

[Aims and scope](#) →[Submit manuscript](#) →[Samuel Aubert](#) & [Pierre Giot](#) ¹ 36 Accesses  4 Citations [Explore all metrics](#) →

Abstract

In a way similar to Asness, this paper examines the effectiveness of earnings yields, as well as of their difference with long-term government bond yields (the so-called Fed model), to forecast real stock returns of various horizons in nine countries. Moreover, the same tests are repeated with dividend yields in place of earnings yields. Forecasting power is measured by using regression analysis. The results show that the traditional model is somewhat successful at forecasting long-term stock returns, whereas the Fed model is a failure.

 This is a preview of subscription content, [log in via an institution](#)  to check access.

[Access this article](#)

Buy article PDF 39,95 €

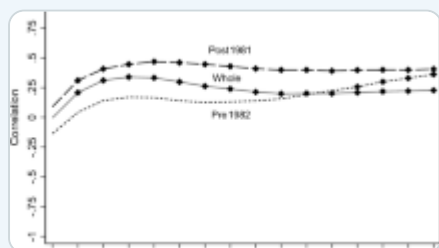
Price includes VAT (Poland)

Instant access to the full article PDF.

Rent this article via [DeepDyve](#) ↗

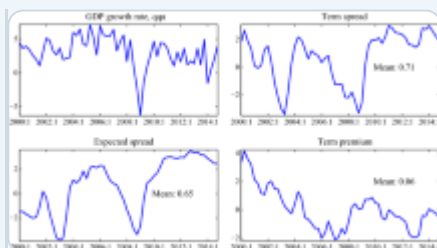
[Institutional subscriptions](#) →

Similar content being viewed by others



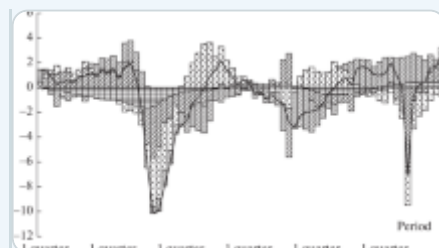
[The Comovement Between Forecast Errors for Real GDP and Its Deflator in Six OECD Countries: Did Supply Shock...](#)

Article | 19 August 2023



[Forecasting output growth using a DSGE-based decomposition of the South African yield curve](#)

Article | 30 November 2018



[Impact of Accounting for Financial Market Imperfections on the Predictive Power of the DSGE Model of the Russian...](#)

Article | 27 July 2024

Notes

1. It should be stressed that this model is neither endorsed nor discussed by the Federal Reserve.
2. Note that W.T. Ziemba already discussed such a relative valuation model for Japan in the early 1990s in his book with S.L. Schwartz *Invest Japan: The Structure, Performance and Opportunities of Japan's Stock, Bond and Fund Markets* (Probus Publishing Company, Chicago).
3. In this way, we also avoid possible problems related to particularly high

$(E/P) \div Y$ ratios due to low government bond yields with respect to earnings yields.

4. As mentioned in [Asness \(2003\)](#), empirical evidence also supports this theory.
5. For simplicity, any mention of R^2 should be interpreted as *adjusted* R^2 .

References

Asness, C. S. (2003) 'Fight the Fed Model', *Journal of Portfolio Management*, 30, 11-24.

[Article](#) [Google Scholar](#)

Berge, K. and Ziemba, W. T. (2007) 'The Predictive Ability of the Bond Stock Earnings Yield Differential in US and Foreign Markets, 1970-2005', in *Handbook of Investments: The Equity Risk Premium*, Handbooks in Finance Series, North-Holland, Amsterdam, forthcoming.

[Google Scholar](#)

Campbell, J. Y. and Shiller, R. J. (1998) 'Valuation Ratios and the Long-Run Stock Market Outlook', *Journal of Portfolio Management*, 24, 11-26.

[Article](#) [Google Scholar](#)

Campbell, J. Y. and Vuolteenaho, T. (2004) 'Inflation Illusion and Stock Prices', *American Economic Review, Papers and Proceedings*, 94, 19-23.

[Article](#) [Google Scholar](#)

Cohen, R. B., Polk, C. and Vuolteenaho, T. (2005) 'Money Illusion in the Stock

Market: The Modigliani-Cohn Hypothesis', NBER Working Paper 11018.

Durré, A. and Giot, P. (2007) 'An International Analysis of Earnings, Stock Prices and Bond Yields', Journal of Business Finance and Accounting, forthcoming.

Fama, E. F. and French, K. R. (1988) 'Dividend Yields and Expected Stock Returns', Journal of Financial Economics, 22, 3-25.

[Article](#) [Google Scholar](#)

Fama, E. F. and French, K. R. (2002) 'The Equity Premium', Journal of Finance, 57, 637-659.

[Article](#) [Google Scholar](#)

Giot, P. (2007) 'Unexpected Capital Gains and the Stock Market Performance at the Turn of the Century', Journal of Investing, forthcoming.

Koivu, M., Pennanen, T. and Ziemba, W. T. (2005) 'Cointegration Analysis of the Fed Model', Finance Research Letters, 2, 248-259.

[Article](#) [Google Scholar](#)

Lansing, K. J. (2004) 'Inflation-induced valuation errors in the stock market', FRBSF Economic Letter 2004-30.

Modigliani, F. and Cohn, R. A. (1979) 'Inflation, Rational Valuation, and the Market', Financial Analysts Journal, 35, 24-44.

[Article](#) [Google Scholar](#)

Ritter, J. R. and Warr, R. S. (2002) 'The Decline of Inflation and the Bull Market of 1982-1989', Journal of Financial and Quantitative Analysis, 37 (1), 29-61.

Thomas, J. (2005) Understanding the Fed Model and the Implications of this Remarkable Empirical Regularity, Yale University School of Management, Mimeo.

[Google Scholar](#)

Author information

Authors and Affiliations

Department of Business Administration & CEREFIM, University of Namur, Rempart de la Vierge 8, Namur, 5000, Belgium

Pierre Giot

Corresponding author

Correspondence to [Pierre Giot](#).

Additional information

¹holds an MSc in Physics from McGill University and recently completed a Master in Finance at the Université Catholique de Louvain in Belgium. He is now working in the finance industry in Japan. This paper is based on his Master's thesis in finance.

²has a PhD in financial econometrics from the Université Catholique de Louvain in Belgium. He is a professor of finance at the University of Namur (Belgium) and has published in many leading finance journals such as the *JIMF*, the *Journal of Empirical Finance* and the *Journal of Banking and Finance*. His research focuses on market microstructure, risk management, venture capital economics and stock market valuation.

Appendix

Regression analyses of the same type as above have also been performed with Germany, France, Belgium, Switzerland, and Sweden. We include the relevant results in [Tables A1](#), [A2](#), [A3](#), [A4](#) and [A5](#). The spans of data are in general shorter than those of the previous sections, so that the results for both E/P and D/P are inserted in the same table and that the great bull market alone may be included in the one-year horizon case. Although we will not attempt to interpret the results as we have done before, we will recall some principal features to look for, and the kind of conclusions that can be drawn from them.

Table a1 Forecasting Germany's real CDAX stock returns of different horizons

Table a2 Forecasting France's real SBF-250 stock returns of different horizons

Table a3 Forecasting Belgium's real stock returns of different horizons

Table a4 Forecasting Switzerland's real stock returns of different horizons

Table a5 Forecasting Sweden's real OMX Stockholm stock returns of different horizons

First, in terms of the first or second form of regression, forecasting power should translate into a high R^2 value and a positive coefficient of the explanatory variable, that is, β for the traditional model or β' for the Fed model, and a corresponding t -

statistic that is sufficiently different from zero. Secondly, the third form of regression can be used to distinguish between the extent to which variations in real returns can be associated with variations in either E/P (D/P) or Y . The sensitivity in each type of variation can then be measured via the magnitude of the relevant coefficient, that is, b for E/P (D/P) and c for Y . Thirdly, if a model is to have reliable forecasting effectiveness, then while its R^2 should be high, it should also be close to the R^2 of the bivariate regression. Furthermore, its coefficient should coincide as much as possible with the one(s) of the bivariate regression, that is, $\beta \approx b$ for the traditional model and $\beta' \approx b \approx -c$ for the Fed model. Hence decent results for the Fed model can further be tested against the third regression; where an abrupt change in R^2 , a significant difference between β' and $-c$, a positive c value, etc are signs of a deceptive Fed model that owes its success to its containing E/P (D/P).

With such ideas in mind, a more cautious examination of the following tables can be done. Despite the fewer data, the regressions on E/P (D/P) alone yield better fits than those on $E/P-Y$ ($D/P-Y$). Namely, the traditional model is relatively successful, whereas the Fed model appears to be a failure. Finally, a general pattern is given by poor results with one-year real returns in the modern period (or whichever closest period), and by considering dividend yields.

Germany

See [Table A1](#).

France

See [Table A2](#).

Belgium

See [Table A3](#).

Switzerland

See [Table A4](#).

Sweden

See [Table A5](#).

Rights and permissions

[Reprints and permissions](#)

About this article

Cite this article

Aubert, S., Giot, P. An international test of the Fed model. *J Asset Manag* **8**, 86–100 (2007).

<https://doi.org/10.1057/palgrave.jam.2250063>

Received

29 March 2007

Revised

29 March 2007

Published

30 June 2007

Issue Date

01 July 2007

DOI

<https://doi.org/10.1057/palgrave.jam.2250063>

Keywords

[stock prices](#)

[earnings](#)

[long-run stock market valuation](#)

[interest rates](#)

[inflation](#)

Search

Search by keyword or author



Navigation

Find a journal

Publish with us

Track your research

