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Spurious Regressions in Financial Economics?

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ABSTRACT

Even though stock returns are not highly autocorrelated, there is a spurious regression bias in predictive regressions for stock returns related to the classic studies of **Yule (1926)** and **Granger and Newbold (1974)**. Data mining for predictor variables interacts with spurious regression bias. The two effects reinforce each other, because more highly persistent series are more likely to be found significant in the search for predictor variables. Our simulations suggest that many of the regressions in the literature, based on individual predictor variables, may be spurious.

REFERENCES

Bekaert, Geert, Robert J. Hodrick, and David Marshall, 1997, On biases in tests of the expectations hypothesis of the term structure, *Journal of Financial Economics* **44**, 309–348.

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Bossaerts, Peter, and Pierre Hillion, 1999, Implementing statistical criteria to select return forecasting models:

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Breen, William, Lawrence R. Glosten, and Ravi Jagannathan, 1989, Economic significance of predictable variations in stock index returns, *Journal of Finance* **44**, 1177–1190.

Web of Science® | Google Scholar

Campbell, John Y., 1987, Stock returns and the term structure, *Journal of Financial Economics* **18**, 373–400.

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Campbell, John Y., and Robert Shiller, 1988, The dividend ratio and small sample bias, *Economics Letters* **29**, 325–331.

Google Scholar

Cochrane, John H., 1999, New facts in finance, *Economic Perspectives* **23**, 36–58.

Google Scholar

Conrad, Jennifer, and Gautam Kaul, 1988, Time variation in expected returns, *Journal of Business* **61**, 409–425.

Web of Science® | Google Scholar

Cox, John C., Jonathan E. Ingersoll Jr., and Stephen A. Ross, 1985, A theory of the term structure of interest rates, *Econometrica* **53**, 363–384.

Web of Science® | Google Scholar

Fama, Eugene F., 1970, Efficient capital markets: A review of theory and empirical work, *Journal of Finance* **25**, 383–417.

Web of Science® | Google Scholar

Fama, Eugene F., 1990, Stock returns, expected returns, and real activity, *Journal of Finance* **45**, 1089–1108.

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Fama, Eugene F., and Kenneth R. French, 1988b, Permanent and temporary components of stock prices, *Journal of Political Economy* **96**, 246–273.

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Fama, Eugene F., and Kenneth R. French, 1989, Business conditions and expected returns on stocks and bonds, *Journal of Financial Economics* **25**, 23–49.

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Fama, Eugene F., and G. William Schwert, 1977, Asset returns and inflation, *Journal of Financial Economics* **5**, 115–146.

Web of Science® | Google Scholar

Ferson, Wayne, and Campbell R. Harvey, 1991, Sources of predictability in portfolio returns, *Financial Analysts Journal* **3**, 49–56.

Google Scholar

Fleming, Jeff, Chris Kirby, and Barbara Ostdiek, 2001, The economic value of volatility timing, *Journal of Finance* **61**, 329–352.

Google Scholar

Foster, F. Douglas, Tom Smith, and Robert E. Whaley, 1997, Assessing goodness-of-fit of asset pricing models: The distribution of the maximal R-squared, *Journal of Finance* **52**, 591–607.

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Goetzmann, William, and Philippe Jorion, 1993, Testing the predictive power of dividend yields, *Journal of Finance* **48**, 663–679.

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Harvey, Campbell R., 1989, Time-varying conditional covariances in tests of asset pricing models, *Journal of Financial Economics* **24**, 289–318.

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Hodrick, Robert J., 1992, Dividend yields and expected stock returns: Alternative procedures for estimation and inference, *Review of Financial Studies* **5**, 357–386.

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Huberman, Gur, and Shmuel Kandel, 1990, Market efficiency and Value Line's record, *Journal of Business* **63**, 187–216.

Web of Science® | Google Scholar

Kandel, Shmuel, and Robert F. Stambaugh, 1990, Expectations and volatility of consumption and asset returns, *Review of Financial Studies* **3**, 207–232.

Web of Science® | Google Scholar

Kandel, Shmuel, and R.F. Stambaugh, 1996, On the predictability of stock returns: An asset-allocation perspective, *Journal of Finance* **51**, 385–424.

Web of Science® | Google Scholar

Keim, Donald B., and Robert F. Stambaugh, 1986, Predicting returns in the bond and stock markets, *Journal of Financial Economics* **17**, 357–390.

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Kendall, Maurice G., 1954, A note on the bias in the estimation of autocorrelation, *Biometrica* **41**, 403–404.

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Lanne, Markku, 2002, Testing the predictability of stock returns, *Review of Economics and Statistics* **84**, 407–415.

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Lee, Charles, James Myers, and Bhaskaran Swaminathan, 1999, What is the intrinsic value of the Dow? *Journal of Finance*, 1693–1742.

Google Scholar

Lettau, Martin, and Sydney Ludvigson, 2001, Consumption, aggregate wealth and expected stock returns, *Journal of Finance* **56**, 815–849.

Web of Science® | Google Scholar

Lo, Andrew W., and A. Craig MacKinlay, 1988, Stocks prices do not follow random walks, *Review of Financial Studies* **1**, 41–66.

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Lo, Andrew W., and A. Craig MacKinlay, 1990, Data snooping in tests of financial asset pricing models, *Review of Financial Studies* **3**, 431–467.

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Lucas, Robert E. Jr., 1978, Asset prices in an exchange economy, *Econometrica* **46**, 1429–1445.

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Marmol, Francesc, 1998, Spurious regression theory with nonstationary fractionally integrated processes, *Journal of Econometrics* **84**, 233–250.

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Newey, Whitney K., and Kenneth D. West, 1987, A simple, positive definite, heteroskedasticity and autocorrelation consistent covariance matrix, *Econometrica* **55**, 703–708.

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Pesaran, M. Hashem, and Allan Timmermann, 1995, Predictability of stock returns: Robustness and economic significance, *Journal of Finance* **50**, 1201–1228.

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Phillips, Peter C.B., 1986, Understanding spurious regressions in econometrics, *Journal of Econometrics* **33**, 311–340.

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Phillips, Peter C.B., 1998, New tools for understanding spurious regressions, *Econometrica* **66**, 1299–1326.

Web of Science® | Google Scholar

Pontiff, Jeffrey, and Lawrence Schall, 1998, Book-to-market as a predictor of market returns, *Journal of Financial Economics* **49**, 141–60.

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Schwert, G. William, 2002, Anomalies and market efficiency, in George M. Constantinides, Milton Harris, René M. Stulz, eds.: *Handbook of the Economics of Finance*, North Holland: Amsterdam.

Google Scholar

Simin, Timothy, 2002, *The (poor) predictive performance of asset pricing models*, Working paper, Pennsylvania State University.

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Yule, George U., 1926, Why do we sometimes get nonsense correlations between time series? A study in sampling and the nature of time series, *Journal of the Royal Statistical Society* **89**, 1–64.

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