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The Geography of S&P 500 Stock Returns

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Abstract

Investor bias in favor of geographically close firms has been documented in previous papers. An implication of this bias is that if local events cause nearby investors to trade together, then the correlation of stock returns of pairs of firms will increase as the distance between them decreases. We test this hypothesis using a sample of Standard & Poor's (S&P) 500 companies. After adjusting for industry effects and other factors, we find that the correlation coefficient between two stocks increases 12 basis points for every 100-mile reduction in distance. This result is consistent with local shocks affecting the returns of nearby firms by an average of approximately 43 basis points per month. We conclude these shocks are most likely the result of trading activity by local investors who own shares in nearby firms.

keywords:

S&P 500 index | Geographic proximity | Stock return correlation

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Notes

1. Reported in Table IV of Pirinsky and Wang [2006].

2. Zhu [2002] using a similar dataset, also finds strong evidence that retail investors overweight their portfolios in local stocks. Consistent with a familiarity explanation, he finds that advantageous information cannot explain the investor local bias.

3. When firms are incorporated in Bermuda but have operational headquarters in the United States, we use the U.S. location. For example, Tyco International is incorporated in Bermuda, but numerous press reports indicate that their operational headquarters are located in Princeton, N.J.

4. There are a variety of reasons for firms to have at least one missing monthly return. Here are two examples. MetLife Inc. went public on April 4, 2000, so it is missing four monthly returns and is excluded from the sample. Rockwell Collins was spun off to the shareholders of Rockwell International in July 2001. Hence, Rockwell Collins is missing 19 months of data and is excluded from the final sample of firms.

5. The Nasdaq Composite Index peaked in March 2000.

6. Note that we classify Washington, D.C., as a state.

7. See Hansen [2001] for more details. The maximum Chow statistic occurred at 1,980 miles.

8. This is reported in Table VIII of Pirinsky and Wang [2006]. The effect of city size is eliminated in Pirinsky and Wang [2006] when controls are added for MSA personal and investment income.