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Summary of “Complicated Firms”¹

Complexity in information processing can lead to a significant delay in the impounding of information into asset prices. To be more precise, while it is relatively straightforward to incorporate industry-specific information into a firm operating solely in the industry (i.e. a standalone firm), it generally requires a set of more complicated analyses to impound the same piece of information into the price of a firm with multiple operating segments (i.e. a conglomerate firm). Based on the return predictability generated by the cross-sectional dispersion in the information processing speed, an investment strategy delivers excellent performance that is unrelated with previously identified factor returns in the U.S. stock market.

For each conglomerate firm, we can construct a “pseudo-conglomerate” that consists of a portfolio of the conglomerate firm’s segments made up using only standalone firms from respective industries. The portfolio weights are given by either sales or asset decomposition. The return of each pseudo-conglomerate is calculated by aggregating the value-weighted average returns of the standalone firms within each of the conglomerates firm’s industries. As these pseudo-conglomerates are composed of easy-to-analyze firms subject to the same industry shocks, their prices should be updated, and thus reflect information, before the prices of the conglomerates. Then, we can sort conglomerate firms into decile portfolios based on lagged returns of their corresponding pseudo-conglomerates. A portfolio that goes long in those conglomerates whose corresponding pseudo-conglomerates performed best in the prior month and goes short in those whose pseudo-conglomerates performed the worst, has value-weighted average return of 95 basis points in the following month ($t = 3.18$).

The return to this strategy does not exhibit significant loadings on the Fama-French three factors, momentum factor (Carhart, 1997), and liquidity factor (Pastor and Stambaugh, 2003), and generates a 5-factor monthly alpha equal to 1.04% ($t = 3.01$).² Transaction costs have a modest effect on the strategy up to a portfolio size of \$10 million. Fama-MacBeth cross-sectional regression confirms the predictive power of pseudo-conglomerate’s return, after controlling for conglomerate firms’ characteristics (Daniel, Grinblatt, Titman, and Wermers, 1997) and industry momentum (Moskowitz and Grinblatt, 1999).³ Limits to arbitrage (e.g. idiosyncratic volatility) increase the predictability.

This is one of the very few cases, in which predictability flows from smaller to larger firms. Predictability is stronger for more complicated firms that span across more industries and tend to have larger market capitalization. The predictability is not driven by investor inattention, and interestingly, the conglomerates are isolated from swings in the market sentiment driven by industry-wise categorical thinking, because information complexity makes it difficult to categorize conglomerates. This complicated information processing channel is further confirmed by the finding that the revisions of analysts’ earnings forecast for standalone firms in the pseudo-conglomerate bucket predict future forecast revisions of their corresponding conglomerate firms.

¹ Cohen, Lauren, and Dong Lou, 2012, *Journal of Financial Economics* 104, 383-400.

² For details of the factors, please refer to: Fama, Eugene F., and Kenneth R. French, 1993, Common risk factors in the returns on stocks and bonds, *Journal of Financial Economics* 33, 3-56; Carhart, Mark M., 1997, On persistence in mutual fund performance, *Journal of Finance* 52, 57-82.; Pástor, Luboš, and Robert F. Stambaugh, 2003, Liquidity risk and expected stock returns, *Journal of Political Economy* 111, 642-685.

³ For details of the control variables, please refer to: Daniel, Kent, Mark Grinblatt, Sheridan Titman, Russ Wermers, 1997, Measuring mutual fund performance with characteristic-based benchmarks, *Journal of Finance* 52, 1035-1058; Moskowitz, Tobias J., and Mark Grinblatt, 1999, Do industries explain momentum? *Journal of Finance* 54, 1249-1290.