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Chapter Author(s): Ben Craig

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Comment Ben Craig

This chapter by Adrian, Brunnermeier, and Nguyen has three parts. The first uses quantile regression to show that the correlation between hedge fund strategies increases in times of stress. The second shows that this behavior is mostly due to a common measurable shock. Finally, the chapter tries to assess whether hedge funds that focus on hedging away from common measurable shocks increase their size.

To treat the three contributions in turn, the dependence of hedge funds on other funds is shown to increase during times of stress through the comparison of two sets of quantile regressions, measured at the 50 percent and 5 percent levels. Indeed, this approach turns the previous approach of two of the authors on its head. Whereas before they use quantile regression to assess VaRs to investigate systemic risk, here they focus on the quantile regression itself and leave systemic risk contributions unsaid. The authors find, in table 4.2, that the hedge funds increase their dependence by 45 percent, on average. In the single example where being in a tail event decreased the dependence of a hedge fund on other funds, the dependence became less negative, making it less of a hedge against the direction of the other funds' exposure. So tail events increase the tendency of hedge funds to move together, a finding that is interesting and important for research into contagion. However, the table also indicates considerable heterogeneity in this overall result. What are we to make of this? I would have liked to have known what distinguishes this finding from earlier research by Boyson, Stahel, and Stulz (2006) (which they cite) and others, such as Brown and Spitzer (2006), who have found the same phenomenon. Does the use of quantile methods make this a more reliable finding? What are differences in quantile methods that distinguish these findings from ones given by copula correlations or even simple event studies? Given that so much recent research has focused on the properties of porfolios during tail events, a useful contribution would focus on the features of the quantile approach that make it an advantageous one. (This has been done in the statistical literature by Koenker [2005], which is cited in the chapter. It would be nice to see something said about the properties in this paper.)

The second contribution is to investigate whether this phenomenon is affected when they use residual returns after taking into account seven risk factors, including excess market return, volatility measures, liquidity risk measures, and yield slopes. These are common factors that are all measurable, and they could be used by managers to "offload" their portfolio into investments that are less sensitive to these factors. Once the offloadings are

Ben Craig is a senior economic advisor in the Research Department of the Federal Reserve Bank of Cleveland.

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removed from the hedge fund returns, the 5 percent quantile regressions are run on the residuals with the result that much of the 5 percent sensitivity is accounted for by these factors. Presumably the factors should also account for the difference between the median sensitivity and the tail sensitivity as well, which it does. I would very much have liked a comparison of these results with similar earlier results such as Boyson, Stahel, and Stulz (2006), along with a discussion of where these results differ and why. Further, it is quite clear from the tables that some funds are much more sensitive to these common factors than others, and are much more sensitive to each other than others. What accounts for this? These hedge funds are actually just aggregates chosen by Credit Suisse to represent differing strategies. To what extent are these strategies consistent with an offloading strategy in a tail event?

The final contribution concerns an observation often made anecdotally about hedge fund managers: these managers have no incentive to offload tail risk. The results from a regression shows that when the tail risk decreases, inflow into that strategy also decreases, suggesting that managerial incentives are not to offload tail risk because this will reduce their management fees. This was a tantalizing result. However, it raised many questions, some of which could have been explored with the data and methods used here. To what extent can a strategy offload risk due to common measurable factors? Do shocks in these dimensions allow such a strategy to work, or do these shocks arise so quickly that managers cannot respond? How do the possible methods of hedging against a common shock relate to the measure defined here, and what does this measure have to do with systemic risk? There was so much I wanted to know about this result, but the brevity of the description prevented me from finding out more.

References

Boyson, N. M., C. W. Stahel, and R. M. Stulz. 2008. "Is There a Hedge Fund Contagion?" *Journal of Finance* 65 (5): 1789–816.

Brown, Stephen, and Jonathan Spitzer. 2006. "Caught by the Tail: Tail Risk Neutrality and Hedge Fund Returns." Unpublished Manuscript. New York Stern School.

Koenker, R. 2005. *Quantile Regression.* Cambridge: Cambridge University Press.