

A Dissertation Defense has been scheduled for Hyuna Park, Ph.D. Candidate in Finance, for Tuesday, April 10, 2007 at 10:30am in SOM 206 (Undergraduate Conference Room). All are invited to attend.

Chair: Bing Liang

Title: Three Essays On The Risk Of Hedge Funds

Abstract:

The hedge fund industry has doubled in size and number in recent years to current estimated assets under management (AUM) of \$1.2 trillion. Such a rapid growth in hedge funds has been accompanied by a substantial growth in the number and severity of failures. Since the aftermath of Long Term Capital Management (LTCM), investors recognize that hedge funds may provide high expected returns but many of them might be exposed to a huge downside risk that is not easily detected by traditional risk measures. Therefore, it is very important to have research that contributes to better understanding of the risk profile of hedge funds, and my dissertation consists of three essays on the risk of hedge funds.

In the first essay, I use a cross-sectional approach and analyze the risk-return trade-off in the hedge fund industry. I compare semi-deviation, value-at-risk (VaR), Expected Shortfall (ES) and Tail Risk (TR) with standard deviation at the individual fund level as well as the portfolio level. Using the Fama and French (1992) methodology and the combined live and defunct hedge fund data from TASS, I find that the left-tail risk captured by Expected Shortfall (ES) and Tail Risk (TR) explains the cross-sectional variation in hedge fund returns very well, while the other risk measures provide statistically insignificant or marginally significant results. During the period between January 1995 and December 2004, hedge funds with high ES outperform those with low ES by an annual return difference of 7%.

In the second essay, I implement a survival analysis based on the Cox proportional hazard (PH) model to compare downside risk measures with standard deviation in predicting hedge fund failure. Using TASS data from January 1995 to December 2004, I find that funds with high ES have a high hazard rate when controlling for other factors such as the style effect, performance, fund age, size, lockup, high-water mark (HWM) provision, and leverage. Standard deviation, however, loses the explanatory power when the other explanatory variables are included. As I find that liquidation does not necessarily mean failure in the hedge fund universe, I suggest simple criteria such as the last six-month return and change in fund size rather than the stated drop reasons to calibrate hedge fund failure. I reexamine the attrition rate of hedge funds based on these findings and argue that the real failure rate of hedge funds (3.1%) is lower than the attrition rate (8.7%, annual average during 1995 - 2004).

In the third essay, I focus on the liquidity risk premium in the hedge fund industry. I examine the relationship between hedge fund share restrictions and liquidity premium by comparing offshore and onshore hedge funds. Due to tax provisions and regulatory concerns, offshore and onshore hedge funds have different legal structures, which lead to differences in share restrictions such as the lockup provision. On average, offshore funds impose less share restrictions than onshore funds, hence they underperform their onshore counterparts due to illiquidity premium, consistent with Aragon (2007). However, I find that once offshore funds impose share restrictions the illiquidity premium is higher because of a tighter relation between share illiquidity and asset illiquidity in the offshore fund portfolio. Introducing the lockup provision increases the abnormal return by 4.4% per year for offshore funds compared with only 2.7% for onshore funds. I also find that share illiquidity premium becomes lower when an offshore fund is affected by its onshore equivalence through a master-feeder structure.