Does size matter? An analysis of the performances of Small and Large hedge funds in 2008

Introduction

2008 will be remembered as the year that transformed the financial sector, the traditional side of the industry lost many of its key players; size did not matter, numerous companies whether they were big or small were bought to their knees. In this paper we discuss how the hedge fund industry fared in 2008, in particular the influence of hedge fund size and strategy on the fund performance. We utilise the AlternativeSoft software platform to enable us to quickly run statistics on individual funds, as well as on a group of hedge funds. To reach our conclusion, we will not use statistical measures like R^2 or t-statistics, but we will rather analyse more return and performance related data, thus keeping this document readable.

We divided the hedge fund universe into four groups of different asset under management (AUM) sizes:

	AUM Range (millions USD)	Average AUM (millions USD)	Number of funds
Small	10-100	35.13	2’279
Medium	101-500	235.38	760
Large	500+	700.31	202
Super Large	10 largest	6’559	10

Source: AlternativeSoft, hedgefund.net database

We found that during the 2008 crash (i.e. from July to December 2008), large and medium hedge funds outperform their smaller peers in terms of returns; also large hedge funds outperform smaller hedge funds in term of Sharpe ratio.

Performance Analysis

In this first section, we investigate hedge fund performance. We find during 2008 the Super Large hedge funds outperform the other funds on average by 12.43%. To put this into perspective, we look at returns over 2008 of each individual group and see that the Super Large hedge funds (-0.35% in 2008) on average outperforms Large (-7.75% in 2008), Medium (-9.26% in 2008) and Small (-14.43% in 2008). These results provide evidence that the Super Large hedge funds performed better than its smaller peers in 2008. However in order to really check whether these returns were due to smart investment decisions or to excess risk, we calculate the Sharpe Ratio. Calculating the average Sharpe ratio in each group, we obtain the following results:

	Sharpe Ratio
Small	0.67
Medium	0.99
Large	1.09
Super Large	1.23

Source: AlternativeSoft, hedgefund.net database, 2% risk free rate, Jan08-Dec08.

We can clearly see that the risk-adjusted performance of larger funds is better than that of smaller funds. We conclude that in 2008 the performance of Super Large hedge funds relative to its smaller peers were better in terms of both returns and Sharpe ratio.

Strategy Analysis

In this second section, having already analysed the effects of size, we investigate the relationship between hedge fund strategy, size and 2008 returns. To simplify our analysis we will only look at four popular strategies:

- CTA
- Equity Long-Short
- Macro
- Multi-Strategy

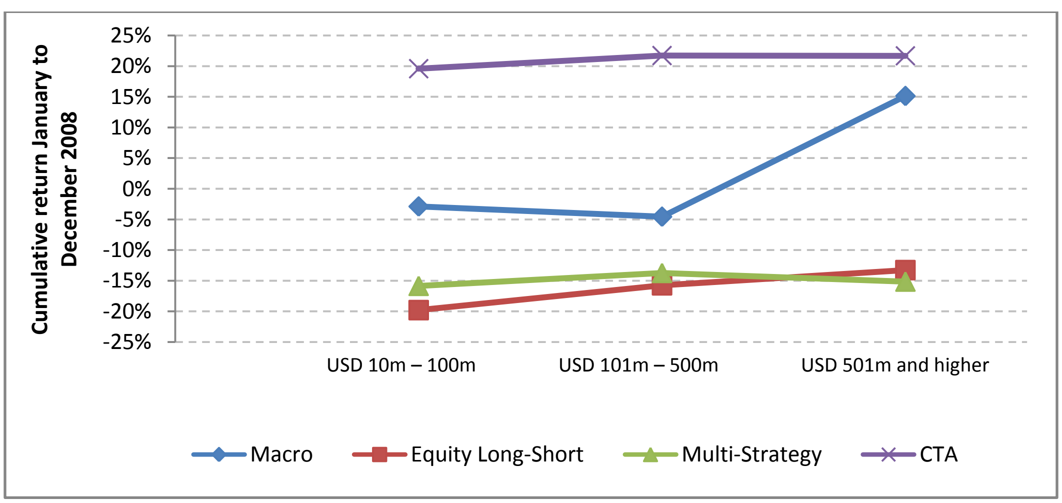
We will analyse the year in two parts: January to December 2008 and July to December 2008. This will allow us to compare and contrast between the performance during the entire year and the performance during the financial crash at the end of 2008. The table below shows the results. We did not include the Super Large group as there are not enough funds per strategy to provide meaningful results.

	Average AUM (millions USD)	July to December 2008	January to December 2008	Sharpe Ratio
CTA				
Small	31.54	4.03%	19.58%	0.68
Medium	243.07	**7.15%**	**21.73%**	0.81
Large	732.86	7.06%	21.69%	**1.00**
Equity Long-Short				
Small	34.22	-17.74%	-19.81%	0.32
Medium	227.41	**-14.77%**	-15.75%	0.70
Large	693.33	-15.22%	**-13.27%**	**0.79**
Macro				
Small	32.78	-6.05%	-2.89%	0.48
Medium	266.44	-8.04%	-4.56%	0.83
Large	736.00	**4.74%**	**15.14%**	**1.36**
Multi-Strategy				
Small	36.43	-16.16%	-15.85%	0.56
Medium	232.80	**-14.90%**	**-13.74%**	0.51
Large	653.81	-17.17%	-15.15%	**0.98**

Source: AlternativeSoft, hedgefund.net database, 2% risk free rate.

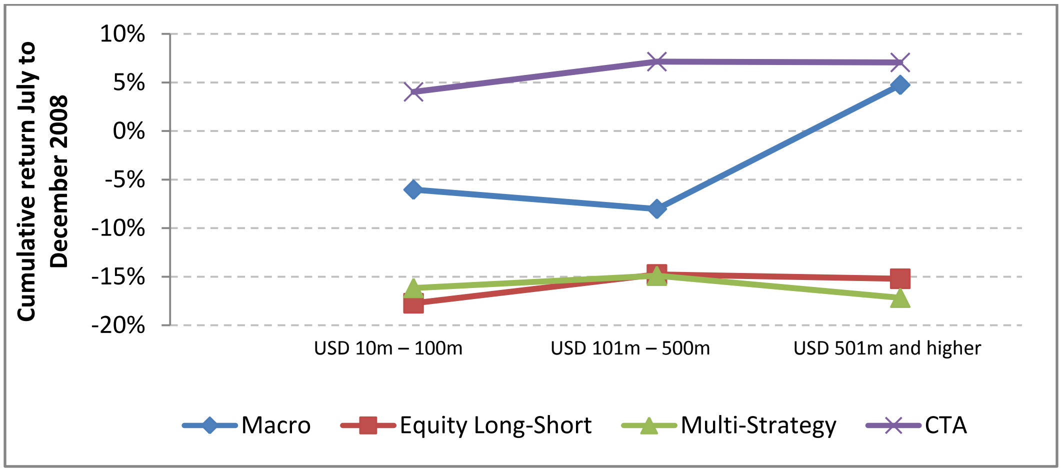
From July to December 2008, in CTA, Equity Long-Short and Multi-Strategy, the medium sized hedge funds performed the best; however for each of them the large sized funds had the best Sharpe Ratio. This indicates that the medium sized hedge funds were exposing themselves to slightly more risk (assuming risk is defined with volatility only). In Macro, the large funds had higher returns and larger Sharpe ratio than smaller funds.

The following graph shows the results for January 2008 to December 2008. Large hedge funds outperformed its smaller peers in Macro and Equity Long-short. However, medium funds slightly outperformed large funds in Multi-Strategy and CTA.



Source: AlternativeSoft, hedgefund.net database.

The following graph shows the results for July 2008 to December 2008. Large hedge funds outperformed smaller hedge funds only in the Macro strategy. In the three other strategies, medium hedge funds slightly outperformed larger hedge funds.



Source: AlternativeSoft, hedgefund.net database.

Conclusion

In this paper we investigated the performance of hedge funds in 2008. Our analysis found that the larger funds performed better than its smaller peers. The main reason why this occurred is because larger funds were able to better manage risk than smaller funds. This was shown by the fact that the Sharpe ratios for the larger funds were higher than the smaller funds. In addition, the larger funds had more experience as shown below with a longer track record history. So experience matters when crash comes.

	Average Track Record
Small	66 months
Medium	78 months
Large	91 months
Super Large	139 months

A basic strategy investing in the 10 Super Large hedge funds mixed with large hedge funds (>USD500m), would have easily outperformed the hedge fund indices and other smaller hedge funds, in term of returns and Sharpe ratio during 2008.

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Disclaimers

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Funds with assets < USD10 millions were not considered. Funds of Hedge Funds were not included in the study. December 2008 data were not available for all funds. In the 'Super-large group, two hedge funds had large returns, which may skew the results. We intentionally do not use statistical measures like R-squared, t-statistics or Granger causality in order to keep the paper readable.