Hedge Funds: Omniscient or Just Plain Wrong[1]

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Abstract: The objective of this paper is to set a framework for a reasoned discussion of hedge funds. I shall first describe what they are and what they do. The compensation arrangements for hedge funds would appear to encourage risk taking behavior that generates extraordinary returns. Interestingly enough, hedge fund returns are not extraordinary. They are not the gunslinging risk-takers of public perception. In fact, an analysis of the events of 1997 suggest, if anything, that they were somewhat gun-shy. We shall examine why this is the case. We shall conclude by examining their widely publicized role in the Asian currency crisis.

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1. Introduction

In a paper submitted to the Australian House of Representatives, the Reserve Bank of Australia indicates that it is very concerned about the activities of highly leveraged financial intermediaries known as "hedge funds"[2]. Their chief concern that these funds make money by attacking an exchange rate that has already overshot, so that it overshoots even further. The tactic is straightforward enough. By highly publicized actions and short selling, a bandwagon forms at which point the hedge funds pull out. This is what happened in the ERM crisis that hit the British Pound back in 1992, the Asian currency crisis in 1997 and speculative attacks on the Hong Kong dollar peg in 1998. By their actions these hedge funds can hold small countries to ransom. So much is clear.

Or is it? On further analysis, the Reserve Bank is very vague when it comes to defining what it means by a "hedge fund" and in fact a number of details in its submission to Parliament are incorrect. Dr. Grenville, Deputy Governor of the Reserve Bank actually hedges in his definition of hedge funds saying that "this terminology is probably more specific than we need to be to make the point."[3]

This goes beyond a confusion about what hedge funds are and what they do. Certainly the Reserve Bank of Australia is not alone on this point. What is really surprising is that in all of the submissions and speeches on this topic, there is not one single hard fact to support the strong claims of the Reserve Bank. In a careful reading of this material, about all I can find is a

reference to some unsupported assertions by George Soros. Dr. Grenville concludes "what more evidence do you want."

My intent is to try to set a framework for a reasoned discussion of hedge funds. I shall first describe what they are and what they do. There is some confusion on this point, which I hope to set to rest. The compensation arrangements for hedge funds would appear to encourage risk taking behavior that generates extraordinary returns. Interestingly enough, hedge fund returns are not extraordinary. They are not the gunslinging risk-takers of public perception. In fact, an analysis of the events of 1997 suggest, if anything, that they were somewhat gun-shy. We shall examine why this is the case. We shall conclude by examining their widely publicized role in the Asian currency crisis.

2. Hedge Funds: Myth and Reality

I should not be too hard on the Reserve Bank and Dr. Grenville. They are, after all, only echoing the remarks of that well known authority on financial affairs, Dr. Mahathir bin Mohamad. To put his remarks in some perspective, it is worth pointing out that during the nineties, according to the International Monetary Fund, financial intermediaries had been investing steadily into South East Asia. There was a net inflow of about $US20 Billion into the region over and above portfolio and direct investment, up until 1995 and 1996 when the amount increased dramatically to $45 Billion per annum. Then with the collapse in both the Baht and the Ringgit in 1997, there was a sudden outflow of $58 Billion. It was self-evident to the central bankers in the region that the collapse in the currency had everything to do with an attack on the currencies of the region by well financed

international speculators. As Dr. Mahathir observed "We are now witnessing how damaging the trading of money can be to the economies of some countries and their currencies. It can be abused as no other trade can. Whole regions can be bankrupted by just a few people whose only objective is to enrich themselves and their rich clients...We welcome foreign investments. We even welcome speculators. But we don't have to welcome share -- and financial-market manipulators. We need these manipulators as much as travelers in the good old days needed highwaymen"[4].

We will show that even if we were to accept the Prime Minister's assurances at face value, the activities of hedge funds could not have been responsible for the Asian currency collapse of 1997. Furthermore, taking at face value the assertion that hedge funds acted in concert with the sole objective of bringing down the Ringgit, their behavior would have to have been extreme indeed to explain the observed facts. However, we will get to this later. What I want to do now is to examine the premises implicit in the Prime Minister's statement one by one.

2.1 Hedge funds act in concert as global market manipulators

A few years ago I was listening to the radio one Saturday morning, when I heard David Frost's interview with Nick Leeson from a German jail. Frost asked Leeson to explain how he lost £800 Million while engaged in hedging operations. Leeson patiently explained to Frost, that sometimes you make money hedging, sometimes you lose money. It just happened that he had lost money. Leeson is certainly not alone in identifying hedging behavior with the activities of hedge funds, and in particular with George Soros, the global macro hedge fund impresario. Soros earned

impressive returns commensurate with his risk taking behaviour. Yet of course, to claim that what Soros did for a living was to hedge financial claims is to stretch beyond recognition what it is that we mean by the term "hedging."

"Hedge funds" were introduced shortly after WWII. Their development is commonly attributed to Alfred Winslow Jones, a sociologist turned journalist turned fund manager. On assignment to *Fortune* magazine in 1949, Jones investigated technical methods of market analysis. His article "Fashions in Forecasting" reported on the new, post-depression class of stock-market timers and the strange schemes — statistical and otherwise — they employed to call the market. These ranged from volume/price ratios to odd-lot statistics to the outcome of the Yale-Harvard football game. Apparently a quick study, Jones went from novice to master overnight. Two months before the *Fortune* article went to press, Jones had established an investment fund as a general partnership, with several characteristics which now distinguish hedge funds. Jones developed the notion of a hedge fund as a market neutral strategy, by which long positions in undervalued securities would be offset and partially funded by short positions in others. This "hedged" position effectively leveraged investment capital, and allowed large bets with limited resources. Jones' other innovation was an incentive fee amounting to 20 percent of realized profit, with no fixed fee. Over the next decade, Alfred Winslow Jones produced a handful of imitators, some of whom he had trained. However, it was not until another *Fortune* article, this one in 1966, that the term "hedge fund" was used to describe the market neutral style that Jones had developed.

However, perhaps Jones' greatest innovation was the recognition that the particular limited partnership form that he created is not subject to the regulatory controls stipulated by the

Investment Company Act of 1940. Extraordinary returns are possible when free of constraints on leverage, short selling and ownership restrictions that bind other investment companies and mutual funds. As a result, there came a flurry of imitators, who borrowed the fee structure, but not necessarily the “hedge” philosophy that Jones represented.

At this point a “hedge fund” is best defined as an limited investment partnership not subject to regulation under the 1940 Act. At this point, hedge funds are a very heterogeneous lot, and only a minority follow the market neutral style that Jones represented. Furthermore there is a lack of clarity concerning what these people really do. George Soros for example was for a number of years held up as the exemplar of the “global macro” manager who would profit from bets taken against countries and currencies. This was in no sense a market neutral style. Recently we learned that he strayed far from his global macro beat to get seriously caught in the April 2000 technology downdraft[5].

Why this lack of clarity? Freedom from regulatory oversight comes at a significant cost. For regulatory purposes before 1996, hedge funds had to limit the number of investors to 99 to qualify for exclusion from regulations governing public issuance of securities, including restrictions on public advertising and solicitation of investors. In 1996, the number of investors was increased to 500 and rules have been broadened to attract individual and institutional money. Hedge funds can accept money only from ”qualified investors,” who have $5 million in capital to invest, and a sophisticated understanding of the financial markets. In addition, they can accept money from institutions such as pension funds who have at least $25 million in capital. However, the absence of regulatory oversight and restrictions on dissemination of information

means that reliable information on hedge funds is hard to come by.

In the end, what most of us are left with are some anecdotes in the popular press that speak of the remarkable investment prowess of George Soros. In fact I think it fair to say that his widely publicised and by all accounts successful attack on the pound Sterling in 1992 led to a huge growth in the hedge fund industry. Investors who were closed out of Soros' funds anxiously sought out other hedge funds. Many trading desks and CTA funds simply redefined themselves as "hedge funds." The public perception was that all hedge funds were like George Soros, gunslingers on a global scale.

Recently, Will Goetzmann, Roger Ibbotson and I published an article in the *Journal of Business* on offshore hedge funds[6] . High quality data are available for these funds which we find are quite representative of the hedge fund industry taken as a whole. Surprisingly enough, in the period 1989-1995 hedge funds did not earn on average anything like the returns attributed to Soros. In fact, the average fund earned a good 300 basis points less than the S&P500 over the same period. The risk was lower, and return per unit risk measured by the Sharpe ratio is favorable relative to that index. Interestingly enough, the Soros funds were larger, and their returns so far superior to those of the average fund, that the value weighted average return of all funds is more than 800 basis points *greater* than the S&P500. This only goes to show that Soros is the exception rather than the rule. To characterize all hedge funds as "global gunslingers" is to go beyond what the data can support.

This perception is confirmed when we break down the results according to style of management.

By whatever criteria we choose to use, it is true that global macro funds did better than any other style of management. In terms of absolute return, risk adjusted return or return per unit risk global macro funds experienced the highest level of returns. However, they are only one of many possible styles of management, some of which did only marginally better than the S&P500. On the basis of the numbers, it did not pay to have invested with short-selling funds, which experienced a negative return of 11 percent in a period when the S&P500 earned a positive 16 percent average annual return. In recent work we examine in greater detail hedge fund returns by style[7] and find that regardless of how we measure style, this attribute contributes at least 20 per cent of the cross sectional variability of hedge fund returns. The variation in fund returns across styles at least raises the question of whether we can attribute the exceptional returns of Soros to his undoubted acumen, or rather to have had the good fortune to have been at the right place at the right time.

To investigate this issue, we studied returns year by year on the understanding that exceptional skill should generate persistently positive returns year by year. In each figure the vertical line is the performance of the median manager in the comparison year, and the horizontal line is the performance of the median manager in the subsequent year. The red line is a regression of return on prior year return

What we see is that the upper quadrant of each figure, the “Winner Winner” quadrant, is remarkably sparse. The funds marked with a “O” are those funds which survive only two years in our database. You lose, you lose, you die. The “S” funds are those operated by George Soros. His performance in the period 1989 through 1992 was outstanding. As a result, his Quantum fund

begat three smaller funds, Quantum Emerging Growth, Quasar and the Quota fund, which all did well in 1993. This figure shows very clearly that Soros is an outlier. It is a serious error to attribute the characteristics of Soros to the hedge fund industry taken as a whole.

2.2 Hedge funds are gunslingers

Hedge funds are a heterogeneous lot. While few adopt Alfred Winslow Jones' "market neutral" style, most do follow his example in the fees that they charge. The fee structure can be characterized as aggressively performance based. According to the most recently available TASS database, as of December 31, 1999 only 14 percent of managers charged no performance based fee. The median fee charged was 20 percent of the positive part of returns, on top of a 1.25 percent flat fee. While other institutional fund managers, such as mutual funds and pension fund managers can and do sometimes charge incentive based fees, their fees are symmetric in nature. Hedge fund fees are asymmetric and are designed to encourage the manager to take risk. In addition, for most funds there is a high water mark provision. In other words, the manager must make up past losses before they are entitled to the performance fee under their contract.

In other words, the manager is granted a call option, an option which goes into the money as the fund returns enough to cover past losses. As we all know, the value of call options increase with the volatility of the underlying asset. For this reason we would expect that the fee structure encourages hedge fund managers to take on considerable risk.

It is therefore something of a puzzle to understand why it is that hedge funds take on so little risk.

Not only do fund managers take less risk than we would anticipate, but also there is considerable heterogeneity across fund managers in the amount of risk they are willing to bear. In recent work[8] we show not only that funds vary in the amount of risk they are willing to assume, but that they vary risk exposure in different ways. Those funds with the lowest value at risk actually reduce their risk exposure at the time that high flying funds increase risk in the midst of the difficulties that LTCM faced.

Why aren't hedge funds the gunslingers that their fee schedules would suggest? My argument is that there is a reputation factor that offsets the obvious incentive to take risk. As it is, hedge funds are a little like radioactive substances. They have a half life of about two and a half years. This is almost in the nature of being a historical constant, and applies to offshore funds, regular hedge funds and CTA's as well. The performance fee option is valuable only so long as the fund stays in existence. If by taking risk, the fund increases the probability that it will go out of business, the fund will moderate risk exposure rather than increase it.

The evidence Will Goetzmann, James Park and I have collected[9] suggests very strongly that those funds most in danger of termination decrease risk exposure. We find that those funds whose performance is relatively poor relative to other funds moderate their risk exposure rather than increase it. Evidence I have collected and that others have collected seems to find that poor performance is a reasonably good predictor of fund failure. Controlling for whether the fund manager incentive fee contract is in the money, we find using a probit regression procedure that both relative performance and the level of risk taken influence the probability of survival. I also find that the younger the fund, the more likely it is to fail. This indicates that reputation is a very

significant factor. Particularly for younger funds, taking on additional risk increases substantially the probability of fund failure.

While in principle, the incentive fee arrangements appear to encourage gunslinging behaviour, such behavior incurs a significant reputation cost. In an environment where there is a high probability of fund failure, this reputation cost tends to dominate. For some funds, this cost may be so high as to eliminate any benefit from taking on additional risk. For this reason, many hedge funds are far more conservative than their incentive fee structures would suggest.

While some funds may take on considerable risk, George Soros among them, most hedge funds are simply not the gunslingers of popular imagination.

2.3 Hedge funds were responsible for the Asian currency crisis

While I have shown that hedge funds are not as a general rule global market manipulating gunslingers, Dr. Mahathir bin Mohamad and his friends still maintain that hedge funds were indeed responsible for the Asian currency crisis. Let us assume that he is correct, and let us see just how far this will take us.

In a recent publication[10] we have taken all of the funds on the TASS hedge fund database that claim to have maintained currency positions over the period of the crisis. Taking the total capitalization of these funds, we come up short on the amount needed to finance net inflows of $US 45 Billion in 1995 and 1996, and a net outflow of $US59 Billion in 1997. Taking all of the

funds together we have an asset size of only about $US29 Billion. This is of course the total asset size and does not account for leverage. Of the managers we consider, only Swiss Bank reports its leverage at about 3.5:1, a little on the high side, but perhaps typical of the more adventurous hedge funds. We see that in order to have had a significant impact on the crisis, they would have had to have put a considerable amount of their leveraged capital at stake. We should be able to detect the impact of the crisis on their P/L. This is on the working hypothesis of Dr. Mahathir that they were involved in the Asia crisis only to benefit themselves and their rich clients.

When we look at fund returns, we find no evidence of enrichment over the period of the crisis. In fact at the outset and height of the crisis, the funds were losing considerable amounts of money. In August of 1997, the Ringgit fell 4.21% relative to the $US, while at the same time all of Soros' funds lost money. His flagship Quantum fund lost 7.43% of its value. In October of 1997 when the Ringgit fell 9.75% in value, it was the same story, with the Quantum fund losing 10.56% of its value in that month. On its face, this does not appear to be strong evidence of illicit enrichment, particularly when hedge funds would have had to expend a considerable amount of capital to influence events in that region.

We can take this analysis a step further. Let us continue to assume that Soros and company were responsible for the capital flight associated with the fall of the Ringgit. Since a very significant fraction of their leveraged capital must have been involved in this effort, we ought to find that their fund returns were sensitive to changes in the value of the Ringgit. There is in fact, almost no relationship. Using a Sharpe type analysis to estimate the total exposure to the Ringgit, we find

that while the implied exposure changed through time, it had zeroed out at the time of the Ringgit's collapse. Of course, it is quite extreme to assume that Soros and company were solely invested in the Ringgit. We examine with weekly data the exposure of two prominent currency traders to the range of currencies: an Asia basket, Japan, Germany Britain and Mexico. Again, the evidence shows dramatic changes in net exposure to the Asia basket prior to the collapse of the Ringgit. However, at the time of the collapse these funds were virtually out of the market altogether. It seems that the period of the collapse was a period of high risk for these funds. They chose safe harbor from the storm.

There were periods when hedge funds had huge positive and negative exposures to Asian currencies, but these bear no relation to current, past or future moves in exchange rates. At the same time, we should be careful to note that our evidence does not rule out a currency flight explanation for the collapse of the Ringgit. As we have noted, In 1997 there was a net outflow of funds from the countries in the region equal to more than twice the capitalization of all of the currency hedge funds in our sample, while at the same time, Malaysian investors were anxiously seeking safe haven in property markets abroad. There were reports all around the Pacific rim of flight capital from Malaysia coming into real estate markets in the month of August, 1997. This was particularly evident in Australia. There were a series of articles in the Australian Financial Review and other publications that remarked upon the aggressive acquisitions of blue chip real estate in Sydney, Melbourne and Adelaide by wealthy Malaysian investors coincident with the collapse of the Ringgit[11]. There was in fact a flight of capital from Malaysia. However, there is no evidence whatsoever to support a claim that hedge funds in general, or any particular hedge fund, led the charge for the exits.

3. Conclusion

From a purely intellectual point of view, what is most fascinating about the Asia currency crisis is the fact that very intelligent people, people such as Dr. Grenville of the Reserve Bank of Australia whom I have the greatest respect for, accepted at face value the claims of Dr. Mahathir without stopping for a moment and asking whether there was any factual basis for these claims. These claims are made on the basis of a variety of premises about hedge funds, each one of which is false. Even assuming these premises to be correct, we can find no data to support his claims.

From a point of pure logic, there cannot be any factual basis for any of these claims. Malaysia is fortunate in having a very fine and able Securities Commission. If there were any factual evidence at all to support a claim that Soros had intervened in the markets to bring down the Ringgit, it would have been produced by now. I should note that the silence is deafening. I suspect that what is really going on is that Soros was an expedient target of opportunity. The more noise made about outsider involvement, the less attention will be paid to those Malaysians who were anxious to get their money out of the region in August of 1997.

It is interesting to note that Dr. Mahathir's feelings about currency speculation have changed over the years. In late 1989 Bank Negara was using its inside information as a member of the club of central bankers to speculate in currencies, sometimes to an amount in excess of $1US billion a day. The US Federal Reserve Board had advised Bank Negara to curtail its foreign exchange bets, which were out of proportion to its reserves which at that time were about $US7 Billion.

At the time, Dr. Mahathir defended this currency speculation, referring to it as active reserve management and was quoted by the official Bernama News Agency in December 1989 as saying "We are a very small player, and for a huge country like the United States, which has a deficit of US$250 million, to comment on a country like Malaysia buying and selling currency is quite difficult to understand"

Indeed, in the shark-infested waters of international Finance the name of Bank Negara stands out. Widely credited for a successful speculative raid on the pound Sterling on September 21, 1990, and currency trading profits amounting to $US1.2 Billion in 1991, a miffed Bank Negara executive was reported as having said that "The existence of this rumour is a reflection of the condescending attitude of the Western media, which refuses to believe that a central bank in a developing country can do as well in an area of the financial market"[12]

Bank Negara came something of a cropper in 1992 when it thought to bet against George Soros on whether Britain would stay in the European Rate Mechanism (ERM), and promptly lost $US3.6 Billion in the process and would end up making a $US9 Billion loss for 1992. Malaysia's loss was Soros' gain[13].

One has to wonder then whether Dr. Mahathir's new found religion on the subject of currency speculation has more to do with his humiliation back in 1992 than with the facts as they existed in 1997. At a psychological level, it does tend to explain why it was that the Prime Minister felt it necessary to make statements and commit to policies that had the effect of restricting almost entirely capital flows into Malaysia and damaging the chances for Kuala Lumpur to become a

major center of finance in the South East Asian region.

References:

Reserve Bank of Australia, 1999, “The Impact of Hedge Funds on Financial Markets” Paper submitted to House of Representatives Standing Committee on Economics,
Finance and Public Administration’s Inquiry into the International Financial Markets Effects on Government Policy

Brown, Stephen J., William N. Goetzmann and Roger G. Ibbotson, 1999, Offshore hedge funds,: survival and performance, 1989 - 1995, Journal of Business, 72(1), 91-119.

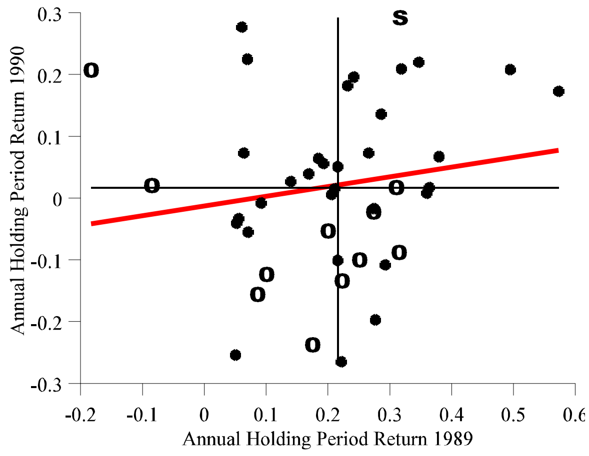
Brown, Stephen J., William N. Goetzmann and James Park, 2000, Hedge Funds and the Asian Currency Crisis of 1997, Journal of Portfolio Management, 26, 95-101.

Brown, Stephen J., William N. Goetzmann and James Park, 2001, Careers and Survival: Competition and Risk in the Hedge Fund and CTA Industry, forthcoming Journal of Finance

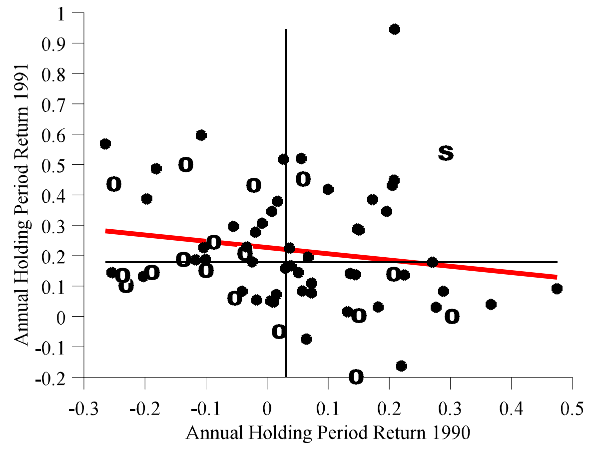
Brown, Stephen J. and William N. Goetzmann, 2001, Hedge funds with Style, unpublished working paper, NYU Stern School of Business

Mahathir bin Mohamad, 1997, Highwaymen of the Global Economy, Wall Street Journal 9/23/1997

Performance of Funds 1989-90



Performance of Funds 1990-91



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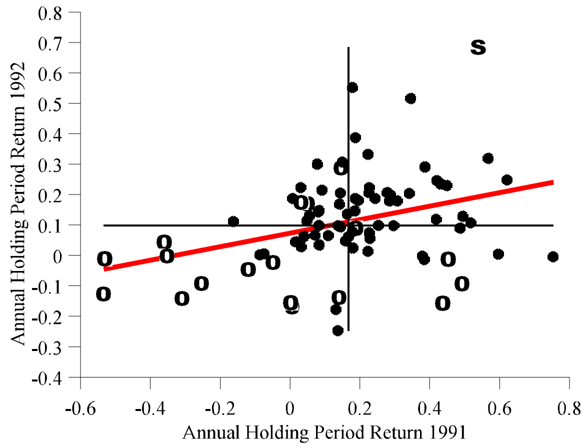
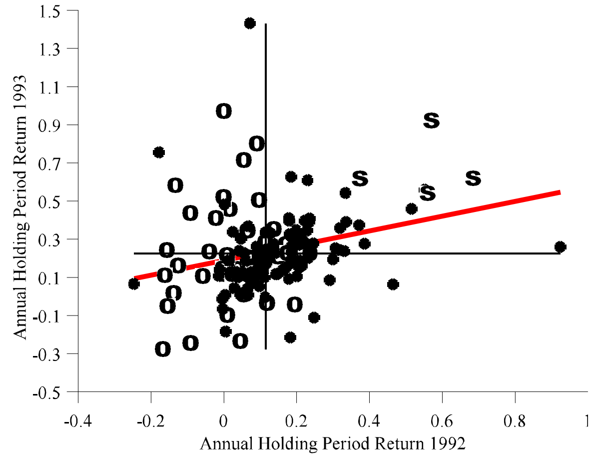
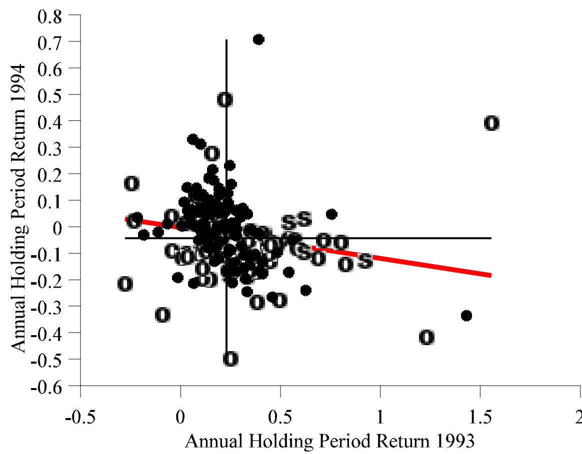


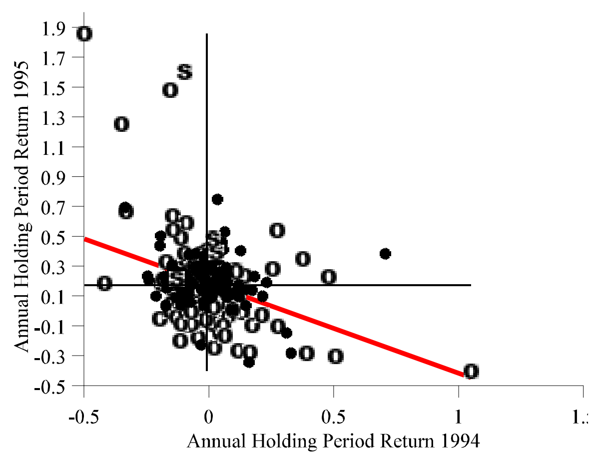
Performance of Funds 1992-93



Performance of Funds 1993-94



Performance of Funds 1994-95



Year by year performance persistence for funds in sample 1989-95. Each panel shows a scatter plot and corresponding regression of annual hedge fund returns on corresponding returns for the previous year. Datapoints marked with a “0" correspond to funds that are in the database for only two years, while those marked with “S” correspond to George Soros funds. Horizontal reference lines indicate the median return for the year given on the vertical axis, while vertical lines give the median returns for the previous year. The upper right quadrant in each panel therefore gives the Winner Winner (WW) category and the lower left quadrant corresponds to the Loser Loser (LL) category.

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2.Reserve Bank of Australia (1999)

3.Address by Dr S.A.Grenville,Deputy Governor to The Reinventing Bretton Woods Committee Conference,'International Capital Mobility and Domestic Economic Stability', Canberra, Australia 15 July 1999.

4.Mahathir bin Mohamad (1997)

5.Hedged Out: How the Soros Funds Lost Game of Chicken Against Tech Stocks, The Wall Street Journal, 05/22/2000.

6.Brown, Goetzmann and Ibbotson (1999)

7.Brown and Goetzmann (2001)

8.Brown and Goetzmann (2001)

9.Brown, Goetzmann and Park (2001)

10.Brown, Goetzmann and Park (2000)

11."Foreigners Snap Up Top CBD Sites" Sydney Sun Herald 9/21/1997, "Asian Buyers Reignite Interest In Adelaide Market" Australian Financial Review 9/25/1995, "Local Property Rocks As Malaysian Investors Reel", Australian Financial Review 09/26/1997, "Kemayan Plans Asia-Pacific Shopping Spree", Australian Financial Review 9/26/1997,

12."Success is Bank Negara's Reply to Critics" Asian Wall Street Journal 8/02/1991

13."Malaysia Viewpoint" The Times of London 4/03/1994