

PERFORMANCE PERSISTENCE OF MONTHLY RETURNS ACROSS STRATEGIES: A STUDY OF ASIAN HEDGE FUNDS

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ABSTRACT

In this paper, we attempt to investigate the performance persistence of Asian hedge funds in their returns across strategies on monthly basis. Using EurekaHedge database which contains monthly returns of 661 Asian hedge funds by December 2005, we carry out two testing methods for parametric (contingency table) and non-parametric (regression – based model) tests for each strategy. We attempt to make a significant contribution to the existing literatures of Asian hedge funds on the performance persistence of Asian hedge funds across strategies.

Keywords: Asian hedge funds, Performance evaluation, Performance persistence, Parametric and non-parametric methods, Hedge fund risks and returns.

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1. INTRODUCTION

Performance persistence has been continuously addressed in various researches as a controversial issue. Results have been drawn out with different conclusions, which are believed to be due to the use of different databases, different time periods, sample sizes and methodologies.

Edwards and Caglayan (2001a), Harri and Brorsen (2002) and Francis, Winston, and Melvyn (2003) tested the performance persistence of hedge fund industry and find evidence that performance persists in hedge funds' returns. Brown and Goetzmann (2001) find a significant relationship between the persistence of fund returns from year to year and style of fund management

In term of persistence period, Harri and Brorsen (2004) and Francis, Winston, and Melvyn (2003) both find short term persistency in hedge fund performance. And Francis, Winston, and Melvyn (2003) find that persistence diminishes greatly when measurement period to 6 months and beyond.

Other researchers only find evidence on performance persistence in risks for hedge funds. Herzberg and Mozes (2003) find that funds' risk, correlations with stock markets and performance is likely to persist and some investment styles persist over a period of time. Kat and Menex (2003) also find significant persistence in the risk profile of hedge funds. Both authors find low predictability for hedge fund values.

And some authors find no evidence of performance persistence in hedge funds. Ennis, Richard and Sebastian, Michael (2003) find that hedge fund style characteristics are not stable through time. This means that there is no persistency in hedge fund performance. Various results have drawn more attentions to researchers to find out the exact answer for this myth.

Most of studies mentioned on performance persistence have done for the American and European hedge funds, but not many for Asian hedge funds. This could be due to the fact that hedge funds are still very new alternative investment methods in Asian region.

We attempt to make a significant contribution to the existing literatures of Asian hedge funds on the performance persistence of Asian hedge funds across strategies. We conduct our investigation by using data provided by EurekaHedge containing 661 funds investing mainly in Asian Pacific Region since their inception. We extract monthly net-of-fee hedge fund return data taken from this database for a study period of January 1999 – December 2005. We employ both parametric (contingency table and non-parametric (regression based) methods to test performance persistence for Asian hedge funds on monthly basis.

Our results show that monthly returns of Asian hedge funds do persist over time. With 84 observed monthly returns for each strategy, performance persistence test across strategies is possible. This is our significant different conclusion with that drawn from Francis, Winston and Melvyn (2003). Strategies which show significant persistence in their returns are long/short equities, event driven, distressed debt, multi-strategy, and relative values. The results are all confirmed by our various tests of persistence.

The rest of the paper is organized as follows. Section II describes characteristics of Asian hedge funds' returns. Section III introduces parametric and non – parametric tests used to test

performance persistence of Asian hedge funds. Section IV provides test results for the two mentioned tests on our four sample periods. Conclusion will be in section V.

2. CHARACTERISTICS OF ASIAN HEDGE FUNDS' RETURNS

According the classification of EurekaHedge, there are twelve different strategies for Asian hedge funds, naming as arbitrage, convertible arbitrage, directional, event driven, long bias, long/short equity, macro funds, market neutral, merger arbitrage, multi-strategy, relative value, and risk arbitrage.

Arbitrage

This is a market neutral hedging strategy. Here the manager seeks to profit by exploiting pricing inefficiencies between related fixed income securities while neutralizing exposure to interest rate risk. Fixed Income Arbitrage is a generic description of a variety of strategies involving investment in fixed income instruments and is weighted in an attempt to eliminate or reduce exposure to changes in the yield curve.

Convertible Bonds

The manager is long on convertible bonds. Convertible bonds have both fixed income and equity characteristics. If the underlying common stock appreciates, the convertible bond's value should rise to reflect this increased value. Downside protection is offered because if the underlying common stock declines, the convertible bond's value can decline only to the point where it behaves like a straight bond.

Distressed Securities

The manager invests in, and may sell short, the securities of companies where the price of the security has been, or is expected to be, affected by a distressed situation. This may involve reorganization, bankruptcies, distressed sales, and other corporate restructuring.

Event Driven

The manager invests in opportunities created by significant transactional events, such as spin-offs, mergers and acquisitions, bankruptcy, reorganizations, recapitalizations, and share buybacks.

Long/ Short Equity

This directional strategy involves equity-oriented investing on both the long and short sides of the market. The objective is not to be market neutral. The manager has the ability to shift from value to growth, from small to medium to large capitalization stocks, and from a net long position to a net short position. The manager may use futures and options to hedge.

Macro

The manager makes leveraged bets on anticipated price movements of stock markets, interest rates, foreign exchange, and physical commodities. Macro managers employ a 'top – down' global approach, and may invest in any markets using any instruments to participate in expected market movements.

Market Neutral

The manager seeks for mis-pricing between related equity securities, and neutralizes exposure to market risk by combining long and short positions to earn profits. In this strategy, the manager will take long positions on stock/ securities of strongest companies across different industries and take short positions on stock/securities of weak companies.

Merger Arbitrage

This strategy is sometimes called Risk Arbitrage. The manager invests in event-driven situations such as leveraged buy-outs, mergers, and hostile takeovers. Normally, the stock of an acquisition target appreciates while the acquiring company's stock decreases in value.

Relative value Arbitrage

In this strategy, the manager attempts to take advantage of relative pricing discrepancies between instruments including equities, debt, options, and futures. The manager may use mathematical, fundamental, or technical analysis to determine misevaluation.

Definitions of each strategy are summarized in Table I below.

**TABLE I
DEFINITION OF HEDGE FUND STRATEGIES**

Strategy	Definition
Arbitrage	<i>A transaction which produces a risk-free profit</i>
Convertible arbitrage	<i>arbitraging the mis-pricing between convertible bonds and their underlying equity</i>
Directional	<i>A strategy or trade that involves taking an unhedged view on an investment</i>
Event driven	<i>A strategy that seeks to benefit from impending, predictable or possible future events</i>
Long bias	<i>A strategy which consistently has more long than short positions in a portfolio</i>
Long/short equity	<i>A strategy where the portfolio has both long and short positions</i>
Macro funds	<i>Funds that take macro views (on interest rates, currencies etc) and position their investments accordingly</i>
Market neutral	<i>A strategy where the portfolio has balanced long and short positions, either by sector or stock.</i>
Merger arbitrage	<i>A strategy that seeks to benefit from the share price movements of companies involved in mergers</i>
Multi-strategy	<i>A strategy is a combination of a number of investment strategies.</i>
Relative value	<i>Exploiting the mis-pricing of one asset against another to generate a low risk profit.</i>
Risk arbitrage	<i>Similar to merger arbitrage.</i>

Source: EurekaHedge Inc.

By December 2005, there are 661 funds across the above mentioned strategies. Among these, long/short equities (396) is the most common strategy for Asian hedge funds, followed by multi-strategy (99), relative value (37), macro (28), CTA (22), and fixed income (20). Not many funds follow arbitrage (3), convertible arbitrage (3), and CTA/ managed futures strategies (7).

Average fund size ranges from USD 47 million to USD 1,147 million. Most strategies with fewer funds tend to have bigger fund size compared to strategies with more funds. This is shown by two extreme cases: arbitrage and long/short equities, in the table below. Fund capacity also varies across strategies from USD 225 million to USD 25,0268 million.

**TABLE II:
FUND SIZE AND FUND CAPACITY FOR EACH STRATEGY**

Strategies	Number of Funds	Average Fund Size (US\$m)	Average Fund Capacity (US\$m)
Arbitrage	3	1,147	N/A
Convertible Arbitrage	3	47.3	225
CTA	28	89.2	885.26
Distressed Debt	17	296	425
Event Driven	19	193	265.67
Fixed Income	20	104	323.31
Long / Short Equities	396	178	3046.4
Macro	28	86	793
Multi-Strategy	99	153	314.91
Others	10	225	25,0268.8
Relative Value	37	80.8	615.71
Grand	661	169	6572.47

Source: EurekaHedge Inc.

The performance of Asian hedge fund returns varies among strategies. Different hedge fund strategies process different tradeoffs between risk and returns.

Strategies with high average annualized returns are CTA/ Managed Futures, event driven, relative value, and multi-strategy and long/short equities. Data on average monthly returns, average rolling returns, average two year rolling return, average five year rolling return and average Sharpe ratio are very much consistent for all strategies except CTA/Managed Futures due to the negative value for average two year rolling return.

TABLE III
SUMMARIZED STATISTICS ON THE RETURNS OF ASIAN HEDGE FUNDS

Investment Style	Average Annualised Return (%)	Average Best Monthly Return (%)	Average Worst Monthly Return (%)	Average One Year Rolling Return (%)	Average Two Year Rolling Return (%)	Average Five Year Rolling Return (%)	Average Sharpe Ratio
Arbitrage	7.81	4.58	-5.69	3.82	12.43	29.76	0.62
Convertible Arbitrage	7.29	4.77	-1.84	9.30	15.28	N/A	0.53
CTA	14.14	15.18	-7.36	9.05	3.97	40.51	0.56
Distressed Debt	13.66	7.09	-5.26	7.32	25.82	96.03	1.78
Event Driven	24.34	7.00	-1.68	19.98	53.00	248.68	2.60
Fixed Income	11.76	4.88	-2.50	7.26	18.55	132.49	2.38
Long / Short Equities	19.74	10.80	-5.15	19.47	32.65	129.11	1.49
Macro	11.74	12.16	-7.95	7.27	10.71	109.25	0.68
Multi-Strategy	22.49	12.89	-5.86	15.29	22.94	83.71	1.61
Others	133.24	22.41	-12.48	61.41	61.76	221.62	3.08
Relative Value	24.41	9.70	-5.02	15.32	18.65	151.38	1.22
Grand	21.28	11.01	-5.39	17.49	28.39	118.65	1.52

Source: EurekaHedge Inc.

In terms of risk profile, funds with high annualized standard deviations are CTA, CTA/ managed futures, macro, multi-strategy and long/short equities. Funds with low standard deviations are arbitrage, convertible arbitrage, fixed incomes, distressed securities and event driven. Some strategies i.e. distressed debt and event driven with low annualized standard deviations but process high Sortino ratios, while others i.e. long/short equities, macro and relative depict the opposite. CTA, multi-strategy and macro have high value at risk at 90%, 95% and 99% level.

TABLE IV
SUMMARIZED STATISTICS ON THE RISKS OF ASIAN HEDGE FUNDS

Investment Style	Average Annualized Standard Deviation (%)	Average Downside Deviation (%)	Average Sortino Ratio	Maximum Drawdown (%)	Average VaR (90%)	Average VaR (95%)	Average VaR (99%)
Arbitrage	5.66	3.24	1.07	-8.95	-1.46	-2.05	-3.16
Convertible Arbitrage	4.87	2.22	6.59	-3.18	-1.22	-1.73	-2.68
CTA	14.89	7.27	1.12	-13.06	-4.33	-5.89	-8.82
Distressed Debt	6.46	3.03	12.86	-6.71	-1.30	-1.98	-3.25
Event Driven	7.51	1.89	15.49	-2.48	-0.97	-1.76	-3.24
Fixed Income	5.21	2.25	6.67	-4.36	-1.01	-1.56	-2.59
Long / Short Equities	11.74	5.05	5.92	-9.46	-2.84	-4.08	-6.38
Macro	14.32	7.56	4.39	-14.46	-4.26	-5.76	-8.58
Multi-Strategy	14.54	5.31	29.29	-10.03	-3.68	-5.20	-8.06
Others	23.99	10.45	1.66	-26.53	-4.95	-7.47	-12.19
Relative Value	10.17	4.66	2.99	-11.38	-2.47	-3.54	-5.54
Grand	11.98	5.10	9.47	-9.84	-2.93	-4.19	-6.55

Source: EurekaHedge Inc.

3. PARAMETRIC AND NON - PARAMETRIC TEST OF PERSISTENCE

These are the two common methods used by various researchers such as Agarwal & Naik (2000), Herzberg and Mozes (2003), Harri & Brorsen (2002), Kat & Menexe (2002) and Francis, Winston and Melvyn (2003) to test performance persistence of hedge funds. The purpose of these tests is to find out if winners/ losers in the first period continue to be winners/losers in the second period.

Due to different risk – return tradeoffs for each hedge fund style, we examine the persistence in Asian hedge fund returns within individual hedge fund strategies. Using monthly return data of 661 Asian hedge funds available from January 1999 to December 2005, we carry out both regression based (parametric) and contingency table based (non-parametric).

3.1 NON – PARAMETRIC TEST OF PERSISTENCE

CONTINGENCY TABLE

We first construct contingency tables for our performance persistence test across strategies. For the above funds we calculated the monthly return for each fund in our sample over 4 periods: January 1999 to December 2000, January 2001 – December 2002, January 2003 – December 2004, and January 2005 – December 2005. Our sample includes 661 funds.

To test whether the funds with a relatively high (low) monthly return over one month also exhibit a relative high (low) value over the second month, we use straight forward contingency tables of winners (W) and losers (L). A fund is considered as a winner (loser) in a particular month if its return is greater (lower) than the median return for all funds following the same strategy. A

fund's performance is persistent when it is a winner or a loser for both periods.(see Agarwal & Naik, 2000)

WW symbolizes a winner in the first month and again a winner in the second month. Likewise, WL stands for a winner in the first month but a loser in the second month. LW and LL are termed in the same way as a loser in the first month and a winner or loser in the second month respectively.

The Cross Product Ratio (CPR) is then used to test the hypothesis of performance persistence with the following formula:

$$CPR = (WW * LL) / (WL * LW)$$

CRP equals to 1 means there is no persistence in fund's performance. In this case, WW, WL, LW, and LL each have 25% of the funds.

The significance of the CRP is tested with a Z – statistic, which equals to the ratio of the natural logarithm of the CPR and the standard error of the natural logarithm of the CPR. Z-statistics of 1.96 and 2.58 correspond to 5% and 1% significance levels respectively. When Z – statistics are greater than 1.96 or 2.58, we reject the null-hypothesis stating that there is no persistence in hedge funds performance.

The standard error of the natural logarithm of the CPR is given by (Christensen, 1990) as below.

$$\sigma_{\ln(CPR)} = \sqrt{1/WW + 1/WL + 1/LW + 1/LL}$$

CHI-SQUARE TEST

To ensure the robustness in our results, we also carry out a chi-square test based on the number of winners and losers. This test is well – specified, powerful, and more robust to the presence of survivorship bias compared to other test methodologies. The chi-square statistic is computed as follows:

$$\chi^2 = \frac{(WW - D_1)^2}{D_1} + \frac{(WL - D_2)^2}{D_2} + \frac{(LW - D_3)^2}{D_3} + \frac{(LL - D_4)^2}{D_4}$$

where

$$D_1 = \frac{(WW + WL) * (WW + LW)}{N} \quad D_3 = \frac{(LW + LL) * (WW + LW)}{N}$$

$$D_2 = \frac{(WW + WL) * (WL + LL)}{N} \quad D_4 = \frac{(LW + LL) * (WL + LL)}{N}$$

$$N = WW + WL + LW + LL$$

The critical values for the above test with one degree of freedom at 5% and 1% significant level are 3.84 and 6.63 respectively.

3.2 REGRESSION ANALYSIS

An alternative test for performance persistence is a cross – sectional regression of the period 2 parameter values on the period 1 parameter values. Using balanced panel data, we first regress the returns for each strategy against their lagged values for one period.

This model can be summarized as below (see D.N. Gujarati – 2003).

$$r_{it} = \alpha_i + \sum \alpha_k D_k + \beta_1 \cdot r_{i(t-1)} + \sum \gamma_k \cdot D_k \cdot r_{i(t-1)} + \varepsilon_{it}$$

Where

$$i = 1, \dots, n$$

$$k = 2, \dots, n$$

$$t = 1, \dots, T$$

$$\varepsilon_{it} \sim N(0, \sigma_{it}^2)$$

D: dummy, α : intercept, β : slope coefficient for fund 1, γ : slope coefficient for fund 2, 3, ..., n.

A significantly positive value of β in the above model indicates that return in period t depends on the return on period (t – 1). In another words, returns of strategy i persist overtime or performance persistence exists. The opposite will mean no performance persistence in returns of Asian hedge funds.

4. PERFORMANCE PERSISTENCE IN ASIAN HEDGE FUNDS' MONTHLY RETURNS

4.1 RESULTS OF CONTIGENCY TABLE

Results for number of months persist over the total months in each period are given in **Table V**, **VI**, **VII** and **VIII**. In three periods: 2001 – 2002, 2003 - 2004, 2005, most of funds have more number of months persist than period 1999 – 2000. This could be due to the small number of funds introduced during this period. Persistence is exceptionally poor for arbitrage, convertible arbitrage and CTA strategies in all four periods.

TABLE V
NUMBER OF MONTHS PERSISTENT BY STRATEGIES FROM 1999 – 2000

Strategies	Number of Funds in the Sample	Number of months in which returns persist
Arbitrage	3	NA
Convertible Arbitrage	0	NA
CTA	6	5/23
Distressed Securities	6	14/23
Event Driven	NA	NA
Fixed Income	4	10/18
Short/Long Equities	63	15/23
Macro	4	7/23
Multi-strategies	12	10/23
Others	4	4/23
Relative Value	6	12/23

TABLE VI
NUMBER OF MONTHS PERSISTENT BY STRATEGIES FROM 2001 – 2002

Strategies	Number of Funds in the Sample	Number of months in which returns persist
Arbitrage	3	7/23
Convertible Arbitrage	0	NA
CTA	11	10/23
Distressed Securities	9	15/23
Event Driven	5	8/23
Fixed Income	6	16/18

Short/Long Equities	131	18/23
Macro	7	13/23
Multi-strategies	23	14/23
Others	5	17/23
Relative Value	11	16/23

**TABLE VII
NUMBER OF MONTHS PERSISTENT BY STRATEGIES FROM 2003 – 2004**

Strategies	Number of Funds in the Sample	Number of months in which returns persist
Arbitrage	3	8/23
Convertible Arbitrage	0	NA
CTA	19	10/23
Distressed Securities	16	19/23
Event Driven	14	12/23
Fixed Income	16	16/23
Short/Long Equities	174	19/23
Macro	28	17/23
Multi-strategies	45	16/23
Others	6	21/23
Relative Value	17	16/23

**TABLE VIII
NUMBER OF MONTHS PERSISTENT BY STRATEGIES FROM JANUARY
2005 – DECEMBER 2005**

Strategies	Number of Funds in the Sample	Number of months in which returns persist
Arbitrage	3	5/12
Convertible Arbitrage	3	4/12
CTA	22	3/12
Distressed Securities	17	10/12
Event Driven	18	10/12
Fixed Income	20	9/12
Short/Long Equities	341	8/12
Macro	26	9/12
Multi-strategies	86	8/12
Others	9	8/12
Relative Value	27	8/12

Our cross product ratios (CPRs) are computed for each strategy for 4 periods of the study. The results are shown in **Table IX**. Due to the short history of Asian hedge fund industry in our sample period, CPRs are not able to obtain for the full sample period. We most accurate measurement for CPRs is by sub-sample periods.

For convertibles, distressed debt, event driven, fixed income, long/short equities, macro, others and relative values, Z and Chi-square statistics are very consistent. Difference in Z and Chi-square statistics are shown in CTA and multi-strategies. For instance, for CTA, Z – statistic for period 2005 shows no persistence, but chi-square test result shows that there is significant persistence in monthly returns at 5% level.

Strategies show significant performance persistence in monthly returns in at least three periods are distressed debt, event driven, fixed – income, long/ short strategies and relative value. CTA, convertibles and macro are the strategies whose returns do not persist over time during our study period.

TABLE IX
CPR FOR MEAN RETURN ACROSS STRATEGIES

Strategy		1999-2000	2001-2002	2003-2004	2005
CTA	CPR	0.66	1.09	1.07	0.61
Convertibles	CPR	NA	NA	NA	1
	Z	NA	NA	NA	0
	Chi-square	NA	NA	NA	0
Distressed Debt	CPR	1.41	2.45	3.93	1.73
	Z	0.97	3.03**	5.34**	1.92
	Chi-square	2.49	8.62**	24.25**	4.88*
Event Driven	CPR	NA	5.67	2.09	2.64
	Z	NA	3.25**	2.64**	3.24**
	Chi-square	NA	11.28**	7.04**	10.72**
Fixed Income	CPR	4.33	2.64	3.3	1.75
	Z	2.46*	2.58**	4.44**	2.03*
	Chi-square	6.37*	6.80**	20.29**	4.14*
Long/Short Equities	CPR	1.57	1.69	1.88	1.2
	Z	3.56**	6.13**	9.79**	2.91**
	Chi-square	12.73**	37.77**	96.66**	8.457**
Macro	CPR	1.11	1.84	1.4	1.79
	Z	0.22	1.86	1.45	2.49*
	Chi-square	0.05	3.48	2.1	6.24*
Multi-strategy	CPR	0.99	1.54	2.13	1
	Z	-0.04	2.44*	5.88**	0
	Chi-square	6.61*	12.44**	36.16**	23.5**
Relative Value	CPR	1.02	1.87	4.88	1.55
	Z	0.06	2.37*	7.22**	1.97*
	Chi-square	0.004	5.67*	55.04**	3.88*

Note: * significant at 10% and ** significant at 5%, *** significant at 1%

4.2 RESULTS OF REGRESSION ANALYSIS

To test whether the returns of Asian hedge funds in the previous period persist in the current periods, we use balanced - sample method to regress monthly-return alpha of hedge funds for each strategy on their lagged one -period returns for full sample period and 4 sub-periods: 1999 – 2000, 2001 – 2002, 2003 – 2004, and 2005. Due to new history of Asian hedge funds, there are not many funds for the first three years of our sample periods. To ensure the sufficiency of our sample data, we observe funds with full data for the whole study period, and funds with full data during the 4 sub-sample periods.

Our results are shown in the *Table X*. Compared to our previous tests; more strategies show persistence in their performance in this regression analysis.

For arbitrage, results suggest that persistence in performance does not exist for this strategy. However, it is not significant for the whole sample period.

For convertible arbitrage, results are available for full sample and two sub-periods. The positive slope coefficient for the regression line of this strategy suggests that there is no significant evidence of performance persistence for convertible arbitrage. While results for CPRs are not available for CTA, regression model gives some insight of this strategy’s performance. For full sample and sub-sample of 2001- 2002, results suggest that there is significant non-persistence for this strategy.

For long /short equities, results produced for whole sample period suggest that long short equities strategy does not have significant persistent. This might be due to the small number of funds selected for this sample, i.e. 30 funds. However, in our sub-sample for 2005, results show significant persistence for this strategy. The number of fund in this sub-sample period is much larger, i.e. 303 funds.

For event driven results of regression analysis are similar to those from the previous test.

Compared to the results obtained from CPRs, results from regression method for distressed securities, macro, multi-strategy, and relative values show more significant evidences of their performance persistence.

CPRs results are more in favor of strategies such as event driven and fixed income for all sub-sample periods. However, for full sample period, these strategies show significant evidence of persistence in overall.

TABLE X
RESULTS OF REGRESSION ANALYSIS BY STRATEGIES

Strategy	Total Funds in the database	Sample Type	Sample Period	Number of Funds	Slope Coefficient	p-value	R-squared
Arbitrage	3	Full Sample	1999 - 2005	3	-0.06	0.72	0.01
		Sub-	1999 - 2000	N/A	N/A	N/A	N/A

		samples	2001 - 2002	3	0.05	0.30	0.01
			2003 - 2004	3	-0.13	0.08*	0.18
			2005	3	-0.02	0.88	0.03
Convertible Arbitrage	2	Full Sample	1999 - 2005	3	0.43	0.40	0.07
		Sub-samples	1999 - 2000	N/A	N/A	N/A	N/A
			2001 - 2002	N/A	N/A	N/A	N/A
			2003 - 2004	3	-0.37	0.05**	0.54
2005	3		0.2	0.80	0.07		
CTA	22	Full Sample	1999 - 2005	3	-0.197	0.00***	0.04
		Sub-samples	1999 - 2000	4	0.058	0.60	0.00
			2001 - 2002	6	-0.22	0.01***	0.05
			2003 - 2004	11	0.1	0.10*	0.01
			2005	16	-0.36	0.29	0.19
Distressed Debt	17	Full Sample	1999 - 2005	3	0.3	0.00***	0.09
		Sub-samples	1999 - 2000	3	0.26	0.03**	0.06
			2001 - 2002	7	0.19	0.01***	0.04
			2003 - 2004	9	0.33	0.00***	0.14
			2005	13	0.1	0.77	0.16
Event Driven	19	Full Sample	1999 - 2005	4	0.43	0.00***	0.17
		Sub-samples	1999 - 2000	N/A	N/A	N/A	N/A
			2001 - 2002	2	0.35	0.02**	0.13
			2003 - 2004	5	0.4	0.00***	0.18
			2005	13	-0.25	0.65	0.40
Fixed Income	20	Full Sample	1999 - 2005	6	0.33	0.00***	0.12
		Sub-samples	1999 - 2000	2	-0.25	0.47	0.02
			2001 - 2002	4	0.15	0.12	0.02
			2003 - 2004	6	0.398	0.00***	0.16
			2005	17	0.05	0.40	0.00
Long/Short Equities	396	Full Sample	1999 - 2005	30	-0.122	0.00***	0.03
		Sub-samples	1999 - 2000	30	0.02	0.79	0.05
			2001 - 2002	71	0.19	0.00***	0.04
			2003 - 2004	153	-0.167	0.00***	0.15
			2005	303	0.054	0.00***	0.00
Macro	28	Full Sample	1999 - 2005	5	-0.19	0.06*	0.03
		Sub-samples	1999 - 2000	N/A	N/A	N/A	N/A
			2001 - 2002	6	-0.009	0.90	0.00
			2003 - 2004	13	-0.37	0.00***	0.17
			2005	21	0.005	0.99	0.17
Multi-strategy	99	Full Sample	1999 - 2005	11	0.2	0***	0.04
		Sub-samples	1999 - 2000	11	0.2	0***	0.04
			2001 - 2002	22	0.13	0***	0.02
			2003 - 2004	40	0.22	0***	0.05
			2005	72	0.15	0***	0.02
Relative Value	37	Full Sample	1999 - 2005	5	0.35	0.00***	0.12
		Sub-samples	1999 - 2000	5	0.29	0.00***	0.09
			2001 - 2002	9	-0.12	0.07*	0.02

		2003 - 2004	17	0.64	0.00***	0.35
		2005	23	0.3	0.00***	0.08

Note: * significant at 10% and ** significant at 5%, *** significant at 1%

5. CONCLUDING REMARKS

By employing both parametric (contingency table) and non-parametric (regression) methods, we carry out our tests for performance persistence for Asian hedge funds from January 1999 to December 2005. Our data consists of 84 monthly return periods for 661 hedge funds from the most comprehensive database for Asian hedge funds – EurekaHedge.

Results from cross – sectional regression analysis are more significant compared to those obtained from contingency table analysis. Strategies show strong persistence in returns from both tests is distressed debt, even driven, fixed income, relative value and multi-strategies.

Our findings contribute to the knowledge of Asia hedge fund that is monthly returns of Asian hedge funds do persist across strategies. This means information on funds could be useful for investor to make their investment decision.

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