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THE INVESTMENT RESULTS OF FIXED INCOME HEDGE FUNDS IN 2007 AND 2008

Summary: The purpose of the research presented in the paper is to measure the investment results of fixed income hedge funds in 2007 and 2008. It was shown that the majority of institutions whose aim is to generate absolute rates of return, and what refers to it, to generate better financial results than traditional investments irrespective of the market situation, did not manage to achieve it during the global market fall. Such measures were taken into consideration as: rates of return, risk measured by standard deviation, risk measured by beta, the level of alpha, the correlation of the examined funds' rates of return with traditional assets and the Sharpe ratio. The S&P500 index was used as a benchmark. The research presented in the paper is a part of the wider research conducted by the author for over 200 hedge funds divided into different investment strategies.

Key words: hedge funds, investment results, alternative investments.

1. Introduction

Traditional investments (like stocks or bonds) results are compared to certain benchmarks that are usually stock or bond indexes. This kind of approach is not used by hedge funds managers. In this case, the aim of an investment is not to achieve the rate of income better than the market but an absolute and attractive rate of income no matter what the situation on the global financial market is. These institutions are characterized by the risk directly deriving from the strategy used by them, not from the market situation. The factor that differentiates a hedge fund from other hedge funds is the level of alpha coefficient.

S.J. Brown, W.N. Goetzmann and R.G. Ibbotson examined the off-shore hedge fund industry over the period 1989 through 1995 using a database that includes both defunct and currently operating funds. They came to the conclusion that the industry is characterized by high attrition rates and low covariance with the U.S. stock market. Besides, offshore funds as a group have positive risk-adjusted performance when measured by Sharpe ratios and by Jensen's alpha. They also point that little public information is available about the investment strategies and the specialization of these mangers [Brown, Goetzmann, Ibbotson 1999, p. 91-118]. As it is shown beneath, the author's conclusions about hedge funds performance differ from this research. They let assume that hedge funds are no longer as good tools for making money as they used to be a few years ago.

2. The aim and range of the research

The research presented in the paper was done on the basis of 20 hedge funds that use fixed income strategies. They were chosen at random from the data base prepared by BarclayHedge and Global Fund Technologies which comprises about 2000 hedge funds applying different investment strategies. The aim of the research is to measure the investment results of hedge funds in 2007 and 2008 that is during the bull and the bear market. The S&P500 index was used as a benchmark. It was shown that the majority of institutions whose aim is to generate absolute rates of return, and what refers to it, generate better rates of return than traditional investments irrespective of the market situation, thus also during the bear market, broke this rule. Such measures were taken into consideration as: rates of return, risk measured by standard deviation, risk measured by beta, the level of alpha, the correlation of the examined funds with traditional assets and the Sharpe ratio.

Given the fact that the research was done at the end of 2008, data from January 2007 until November 2008 were taken into consideration. It let examine the results of hedge funds both during favorable market conditions and during the bear market on global financial markets. In the first part of the paper the author gives the detailed characteristics of investment strategies used by the examined hedge funds.

3. Hedge funds performance measurement

All hedge funds claim to do something highly exclusive and proprietary and anxiously guard their trading secrets. Although transparency has improved with the arrival of institutional investors, hedge fund investors are seldom told what exactly goes on inside the black box. As a result, it can sometimes be very hard to properly assess the risk-return characteristics of a fund [Kat, Palaro 2005, p. 7]. Apart from standard characteristics like rates of return, standard deviation, correlation, hedge funds' performance is usually measured by beta and alpha. The overall measure used in this industry is the Sharpe ratio which covers both risk and rates of return. The paper does not concentrate on the idea of these measures, however, the author gives a brief point on the most important things concerning beta and alpha, so as to make the empirical results more understandable.

In a nutshell, beta is a measure of a fund's amount of dependence on the return of the market. The concept is rooted in portfolio theory pioneered by Harry Markowitz in the 1950s, which has evolved to express the relationship between risky assets, such as stocks, and the market [Tran 2006, p. 51]. Hedge funds offer three types of beta benefits [Gregoriou et all 2005, p. 33]:

- traditional beta benefits emanating from exposure to stock and bond returns,
- beta benefits emanating from exposure to other risk factors in equity markets, such as small-cap versus large-cap spread, value versus growth spread, or implied volatility, and in bond markets, such as term spread, credit spread, or bond returns volatility,
- other alternate beta benefits, such as commodity price levels or currency rates.

The beta measure is connected with a risk premium that is a part of the CAPM [Sharpe 1964, p. 425-442]. Hedge funds are supposed to be free from the market, free from its vagaries and fluctuations and risks. The values of their beta are supposed to be very low or near zero. For a fund manager to achieve such a feat, he or she must have exceptional skills or talent. That is why alpha is often claimed to be synonymous with a portfolio manager's talent or skills [Tran 2006, p. 52].

4. Assets under management of the examined funds and their investment strategies

As it is shown in figure 1, the examined hedge funds have different values of their assets under management. The three biggest are: Structured Servicing Holdings, L.P. with its assets of 668504 thousand dollars, III Relative Value Credit Strategies Fund

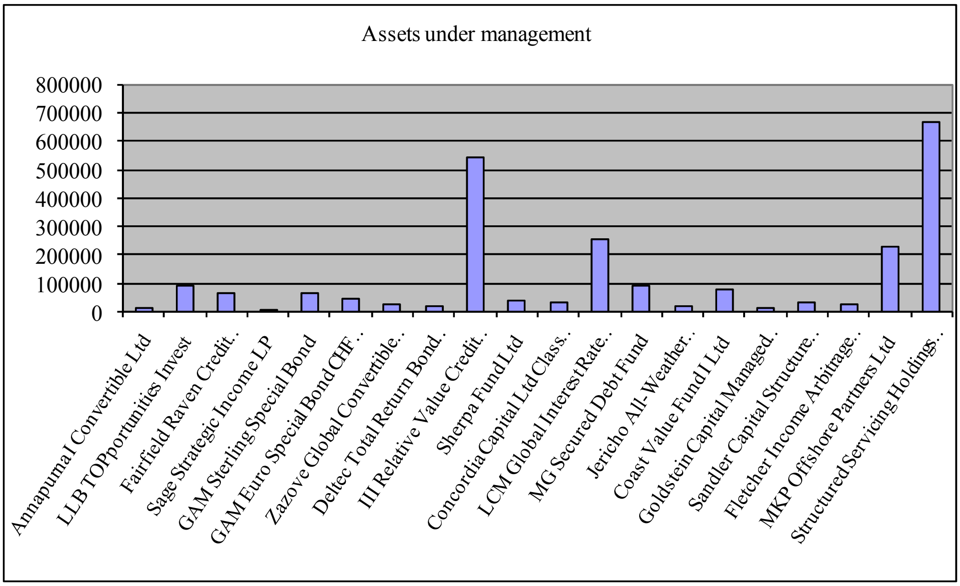

Fig. 1. Assets under management of the examined hedge funds in 2008 [thousands of dollars]

Source: prepared by the author on the basis of data provided by BarclayHedge and Global Fund Technologies.

Table 1. The spectrum of investments of the examined hedge funds.

Fund's name	Description of applied instruments and/or investment strategies
1	2
Annapurna I Convertible Ltd.	Invests worldwide in convertible bonds with a hybrid characteristic.
LLB TOPportunities Invest	Invests globally into the most attractive convertible securities with extremely strict quality and technical criteria.
Fairfield Raven Credit Opportunities Fund, Ltd.	Utilizes a long/short credit strategy focusing on capital structure arbitrage, hedged credit and special situations.
Sage Strategic Income L.P.	Its investment objective is to achieve capital appreciation and current income through the purchase of U.S. dollar denominated convertible securities that present attractive risk/reward characteristics.
GAM Sterling Special Bond	Invests in and trades primarily in convertible bonds and other debt securities in various currencies.
GAM Euro Special Bond CHF Open	Invests in and trades primarily in convertible bonds and other debt securities as well as currency and interest rate hedging techniques.
Zazove Global Convertible Fund L.P.	Seeks to achieve the long-term returns associated with an international stock portfolio with reduced volatility. The portfolios in this program consist of assets invested primarily in securities of non-United States issuers.
Deltec Total Return Bond Fund, L.P.	Its investment objective is to achieve growth of capital while minimizing capital risk by investing primarily in high yield fixed income securities and, to a lesser extent, distressed and equity securities of both U.S. and foreign companies.
III Relative Value Credit Strategies Fund Ltd	Attempts to achieve superior risk-adjusted returns primarily through leveraged trading in a broad range of financial instruments and other investments.
Sherpa Fund, Ltd.	Engages in trading of interest rate swaps, currency forward rate agreements and other fixed income contractual commitments, and derivative products.
Concordia Capital, Ltd. Class C-G-10 Fixed Income Arbitrage	Does not reveal any instruments engaged.
LCM Global Interest Rate Hedged Fund – Aggressive Program	Invests in global fixed income securities, interest rate swaps and foreign currencies.
MG Secured Debt Fund	Its investment goal is to achieve consistent returns through investing in a diversified pool of loans secured by recorded liens on real estate assets in the US.
Jericho All-Weather Opportunity Fund L.P.	Its investment goal is to generate attractive returns by investing in a diversified pool of loans.
Coast Value Fund I Ltd.	Relative value fixed income arbitrage in US and G-7 government bond markets.
Goldstein Capital Managed Bond Portfolio	Is a conservatively managed leveraged portfolio investing in high quality mortgage-backed securities.

Table 1, cont.

1	2
Sandler Capital Structure Opportunities Fund, Ltd.	Focuses on corporate credit opportunities and encompasses both long and short investments across the capital structure of publicly-traded companies.
Fletcher Income Arbitrage Fund, L.P.	Buys, hedges and sells various income- producing securities in an effort to capture dividends, interest or other payments.
MKP Offshore Partners Ltd.	Concentrates on the mortgage-backed securities (MBS) market.
Structured Servicing Holdings, L.P.	Offers a hedge strategy designed to generate consistent returns of LIBOR + 15% net of fees with low correlation to most major market sectors.

Source: prepared by the author on the basis of data provided by BarclayHedge and Global Fund Technologies.

Ltd having assets of 546 000 thousand dollars and LCM Global Interest Rate Hedged Fund – Aggressive Program whose assets under management are 258 000 thousand dollars. As far as the three smallest funds are concerned these are: Sage Strategic Income L.P. with its assets of 8 900 thousand dollars, Annapurna I Convertible Ltd. that has assets at the level of 10 643 thousand dollars and Goldstein Capital Managed Bond Portfolio that manages assets equal to 15 989 thousand dollars.

Although all analysed hedge funds declare to use fixed income strategies, the instruments and the investment policy applied by the examined hedge funds are varied. Their detailed description is covered by table 1.

5. Rates of return and risk generated by hedge funds in the analysed period

In 2007 only 5 hedge funds generated minus rates of return (see table 2). The rest of them had positive results. The best was MKP Offshore Partners Ltd. with its result of 27.79%, the second best was Structured Servicing Holdings, L.P. which achieved the result equal to 22.19%, whereas the third best was Jericho All-Weather Opportunity Fund L.P. that generated the rate of 21.91%. In 2008 the results looked totally different. 14 hedge funds achieved negative returns, which means that 6 funds only were positive. These were (starting from the best one): Structured Servicing Holdings, L.P. (17.89%), Coast Value Fund I Ltd. (12.91%), Concordia Capital, Ltd. Class C-G-10 Fixed Income Arbitrage (12.67%), Jericho All-Weather Opportunity Fund L.P. (12.64%), MG Secured Debt Fund (11.63%) and Fletcher Income Arbitrage Fund, L.P. (7.52%).

As far as alpha is concerned, in 2007 fifteen funds had positive values of this coefficient, which means that only 5 of them did not manage to generate attractive results. The highest alpha was achieved by MKP Offshore Partners Ltd. (2.23), the second best by Jericho All-Weather Opportunity Fund L.P. (1.63) and the third best by Structured Servicing Holdings, L.P. (1.61). In 2008 exactly half of the funds had negative values of alpha. It approves of the fact that hedge funds performed worse than the previous year. The best was Coast Value Fund I Ltd. With its alpha 2.57, the second best was Concordia Capital, Ltd. Class C-G-10 Fixed Income Arbitrage that generated alpha equal to 2.37, whereas the third one was Structured Servicing Holdings, L.P. which achieved alpha of 1.59.

As for beta, in 2008 in comparison to 2007, in the case of 6 funds it diminished and for 14 funds it increased, which shows that for the majority of funds risk measured by beta rose.

Table 2. Rates of return as well as alpha and beta coefficients for the examined hedge funds

		Rate of return		Alpha		Beta	
		2007	2008	2007	2008	2007	2008
1	Annapurna I Convertible Ltd.	3.66	–29.84	0.10	–0.60	0.45	0.60
2	LLB TOPportunities Invest	6.20	–30.28	0.21	–0.51	0.64	0.65
3	Fairfield Raven Credit Opportunities Fund, Ltd.	–2.56	–7.22	–0.43	–0.55	0.47	0.12
4	Sage Strategic Income L.P.	6.31	–22.59	0.38	0.37	0.27	0.74
5	GAM Sterling Special Bond	–0.3–	–25.83	–0.09	0.19	0.15	0.68
6	GAM Euro Special Bond CHF Open	–7.24	–41.35	–0.90	–0.49	0.68	0.99
7	Zazove Global Convertible Fund L.P.	13.37	–39.35	0.85	–0.81	0.45	1.03
8	Deltec Total Return Bond Fund, L.P.	–0.17	–10.16	–0.24	–0.13	0.49	0.20
9	III Relative Value Credit Strategies Fund Ltd	18.39	–29.33	1.48	–0.50	–0.11	0.62
10	Sherpa Fund, Ltd.	5.65	–12.22	0.39	–0.08	0.14	0.26
11	Concordia Capital, Ltd. Class C-G-10 Fixed Income Arbitrage	3.20	12.67	0.24	2.37	0.06	0.28
12	LCM Global Interest Rate Hedged Fund – Aggressive Program	10.51	–3.90	1.00	–0.41	–0.30	–0.01
13	MG Secured Debt Fund	16.68	11.63	1.28	1.03	0.03	0.01
14	Jericho All-Weather Opportunity Fund L.P.	21.91	12.64	1.63	1.16	0.07	0.02
15	Coast Value Fund I Ltd.	10.05	12.91	0.77	2.57	0.08	0.32
16	Goldstein Capital Managed Bond Portfolio	–3.22	–11.49	–0.41	1.07	0.30	0.50
17	Sandler Capital Structure Opportunities Fund, Ltd.	2.03	–20.87	0.03	–0.47	0.32	0.39
18	Fletcher Income Arbitrage Fund, L.P.	10.11	7.52	0.80	0.62	0.02	–0.01
19	MKP Offshore Partners Ltd.	27.79	–1.29	2.23	0.24	–0.32	0.09
20	Structured Servicing Holdings, L.P.	22.19	17.89	1.61	1.59	0.23	–0.07

Source: prepared by the author on the basis of data provided by BarclayHedge and Global Fund Technologies.

Table 3. Standard deviations of the examined hedge funds and their changes (data in %)

	Fund's name	Standard deviation of monthly rates of return		Standard deviation change
		2007	2008	
1	Annapurna I Convertible Ltd.	1.76	5.33	202.84
2	LLB TOPportunities Invest	1.87	4.64	148.13
3	Fairfield Raven Credit Opportunities Fund, Ltd.	1.58	1.31	–17.09
4	Sage Strategic Income L.P.	0.96	5.09	430.21
5	GAM Sterling Special Bond	0.85	4.75	458.82
6	GAM Euro Special Bond CHF Open	3.12	6.88	120.51
7	Zazove Global Convertible Fund L.P.	1.81	6.80	275.69
8	Deltec Total Return Bond Fund, L.P.	1.56	2.51	60.90
9	III Relative Value Credit Strategies Fund Ltd	1.35	4.68	246.67
10	Sherpa Fund, Ltd.	0.81	2.72	235.80
11	Concordia Capital, Ltd. Class C-G-10 Fixed Income Arbitrage	1.29	5.45	322.48
12	LCM Global Interest Rate Hedged Fund – Aggressive Program	1.91	1.50	–21.47
13	MG Secured Debt Fund	0.20	0.10	–50
14	Jericho All-Weather Opportunity Fund L.P.	0.30	0.27	–10
15	Coast Value Fund I Ltd.	1.00	5.44	444
16	Goldstein Capital Managed Bond Portfolio	1.43	5.52	286.01
17	Sandler Capital Structure Opportunities Fund, Ltd.	1.52	3.38	122.37
18	Fletcher Income Arbitrage Fund, L.P.	0.28	0.28	0
19	MKP Offshore Partners Ltd.	1.70	1.06	–37.65
20	Structured Servicing Holdings, L.P.	2.67	6.27	134.83

Source: prepared by the author on the basis of own calculations and data provided by BarclayHedge and Global Fund Technologies.

As data depicted in table 3 show risk measured by standard deviation increased in 2008 in comparison to 2007 in the case of 15 hedge funds. The biggest rise was for GAM Sterling Special Bond (about 459%), the second big for Sage Strategic Income L.P. (about 430%) and the third big for Concordia Capital, Ltd. Class C-G-10 Fixed Income Arbitrage (about 322%). 5 funds only had their risk diminished. Thus, the vast majority of the examined hedge funds increased risk bore by them and what directly results from it, by their clients.

In 2007 there were 12 funds that had their Sharpe ratios above zero, which was a good result (table 4). The highest Sharpe ratio was 17.58 and it was generated by MG Secured Debt Fund, the second high was 16.75 achieved by Jericho All-Weather Opportunity Fund L.P. and the third one was 5.78 for Fletcher Income Arbitrage

Table 4. Sharpe and correlation ratios for the examined hedge funds

	Fund's name	Sharpe ratio		Correlation ratio	
		2007	2008	2007	2008
1	Annapurna I Convertible Ltd.	–0.14	–1.81	0.68	0.66
2	LLB TOPportunities Invest	0.26	–2.11	0.92	0.82
3	Fairfield Raven Credit Opportunities Fund, Ltd.	–1.29	–2.45	0.79	0.41
4	Sage Strategic Income L.P.	0.54	–1.59	0.76	0.89
5	GAM Sterling Special Bond	–1.63	–1.78	0.48	0.84
6	GAM Euro Special Bond CHF Open	–1.09	–1.91	0.59	0.85
7	Zazove Global Convertible Fund L.P.	1.41	–1.98	0.67	0.92
8	Deltec Total Return Bond Fund, L.P.	–0.86	–1.43	0.83	0.47
9	III Relative Value Credit Strategies Fund Ltd.	2.97	–2.03	–0.21	0.78
10	Sherpa Fund, Ltd.	0.41	–1.55	0.46	0.57
11	Concordia Capital, Ltd. Class C-G-10 Fixed Income Arbitrage	–0.29	0.66	0.13	0.30
12	LCM Global Interest Rate Hedged Fund - Aggressive Program	0.91	–1.09	–0.42	–0.06
13	MG Secured Debt Fund	17.58	32.79	0.37	0.33
14	Jericho All-Weather Opportunity Fund L.P.	16.75	13.33	0.58	0.39
15	Coast Value Fund I Ltd.	1.60	0.75	0.21	0.36
16	Goldstein Capital Managed Bond Portfolio	–1.56	–0.72	0.56	0.53
17	Sandler Capital Structure Opportunities Fund, Ltd.	–0.47	–2.04	0.56	0.68
18	Fletcher Income Arbitrage Fund, L.P.	5.78	7.05	0.17	–0.20
19	MKP Offshore Partners Ltd.	3.95	–0.76	–0.51	0.48
20	Structured Servicing Holdings, L.P.	1.91	0.94	0.23	–0.07

Source: prepared by the author on the basis of data provided by BarclayHedge and Global Fund Technologies.

Fund, L.P. In 2008 the situation changed. Three funds only managed to increase their Sharpe ratios compared with 2007. However, it is worth emphasizing that the highest Sharpe ratio generated by MG Secured Debt Fund was higher than for the same fund the previous year. It proves that it is a well managed fund. The second best fund in 2008 was Fletcher Income Arbitrage Fund, L.P. with its Sharpe ratio of 7.05 and it is again a higher value of the ratio than a year earlier. The third best fund was Concordia Capital, Ltd. Class C-G-10 Fixed Income Arbitrage, generating the Sharpe ratio of 0.66 that in this case was also higher than in 2007. To sum up, the three best funds were the best both in 2007 and in 2008. Additionally, they increased their Sharpe ratios in 2008 when the rest of funds diminished these values. However, in 2008 the majority of funds achieved poor results measured by Sharpe ratio, which is proved by minus values of this ratio for 14 hedge funds.

As far as correlation ratios are concerned, in 2007 there were 6 funds that had high correlation ratios (see table 4). Two of them had values between high and average (GAM Euro Special Bond CHF Open and Jericho All-Weather Opportunity Fund L.P.), six of them had average ratios (GAM Sterling Special Bond, Sherpa Fund, Ltd., LCM Global Interest Rate Hedged Fund – Aggressive Program, Goldstein Capital Managed Bond Portfolio, Sandler Capital Structure Opportunities Fund, Ltd., and MKP Offshore Partners Ltd.), one between low and average (MG Secured Debt Fund) and 5 funds had low correlation ratios (III Relative Value Credit Strategies Fund Ltd, Concordia Capital, Ltd. Class C-G-10 Fixed Income Arbitrage, Coast Value Fund I Ltd., and Fletcher Income Arbitrage Fund, L.P.).

In 2008 the situation changed to a certain degree. There were 8 funds with high correlation ratios (Annapurna I Convertible Ltd., LLB TOPportunities Invest, Sage Strategic Income L.P., GAM Sterling Special Bond, GAM Euro Special Bond CHF Open, Zazove Global Convertible Fund L.P., III Relative Value Credit Strategies Fund Ltd., and Sandler Capital Structure Opportunities Fund, Ltd.), one fund with the correlation ratio between low and average (Sherpa Fund, Ltd.), four funds with average correlation ratios (Fairfield Raven Credit Opportunities Fund, Ltd., Deltec Total Return Bond Fund, L.P., Goldstein Capital Managed Bond Portfolio, and MKP Offshore Partners Ltd.), two funds with ratios between low and average (Jericho All-Weather Opportunity Fund L.P. and Coast Value Fund I Ltd.), and five funds with low correlation ratios (Concordia Capital, Ltd. Class C-G-10 Fixed Income Arbitrage, LCM Global Interest Rate Hedged Fund – Aggressive Program, MG Secured Debt Fund, Fletcher Income Arbitrage Fund, L.P. Structured Servicing Holdings, L.P.). To sum up, in the case of 11 funds the strength of the relation between a fund's return and the return of the market increased. It is also seen by a rise of the average correlation strength which in 2007 was equal to 0,5065, whereas in 2008 it was equal to 0,5305, however the growth was not a dramatic one.

6. Final conclusions

As it was shown in the paper fixed income hedge funds did not perform well during the bear market. It means that theoretical assumptions on the activity of hedge funds were not fulfilled in the examined period. The similar results were achieved for emerging markets funds, energy markets, equity long/short, convertible arbitrage, multistrategy, equity market neutral, event driven, makro, equity long bias, as well as for equity long only funds.

In December 2006, the ECB voiced ”unease” at the distribution of credit risk to ”opaque” players such as hedge funds in its twice-yearly Financial Stability Forum. The UK's Financial Services Authority has also raised concerns about over-reliance on historical data, call in for a reassessment of some players' pricing assumptions for risk and greater stress testing [Gore 2007, p. 13].

Thus, if one additionally takes into consideration recent discussions on the influence of hedge funds on the global financial stability [*The Impact of Hedge...* 1999, p. 1-8], it raises the question what hedge funds really are and what their influence on economic development is. I am sure these problems need further studies.

Literature

Brown S.J., Goetzmann W.N., Ibbotson R.G., *Offshore hedge funds: survival & performance 1989--1995*, "Journal of Business" 1999, vol. 72, no 1.

Garbaravicius T., Dierick F., *Hedge Funds and Their Implications for Financial Stability*, Occasional Paper Series no 34, European Central Bank, August 2005.

Gore G., *ECB's Trichet warns on derivatives*, "Risk", February 2007.

Gregoriou G.N., Buebner G., Papageorgiou N., Rouah F., *Hedge Funds, Insights in Performance Measurement, Risk Analysis, and Portfolio Allocation*, John Wiley & Sons, Inc., Hoboken 2005.

Guizot A., *The Hedge Fund Compliance and Risk Management Guide*, John Wiley & Sons, Inc., Hoboken 2007.

Kat H.M., Palaro H.P., *Who needs hedge funds? A Copula-Based Approach to Hedge Fund Return Replication*, Cass Business School, City of London, November 23, 2005.

Inglis D., *A Brief History of Hedge Funds*, 2005, www.hughestrustco.com.

Sharpe W.F., *Capital asset prices: a theory of basset equilibrium under conditions of risk*, "Journal of Finance" 1964, vol. 19, no 3.

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 Goverment Policy, Reserve Bank of Australia, Sydney, June 1999.

Tran V.Q., *Evaluating Hedge Fund Performance*, John Wiley & Sons, Inc. Hoboken 2006.

WYNIKI INWESTYCYJNE FUNDUSZY HEDGINGOWYCH STOSUJĄCYCH STRATEGIĘ TYPU *FIXED INCOME* W LATACH 2007 I 2008

Streszczenie: Celem badań przedstawionych w artykule jest zmierzenie rezultatów inwestycji funduszy hedgingowych w latach 2007 i 2008. Pokazano, że większość instytucji, których celem jest generowanie absolutnych stóp zwrotu, a co za tym idzie, uzyskiwanie lepszych rezultatów finansowych od inwestycji tradycyjnych bez względu na sytuację rynkową, nie uzyskała takich wyników w okresie światowej bessy. Pod uwagę wzięto takie miary, jak: stopy zwrotu, ryzyko mierzone odchyleniem standardowym oraz betą, poziom współczynnika alfa, korelacja stóp zwrotu badanych funduszy z aktywami tradycyjnymi oraz współczynnik Sharpe'a. Za benchmark przyjęto indeks S&P500. Prezentowane badania są częścią szerszych analiz prowadzonych przez autorkę dla ponad 200 funduszy hedgingowych podzielonych na poszczególne strategie inwestycyjne.