Meeting Between Federal Reserve Board Staff and Representatives of the Managed Funds Association February 17, 2011

Participants: Michael Gibson, Matthew Pritsker, Mark Carlson, Molly Mahar, Kieran Fallon and Paige Pidano (Federal Reserve Board)

Stuart Kaswell, Benjamin Allensworth (Managed Funds Association); Darcy Bradbury (DE Shaw & Co); Michael Waldorf (Paulson & Co. Inc.); Scott Bernstein (Caxton Associates LP); and Brian Gunderson (GPC Associates LLC)

Summary: Federal Reserve Board staff met with representatives of the Managed Funds Association (MFA) and member firms of the MFA to discuss systemic risk regulation in light of the new authority provided to the Financial Stability Oversight Council (FSOC) and the Federal Reserve Board under Title I of the Dodd-Frank Wall Street Reform and Consumer Protection Act. The representatives of the MFA and member firms presented an overview of the hedge fund industry and discussed their views on applying the systemic risk criteria set forth in the FSOC's Notice of Proposed Rulemaking "Authority to Require Supervision and Regulation of Certain Nonbank Financial Companies" to hedge funds and other similar firms. The written materials and other correspondence provided by MFA following the meeting are attached below.

Citi Prime Finance

Hedge Fund Industry Snapshot

Data as of December 2010

Citi Prime Finance

Americas

New York:	800 773 2889
Boston:	617 346 9335
San Francisco:	415 617 8554

EMEA

EMEA:	44 (0) 207 986 0822

Asia Pac

Hong Kong:	852 2501 8356
Tokyo:	813 6270 3165
Singapore:	65 6432 1223
Australia:	612 8225 6424

www.citigroupgcib.com

Market Commentary
Report Date: January 2010

Table of Contents

Highlights

Data as of Dec-2010

Performance, AUM & Flows:

- Equal-weighted hedge fund composite indices were up for December 2010 with gains ranging from of +2.36% to +3.21%. These gains bring the year-to-date industry performance to +5.19% to +10.72%. The Citi HARP hedge fund replication index was +1.35% in December versus the HFRI Fund of Fund index that was +2.09%. Year-to-date, the HARP index was +2.99% and the HFRIFOF index was +5.60%. December 2010 performance returns proved to be higher than December 2009 which experienced +0.55% to +1.37% over the same period.

- An overall upbeat sentiment influenced Equity Markets in December. Equity Long/Short strategy funds saw the largest positive gains at +3.27%, followed by CTA/Managed Futures (+3.18%), Global Macro (+2.17%), Emerging Markets (+2.04%), Distressed (+1.99%) and Event Driven (+1.98%). Dedicated Short Bias strategies were the only subset of funds experiencing losses (-4.49%). Remaining strategies were up although more modestly than the top six strategies.

- According to HedgeFund.net (HFN), hedge fund industry AUM ended December 2010 at $2.47 trillion, up from $2.41 trillion in November 2010. This is the sixth consecutive month Industry AUM has increased. However, Industry AUM remains well below its $2.94 trillion June 2008 peak.

- Increases in AUM attributable to net investor inflows were only +$1.07 billion while positive performance accounted for an increase of +$60.1 billion. Overall, 2010 net investor flows were +$79.4 billion compared to -$128.54 billion over the same period a year ago.

- Increases to industry AUM from performance were +$60.06 billion – the third largest of the year after March (+66.76 billion) and September (+$60.09 billion) – and higher than year-ago December 2009 of +$24.36 billion. For 2010, performance related AUM gains were +$221.2 billion compared to +$367.8 billion in 2009.

Fund Profiles:

- Across the subset of hedge funds reporting performance and AUM, the monthly median performance for large single funds (>$500 million) was +2.0%; medium single funds ($100-$500 million) +1.8% and small single funds (<$100 million) +2.3%.

- Liquidity terms continued their consistent pattern of 2010 with December showing little changes to redemption notice periods with 67% of funds requiring 30 days or less notice for redemption. Across the entire subset of reporting funds, the majority (61%) required no lockup (44%) or less than 1 year lock up (17%).

- Consistent throughout 2010, large funds (> $500 million AUM) continue to hold a large potion of industry AUM (67%) compared to medium funds ($100-$500 million) at 24% and small funds (<$100 million) holding only 9%.

Leverage & Shorts:

- On a global basis, we calculate gross leverage (as measured on a mean basis) at 1.79 x in December 2010 versus 1.81x in November, 1.80x in October and 1.79x in September.

- Looking across both long leverage and gross leverage, the following strategies showed the highest uses of leverage: Multi Strategy (5.16x), Equity Market Neutral (3.58x), Convertible Arbitrage (3.35x), Global Macro (3.17x), Fixed Income Arbitrage (2.95x). Use of leverage in other strategies was generally lower across the board.

- Citi U.S. short flows data included in this month's report shows a continued strong concentration of interest in the Consumer Discretionary, Financials & Information Technology & sectors. These three sectors accounted for 55.25% of short executions and 54.68% of short flows versus 59.26% of short executions and 53.16% of short flows in November 2010.

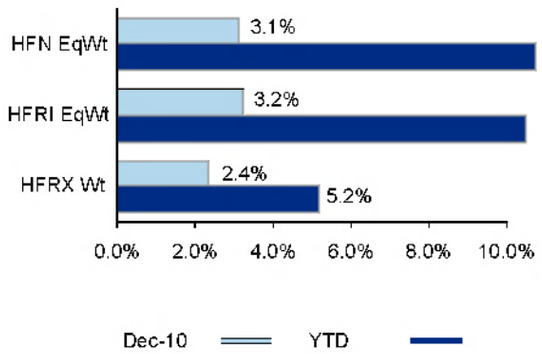
- In December the biggest changes in large speculator net positioning in Futures and Options (as a percentage of total open interest and including both futures & options) in 10 Year Treasuries, S&P, EuroFX and Gold futures markets came in builds in the net short position in both Treasuries and EuroFX. The net short position in Treasury contracts (-4.0%) is back to the largest it has been in terms of percentage of open interest since May 2010 (-4.5% 5/25/10) and in EuroFX contracts (-5.7%) back to where it had been in July 2010 (-6.2% 7/6/10). There was little change in positioning in the S&P and Gold markets. Large speculators remain close to neutral on the S&P and net long Gold.

Hedge Fund Industry: AUM, Performance

Data as of Dec-2010

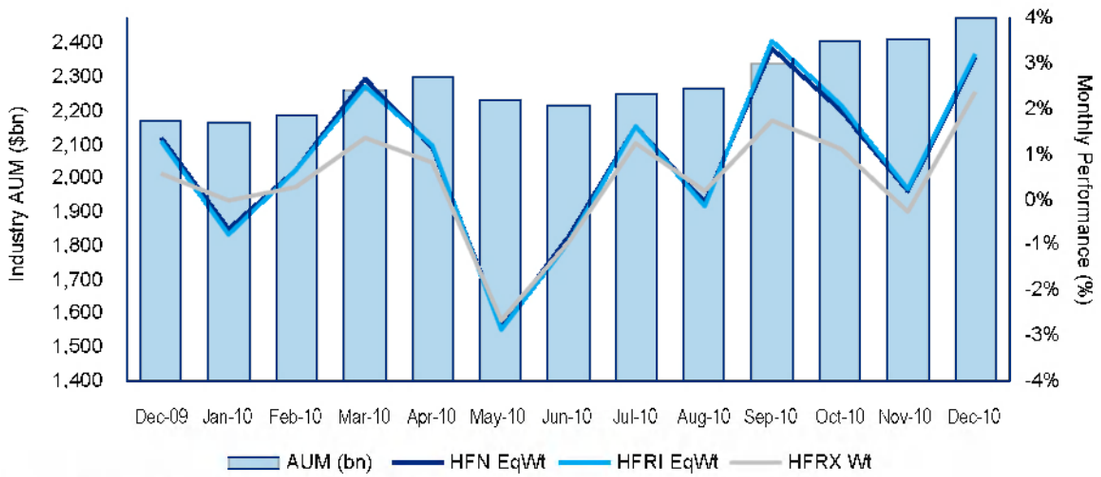
- Composite hedge fund performance, equal-weighted across funds, was up in December 2010 with gains ranging from +2.36% to +3.14%. Returns were higher than last month's (-0.27%) to +0.21% and above year-ago December 2009 of +0.55% to +1.37%. Year-to-date 2010 performance ranged from +5.2% to +10.7% relative to +13.4% to +20.0% in 2009.
- Equity markets continued their 2010 broad advance with large positive returns in December (S&P 500, +6.7%; MSCI World index, +7.4%, MSCI EM +7.1%.) The US dollar declined during the month (U.S. dollar index, -2.7%) putting pressure on rates (Citi US BIG -1.2%.) Commodities prices generally rose (S&P GSCI up 9.4%.) Across broad global economic measures, the US inflation rate quickened to 1.5% in December from 1.1% in November. China's economy grew by 9.8% in the year to the fourth quarter, bringing growth for the full year to 10.3%. British inflation went up to 3.7% in December, 0.4 percentage points higher than in November. Brazil's central bank raised its benchmark interest rate by half a percentage point to 11.25%.
- Once again investors showed a preference for riskier assets although not quite as clear cut as in prior months. Nonetheless, 2010 closed and marked outperformance seen from small cap, emerging markets and defaulted and high yield debt. Hedge fund strategy wise all but FI Arbitrage and Dedicated Short Bias had December monthly returns above their 60-month trailing medians.
- Industry AUM, estimated at $2.47 trillion according to HFN, is up from November's $2.41 trillion and up 13.9% from the $2.172 trillion seen at December 2009. Depending on the source, estimates of industry AUM ranges from $1.92 to $2.47 trillion compared to the Q2 2008 peak range of $1.9 to $3.0 trillion.

Industry Performance: Dec-10 / YTD



Source: HedgeFund.net (HFN)

Monthly Industry AUM and Performance



Source: HedgeFund.net (HFN); Hedge Fund Research, Inc., © 2010; www.hedgefundresearch.com

Note Pad:

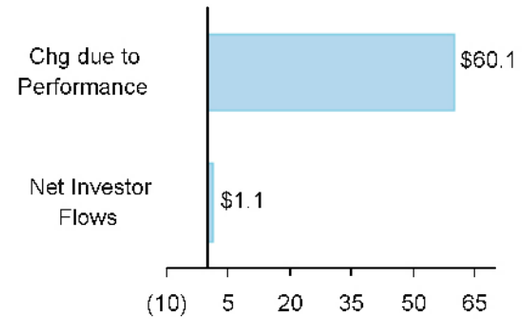
- MSCI World Index: +7.4% December; +12.3% YTD MSCI Emerging Markets Index: +7.1% December; +19.2% YTD
- S&P 500: +6.7% December; +15.1% YTD
- Citi US BIG Index: -1.2% December; 6.3% YTD
- S&P GSCI: +9.4% December; +9.0% YTD
- U.S. Dollar Index: -2.7% December; +1.5% YTD
- HFN Country Indices December / YTD: Brazil +2.37% / +12.64%; Russia +8.23% / +22.71%; India: +3.72% / +14.86%; China: -0.32% / +5.99%

Hedge Fund Industry: Change in Industry Assets

Data as of Dec-2010

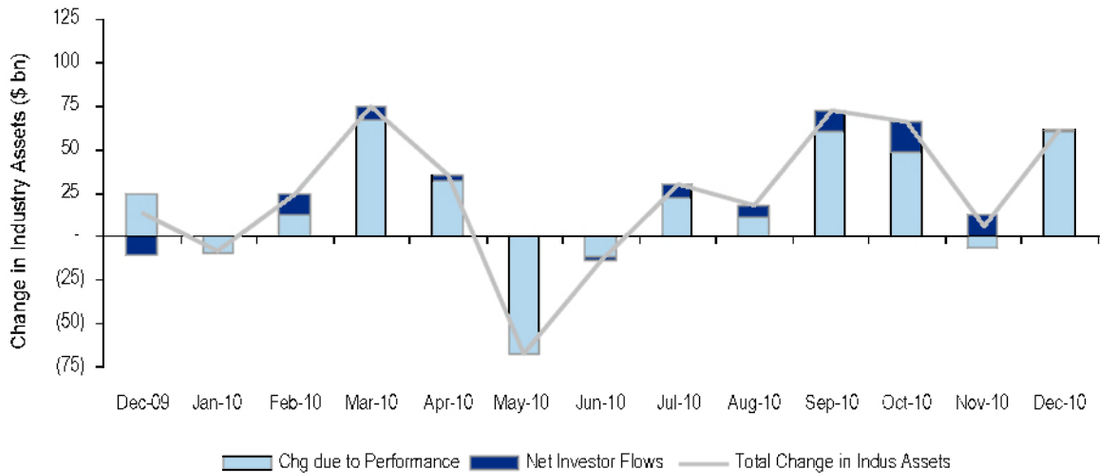
- According to HFN, the estimated change in industry assets was +$61.13 billion for December 2010 and +$300.56 billion for the year. Gains stemmed mostly from performance (+$60.06 billion, $221.21 billion) as net investor flows accounted for only +$1.07 billion and $79.35 billion, respectively. The 2010 year-to-date increase in AUM was up over 25% from the $239.3 billion seen in 2009.
- December marks the third highest increase of 2010 in industry assets due to positive performance (March 2010 +$66.76 billion, September +$60.09 billion, December +$60.06 billion.) The year-to-date 2010 total of $221.21 billion, however, is down from $367.8 billion seen in 2009.
- Uncertainty in the pace of the global economic recovery appears to linger and may still contribute to challenges faced in the current capital raising landscape. Although December's net investor inflows of $1.07 billion are below the 2010 median of +$7.23 billion, 2010 saw eleven months of positive net investor flows and thus a relief from the large negative outflows seen in 2009.
- Total industry AUM of $2.47 trillion is up13.9% for the year, up from the $2.17 trillion seen at December 2009. This compares to an increase of 12.4% seen in the 2009/2008 period. All figures are provided from HFN.

Composition of Change in Assets: Dec-10 Amounts in ($ bn)



Source: HedgeFund.net (HFN)

Monthly Change in Industry Assets and Composition



Source: HedgeFund.net (HFN)

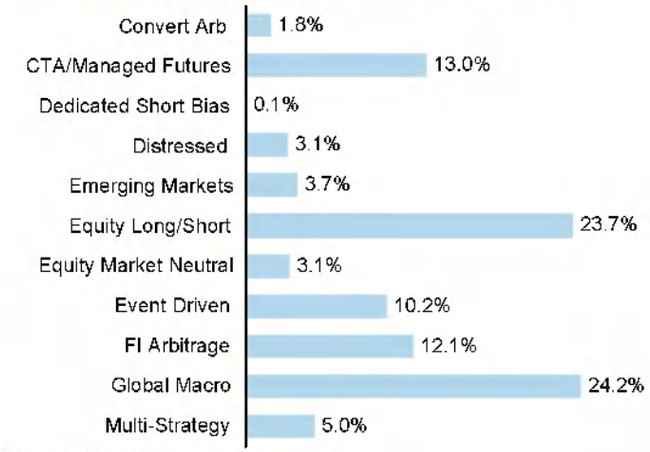
Note Pad:

- The Citi Prime Finance calculation for end-December gross leverage (as measured on a mean basis) was 1.79x, in line with most months this year
- Gross leverage (mean): defined as sum of (LMV + abs SMV) / Net Equity

Hedge Fund Stats by Strategy

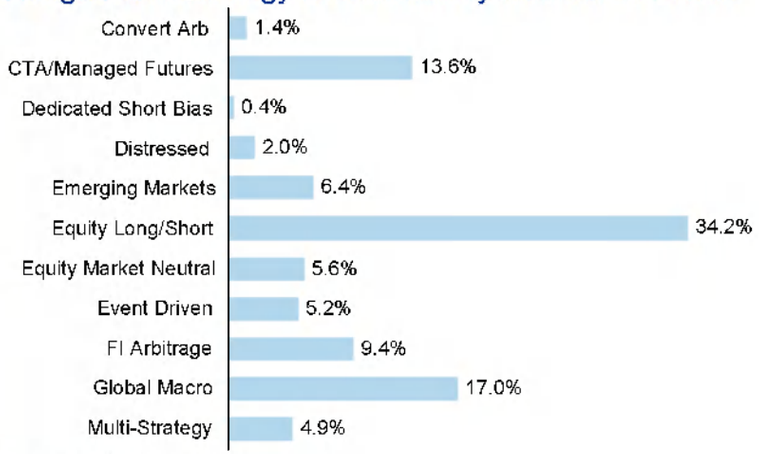
Data as of Dec-2010

Hedge Fund Strategy Breakdown by Assets



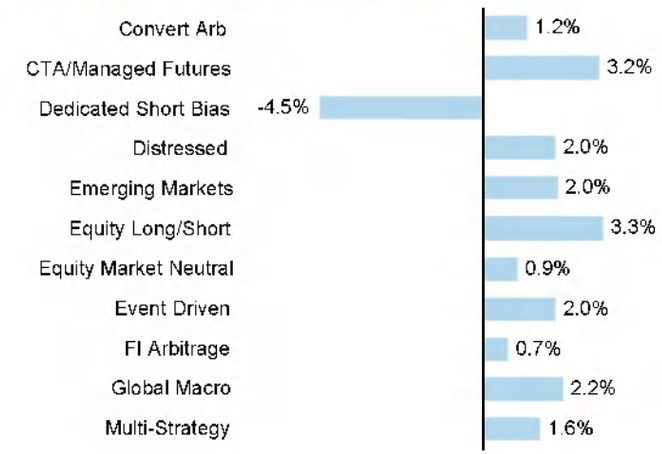
Source: Citi ICG Analytics

Hedge Fund Strategy Breakdown by Number of Funds



Source: Citi ICG Analytics

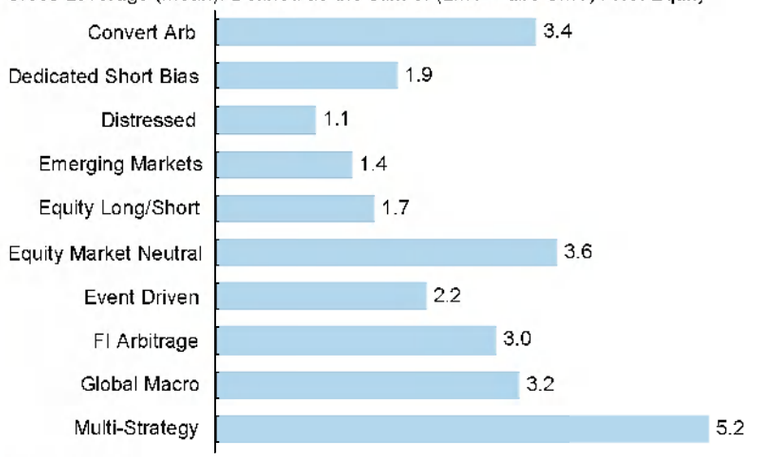
Hedge Fund Performance by Strategy



Source: Citi ICG Analytics

Hedge Fund Leverage Ratios by Strategy

Gross Leverage (Mean): Defined as the sum of (LMV + abs SMV) / Net Equity



Source: Citi Prime Finance

Note: Hedge fund data is self-reported; each calculation is based on the respective data from funds who have reported for the current period.

Monthly Performance by Strategy

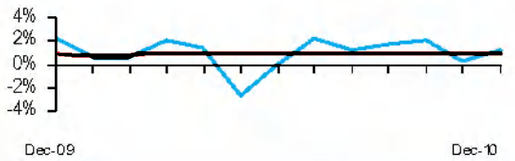
Data as of Dec-2010

Monthly Median:

Trailing 60 Month Median:

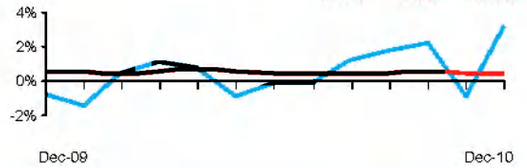
Convertible Arbitrage

Dec-10	Nov-10	Dec-09
1.2%	0.2%	2.2%
0.98%	0.94%	0.84%



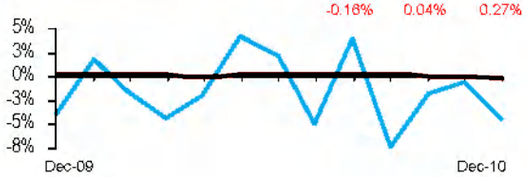
CTA/Managed Futures

Dec-10	Nov-10	Dec-09
3.2%	-0.9%	-0.8%
0.45%	0.45%	0.55%



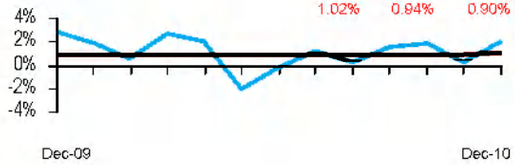
Dedicated Short Bias

Dec-10	Nov-10	Dec-09
-4.5%	-0.7%	-4.0%
-0.16%	0.04%	0.27%



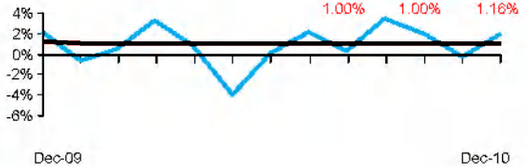
Distressed

Dec-10	Nov-10	Dec-09
2.0%	0.2%	2.9%
1.02%	0.94%	0.90%



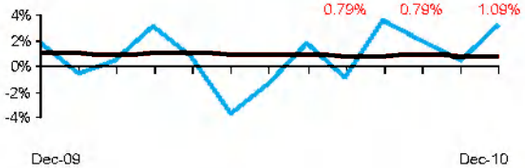
Emerging Markets

Dec-10	Nov-10	Dec-09
2.0%	-0.2%	2.1%
1.00%	1.00%	1.16%



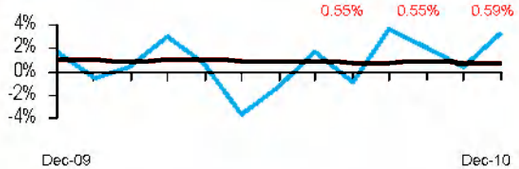
Equity Long/Short

Dec-10	Nov-10	Dec-09
3.3%	0.4%	1.7%
0.79%	0.79%	1.09%



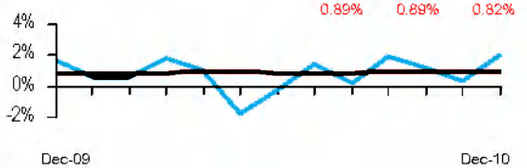
Equity Market Neutral

Dec-10	Nov-10	Dec-09
0.9%	0.3%	0.6%
0.55%	0.55%	0.59%



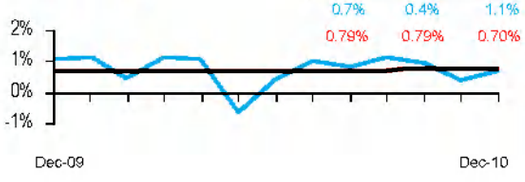
Event Driven

Dec-10	Nov-10	Dec-09
2.0%	0.3%	1.7%
0.89%	0.89%	0.82%



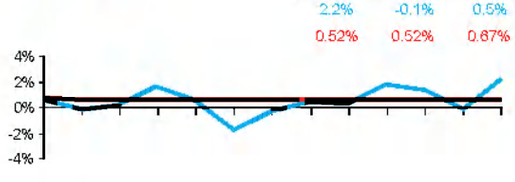
FI Arbitrage

Dec-10	Nov-10	Dec-09
0.7%	0.4%	1.1%
0.79%	0.79%	0.70%



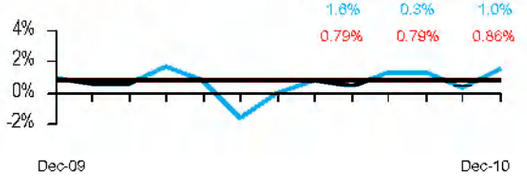
Global Macro

Dec-10	Nov-10	Dec-09
2.2%	-0.1%	0.5%
0.52%	0.52%	0.87%



Multi-Strategy

Dec-10	Nov-10	Dec-09
1.8%	0.3%	1.0%
0.79%	0.79%	0.86%



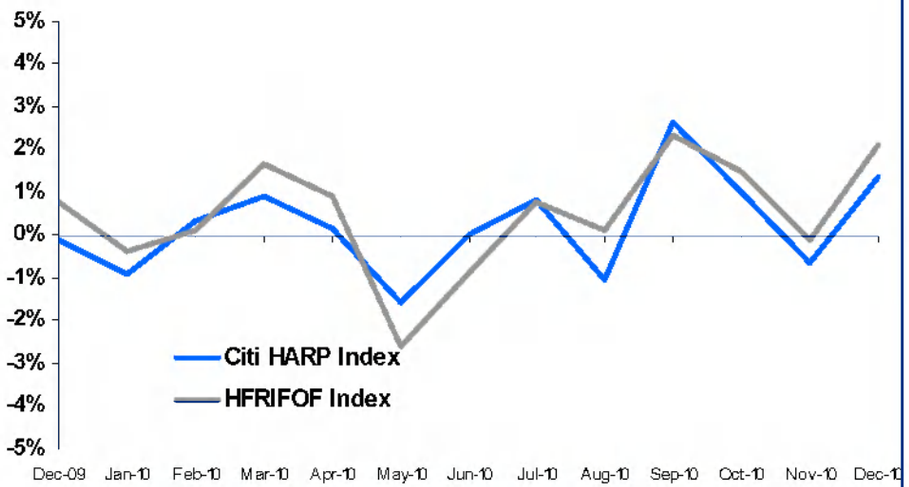
Source: Citi ICG Analytics

Note: Hedge fund data is self-reported; each calculation is based on the respective data from funds who have reported for the current period.

Citi Liquid Hedge Fund Replicator (HARP)

Data as of Dec-2010

Citi HARP Index vs. Benchmark (monthly rolling)



Citi HARP is a liquid investable index, which aims at approximating the performance of the hedge fund sector

	Dec-10	Nov-10	Dec-09	YTD-10
Citi Harp	1.35%	-0.66%	-0.10%	2.99%
HFRIFOF	2.09%	-0.10%	0.76%	5.60%

Source: Citi and Hedge Fund Research, Inc., © www.hedgefundresearch.com
HFRIFOF Index is the HFRI Funds of Funds Composite Index

Annualized Performance: Last 12-Month	Citi HARP Index	HFRIFOF
Annualised Return	2.99%	5.60%
Annualised Volatility	4.12%	4.83%
Sharpe Ratio	0.654	1.099
Correlation	86.59%	-

The purpose of the Index is to approximate in broad terms the performance of the hedge fund sector by achieving a similarity between the pattern of the returns of the Index and the pattern of the returns of a Benchmark - the HFRI Fund of Funds Composite Index.

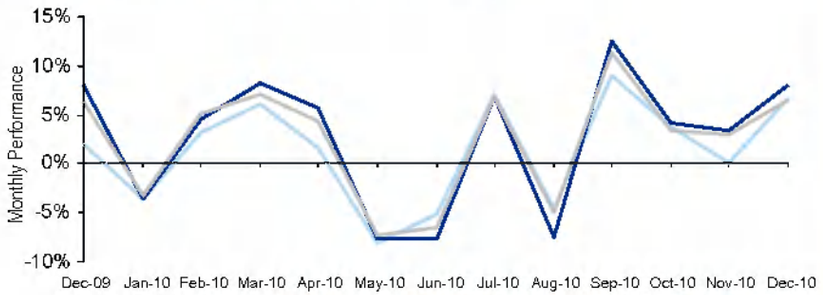
The Index contains weighted components. The components are a money market component and various index components. Each index component represents a class of asset in which the hedge fund sector is assumed to invest: bond, commodity, equity and foreign exchange.

The weighting within the Index of each component is determined monthly. Every month, a multiple linear regression algorithm is used to identify the appropriate weighting.

Market Performance

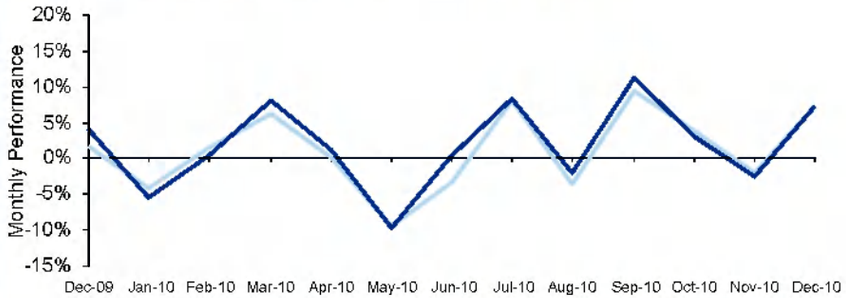
Data as of Dec-2010

US Equities (Large Cap vs. Small Cap)



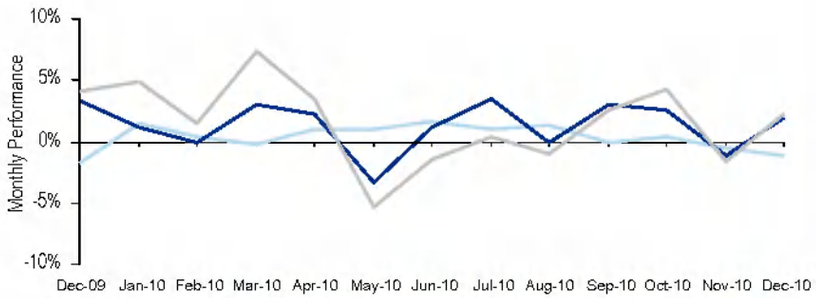
	Dec-10	Nov-10	Dec-09	YTD-10
S&P 500	6.7%	0.0%	1.9%	15.1%
RUS 2000	7.9%	3.5%	8.0%	26.9%
S&P Mid	6.6%	3.0%	6.3%	26.6%

Global Equities (Developed vs. Emerging)



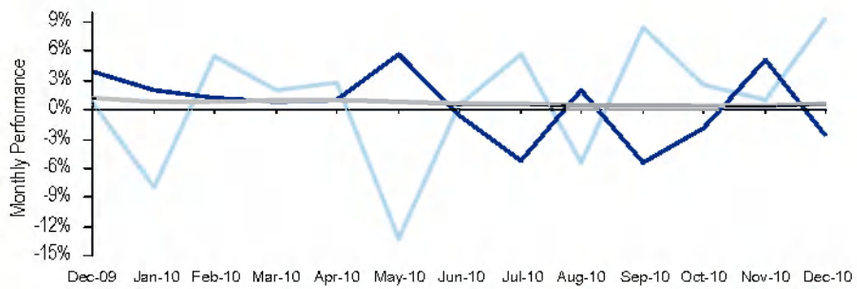
	Dec-10	Nov-10	Dec-09	YTD-10
MSCI World	7.4%	-2.1%	1.8%	12.3%
MSCI EM	7.1%	-2.6%	4.0%	19.2%

Fixed Income (High-Grade vs. High-Yield)



	Dec-10	Nov-10	Dec-09	YTD-10
Citi US BIG Index	-1.2%	-0.5%	-1.7%	6.3%
Citi HY Bond Index	1.9%	-1.1%	3.4%	14.3%
Altman Defaulted	2.2%	-1.6%	4.1%	17.7%

Commodities (US$ performance)



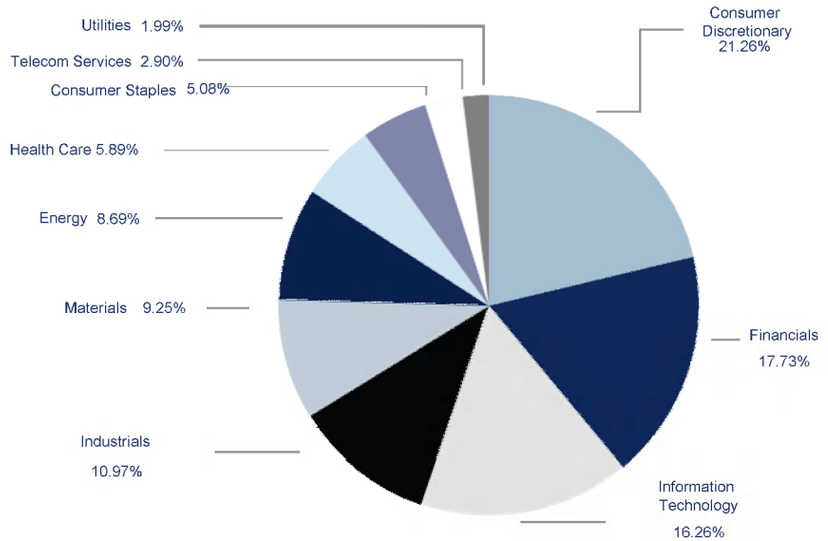
	Dec-10	Nov-10	Dec-09	YTD-10
S&P GSCI	9.4%	1.1%	0.9%	9.0%
US-$ Index	-2.7%	5.1%	4.0%	1.5%
US 2yr Note	0.6%	0.5%	1.1%	0.7%

Source: Citi ICG Analytics; FactSet; Citigroup Index LLC; Altman-NYU Salomon Center defaulted Debt Security Indexes.

US Securities Lending Sector Short Flows

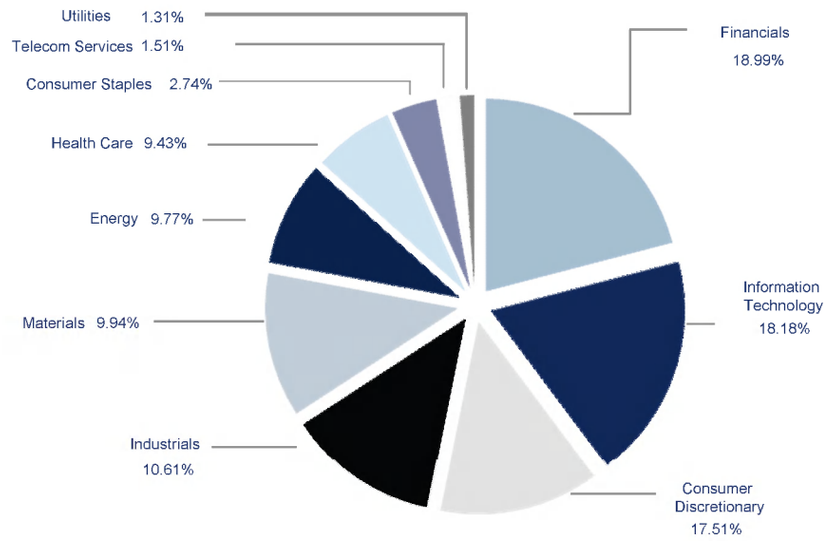
Data as of Dec-2010

Short Sale Executions



Sector Short Flows	% Short Execution	% Previous Month Short Execution	% Change From Previous Month
Consumer Discretionary	21.26	21.77	-2.34
Financials	17.73	14.19	24.95
Information Technology	16.26	23.81	-31.71
Industrials	10.97	10.19	7.65
Materials	9.25	7.71	19.97
Energy	8.69	10.68	-18.63
Health Care	5.89	5.19	13.49
Consumer Staples	5.08	4.26	19.25
Telecom Services	2.9	1.40	107.14
Utilities	1.99	0.81	145.68

Short Cover Executions



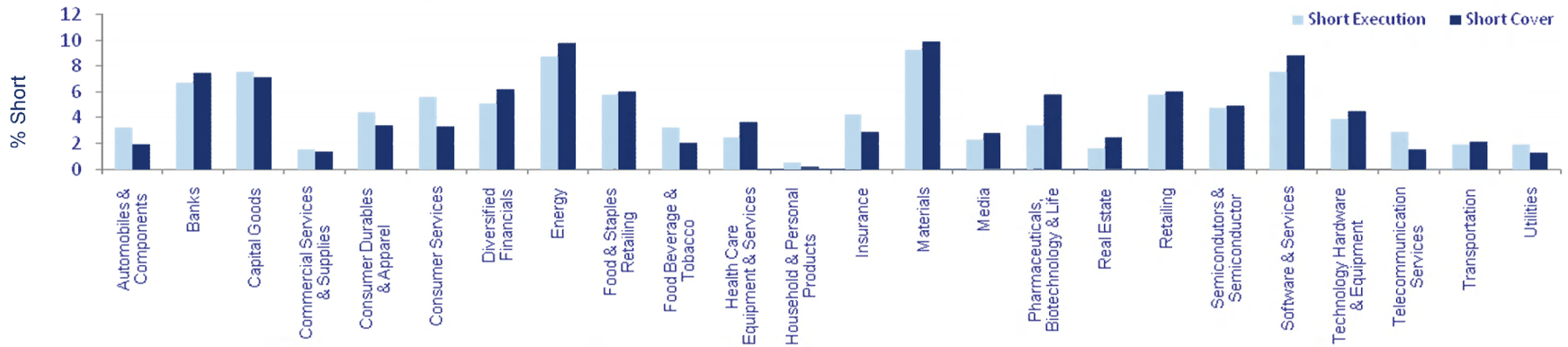
Sector Short Flows	% Cover Execution	% Previous Month Short Cover	% Change From Previous Month
Financials	18.99	13.32	42.57
Information Technology	18.18	21.09	-13.8
Consumer Discretionary	17.51	18.74	-6.56
Industrials	10.61	12.16	-12.75
Materials	9.94	8.70	14.25
Energy	9.77	12.55	-22.15
Health Care	9.43	6.85	37.66
Consumer Staples	2.74	3.78	-27.51
Telecom Services	1.51	1.62	-6.79
Utilities	1.31	1.19	10.08

Source: S&P (GICS); Citi U.S. Securities Lending. Executions of shorts and short covers settled at Citi Prime Finance based on Market Value

US Securities Lending Industry Group Short Flows

Data as of Dec-2010

Citi Industry Group Short Flows



Industry	% Short Execution	% Previous Month Short Execution	% Change From Previous Month
Materials	9.25	7.71	19.97
Energy	8.69	10.68	-18.63
Software and Services	7.57	11.75	-35.57
Capital Goods	7.52	6.95	8.20
Banks	6.72	4.71	42.68
Retailing	5.73	5.11	12.13
Consumer Services	5.62	5.77	-2.60
Diversified Financials	5.12	4.09	25.18
Semiconductors & Semiconductor	4.75	6.28	-24.36
Consumer Durables & Apparel	4.44	3.78	17.46
Insurance	4.24	2.72	55.88
Technology Hardware and Equipment	3.94	5.78	-31.83
Pharmaceuticals, Biotechnology & Life	3.41	3.25	4.92
Food Beverage & Tobacco	3.23	2.51	28.69
Automobiles & Components	3.21	4.50	-28.67
Telecom Services	2.90	1.40	107.14
Health Care Equipment and Services	2.48	1.94	27.84
Media	2.25	2.61	-13.79
Utilities	1.99	0.81	145.68
Transportation	1.94	2.39	-18.83
Real Estate	1.65	2.67	-38.20
Commercial Services and Supplies	1.51	0.85	77.65
Food & Staples Retailing	1.36	1.42	-4.23
Household & Personal Products	0.49	0.32	53.12

Industry	% Cover Execution	% Previous Month Short Cover	% Change From Previous Month
Materials	9.94	8.70	14.25
Energy	9.77	12.55	-22.15
Software and Services	8.82	10.97	-19.60
Banks	7.49	3.98	88.19
Capital Goods	7.14	9.06	-21.19
Diversified Financials	6.19	3.43	80.47
Retailing	6.02	4.91	22.61
Pharmaceuticals, Biotechnology & Life	5.80	4.11	41.12
Semiconductors & Semiconductor	4.89	4.60	6.30
Technology Hardware and Equipment	4.48	5.52	-18.84
Health Care Equipment and Services	3.62	2.74	32.12
Consumer Durables & Apparel	3.43	3.86	-11.14
Consumer Services	3.33	4.15	-19.76
Insurance	2.88	2.15	33.95
Media	2.81	2.53	11.07
Real Estate	2.43	3.77	-35.54
Transportation	2.12	1.68	26.19
Food Beverage & Tobacco	2.00	2.59	-22.78
Automobiles & Components	1.92	3.28	-44.46
Telecom Services	1.51	1.62	-6.79
Commercial Services and Supplies	1.35	1.42	-4.93
Utilities	1.31	1.19	10.08
Food & Staples Retailing	0.55	0.83	-33.73
Household & Personal Products	0.19	0.36	-47.22

Source: S&P (GICS); Citi U.S. Securities Lending. Executions of shorts and short covers settled at Citi Prime Finance based on Market Value

US Securities Lending Short Flows Summary

Data as of Dec-2010

Citi Short Flows: December 2010

GICS Code	Description	% Short Executions This Month	% Short Executions From Last Month	% Change From Last Month	% Short Cover This Month	% Short Cover From Last Month	% Change From Last Month
Sector	**Sector**						
10	Energy	8.69	10.68	-18.63	9.77	12.55	-22.15
15	Materials	9.25	7.71	19.97	9.94	8.70	14.25
20	Industrials	10.97	10.19	7.65	10.61	12.16	-12.75
25	Consumer Discretionary	21.26	21.77	-2.34	17.51	18.74	-6.56
30	Consumer Staples	5.08	4.26	19.25	2.74	3.78	-27.51
35	Health Care	5.89	5.19	13.49	9.43	6.85	37.66
40	Financials	17.73	14.19	24.95	18.99	13.32	42.57
45	Information Technology	16.26	23.81	-31.71	18.18	21.09	-13.80
50	Telecommunication Services	2.90	1.40	107.14	1.51	1.62	-6.79
55	Utilities	1.99	0.81	145.68	1.31	1.19	10.08
Industry Group	**Industry Group**						
1010	Energy	8.69	10.68	-18.63	9.77	12.55	-22.15
1510	Materials	9.25	7.71	19.97	9.94	8.70	14.25
2010	Capital Goods	7.52	6.95	8.20	7.14	9.06	-21.19
2020	Commercial Services & Supplies	1.51	0.85	77.65	1.35	1.42	-4.93
2030	Transportation	1.94	2.39	-18.83	2.12	1.68	26.19
2510	Automobiles & Components	3.21	4.50	-28.67	1.92	3.28	-41.46
2520	Consumer Durables & Apparel	4.44	3.78	17.46	3.43	3.86	-11.14
2530	Consumer Services	5.62	5.77	-2.60	3.33	4.15	-19.76
2540	Media	2.25	2.61	-13.79	2.81	2.53	11.07
2550	Retailing	5.73	5.11	12.13	6.02	4.91	22.61
3010	Food & Staples Retailing	1.36	1.42	-4.23	0.55	0.83	-33.73
3020	Food Beverage & Tobacco	3.23	2.51	28.69	2.00	2.59	-22.78
3030	Household & Personal Products	0.49	0.32	53.12	0.19	0.36	-47.22
3510	Health Care Equipment & Services	2.48	1.94	27.84	3.62	2.74	32.12
3520	Pharmaceuticals,Biotechnology & Life Sciences	3.41	3.25	4.92	5.80	4.11	41.12
4010	Banks	6.72	4.71	42.68	7.49	3.98	88.19
4020	Diversified Financials	5.12	4.09	25.18	6.19	3.43	80.47
4030	Insurance	4.24	2.72	55.88	2.68	2.15	33.95
4040	Real Estate	1.65	2.67	-38.20	2.43	3.77	-35.54
4510	Software & Services	7.57	11.75	-35.57	8.82	10.97	-19.60
4520	Technology Hardware & Equipment	3.94	5.78	-31.83	4.48	5.52	-18.84
4530	Semiconductors & Semiconductor Equipment	4.75	6.28	-24.36	4.89	4.60	6.30
5010	Telecommunication Services	2.90	1.40	107.14	1.51	1.62	-6.79
5510	Utilities	1.99	0.81	145.68	1.31	1.19	10.08

Source: S&P (GICS); Citi U.S. Securities Lending. Executions of shorts and short covers settled at Citi Prime Finance based on Market Value

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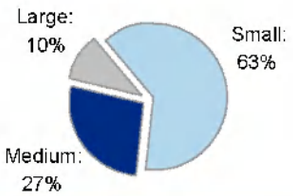
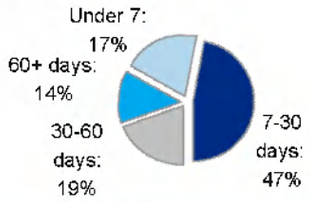
Hedge Fund (Fund Level) Profiles

Data as of Dec-2010

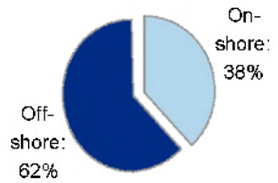
By Fund Size—No. of Funds



Redemption Notice Period

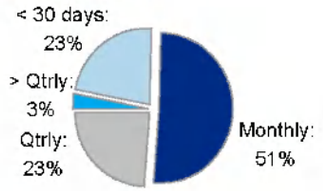


On-shore/Off-shore

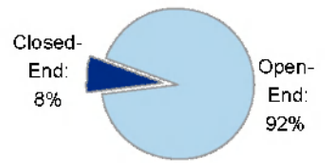


By Fund Size—$ AUM

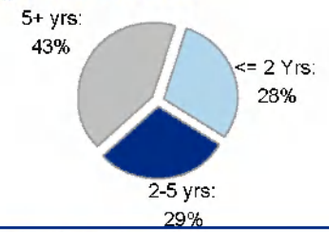
Redemption Frequency



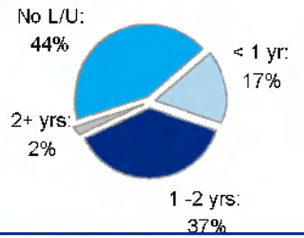
Legal Status



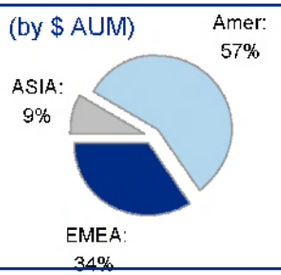
By Fund Age—No. of Funds



Lock-Up

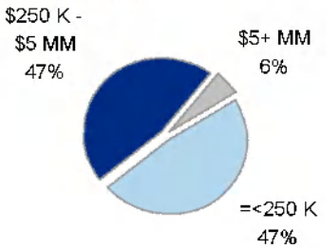


Domicile (by $ AUM)



By Fund Age—$ AUM

Minimum Investment



Source: Citi ICG Analytics
Note: Hedge fund data is self-reported; each calculation is based on the respective data from funds who have reported for the current period.

Hedge Fund (Fund Level) Profiles

Data as of Dec-2010

Hedge Funds: Large (>$500 MM)

Hedge Fund Age	% of Total	Median AUM ($MM)	Median Monthly Perform	Median YTD Perform	Domicile: Americas Region	Off-Shore	Preferred Lock-Up / % of Total	Preferred Redemption Notice/ % of Total	Preferred Redemption Frequency/ % of Total
Under 2 yrs	10%	$792	1.3%	4.8%	66%	76%	n/m	30-60 days / 32%	Under 30 / 45%
2-5 yrs	16%	$949	1.0%	9.6%	65%	78%	1-2 yrs / 58%	30-60 days / 39%	Monthly / 36%
Over 5 yrs	74%	$1,027	2.4%	8.9%	65%	72%	No / 48%	7-30 days / 36%	Monthly / 49%
Total	100%	$964	2.0%	8.8%	65%	73%	No / 45%	7-30 days / 32%	Monthly / 46%

Hedge Funds: Medium ($100 – $500 MM)

Hedge Fund Age	% of Total	Median AUM ($MM)	Median Monthly Perform	Median YTD Perform	Domicile: Americas Region	Off-Shore	Preferred Lock-Up / % of Total	Preferred Redemption Notice/ % of Total	Preferred Redemption Frequency/ % of Total
Under 2 yrs	16%	$172	1.6%	7.7%	46%	77%	1-2 yrs / 55%	7-30 days / 43%	Monthly / 43%
2-5 yrs	29%	$183	1.6%	8.0%	66%	70%	1-2 yrs / 45%	7-30 days / 43%	Monthly / 52%
Over 5 yrs	55%	$201	2.2%	8.8%	71%	64%	No / 53%	7-30 days / 52%	Monthly / 53%
Total	100%	$190	1.8%	8.3%	66%	67%	No / 48%	7-30 days / 49%	Monthly / 51%

Hedge Funds: Small (<$100 MM)

Hedge Fund Age	% of Total	Median AUM ($MM)	Median Monthly Perform	Median YTD Perform	Domicile: Americas Region	Off-Shore	Preferred Lock-Up / % of Total	Preferred Redemption Notice/ % of Total	Preferred Redemption Frequency/ % of Total
Under 2 yrs	22%	$27	1.6%	8.2%	49%	75%	1-2 yrs / 61%	7-30 days / 38%	Monthly / 43%
2-5 yrs	32%	$26	2.2%	9.8%	63%	64%	No / 46%	7-30 days / 48%	Monthly / 56%
Over 5 yrs	45%	$30	2.7%	9.4%	71%	56%	No / 51%	7-30 days / 55%	Monthly / 47%
Total	100%	$28	2.3%	9.4%	64%	63%	No / 48%	7-30 days / 50%	Monthly / 49%

Source: Citi ICG Analytics

Note: Hedge fund data is self-reported; each calculation is based on the respective data from funds who have reported for the current period. Median YTD performance is calculated from funds reporting for all underlying periods. - "n/m" = Not Meaningful.

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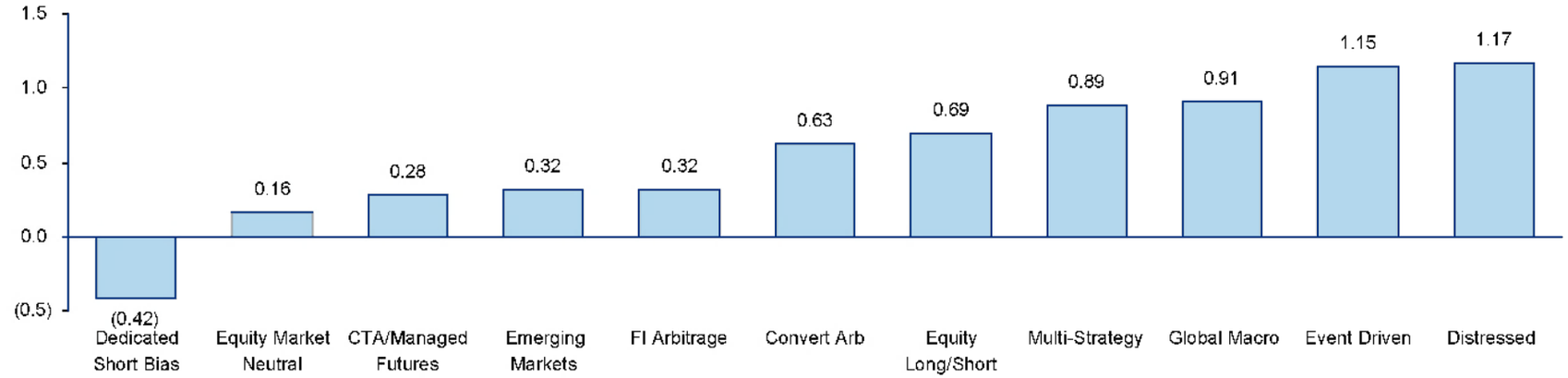
Risk and Return Metrics

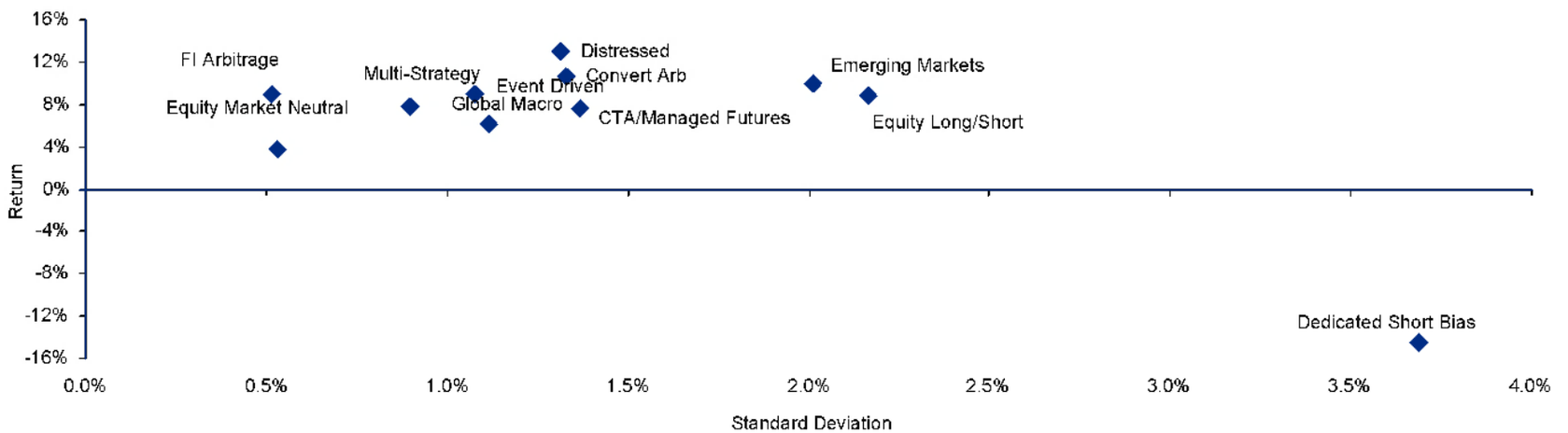
Data as of Dec-2010

Sharpe Ratios (Jun-94 – Dec-10)



Source: Credit Suisse Tremont

Risk vs. Return (Jan-10 – Dec-10)



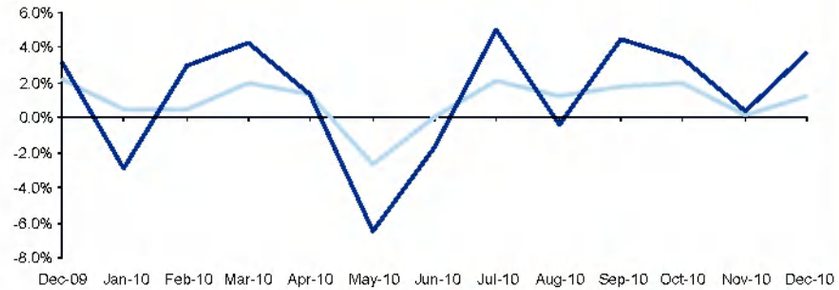
Source: Citi ICG Analytics

Convertible Arbitrage

Data as of Dec-2010

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	YTD
Citi-derived Median	**0.5%**	**0.5%**	**2.0%**	**1.4%**	**-2.7%**	**0.0%**	**2.1%**	**1.2%**	**1.7%**	**2.0%**	**0.2%**	**1.2%**	**10.6%**

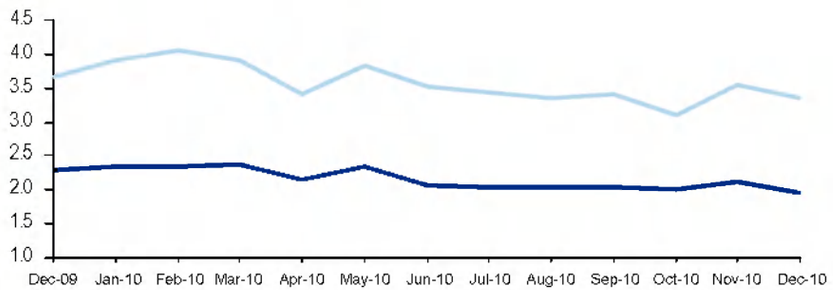
Hedge Fund Performance vs. Benchmark (Monthly, LTM)



	Dec-10	Nov-10	Dec-09	YTD-10
Convert Arb	1.2%	0.2%	2.2%	10.6%
CWB ETF	3.7%	0.3%	3.2%	14.0%

Source: Citi ICG Analytics; FactSet

Leverage Profile (Monthly, LTM)

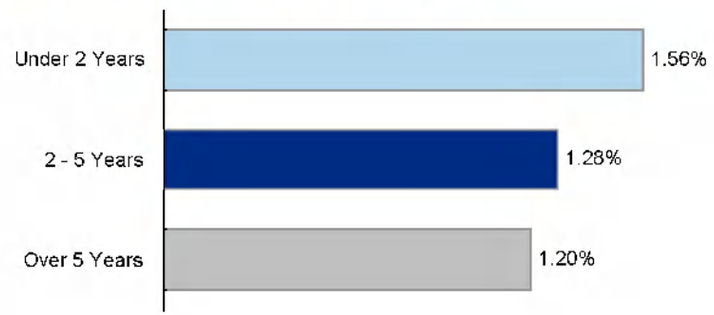


Gross Leverage (Mean): Defined as the sum of (LMV + abs SMV) / Net Equity

LMV Leverage (Mean): Defined as Long Market Value / Net Equity

Source: Citi Prime Finance

Hedge Fund Performance by Age (1)



Source: Citi ICG Analytics

Hedge Fund Performance by Size (1)

Source: Citi ICG Analytics

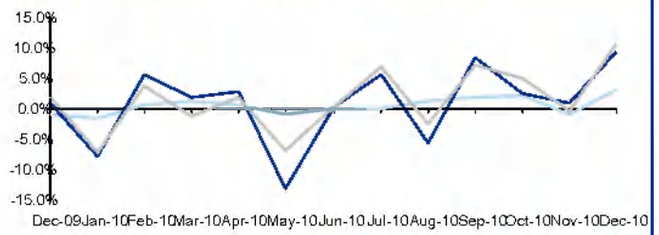
Note: Hedge fund data is self-reported; each calculation is based on the respective data from funds who have reported for the current period. (1) Universe and sample sizes may be small.

CTA/Managed Futures

Data as of Dec-2010

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	YTD
Citi-derived Median	**-1.4%**	**0.5%**	**1.1%**	**0.8%**	**-0.8%**	**-0.1%**	**-0.1%**	**1.2%**	**1.8%**	**2.2%**	**-0.9%**	**3.2%**	**7.6%**

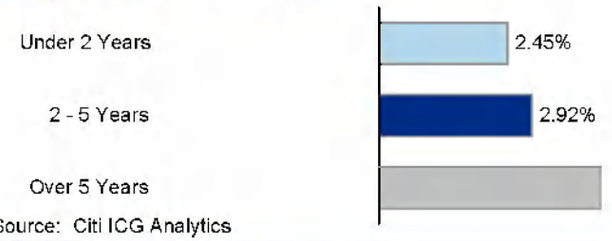
Hedge Fund Performance vs. Benchmark



	Dec-10	Nov-10	Dec-09	YTD-10
CTA/Mgd Futures	3.2%	-0.9%	-0.8%	7.6%
S&P GSCI Commodity (SPGSCI)	9.4%	1.1%	0.9%	9.0%
DJ-UBS Commodity (DJAGK)	10.7%	-0.4%	2.0%	16.7%

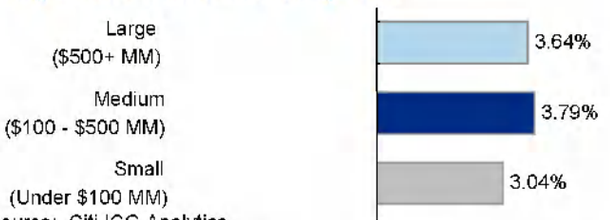
Source: Citi ICG Analytics; FactSet

Hedge Fund Performance by Age



Source: Citi ICG Analytics

Hedge Fund Performance by Size



Source: Citi ICG Analytics

Large Speculator Positions: CFTC Commitment Of Trader (Futures & Options) Report

Net of Longs Less Shorts As Percent of Total Open Positions

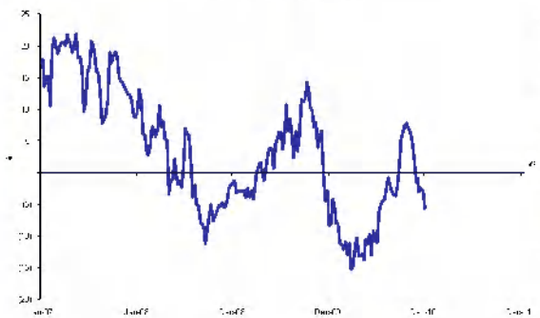
Combined S&P / Weighted Mini S&P Contracts

Last Update: 12/28/10 -0.3%

U.S. 10-Year Treasury Futures

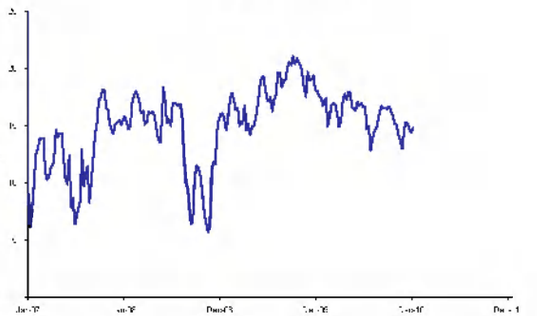
Last Update: 12/28/10 -4.0%

EuroFX Futures



Last Update: 12/28/10 -5.7%

Gold Futures



Last Update: 12/28/10 +14.8%

Source: CFTC, Bloomberg, Citi Futures Perspective

Note: Hedge fund data is self-reported; each calculation is based on the respective data from funds who have reported for the current period. (1) Universe and sample sizes may be small.

Dedicated Short Bias

Data as of Dec-2010

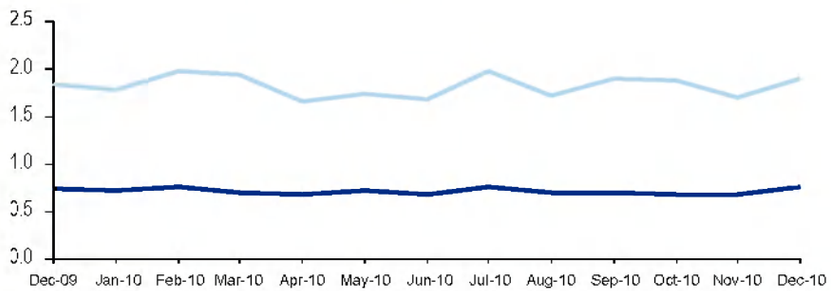
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	YTD
Citi-derived Median	**1.7%**	**-1.6%**	**-4.3%**	**-2.0%**	**4.2%**	**2.2%**	**-4.9%**	**4.1%**	**-7.3%**	**-1.8%**	**-0.7%**	**-4.5%**	**-14.5%**

Hedge Fund Performance vs. Benchmark (Monthly, LTM)

	Dec-10	Nov-10	Dec-09	YTD-10
Ded Short Bias	-4.5%	-0.7%	-4.0%	-14.5%
S&P Short ETF (SH)	-6.5%	-0.3%	-2.1%	-16.6%
Rus 2000 Short ETF (RWM)	-7.7%	-4.0%	-7.7%	-27.4%

Source: Citi ICG Analytics; FactSet

Leverage Profile (Monthly, LTM)

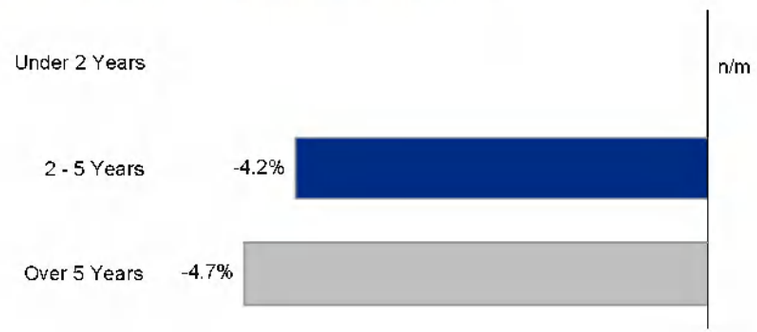


Gross Leverage (Mean): Defined as the sum of (LMV + abs SMV) / Net Equity

LMV Leverage (Mean): Defined as Long Market Value / Net Equity

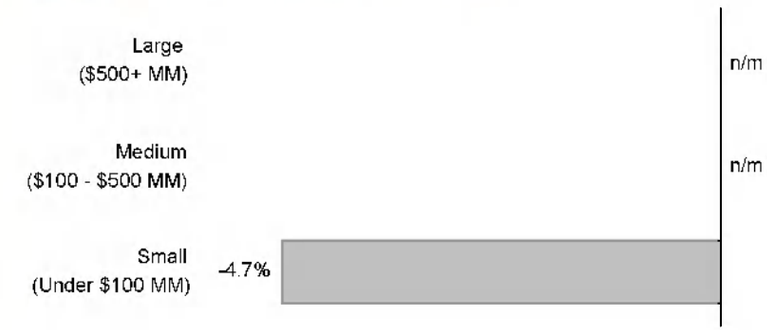
Source: Citi Prime Finance

Hedge Fund Performance by Age (1)



Source: Citi ICG Analytics

Hedge Fund Performance by Size (1)



Source: Citi ICG Analytics

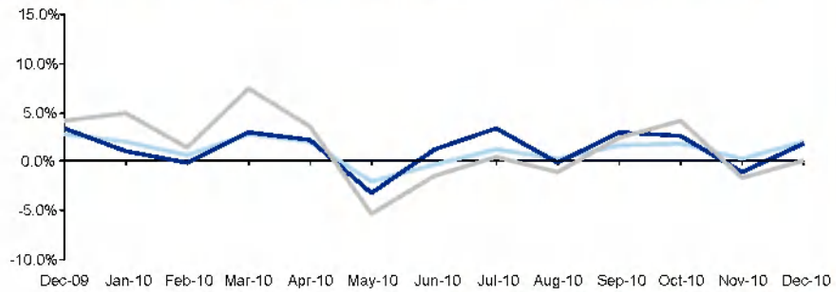
Note: Hedge fund data is self-reported; each calculation is based on the respective data from funds who have reported for the current period. (1) Universe and sample sizes may be small.

Distressed

Data as of Dec-2010

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	YTD
Citi-derived Median	**2.0%**	**0.6%**	**2.7%**	**2.0%**	**-2.0%**	**-0.2%**	**1.3%**	**0.2%**	**1.6%**	**1.9%**	**0.2%**	**2.0%**	**13.0%**

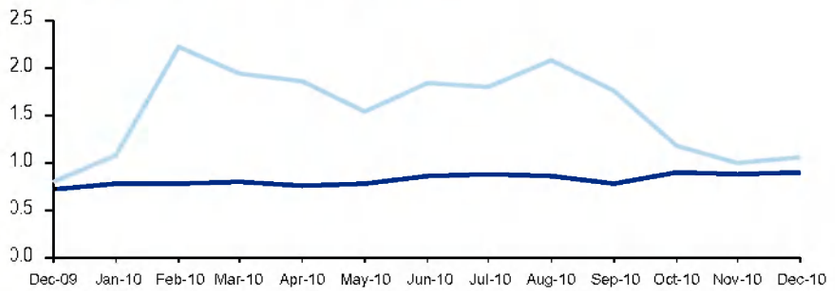
Hedge Fund Performance vs. Benchmark (Monthly, LTM)



	Dec-10	Nov-10	Dec-09	YTD-10
Distressed	2.0%	0.2%	2.9%	13.0%
Citi HY Bond Index	1.9%	-1.1%	3.4%	14.3%
Altman Defaulted Index	0.0%	-1.6%	4.1%	15.1%

Source: Citi ICG Analytics; Citigroup Index LLC; Altman-NYU Salomon Center

Leverage Profile (Monthly, LTM)

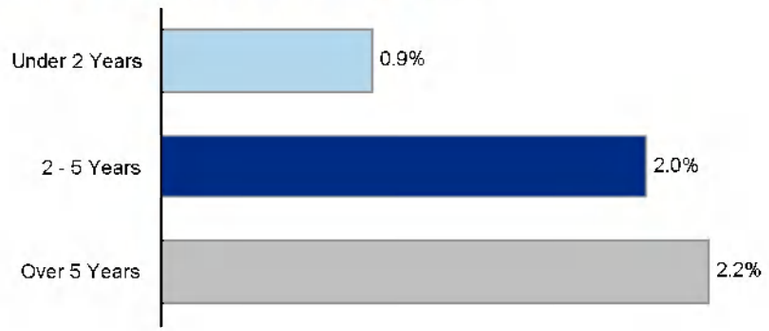


Gross Leverage (Mean): Defined as the sum of (LMV + abs SMV) / Net Equity

LMV Leverage (Mean): Defined as Long Market Value / Net Equity

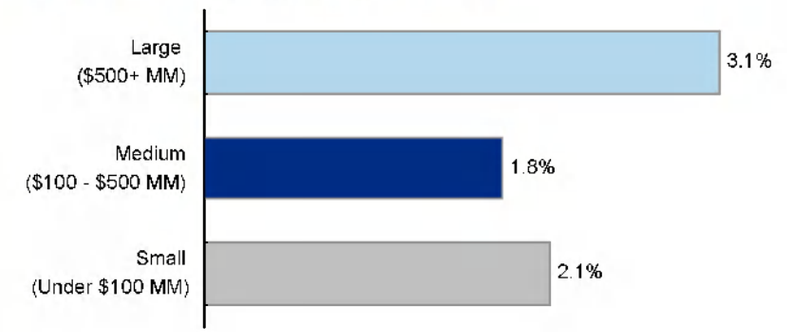
Source: Citi Prime Finance

Hedge Fund Performance by Age (1)



Source: Citi ICG Analytics

Hedge Fund Performance by Size (1)



Source: Citi ICG Analytics

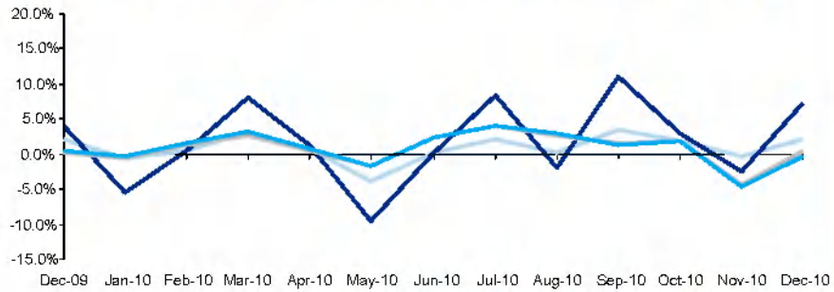
Note: Hedge fund data is self-reported; each calculation is based on the respective data from funds who have reported for the current period. (1) Universe and sample sizes may be small.

Emerging Markets

Data as of Dec-2010

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	YTD
Citi-derived Median	**-0.7%**	**0.4%**	**3.3%**	**0.9%**	**-3.9%**	**0.1%**	**2.1%**	**0.3%**	**3.5%**	**1.9%**	**-0.2%**	**2.0%**	**9.9%**

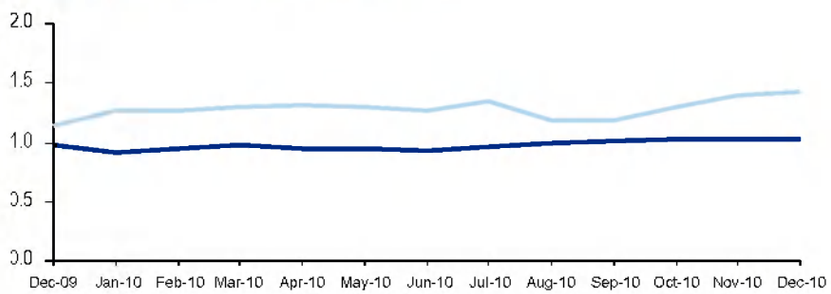
Hedge Fund Performance vs. Benchmark (Monthly, LTM)



	Dec-10	Nov-10	Dec-09	YTD-10
Emerging Mkts	2.0%	-0.2%	2.1%	9.9%
MSCI EM	7.1%	-2.6%	4.0%	19.2%
JPM EMBIG Core ETF (EMB)	0.4%	-4.4%	0.2%	10.8%
DB EM Liquid ETF (PCY)	-0.3%	-4.6%	0.3%	10.8%

Source: Citi ICG Analytics; FactSet

Leverage Profile (Monthly, LTM)

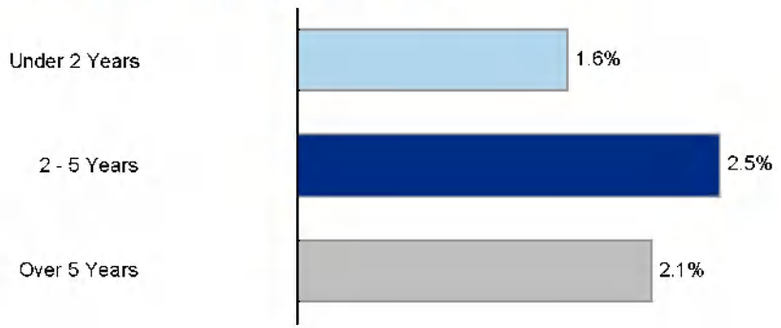


Gross Leverage (Mean): Defined as the sum of (LMV + abs SMV) / Net Equity

LMV Leverage (Mean): Defined as Long Market Value / Net Equity

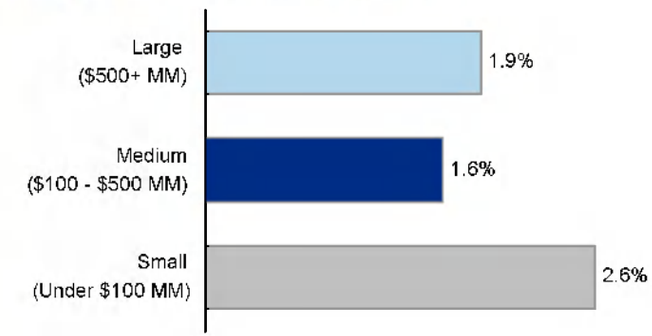
Source: Citi Prime Finance

Hedge Fund Performance by Age



Source: Citi ICG Analytics

Hedge Fund Performance by Size



Source: Citi ICG Analytics

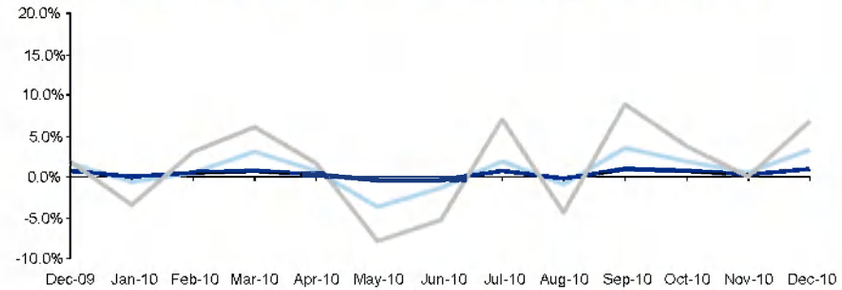
Note: Hedge fund data is self-reported; each calculation is based on the respective data from funds who have reported for the current period. (1) Universe and sample sizes may be small.

Equity Long/Short

Data as of Dec-2010

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	YTD
Citi-derived Median	**-0.6%**	**0.5%**	**3.0%**	**0.8%**	**-3.7%**	**-1.3%**	**1.8%**	**-0.9%**	**3.6%**	**2.0%**	**0.4%**	**3.3%**	**8.8%**

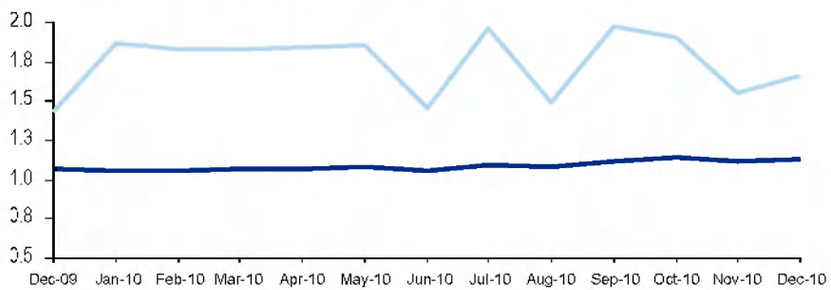
Hedge Fund Performance vs. Benchmark (Monthly, LTM)



	Dec-10	Nov-10	Dec-09	YTD-10
Eq Long/Short	3.3%	0.4%	1.7%	8.8%
Eq Mkt Neutral	0.9%	0.3%	0.6%	3.7%
S&P 500	6.7%	0.0%	1.9%	15.1%

Source: Citi ICG Analytics; FactSet

Leverage Profile (Monthly, LTM)

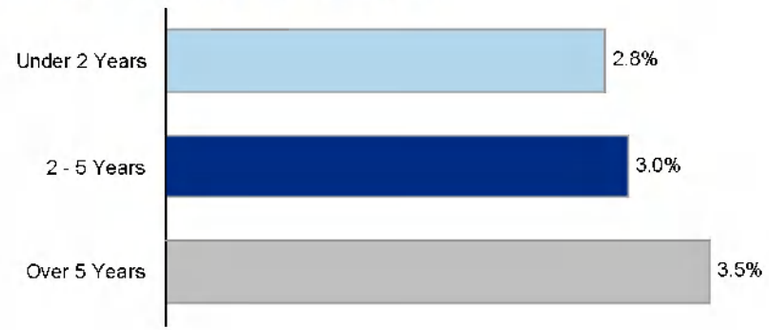


Gross Leverage (Mean): Defined as the sum of (LMV + abs SMV) / Net Equity

LMV Leverage (Mean): Defined as Long Market Value / Net Equity

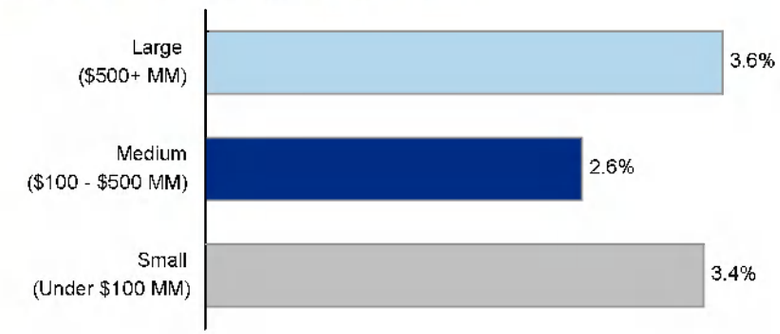
Source: Citi Prime Finance

Hedge Fund Performance by Age



Source: Citi ICG Analytics

Hedge Fund Performance by Size



Source: Citi ICG Analytics

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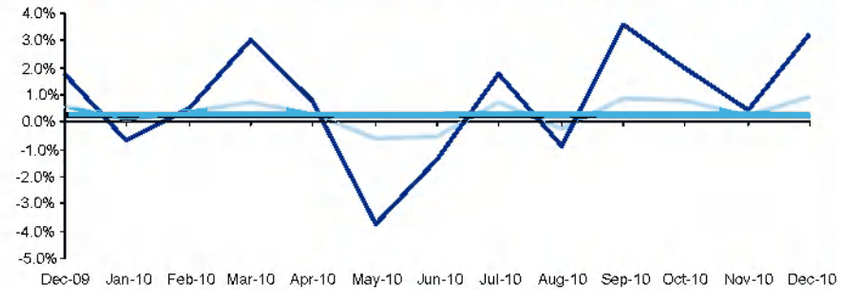
Equity Market Neutral

Data as of Dec-2010

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	YTD
Citi-derived Median	**0.1%**	**0.4%**	**0.7%**	**0.3%**	**-0.6%**	**-0.5%**	**0.7%**	**-0.3%**	**0.8%**	**0.8%**	**0.3%**	**0.9%**	**3.7%**

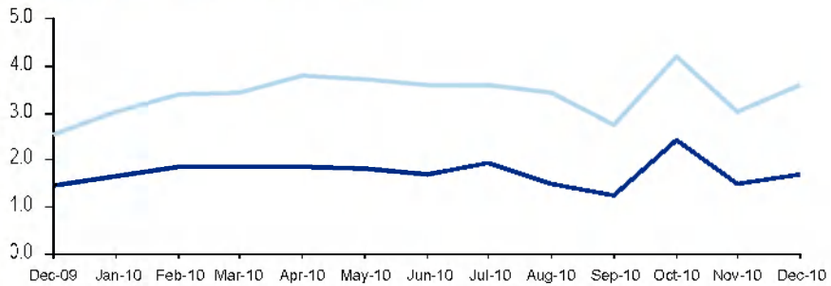
Hedge Fund Performance vs. Benchmark (Monthly, LTM)



	Dec-10	Nov-10	Dec-09	YTD-10
Eq Mkt Neutral	0.9%	0.3%	0.6%	3.7%
Eq Long/Short	3.3%	0.4%	1.7%	8.8%
LIBOR + 300 bps	0.3%	0.3%	0.3%	3.3%
US T-Bill + 300 bps	0.3%	0.3%	0.3%	3.2%

Source: Citi ICG Analytics; FactSet

Leverage Profile (Monthly, LTM)

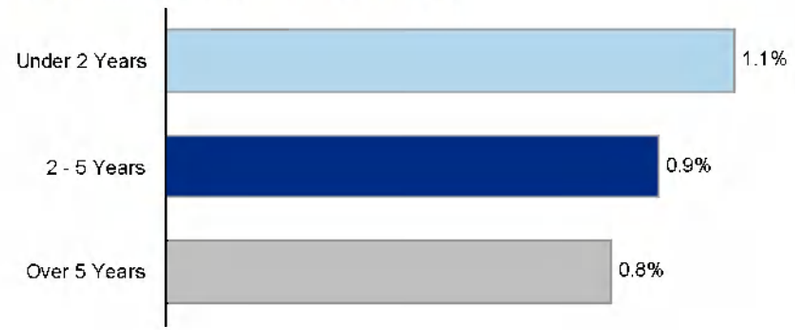


Gross Leverage (Mean): Defined as the sum of (LMV + abs SMV) / Net Equity

LMV Leverage (Mean): Defined as Long Market Value / Net Equity

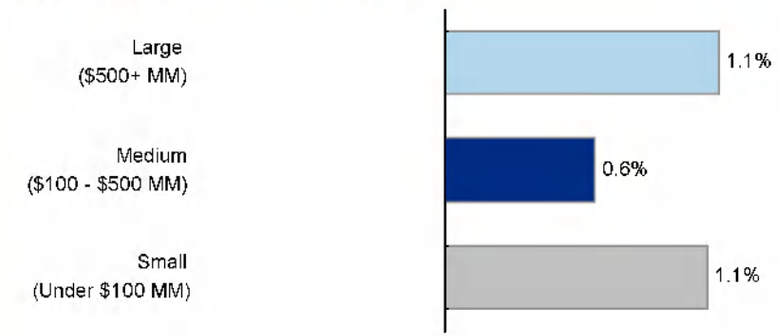
Source: Citi Prime Finance

Hedge Fund Performance by Age



Source: Citi ICG Analytics

Hedge Fund Performance by Size



Source: Citi ICG Analytics

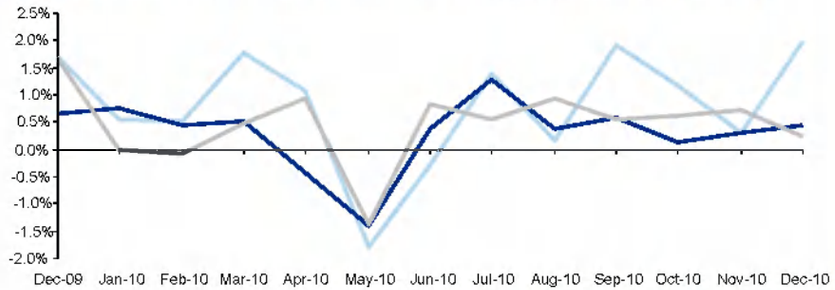
Note: Hedge fund data is self-reported; each calculation is based on the respective data from funds who have reported for the current period. (1) Universe and sample sizes may be small.

Event Driven

Data as of Dec-2010

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	YTD
Citi-derived Median	**0.5%**	**0.5%**	**1.8%**	**1.1%**	**-1.8%**	**-0.3%**	**1.4%**	**0.2%**	**1.9%**	**1.2%**	**0.3%**	**2.0%**	**9.0%**

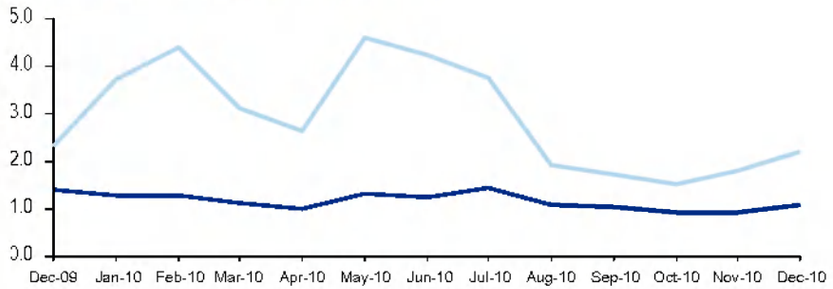
Hedge Fund Performance vs. Benchmark (Monthly, LTM)



	Dec-10	Nov-10	Dec-09	YTD-10
Event Driven	2.0%	0.3%	1.7%	9.0%
The Merger Fund (MERFX)	0.4%	0.3%	0.6%	3.4%
AQR Div Arb Fund (ADANX)	0.2%	0.7%	1.7%	4.4%

Source: Citi ICG Analytics; FactSet

Leverage Profile (Monthly, LTM)



Gross Leverage (Mean): Defined as the sum of (LMV + abs SMV) / Net Equity

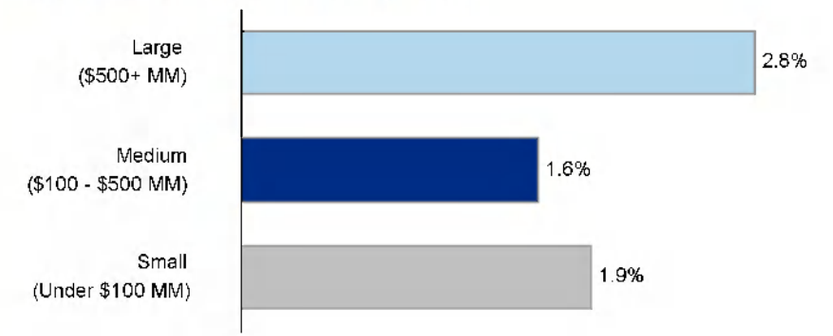
LMV Leverage (Mean): Defined as Long Market Value / Net Equity

Source: Citi Prime Finance

Hedge Fund Performance by Age

Source: Citi ICG Analytics

Hedge Fund Performance by Size



Source: Citi ICG Analytics

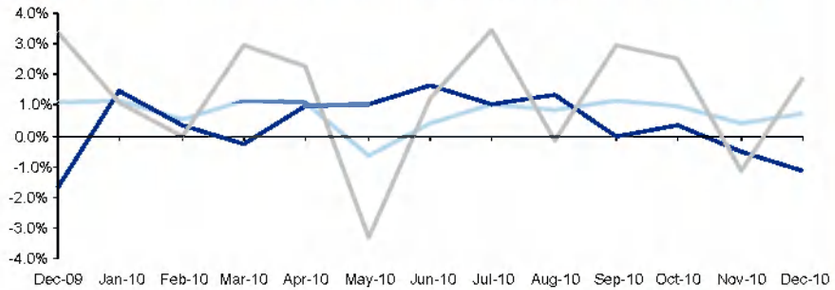
Note: Hedge fund data is self-reported; each calculation is based on the respective data from funds who have reported for the current period. (1) Universe and sample sizes may be small.

FI Arbitrage

Data as of Dec-2010

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	YTD
Citi-derived Median	**1.1%**	**0.5%**	**1.1%**	**1.1%**	**-0.6%**	**0.4%**	**1.0%**	**0.8%**	**1.1%**	**1.0%**	**0.4%**	**0.7%**	**9.0%**

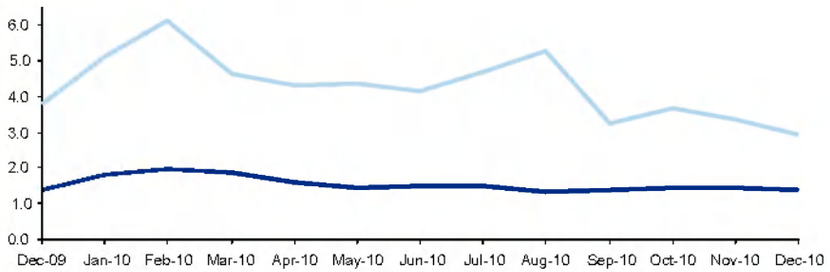
Hedge Fund Performance vs. Benchmark (Monthly, LTM)



	Dec-10	Nov-10	Dec-09	YTD-10
FI Arbitrage	0.7%	0.4%	1.1%	9.0%
Citi US BIG Index	-1.2%	-0.5%	-1.7%	6.3%
Citi HY Bond Index	1.9%	-1.1%	3.4%	14.3%

Source: Citi ICG Analytics; Citigroup Index LLC

Leverage Profile (Monthly, LTM)

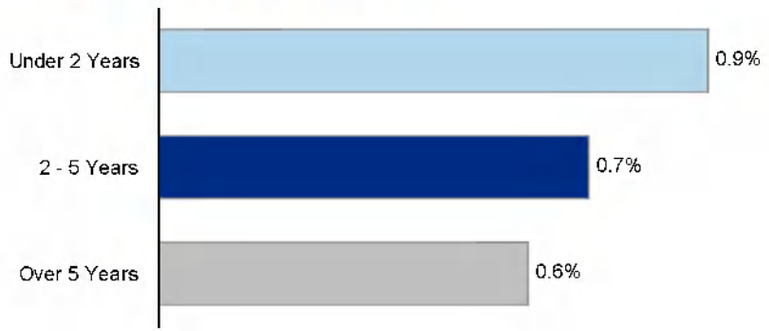


Gross Leverage (Mean): Defined as the sum of (LMV + abs SMV) / Net Equity

LMV Leverage (Mean): Defined as Long Market Value / Net Equity

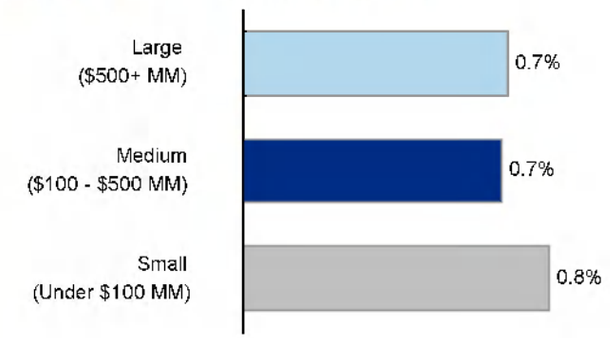
Source: Citi Prime Finance

Hedge Fund Performance by Age



Source: Citi ICG Analytics

Hedge Fund Performance by Size



Source: Citi ICG Analytics

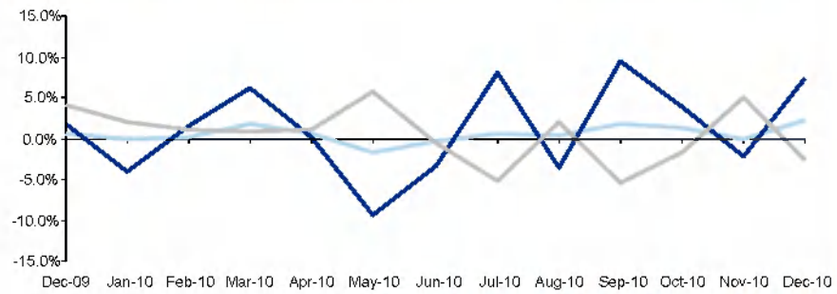
Note: Hedge fund data is self-reported; each calculation is based on the respective data from funds who have reported for the current period. (1) Universe and sample sizes may be small.

Global Macro

Data as of Dec-2010

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	YTD
Citi-derived Median	**-0.2%**	**0.1%**	**1.7%**	**0.6%**	**-1.9%**	**-0.3%**	**0.5%**	**0.4%**	**1.7%**	**1.3%**	**-0.1%**	**2.2%**	**6.1%**

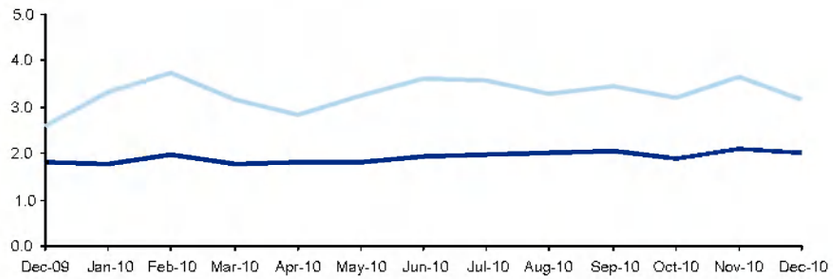
Hedge Fund Performance vs. Benchmark (Monthly, LTM)



	Dec-10	Nov-10	Dec-09	YTD-10
Global Macro	2.2%	-0.1%	0.5%	6.1%
MSCI World	7.4%	-2.1%	1.8%	12.3%
US$-Index	-2.7%	5.1%	4.0%	1.5%

Source: Citi ICG Analytics; FactSet

Leverage Profile (Monthly, LTM)

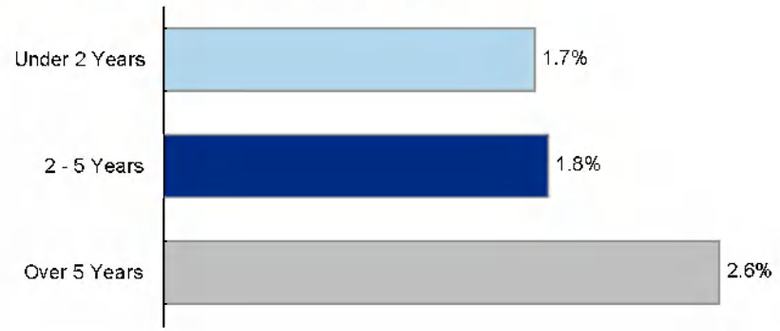


Gross Leverage (Mean): Defined as the sum of (LMV + abs SMV) / Net Equity

LMV Leverage (Mean): Defined as Long Market Value / Net Equity

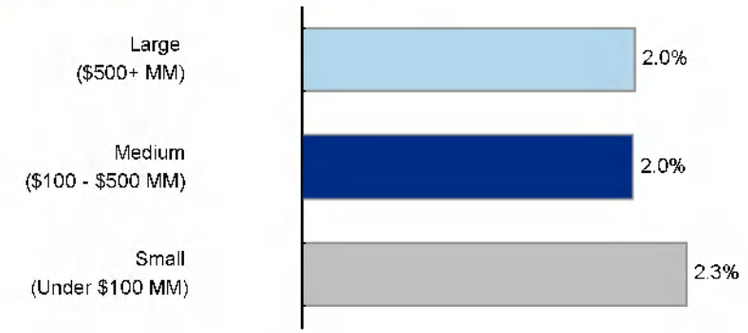
Source: Citi ICG Analytics; FactSet; Citi Prime Finance

Hedge Fund Performance by Age



Source: Citi ICG Analytics; FactSet; Citi Prime Finance

Hedge Fund Performance by Size



Source: Citi ICG Analytics; FactSet; Citi Prime Finance

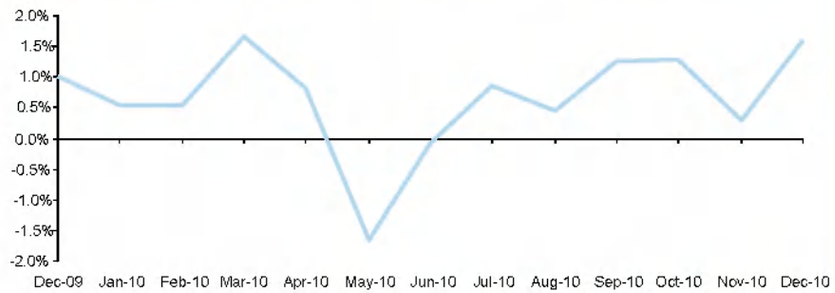
Note: Hedge fund data is self-reported; each calculation is based on the respective data from funds who have reported for the current period. (1) Universe and sample sizes may be small.

Multi-Strategy

Data as of Dec-2010

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	YTD
Citi-derived Median	**0.6%**	**0.5%**	**1.7%**	**0.8%**	**-1.7%**	**-0.1%**	**0.9%**	**0.4%**	**1.3%**	**1.3%**	**0.3%**	**1.6%**	**7.8%**

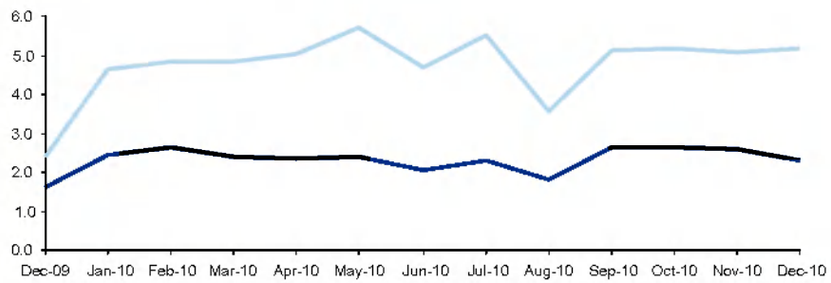
Hedge Fund Performance vs. Benchmark (Monthly, LTM)



	Dec-10	Nov-10	Dec-09	YTD-10
Multi-Strategy	1.6%	0.3%	1.0%	7.8%

Source: Citi ICG Analytics

Leverage Profile (Monthly, LTM)

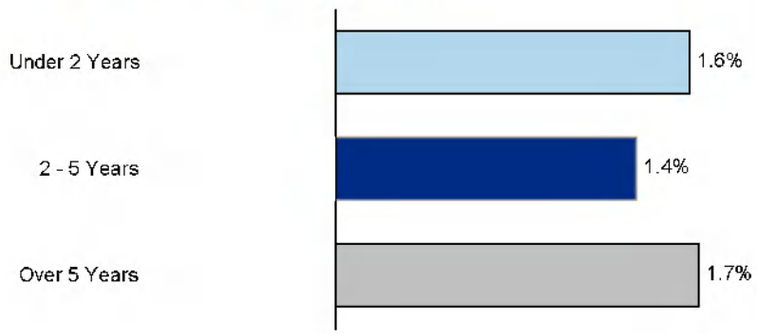


Gross Leverage (Mean): Defined as the sum of (LMV + abs SMV) / Net Equity

LMV Leverage (Mean): Defined as Long Market Value / Net Equity

Source: Citi Prime Finance

Hedge Fund Performance by Age



Source: Citi ICG Analytics

Hedge Fund Performance by Size

Source: Citi ICG Analytics

Note: Hedge fund data is self-reported; each calculation is based on the respective data from funds who have reported for the current period. (1) Universe and sample sizes may be small.

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Financial Services Authority

Assessing the possible sources of systemic risk from hedge funds

A report on the findings of the Hedge Fund Survey and Hedge Fund as Counterparty Survey

February 2011

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February 2011

Introduction

This paper sets out the results of the Financial Services Authority's (FSA) latest Hedge Fund Survey (HFS) conducted in September 2010 and the Hedge Fund as Counterparty Survey (HFACS) conducted in October 2010.[1] These surveys help us to analyse the systemic risk posed by hedge funds and are conducted every six months as part of our work on assessing risks to financial stability from outside the boundary of prudential regulation.[2] This, in turn, is a key part of our work to protect and enhance the stability of the UK financial system, one of our statutory objectives.

These voluntary surveys provide only a snapshot of hedge fund exposures and partial view of the hedge fund industry, and when examining the results it is important to consider the surveys' limitations. The analysis presented only covers the broad systemic conclusions and does not discuss individual firms or funds. Nevertheless, the surveys are important tools in providing us with a window into the hedge fund industry.

Risks to financial stability from hedge funds could crystallise through two potential channels: market dislocations that disrupt liquidity and pricing (the 'market channel'); and/or losses in hedge funds leading to losses by banking and other counterparties (the 'credit channel').

The latest results suggest that the footprint of surveyed hedge funds remains small within most markets and leverage is largely unchanged, so that risks to financial stability through the market channel seem limited at the time of the latest surveys. In addition, counterparties have increased margin requirements and tightened other conditions on their exposures to hedge funds since the crisis, increasing their resilience to hedge fund defaults. Nevertheless, some risks to hedge funds remain, particularly if they are unable to manage a sudden withdrawal of liabilities during a crisis period,

1 The timing of the Hedge Fund Survey was brought forward one month to September 2010 to coincide with similar surveys run by other regulators internationally. We are working actively with other regulators to monitor the global hedge fund industry and share survey results in aggregated 'anonymised' form.

2 For the purposes of this work, a systemic risk is a risk which, if it crystallised without any form of intervention by the authorities, would mean a high likelihood of major and rapid disruption to the effective operation of a core function of the financial system (and so leading to a wider economic impact).

potentially resulting in forced asset sales. Forced asset sales during stressed market environments may exacerbate pressure on market liquidity and efficient pricing.

A discussion on the outcomes of previous surveys is available on our website.[3]

The Hedge Fund Survey and the Hedge Fund as Counterparty Survey

The HFS is a voluntary survey that began in October 2009 and is now in its third iteration. The HFS asks selected FSA-authorised investment managers[4] about the hedge fund assets they manage and the Qualifying Funds[5] for which they undertake management activities. It contains data used to assess potential threats through both the market and credit channels. The September 2010 survey captured about 50 investment managers with just over 100 Qualifying Funds. Together these firms reported approximately US$380 billion of hedge fund assets under management. Qualifying Funds captured in the survey cover a broad spectrum of investment strategies and have a wide range of geographical exposures. Most Qualifying Funds are domiciled in offshore centres, such as the Cayman Islands. We estimate that the HFS captures approximately 20% of global hedge fund industry assets under management and consequently the results should not necessarily be assumed to reflect those for the broader hedge fund industry.

The HFACS survey has been running since 2005. This survey is voluntary and covers 14 large FSA-authorised banks which have significant dealings with hedge funds either through prime brokerage and/or through businesses generating counterparty credit exposures. The survey asks about the size, channel and nature of the larger credit counterparty risks that individual banks have for hedge funds, both individually and collectively. However, not all the data collected covers global exposures to the hedge fund industry and not all counterparties to hedge funds are surveyed. The HFACS is used to analyse the credit channel for systemic risk.

Latest results

Performance and current conditions

On balance, conditions for hedge funds surveyed remain positive. Returns for Qualifying Funds averaged 2% for the six-month period from April to end September 2010 (Chart 1). This is in line with estimates from global hedge fund databases[6] and above the -0.6% return of the MSCI World equity index over the same period, although it is less than the average 7.5% return for the six months covered in previous HSF. The distribution of returns was favourable with approximately 75% of funds reporting positive returns. In addition, assets below

3 www.fsa.gov.uk/pubs/other/hf_report.pdf

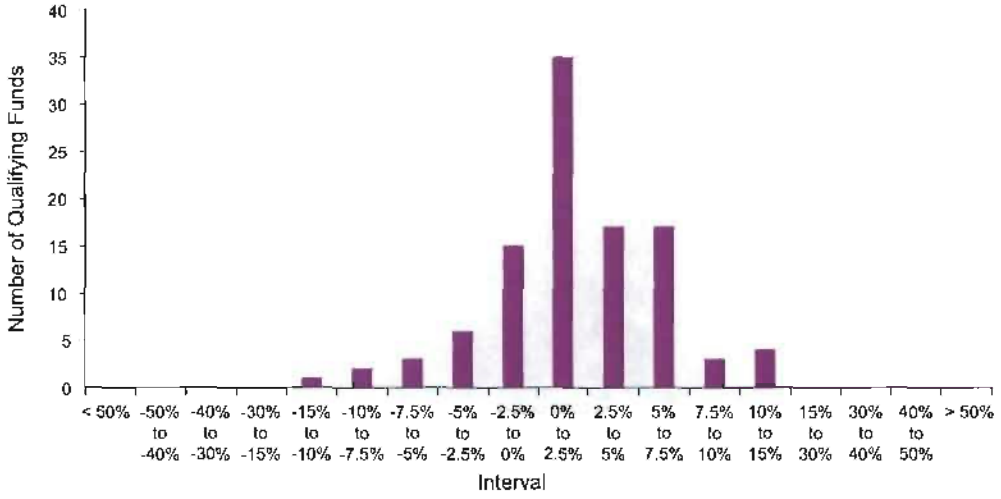
4 This includes FSA-authorised firms acting as sub-advisor in other jurisdictions.

5 Qualifying Funds for the purposes of the HFS are hedge funds with a Net Asset Value equal to or greater than US$500 million.

6 For example, the HFRI index return was 2.2% for the same period and the BarclayHedge index was 1.9%.

their highwater mark continued to decline, helping to improve the sustainability of the sector as a greater number of performance fees are levied. Assets below their highwater mark have declined to less than 5% of total surveyed assets, down from 43% reported in the October 2009 survey.

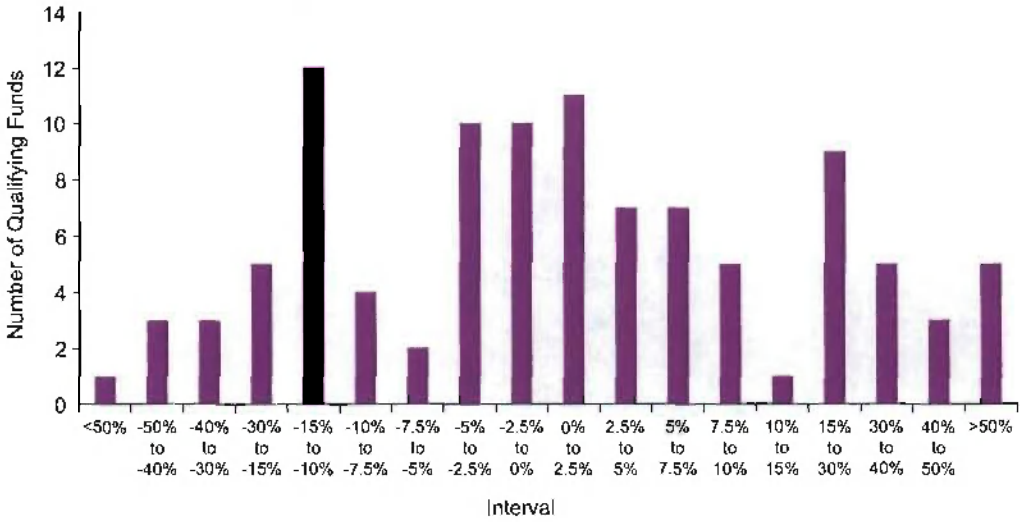
Chart 1: Fund Returns – Histogram of total returns for the 6 months to end September 2010



Source: FSA HFS

Aggregate assets under management increased in the survey period due to positive performance. But the picture of subscriptions and redemptions was more mixed. Approximately one half of Qualifying Funds in the September 2010 survey reported a decline in Net Asset Value (NAV) driven by negative net subscriptions (Chart 2). In aggregate, negative net subscriptions reduced assets under management by 0.8% (measured on the level of their aggregate assets at the start of the survey period). Assets under special arrangements due to their illiquid nature, such as in 'side pockets', remained largely unchanged at 11% of aggregate NAV, suggesting no improvement in the quality of these assets.

Chart 2: Change in NAV – Histogram of change in NAV for the 6 months to end September 2010

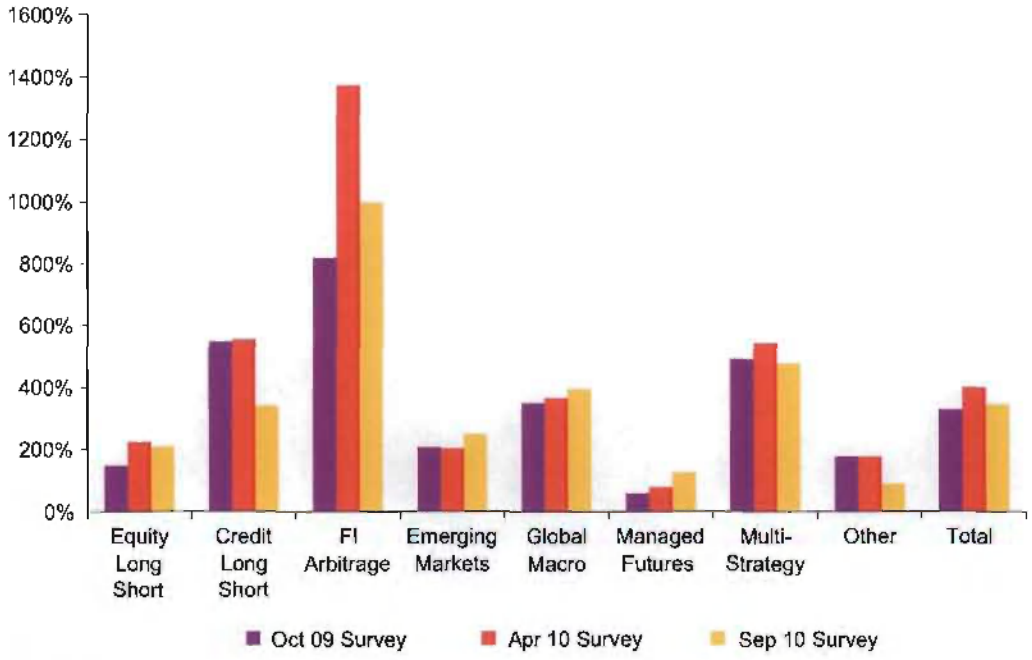


Source: FSA HFS

Market footprint

The potential for any stress within the hedge fund sector to be transmitted through the 'market impact channel' will be directly affected by the extent of hedge funds' presence within those markets. One method of assessing the size of hedge funds is to measure their gross exposures or 'footprint', calculated as the sum of their long market value and short market value. Changes in footprint can be illustrated relative to the equity raised from investors (i.e. NAV); these measures have remained fairly stable over the different surveys in aggregate (Chart 3). There was a sizable increase in footprint to NAV for fixed income arbitrage strategies in the April 2010 survey, but that has since reduced. Funds with 'spread-based' strategies (such as fixed income arbitrage) can be expected to have a greater ratio of gross exposures (footprint) to investor equity than those with 'fundamentals-based' strategies (such as equity long-short).

Chart 3: Qualified Fund Footprint as a percent of NAV[7]



Source: FSA HFS

Of particular importance is the relative size of hedge funds' 'footprint' compared with the size of the global markets they trade in. These measures are generally low and have not changed significantly between the different surveys (Chart 4), suggesting the hedge funds we surveyed are not the biggest category of players in most markets when measured by the value of their holdings. As noted above, however, we estimate that the HFS captures approximately 20% of global hedge fund assets and so globally hedge funds will have a significantly higher footprint in some of these markets. The convertible bond market may be an exception where the hedge funds we surveyed continue to have a big presence. The firms surveyed are estimated to hold

7 Footprint is measured as the sum of long market value (LMV) and short market value (SMV). The measure of footprint reported does not include interest rate, FX and commodity derivatives. Footprint to NAV has been illustrated to show changes over time as this helps to control for changes in participants between surveys.

approximately 8% of the outstanding value of the global convertible bond market.[8] The HFS also suggests that hedge funds are possible material players in the much larger and more systemically important interest rate and commodity derivatives markets.

Chart 4: Hedge Fund Footprint Within Selected Markets

Footprint (LMV + SMV) as a % of market size; derivatives measured based on gross notional value

	Oct 09 Survey	Apr 10 Survey	Sep 10 Survey
Listed Equities	0.5%	0.6%	0.6%
Corporate Bonds	0.3%	0.3%	0.3%
G10 bonds with a 0-1 year duration	1.2%	0.6%	0.7%
G10 bonds with a 1+ year duration	0.8%	1.0%	1.3%
Non-G10 sovereign bonds	0.1%	0.2%	0.2%
Financial institution bonds	0.2%	0.1%	0.0%
Convertible bonds	10.1%	8.1%	8.3%
Structured/securitised products	0.2%	0.3%	0.3%
Credit derivatives	0.8%	1.0%	1.1%
Additional Derivative Markets			
Foreign exchange	0.3%	2.4%	0.8%
Interest rate derivatives	2.9%	4.7%	4.0%
Commodity derivatives	2.5%	4.8%	3.7%

Market presence can also be thought of in terms of the proportion of trade volumes, but this is much harder to measure on a consistent basis across multiple markets. The latest HFS also suggests that individually, most surveyed hedge funds do not account for a significant proportion of trade volumes. As a group, however, hedge funds are considered to be more significant in providing market liquidity in normal market conditions.[9]

The source of borrowings and extent of leverage

Because of the potential impact of hedge funds on financial stability through both market and credit channels, it is also important to consider the amount and sources of hedge fund borrowing. Most concepts of hedge fund leverage involve borrowed money or increased exposure to an underlying asset via derivatives.[10]

There are a number of channels through which hedge funds can borrow money. These include collateralised borrowing under prime brokerage agreements, repurchase agreements (repo), and using synthetic instruments such as total return swaps or contracts for difference. The latest HFS indicates that hedge funds continued to rely heavily on borrowing via repos in aggregate, with roughly 53% coming from this

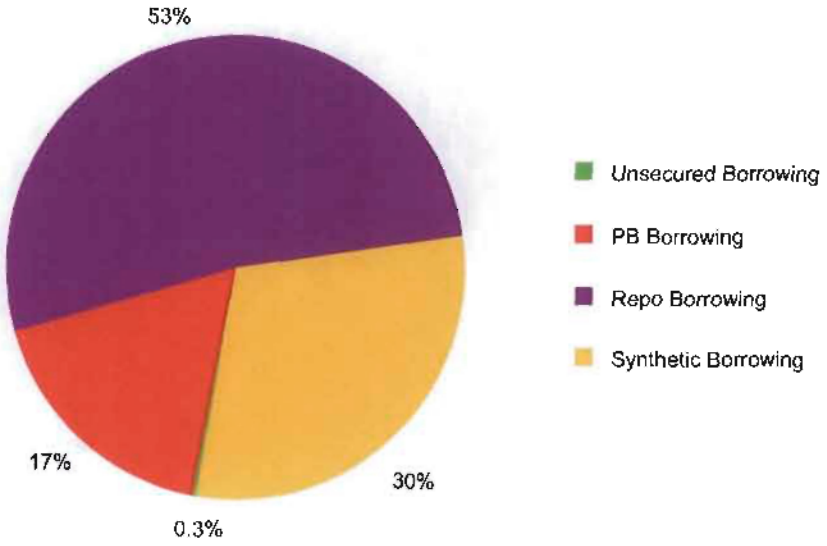
8 The size of the global convertible bond market is sourced from the Bank of America/Merrill Lynch All Convertible Index.

9 See, for example, *An Update on the FSF Report on Highly Leveraged Institutions*, FSF 2007.

10 Measuring 'synthetic' or 'embedded' leverage that is derived through the use of derivatives can be difficult given the complex nature of derivatives.

source (Chart 5). This represents a decline from 60% recorded in the April 2010 survey, with hedge funds' use of synthetic borrowing increasing. Data from the October 2010 HFACS shows that over 77% of cash-out reverse repo financing between firms and their hedge fund counterparties comprised G10 government bond collateral.[11] The latest HFACS data also shows that the majority of fixed income reference assets for synthetic financing were loans, while most reference assets for equity synthetic swaps comprised G10 equities.

Chart 5: Source of Hedge Fund Borrowings – September 2010



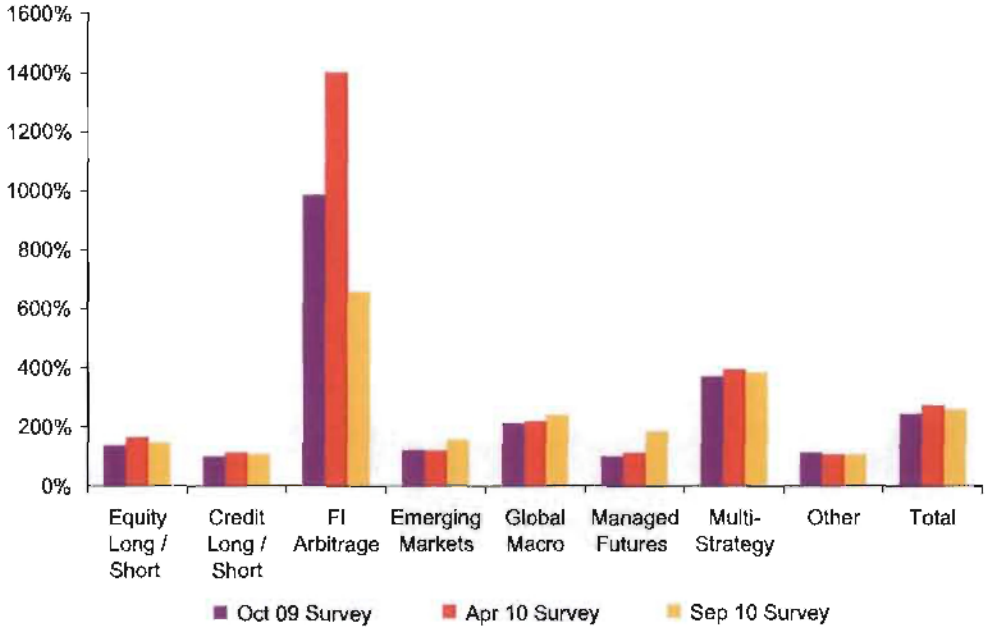
Source: FSA HFS

When the provision of finance is withdrawn rapidly – which can potentially occur for all forms of borrowing – hedge funds may be forced to liquidate their portfolios quickly resulting in a disorderly fire sale of assets. While hedge fund holdings are generally small in most markets, forced selling still has the potential to impact market liquidity and efficient pricing if it occurs during periods of heightened market stress or where hedge funds make up a significant proportion of market liquidity. Repo borrowing may be a particular risk as it has to be continually rolled, especially if it is short term. The rolling over of repo borrowing may be difficult in a stressed market environment. The source of hedge funds' borrowings continues to be an area of interest.

There are many methods to measure the extent of leverage. One method is to measure footprint (gross exposures) as a multiple of NAV, which was shown earlier when examining changes in footprint over time. But this does not take into account netting arrangements that may serve to reduce market exposures. An alternative, also used within the HFS, is to measure total borrowings expressed as a multiple of NAV. This measure paints a similar picture of leverage remaining fairly constant between the survey periods (Chart 6). We also analyse leverage and other survey measures on a fund-by-fund basis, looking for outliers that may be of systemic importance individually.

11 The G10 is made up of 11 industrialised countries: Belgium; Canada; France; Germany; Italy; Japan; the Netherlands; Sweden; Switzerland; the United Kingdom; and the United States of America.

Chart 6: Qualified Fund Leverage: Cash + Synthetic Borrowing as a percent of NAV

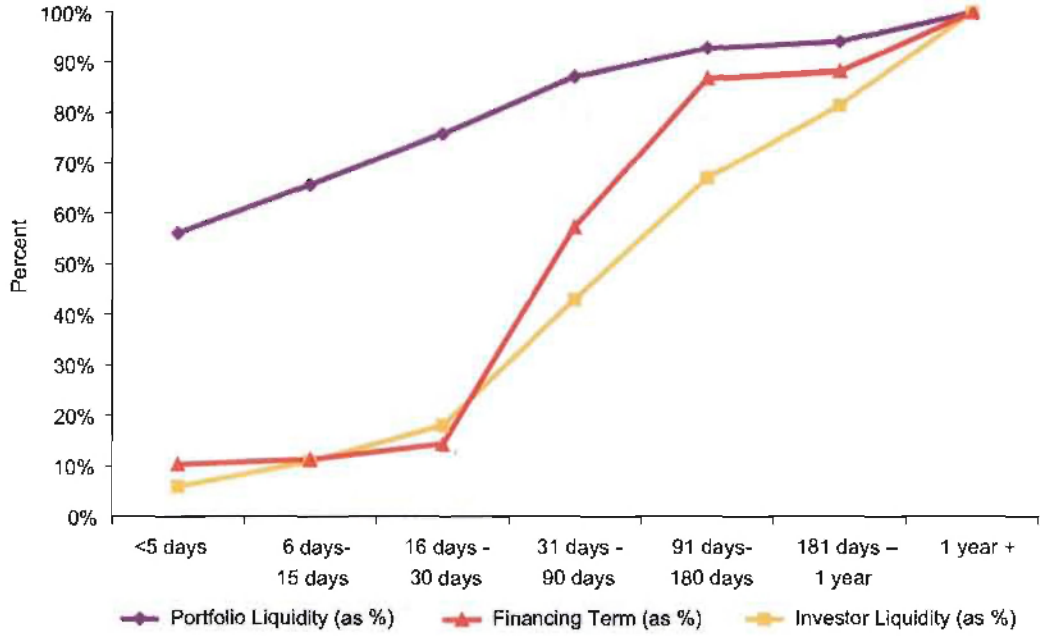


Source: FSA HFS

Maturity transformation

Hedge funds continue to report a high level of portfolio liquidity relative to financing terms and investor liabilities (Chart 7). For example, approximately 55% of aggregate portfolios are estimated to be capable of being liquidated in less than five days, in contrast to 10% or less of investor or financing liabilities falling due over the same period. However, there are important caveats. The assessment of portfolio liquidity is, to a degree, a subjective assessment and will be based on recent expectations and experience of market liquidity. In a stressed market environment, market liquidity may deteriorate significantly and rapidly relative to the current portfolio liquidity reported in the HFS. Further, the assessment of the term of any financing (borrowings) does not take into consideration break-clauses and other methods that finance providers could use to change their terms. It is also possible that conditions may be attached to term financing agreements that would be triggered in stressed environments.

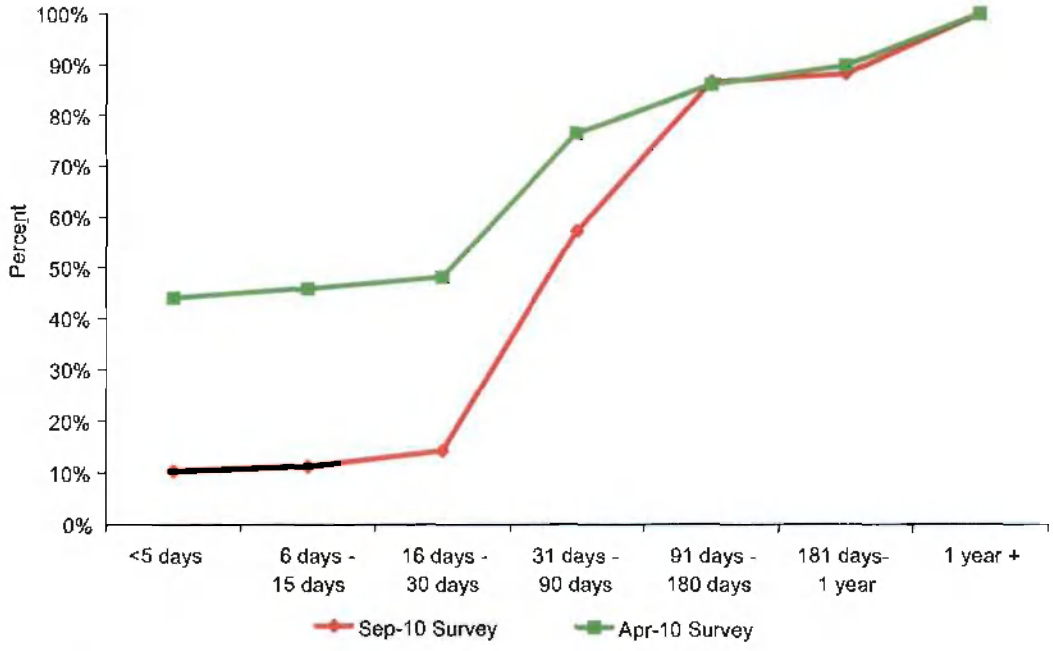
Chart 7: Asset/Liability Mismatch – September 2010



Source: FSA HFS

Portfolio and investor liquidity remains largely unchanged relative to the April 2010 HFS. In contrast, the term of financing has been 'pushed out' in aggregate, with a reduction in short-term financing of between 5 and 30 days and an increase in financing terms of 31 to 180 days (Chart 8).[12] By pushing out the financing terms, hedge funds have potentially reduced the risk of a sudden withdrawal of finance from their leverage providers (usually prime brokers).

Chart 8: Financing Term – Percent of financing by days

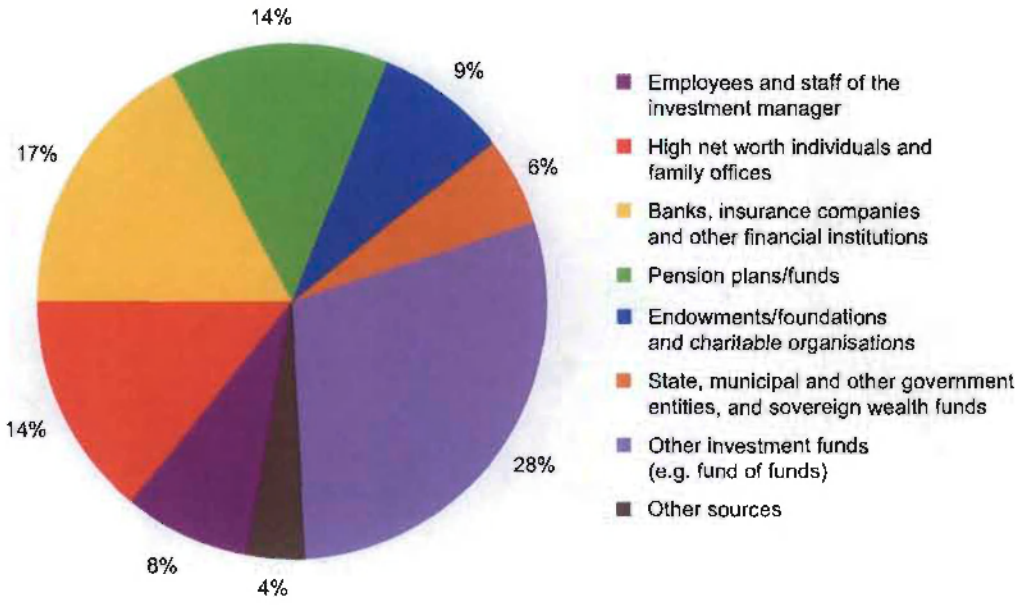


Source: FSA HFS

12 It is possible that the change in term financing could be due to seasonal effects, rather than a fundamental shift by hedge funds (or finance providers). We cannot determine this until additional surveys are completed in the future and a longer time series of responses is developed.

The HFS also suggested that investors in hedge funds comprise a diverse range of entity types, which may reduce the risk of a sudden withdrawal of an investor's capital (Chart 9). In addition, approximately 90% of funds surveyed have the ability to suspend investor redemptions or side pocket, which provides a 'last option' method for funds to manage assets whose liquidity profile suddenly changes.[13] Nevertheless, the potential for asset fire sales during stressed markets remains, as restricting investor redemptions is likely to be seen as a last resort option by many managers and because finance providers are likely to maintain the ability to withdraw finance during stressed markets (whether this is by not rolling repo borrowing or by changing financing terms).

Chart 9: Aggregate Source of Investors – September 2010



Source: FSA HFS

The source of investors also indicates potential channels through which distress in hedge funds can spread to other parts of the finance industry and to the real economy.

Counterparty exposures

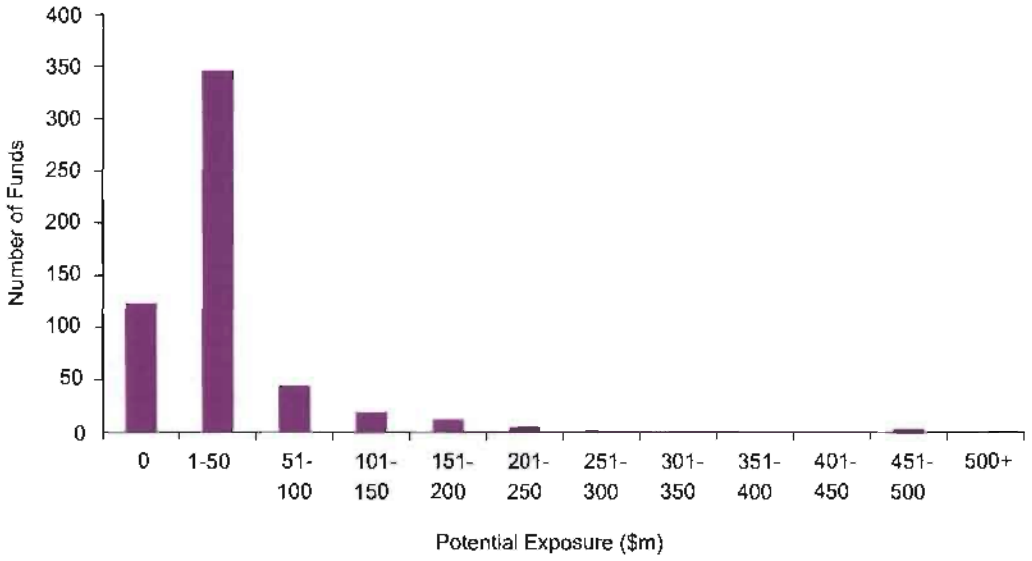
An important function of the two surveys is that they allow us to examine the credit counterparty risks that exist between banks and hedge funds. This helps us understand the possible transmission mechanisms for systemic risk through the 'credit channel'.

Anecdotally, the range of counterparties used by hedge funds since the financial crisis is said to have broadened, such as in the use of multiple prime brokers. Despite some widening, however, the HFS still suggests that counterparty exposures of the hedge fund industry as a whole remain fairly concentrated, with just five banks accounting for over 60% of aggregate net credit counterparty exposure. For banks, the size of exposures are generally small relative to their capital, which should mitigate some of the high level aggregate concentration risk. The HFACS

13 Side pockets are separate funds typically created to house illiquid assets. Investors receive a pro-rata share of the illiquid assets removed from the main fund and placed in the side pocket. Side pockets are used to manage illiquid assets that cannot be sold at the same pace as other assets in the main fund without incurring significant price discounts. Side pockets generally wind down over a much longer time period relative to the main share classes of funds.

suggests that the maximum potential credit exposure[14] of any one bank in the survey to any one hedge fund is less than US$500 million, while the average exposure reported is less than US$50 million (Chart 10).

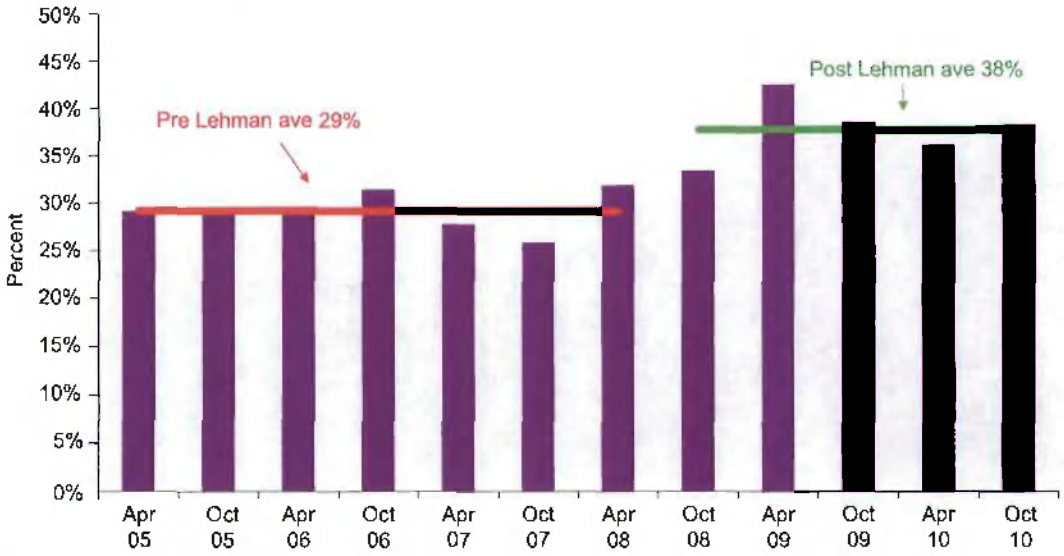
Chart 10: Potential Exposure by Banks to Hedge Funds – October 2010



Source: FSA HFACS

The average margin requirement of surveyed prime brokers in the HFACS has increased since the financial crisis (Chart 11), providing banks with a degree of protection from a hedge fund default. It is also possible that higher margins reflect the longer maturity of financing being provided, as evident from Chart 8. To avoid a strong pro-cyclical effect, firms and supervisors will need to make sure that margins do not fall to unsustainably low levels if exuberant market conditions return in the future.

Chart 11: Average Prime Brokerage Margin Requirements – Margin requirement/LMV

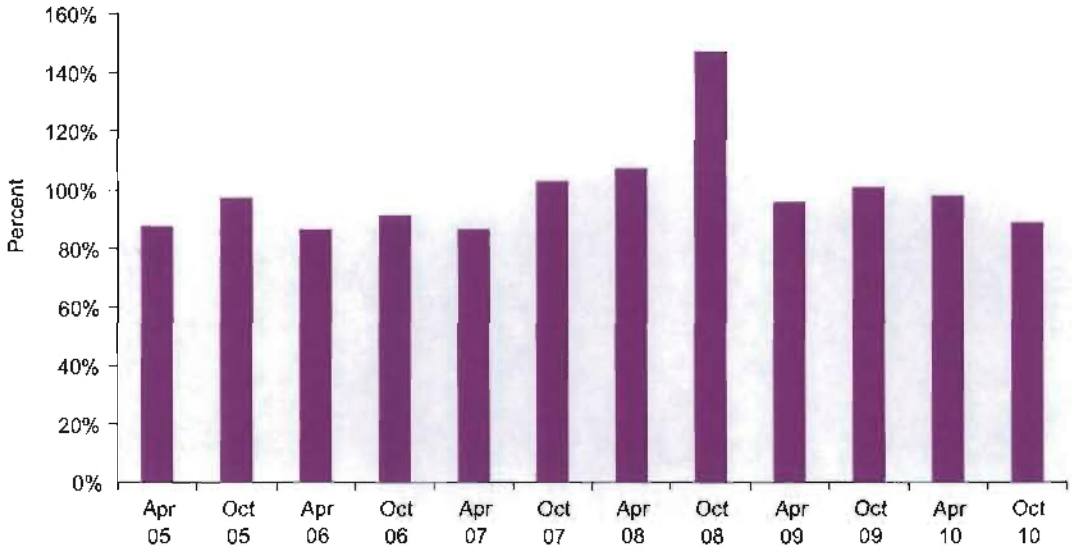


Source: FSA HFACS

14 'Potential exposure' is defined as an unsecured exposure plus a risk-based element (typically VaR-based) standardised to a 99% confidence interval and 10-day holding period.

A further factor that may mitigate any potential systemic risks from hedge funds is the posting of excess collateral by hedge funds. The HFACS suggests that the average excess collateral is currently around 90% of the base margin required, in line with the long-run average over previous surveys (Chart 12). There are potentially other factors that could influence these numbers, including developments in hedge funds' cash management, such as an increased use of custody accounts for excess collateral. Also, if this excess collateral can be moved rapidly, it may not provide the counterparty with the level of protection it suggests.

Chart 12: Average Excess Collateral Held by Prime Brokers – Collateral as a percent of base margin[15]



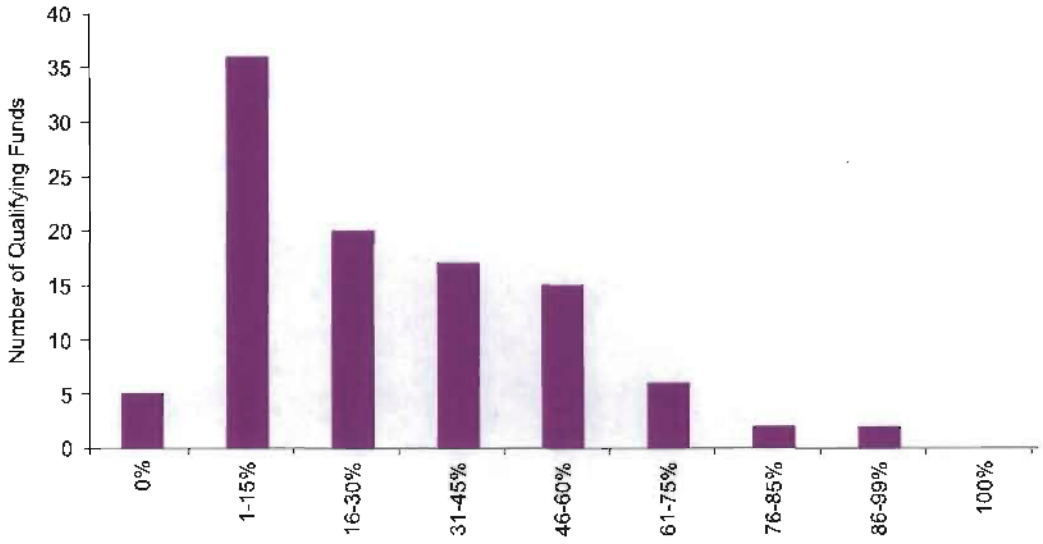
Source: FSA HFACS

Portfolio concentration

As part of our analysis we also look at operational and portfolio measures, in particular, looking for outliers and changes over time. Portfolio concentration – measured as the top 10 positions as a percent of total Gross Market Value (GMV) – declined slightly for the median Qualifying Fund relative to the previous survey. The largest number of funds report that their top 10 positions account for between 1-15% of total GMV, with 50% of funds reporting it as less than 30% (Chart 13).

15 'Excess collateral' is defined as the net equity held in a prime brokerage account, in excess of the margin requirement

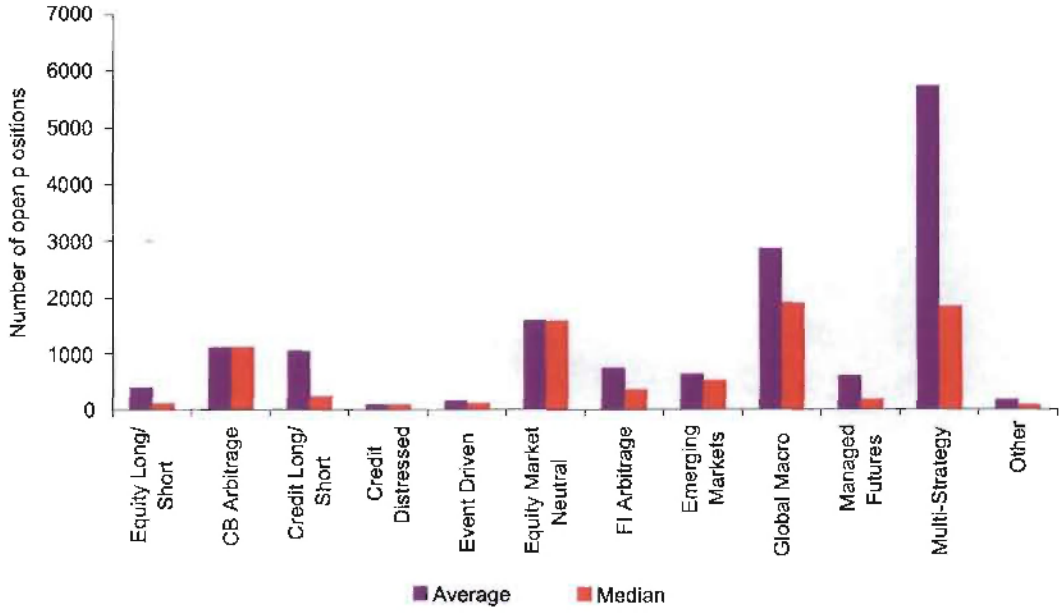
Chart 13: Top 10 Positions as a Percent of GMV – September 2010



Source: FSA HFS

The number of open positions can also vary considerably by fund. Multi-strategy and global macro type funds have the highest number of open positions on average (and for the median), while credit, distressed and event-driven have the lowest (Chart 14).

Chart 14: Number of Open Positions by Strategy – September 2010



Source: FSA HFS

Concluding remarks

To summarise, the key findings of the September 2010 surveys were:

- Most surveyed hedge funds had positive returns over the survey period. Assets below their high-water mark declined, enhancing the sustainability of the sector.
- The footprint of surveyed hedge funds within markets is generally small when measured by the value of their holdings, suggesting that in aggregate they do not have a major presence in most markets. Convertible bonds, interest rate and commodity derivatives are potential exceptions.
- Leverage has not changed significantly relative to previous surveys. Understanding leverage and the source of borrowings is one of the keys to assessing systemic risk.
- Hedge funds have 'pushed out' their financing terms recently. But the risk of a sudden withdrawal of liabilities during stressed markets (particularly financing) is likely to remain with an associated risk of fire sales of assets.
- Despite some signs of change, counterparty credit exposures to hedge funds remain concentrated amongst a small number of banks. Aside from the apparent extension of average maturities, banks appear to have tightened financing terms for hedge funds post-crisis, increasing their resilience to hedge fund defaults.

Our survey work highlights the importance of regularly collecting such data from hedge fund managers and their counterparties. It informs our supervisory work and allows for a better understanding of any systemic risks that might arise through the activities of hedge funds. In particular, building a time series of data should provide us with a valuable insight into the changing nature of these activities and help us to identify whether risks are emerging.

Our intention is to repeat this survey work in March 2011. We will also continue to work closely with the International Organisation of Securities Commissions (IOSCO) and other national regulators to ensure that a clearer identification of global risks can be achieved through a consistent and proportionate global approach to systemic risk data.

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Financial Services Authority

Assessing possible sources of systemic risk from hedge funds

A report on the findings of the Hedge Fund Survey and Hedge Fund as Counterparty Survey

July 2010

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Introduction

This paper sets out the results of the Financial Services Authority's latest Hedge Fund and Hedge Fund as Counterparty surveys conducted in April 2010. These are designed to highlight the potential risks hedge funds could pose to financial stability through credit or market channels. We have an important role in assessing and mitigating systemic risk that market participants pose – including hedge funds – as we carry out our supervisory and regulatory functions.[1]

We conduct these two surveys every six months, which aim to examine and identify these risks, and inform our supervisory work. The Hedge Fund Survey (HFS) began in October 2009 and the Hedge Fund as Counterparty Survey (HFACS) has been running since 2005. We have published a paper discussing the outcomes of the October 2009 surveys. www.fsa.gov.uk/pubs/other/hedge_funds.pdf

The Hedge Fund Survey (HFS)

The HFS was introduced in October 2009 to complement the HFACS. In this survey we ask approximately 50 FSA-authorised investment managers[2] about the hedge fund assets they manage and about the qualifying funds[3] for which they undertake management activities. Questions cover asset class exposures, performance, borrowings, risk and operational measures. The HFS aims to help us better understand the use of leverage (through borrowing or derivatives), 'footprints' in various asset classes, the scale of any asset/liability mismatch and credit counterparty risks. It mainly focuses on the market channel for systemic risk; the potential for large scale forced liquidations by hedge funds to disrupt market liquidity and pricing.

1 For the purposes of this work, a systemic risk is a risk which, if it crystallised without any form of intervention by the authorities, would mean a high likelihood of major, rapid disruption to the effective operation of a core function of the financial system (and so leading to a wider economic impact).

2 This includes FSA-authorised firms acting as sub-advisor in other jurisdictions.

3 Qualifying funds for the purposes of the HFS are hedge funds with a Net Asset Value equal to or greater than US $500 million.

The Hedge Funds as Counterparties Survey (HFACS)

The HFACS encompasses some of the largest FSA-authorised banks that have significant dealings with hedge funds either through prime brokerage and/or through businesses generating counterparty credit exposures. We ask about the size, channel and nature of the larger credit counterparty exposures that individual banks have to hedge funds, both individually and collectively. The HFACS focuses on the credit channel for systemic risk: the potential for hedge fund failures to lead to banking sector losses.

April 2010 HFS and HFACS results

About 50 investment managers participated in the April 2010 HFS. Together these firms had nearly $345bn of hedge fund Assets Under Management (AUM) and approximately 90 qualifying funds. Some firms reported their global AUM, while others reported only on assets managed by their UK entity. This compares to the nearly $320bn of hedge fund AUM and approximately 80 qualifying funds reported in October 2009's HFS. Again, the largest strategy types by qualifying fund AUM at April 2010 were multi-strategy, global macro, managed futures and equity long/short.[4]

Some of the managers surveyed and funds reported on differ between the October 2009 and April 2010 surveys.[5] So, it is not possible to compare the two data sets exactly. However, the majority of managers and funds reporting are the same, meaning that broad changes can be identified.

Between the October 2009 and April 2010 surveys, hedge fund performance strongly recovered, with the Dow Jones Credit Suisse Hedge Fund Index rising by 7.3%. See the table below for sub-strategy performance.

Dow Jones CS Sub-strategy indices	% increases
Fixed Income Arbitrage	7.8
Multi-strategy	5.7
Long/Short Equity	6.7
Global Macro	6.3

Broader market indices also showed positive performance over the period with the S&P 500 Index up 15%, the FTSE 100 Index 10% higher and the MSCI World index increasing by 8%.

This backdrop helped inform our April 2010 survey data and results expectations, which showed increased risk appetite. It is worth noting that the April 2010 surveys took place before May's heightened market volatility, so the poor performance generally experienced by hedge fund strategies in that month will be reflected in the next survey's results.

4 Approximately 80% of qualifying fund AUM were attributable to these strategy types at April 2010.

5 For example, some funds that qualified in October 2009 no longer qualified in April 2010 and vice versa.

Our April 2010 findings on leverage, asset/liability mismatch, credit counterparty risk and other supervisory issues are presented below.

Leverage

Due to the range of trading strategies and products that hedge funds use, the concept of 'leverage' is difficult to define consistently. Therefore instead of asking hedge fund managers directly about their funds' 'leverage', we asked for the basic data that could make up a risk assessment. By cutting the data in different ways, we have assessed leverage across strategies and groups of funds as well as in relation to individual qualifying funds.

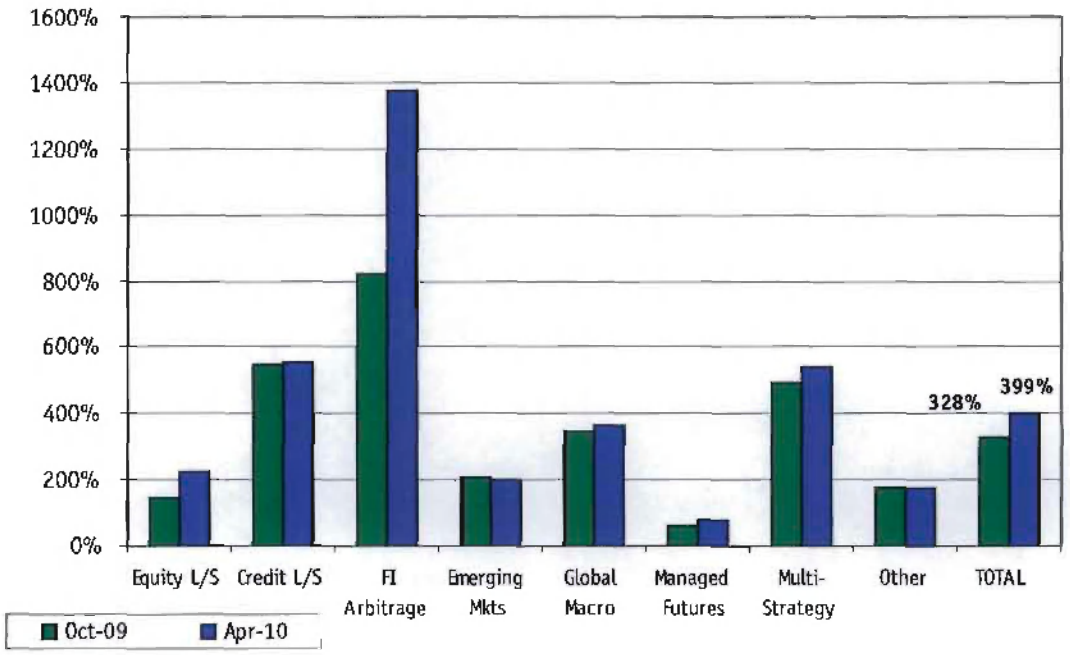
Footprint

To give an idea of the scale of a hedge fund's presence in the market, we examine its total gross 'footprint' across asset classes, compared with equity raised from investors.

Chart 1 compares the size of qualifying funds' overall footprint as a multiple of investor equity as at October 2009 and April 2010 by fund strategy[6]. We can see that since October 2009 leverage has increased as shown by this measure. Overall, leverage by 'footprint' at April 2010 of qualifying funds was 399% compared to 328% in October 2009. Funds with 'spread-based' strategies (e.g. fixed income arbitrage) can be expected to have a greater ratio of gross footprint to investor equity than those with 'fundamental' strategies (e.g. equity long-short). However, the increase in this measure for fixed income arbitrage funds is particularly noteworthy. This is in line with an increase since October 2009 in the amount of financing provided under global master repurchase agreements as a percentage of total borrowing by surveyed hedge funds.

6 A larger footprint does not necessarily equate to a larger risk as this metric takes no account of netting long and short positions or the volatility of the assets that make up the footprint.

Chart 1: 'Footprint' as a multiple of net equity



We have also looked at exposure data to identify asset classes in which hedge funds appear to have a large share. As before convertible bonds stand out, with managers reporting positions held by their funds equating to approximately 8% of the outstanding value of the global market.[7] This compares to positions representing approximately 10% of the market reported in October 2009. Hedge funds were not significant participants in respect of their aggregated holdings in other asset classes at April 2010: for example, surveyed managers reported gross positions[8] held by their funds equal to approximately 1.0% of the value of European equity markets[9] (similar to 0.9% in October 2009).

Borrowing

Most concepts of hedge fund leverage involve borrowed money or increasing exposure to an underlying asset via derivatives.[10]

There are a number of channels through which hedge funds can borrow money. These include collateralised borrowing under prime brokerage agreements, repo agreements, or synthetically using instruments like swaps and contracts for difference. Chart 2 shows hedge funds' reported cash borrowing plus synthetic borrowing as a multiple of net equity.

Overall, this type of leverage has increased for qualifying funds from 244% at October 2009 to 272% at April 2010. This is most evident in respect of certain strategy types, including fixed income arbitrage and multi-strategy.

7 Source: Bank of America/Merrill Lynch All Convertible Index as at 30/04/2010.

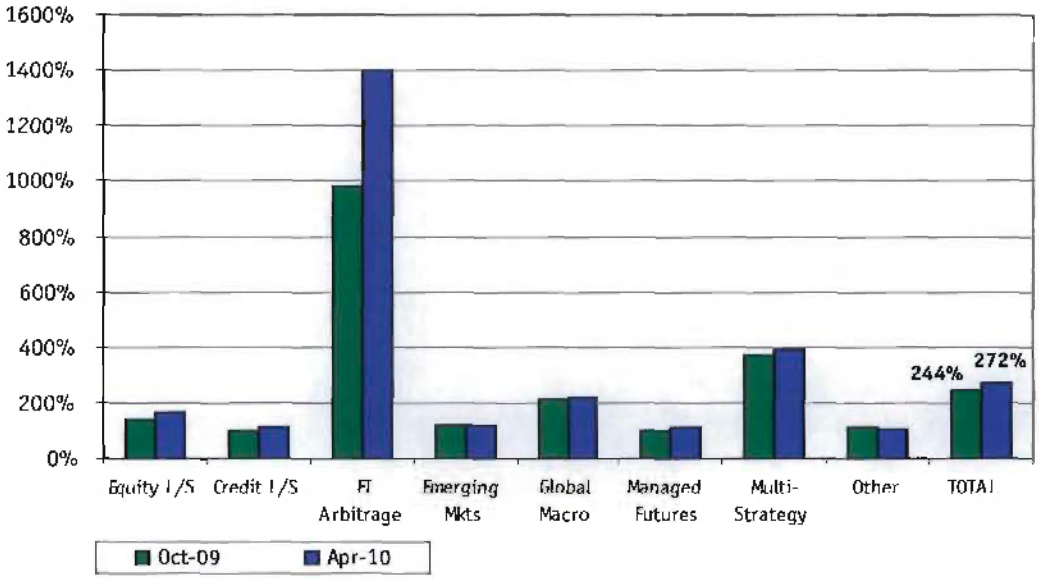
8 Longs and shorts plus exposure through derivatives (delta adjusted for options and gross notional for futures).

9 Source: www.world-exchanges.org/statistics/ytd-monthly.

10 Measuring leverage using the increased exposure to an underlying asset via derivatives is particularly hard to assess given the complex nature of options.

Borrowing under repo has increased as a source of financing for qualifying funds since the previous survey date, particularly when compared to borrowing through prime brokerage. The HFACS April 2010 survey shows that over 70% of cash-out reverse repo financing between firms and their hedge fund counterparties comprised G10 government bond collateral. Synthetic financing has also increased between the HFS dates, but not in the same proportion as financing through repo.[11] April 2010 HFACS data shows that most fixed income reference assets for synthetic financing were loans, while most reference assets for equity synthetic swaps comprised G10 equities.

Chart 2: Borrowings as a multiple of net equity



The proportion of borrowing on an unsecured basis continued to be negligible with the amount outstanding in April 2010 even lower than that reported in October 2009.

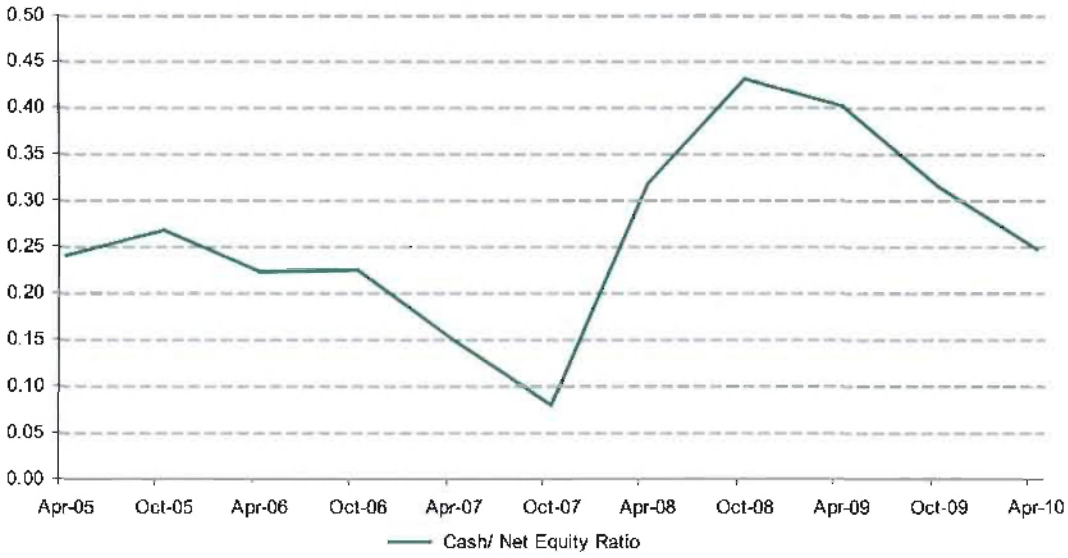
Borrowing by funds with a fixed income arbitrage strategy is the highest among the hedge fund sub-strategies and has risen markedly since the October 2009 survey. However, reported levels of unencumbered cash for fixed income arbitrage – funds are relatively high – on average 85% of net asset value at April 2010. This should provide some liquidity buffer for these funds in the event of a sudden or rapid deleveraging.

Data from the HFACS also indicates that the ratio of cash balances to net equity in prime brokerage has decreased between October 2009 and April 2010, following a peak in October 2008. Chart 3 is based on total aggregate net equity and total aggregate cash balances data over the life of the survey. The green line shows the ratio of cash balances to net equity in prime brokerage accounts (net equity = cash + LMV — SMV).[12] This ratio represents the proportion of cash held within prime brokerage relative to net equity. Outliers are followed up using the regulatory toolkit.

11 We note that the HFS does not capture data in respect of UCITS III funds which, if included, may significantly alter the synthetic financing figures.

12 LMV = long market value. SMV = short market value.

Chart 3: Prime brokerage cash balances to net equity ratio



Asset/liability mismatch

The HFS helps us understand the degree to which hedge funds may routinely engage in maturity transformation and examine the scale of any asset/liability mismatch. Participants were asked to assess, in relation to the qualifying funds they managed, the liquidity of the investments being made compared with the liquidity of liabilities to investors and finance providers.[13] A caveat to this assessment is that data on portfolio liquidity is to a degree a subjective assessment and will be based on recent expectations and experience of market liquidity.

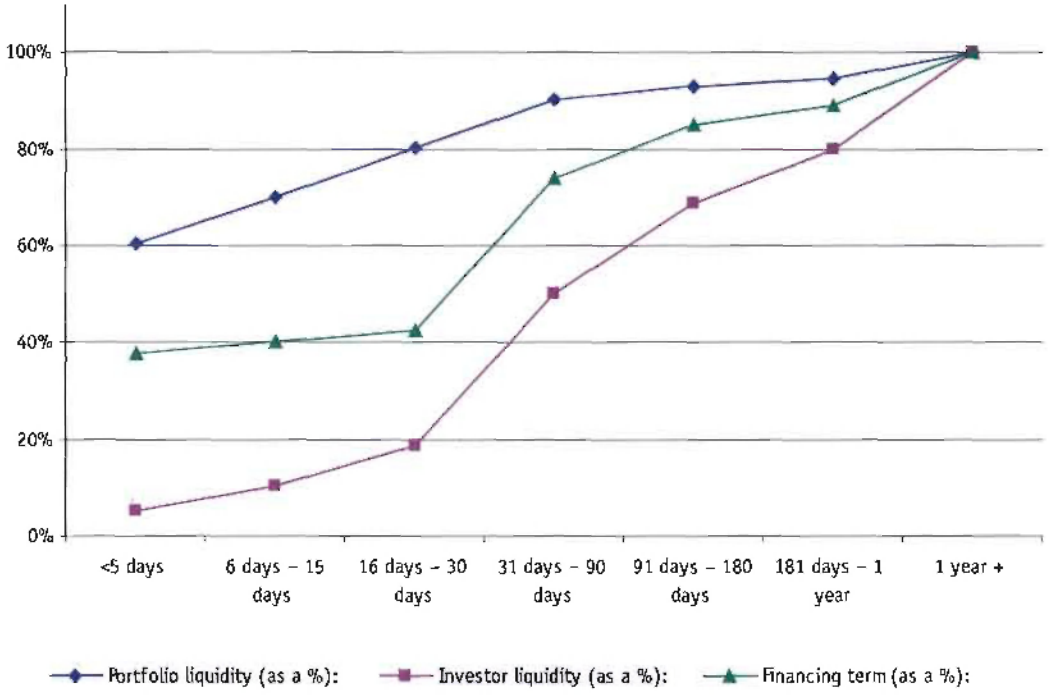
Chart 4 shows the reported liquidity of the qualifying fund's assets and liabilities. It appears that hedge fund assets can be liquidated more quickly than their liabilities fall due. Results also suggest hedge fund managers have improved portfolio liquidity and financing profiles vs. investor redemption terms since the October 2009 survey.[14] However, in a stressed market environment the portfolio liquidity reported in the HFS may not hold, and conditions may be attached to term financing agreements that would possibly be triggered in such a situation.

In terms of investor liquidity, we note that a higher proportion of assets surveyed in April 2010 (12%) were subject to special arrangements, when compared with October 2009 (8%). This should mean there is less pressure in a stressed market environment from investor liabilities coming due.

13 Participants were asked to calculate Portfolio liquidity based upon average 90-day trading volumes and on the basis of trading a maximum of 25% of this amount in a single day. For less liquid positions, participants were asked to use best estimates for liquidity, assuming no fire-sale discounting, based on market conditions over the six months prior to the survey date. Investor liquidity was calculated in a 'worst case' scenario, where gates were enforced, although funds not suspended.

14 HFACS data from April 2010 indicates that over 40% of financing provided through prime brokers is subject to margin lock agreements.

Chart 4: Liquidity of assets and liabilities – April 2010



Credit counterparty risk

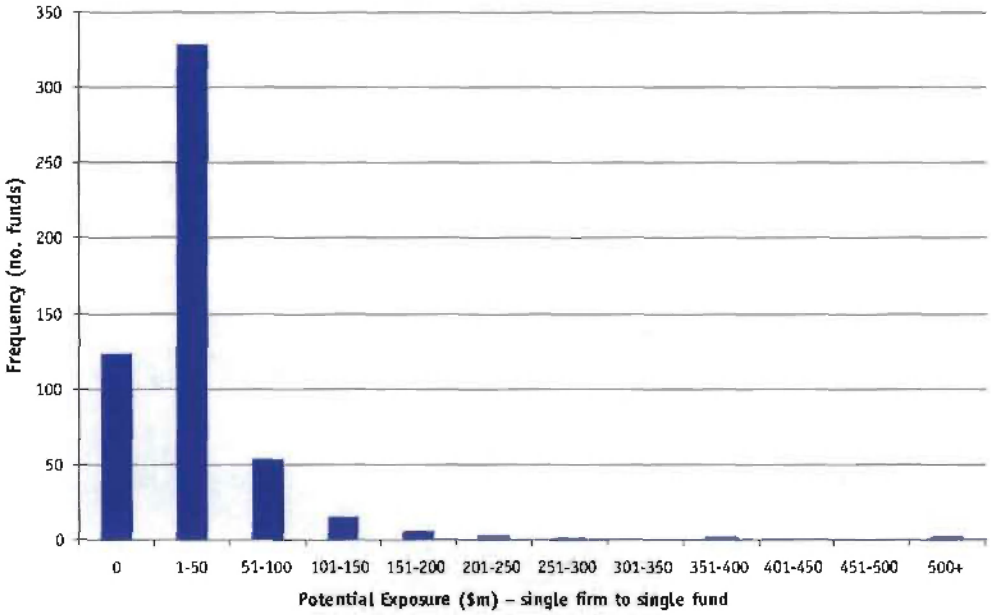
The two surveys allow us to examine the credit counterparty risks that exist between banks and hedge funds, helping us understand the possible transmission mechanisms for systemic risk through the 'credit channel'.

The HFACS identified individual funds that posed the greatest counterparty credit risk across banks, while the HFS gave us information about the funds' activities.

HFACS data suggested that the maximum potential credit exposure[15] of any one bank in our survey to any one hedge fund was approximately $600m. Chart 5 shows most potential credit exposures of single banks to single hedge funds amounted to less than $51m.

15 'Potential Exposure' is defined as an unsecured exposure plus a risk based element (typically VaR-based) standardised to a 99% confidence interval and 10-day holding period.

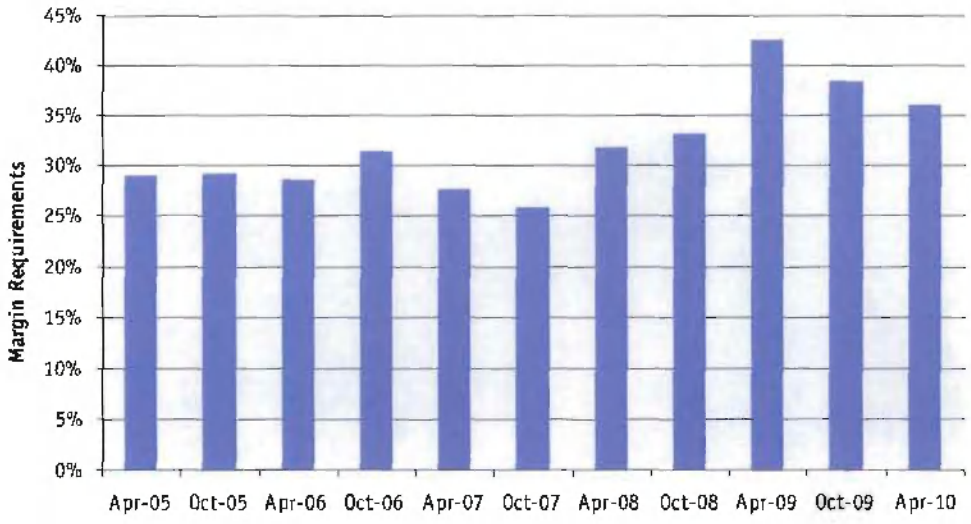
Chart 5: Distribution of funds – April 2010



Average margin requirement and excess collateral

Chart 6 shows the average margin requirement of surveyed prime brokers has increased[16] since October 2007 in a pro-cyclical way. To avoid this strong pro-cyclical effect firms and supervisors will need to make sure that margins do not fall to unsustainably low levels during benign market conditions in the future.

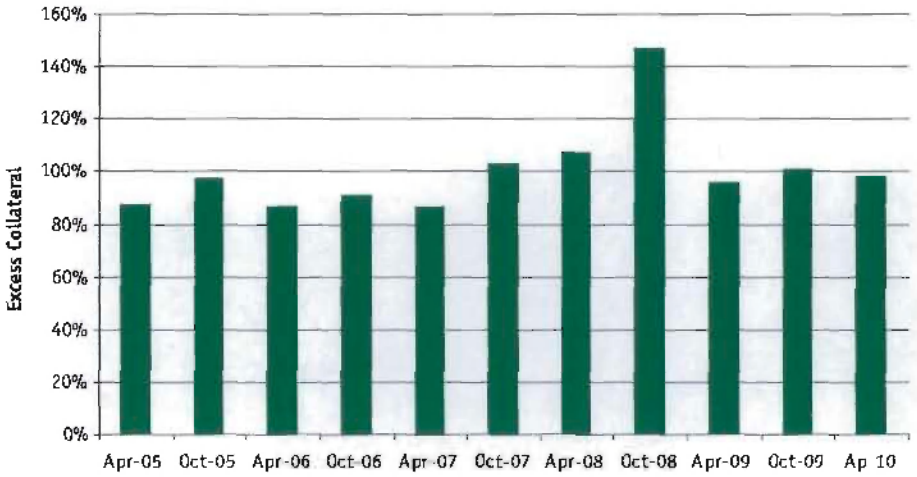
Chart 6: Average prime broker margin requirement



16 We note that there may be other drivers of increased margins beyond heightened risk aversion, such as a change in the composition or volatility of assets within prime brokerage accounts.

The HFACS also focuses on excess collateral, which is defined as the buffer remaining in prime brokerage accounts above the base margin requirement. Chart 7 shows that surveyed prime brokers have excess collateral in these accounts, although there are other factors that could influence these numbers, including developments in hedge funds' cash management, such as an increased use of custody accounts. Furthermore, if this excess collateral can be moved rapidly it may not provide the level of protection it suggests.

Chart 7: Average prime broker excess collateral[17]



Informing supervisory activities

The surveys give us information that helps when supervising FSA-authorised firms, and the data will be used to inform our regulatory meetings with firms. It will enable us to make peer comparisons and identify any outliers. It will be useful for testing the consistent application of strategies and used, in conjunction with future survey data, to develop a time series and highlight any trends.

Results of the April 2010 HFS suggest that the proportion of qualifying fund's assets under their High Water Mark (HWM) has decreased to about 10% from around half in October 2009. This implies that performance fees were charged on a greater proportion of AUM than before. However, further information on each investor's HWM would be needed to confirm this.

This information, coupled with data on fund performance (Chart 8) and changes in value of assets under management (Chart 9) can help supervisors identify emerging risks to hedge funds business models. It will also indicate where hedge fund managers may be incentivised to take greater risks; including getting their funds' assets back above the HWM and charging the associated performance fees.

Chart 8 shows that qualifying funds' had an overall positive performance during the six months to the end of April 2010. Since this survey was conducted, hedge

17 Excess Collateral: the net equity held in a prime brokerage account, in excess of the margin requirement.

funds' overall performance during May was negative, and this will be picked up from data in the next survey round. In terms of performance by fund strategy, most multi-strategy qualifying funds reported positive returns in the six month period to April 2010, generally returning between 6% –10% and credit long/short funds also reported positive performance, often in the 6–15% range. Conversely, the majority of equity long/short funds reported relatively flat or slightly negative performances.

Chart 8: Fund performance (NAV per share basis) – 6 month period to April 2010

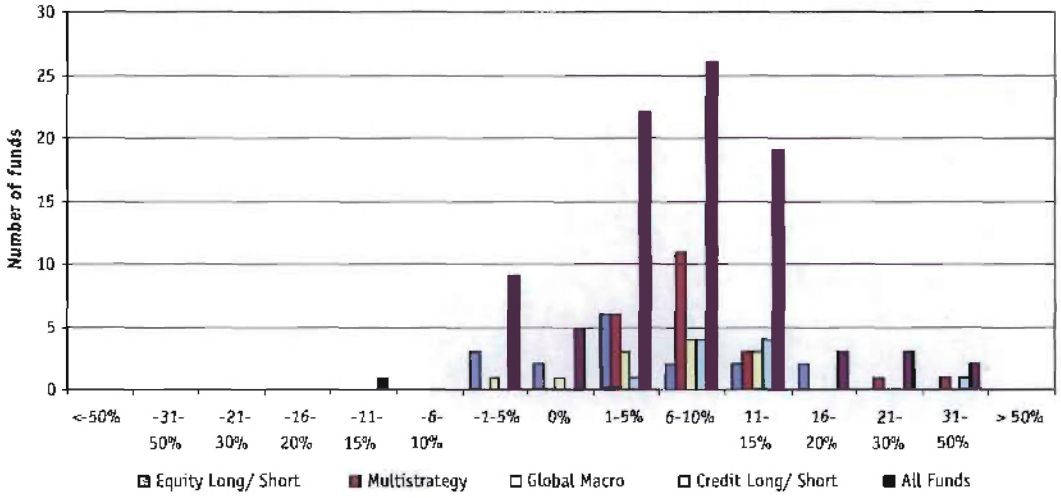
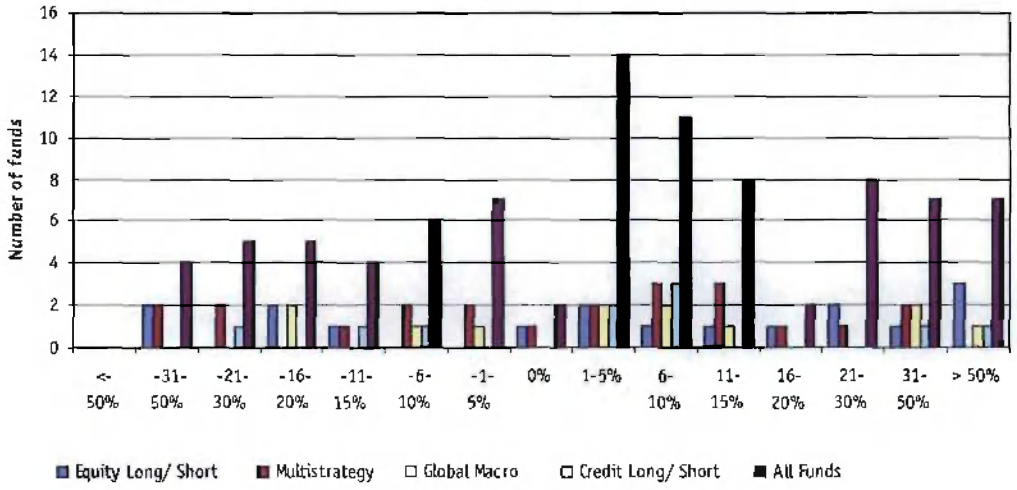


Chart 9 shows a change in Net Asset Value (NAV) and that some investors were still withdrawing money from qualifying funds during the six months to April 2010. However, relative to October 2009, more increases in fund NAV were reported, driven by performance and/or investor inflows.

Chart 9: Change in fund NAV – six months to April 2010



In Chart 10 we can see the total number of open positions reported by qualifying funds at April 2010. The survey results suggest more polarisation since October

2009 concerning the number of open positions that funds had (few vs. many) at April 2010.

The results from the April 2010 HFS also show that those qualifying funds with a large number of positions[18] usually report a relatively high proportion of their trades being traded on exchange and cleared centrally.

Chart 10: Total number of Open Positions

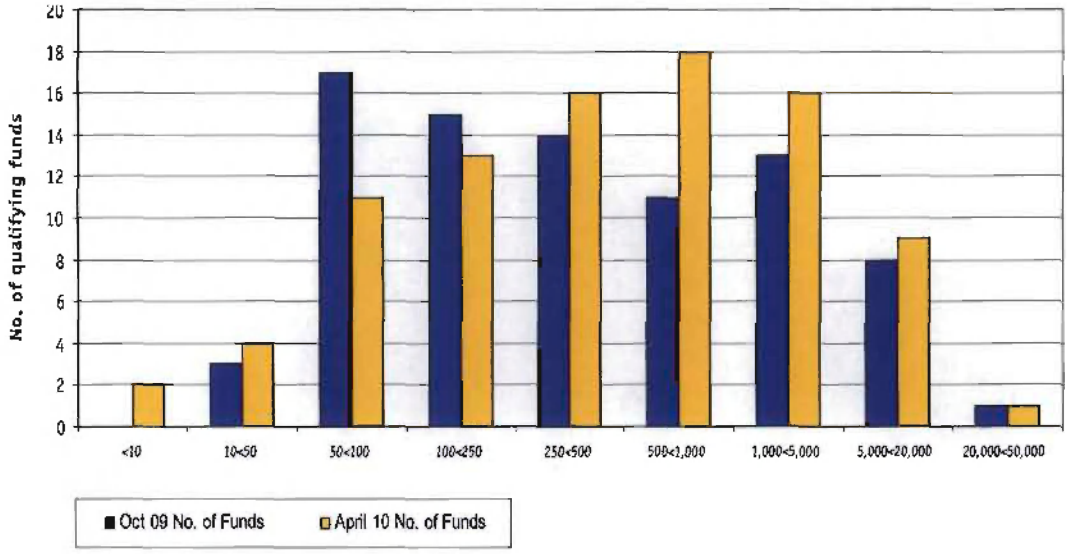
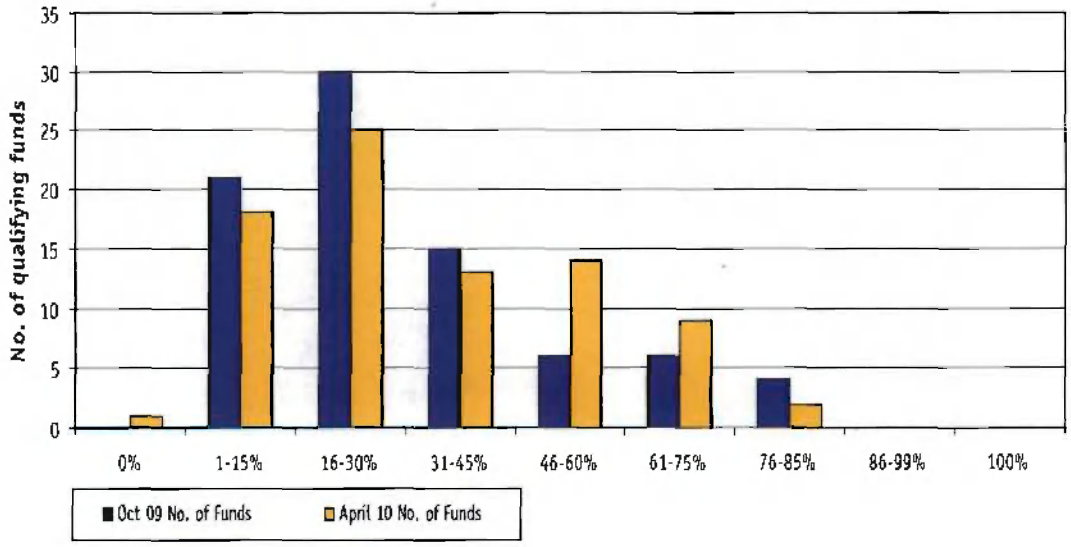


Chart 11 shows the top ten positions as a percentage of a fund's Gross Market Value (GMV) and indicates an increase in the position concentration of qualifying funds. This may suggest a higher degree of conviction by managers in April 2010 compared to October 2009.

Chart 11: Top 10 positions as a percentage of fund's GMV



18 Such as those with a global macro strategy (average > 3,000 positions) or which are multi-strategy (average >5,500 positions).

Concluding Remarks

To summarise, the key findings of the April 2010 surveys were:

- hedge funds are using more leverage on all measures we used,[19] reflecting an increased risk appetite since October 2009;
- hedge funds are borrowing more through repo and less through prime brokerage;
- positions held by surveyed hedge funds did not comprise a particularly large proportion of any total asset class, apart from convertible bonds;
- measures such as performance, open positions, concentration of positions, overall exposure of funds by LMV vs. SMV and prime brokerage cash balances to net equity ratio suggest hedge funds have a higher risk appetite at April 2010 compared to six months earlier; and
- hedge funds appear to have further diversified their credit exposures to bank counterparties.

These results aligned with our expectations of an increase in risk appetite and improved market conditions since the survey in October 2009.

However, it is important to note the relatively quick return to higher leverage levels and risk taking behaviour, as shown in the April 2010 survey data, particularly among fixed income funds and associated with a pickup in repo financing. That is consistent with some increase in the risk profiles of certain funds, however, we do not currently consider that there has been a material change in risks to financial stability since October 2009.

Our surveys highlight the importance of regularly collecting such data from hedge fund managers and their counterparties, as they inform our supervisory work and allow for a better understanding any systemic risks that might arise through the activities of hedge funds. In particular, building a time series of data should give us a valuable insight into the changing nature of these risks.

We intend to repeat these surveys in September 2010. We will also continue to work closely with IOSCO[20] and other national regulators bilaterally to ensure that we can more clearly identify global risks through a consistent and proportionate global approach to systemic risk data requirements for hedge funds.

19 The HFACS April 2010 survey shows that average long leverage has slightly increased to around the 1.78x mark (from 1.67x) and there has been a slight reduction in excess collateral to an average of 98% (from 101%).

20 International Organization of Securities Commissions (IOSCO).
Please see: www.iosco.org/news/pdf/IOSCONEWS179.pdf

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Financial Services Authority

Assessing possible sources of systemic risk from hedge funds

A report on the findings of the hedge fund as counterparty survey and hedge fund survey

February 2010

This paper reports on the findings of the hedge fund as counterparty survey and hedge fund survey.

This is not a consultation document, but should you have any comments please address them to:

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Assessing possible sources of systemic risk from hedge funds

Introduction

We have an important role to play in assessing and mitigating systemic risk as we carry out our supervisory and regulatory functions.[1] It has been suggested that hedge funds[2] could pose a source of systemic risk to the financial system and this paper describes some of the survey work we have carried out to address the issue.

We believe that, in the case of hedge funds, systemic risk could arise through two main channels:

1. **The credit channel**

   If hedge funds suffer losses on their investments, then once investors' capital has been eroded, losses would be borne by creditors. Where the failing fund is large, or there are a number of funds involved, then this could destabilise creditors, who might be systemically important in their own right.

2. **The market channel**

   In a number of asset classes, hedge funds may be significant investors and/or providers of liquidity. As a result, it is possible for their collective impact to be one of the drivers of unsustainable asset price upswings in certain markets. And, in particular, in moments of financial crisis, forced selling by hedge funds may cause downward price adjustments to overshoot.

1 For the purposes of this work, a systemic risk is a risk which, if it crystallised without any form of intervention by the authorities, would mean a high likelihood of major, rapid disruption to the effective operation of a core function of the financial system (and so leading to a wider economic impact).

2 We note that no formal definition of 'hedge fund' currently exists although it is generally accepted that such funds share a number of similar characteristics. For a discussion of hedge funds and systemic risk, please see: www.banque-france.fr/gb/publications/telechar/rsf/2007/etud5_0407.pdf.

We conduct two different surveys every six months that attempt to examine and identify these risks, as well as inform us in our supervisory work. This paper sets out some of the key findings from the surveys in October 2009.

The Hedge Funds as Counterparties Survey (HFACS) and the Hedge Fund Survey (HFS)

The HFACS has been running semi-annually for five years. It surveys some of the largest FSA-authorised banks with exposures to hedge funds about their associated credit counterparty risks. We ask about the size, channel and nature of the larger credit counterparty risks that individual banks have to hedge funds, both individually and all together. The HFACS mainly focuses on the credit channel for systemic risk.

The HFS was introduced in October 2009 to complement the HFACS. It asks 50 of the largest FSA-authorised investment managers[3] about the hedge fund assets they manage and about the larger individual hedge funds for which they undertake management activities. The October 2009 HFS covered FSA-authorised managers, 'touching' over $300bn of hedge fund assets under management[4] representing approximately 20% of the global industry. These assets were distributed between a number of strategy types with Multi-strategy, Global Macro, Managed Futures and Equity Long/Short accounting for 83% of the total. 85% of surveyed assets were domiciled in 'traditional' offshore centres.[5]

The main objectives of the HFS are to help us better understand:

- managers' and larger funds' use of leverage, whether through borrowing or derivatives;
- managers' and larger funds' 'footprints' in various asset classes, including concentration and liquidity issues;
- the scale of any larger funds' asset/liability mismatch; and
- the credit counterparty risks of larger funds.

This means that the HFS mainly focuses on the market channel for the potential systemic risks posed by hedge funds.

3 This includes FSA-authorised firms that might be acting as sub-advisor for larger US hedge fund managers. We surveyed 50 firms in October 2009, but may increase the number of participants in future surveys though we are mindful of maintaining a proportionate approach to assessing systemic risk.

4 We use the expression 'touched' deliberately because in some circumstances this can be the global assets under management (AUM) for managers where the FSA-authorised London office is part of a larger global group.

5 Such as the Cayman Islands, Bermuda, Bahamas and the British Virgin Islands (B.V.I).

October 2009 HFS and HFACS results

Both surveys gathered a very large amount of data. Here we provide analysis and conclusions on key subjects, such as leverage (assessing funds' overall footprint and cash borrowings), asset/liability mismatch, credit counterparty risk, fund performance and other supervisory issues.

Leverage

One important aim of the HFS was to understand the use of leverage by hedge funds. The concept of 'leverage' is difficult to define in a consistent way across hedge funds, particularly because of the range of trading strategies and products used.[6] In our view, the term 'leverage' is often incorrectly used for hedge funds as a synonym for risk. So, we did not ask hedge fund managers directly about their funds' 'leverage', instead we have gathered the basic building blocks that might make up any assessment of risk. This allowed us to reassemble the data we gathered in different ways across strategies, funds or groups of funds to assess leverage in a number of ways.

Footprint

One concept of 'leverage' we examined was a hedge fund's total gross 'footprint'[7] across asset classes compared with the equity they have raised from investors. A fund's gross footprint is the total value of all long and short securities positions held, regardless of how they are held (physically or through derivatives) and ignoring the fact that many of the risks may be offsetting. This gives us an idea of the scale of a fund's presence in the market.

Chart 1 shows, by fund strategy, the size of this overall footprint as a multiple of net equity, as at 31 October 2009.[8] As we would expect, the results demonstrate that with 'spread-based' strategies (such as those used by fixed-income arbitrage funds) there is a greater ratio of gross footprint to net equity than for fundamental strategies (like equity long-short).[9] We also note that the two strategies with the highest ratio of gross footprint to net equity together accounted for less than 10% of surveyed assets under management.

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6 There is a vast amount of literature on this topic and the European Central Bank cited this issue and put forward some measures of leverage in its occasional paper Hedge Funds and their implications for financial stability (available at: www.ecb.int/pub/pdf/scpops/ecbocp34.pdf)

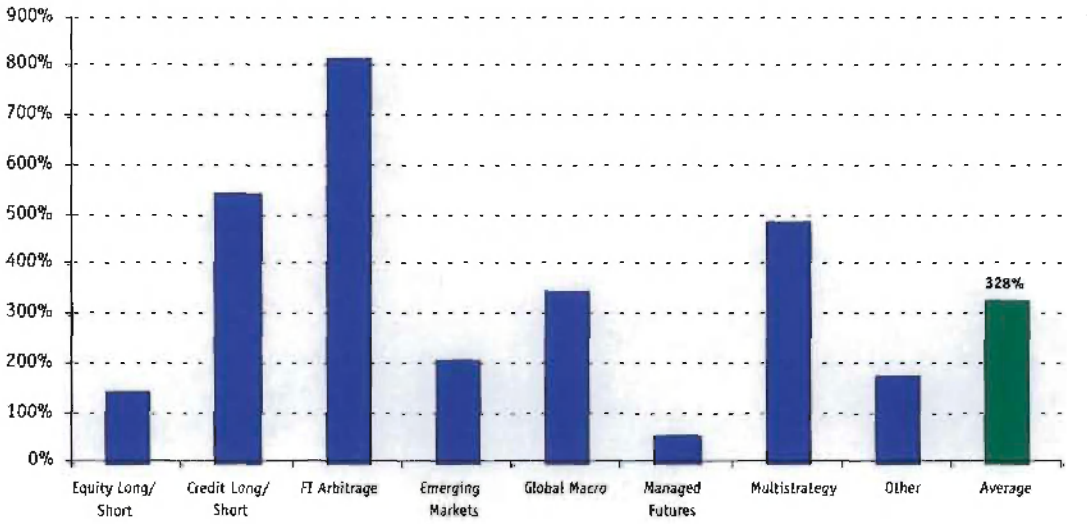
7 Footprint is defined here as the long and short positions held in equities, corporate bonds, convertible bonds, sovereign bonds, loans, CDS and structured credit (for securities whether they are held physically, synthetically or via derivatives – in which case delta adjusted notional value of options and total notional value of futures). It does not include FX, commodity or interest rate derivatives.

8 In defining leverage, it will be important to watch the consultation process of the Basel Committee on Banking Supervision in their efforts to agree a definition of leverage ratios for banks to see whether and how their methodology might in the future be applied to hedge funds: BCBS Strength and resilience of the banking sector www.bis.org/publ/bcbs164.pdf page 60-66.

9 A larger footprint does not necessarily equate to a larger risk as this metric takes no account of netting long and short positions or the volatility of the assets that make up the footprint. Indeed risk measures such as VAR suggest that funds with a larger footprint relative to their net equity often have a VAR close to the sample mean.

The use of such a measure would have helped to pick up anomalies such as Long-Term Capital Management (LTCM). Using data from an official 1999 report on LTCM[10] we can estimate that the gross footprint of the LTCM fund would have been many multiples greater than the numbers in Chart 1.

Chart 1: 'Footprint' as a multiple of net equity



The data on hedge funds' overall footprint also allowed us to assess their dominance in a number of asset classes (both in terms of size and contribution to daily volume).

On 31 October 2009, there were few asset classes where our samples' aggregate footprint was greater than 3% of any total market size. In European equities, for example, our sample had gross positions[11] equal to 0.9% of the value of European equity markets.[12] Similarly, in the data we captured on funds' derivative exposure, our sample's gross footprint in many derivative products was small compared with the Bank of International Settlements (BIS) estimates[13] of the market size. An exception was convertible bonds, where hedge funds seem to comprise a more significant proportion of ownership. Our sample of funds had positions in convertible bonds equating to approximately 10% of the size of the global convertible bond market.[14] This was not unexpected, as convertible bond arbitrage is a popular strategy and it is widely recognised that hedge funds are significant participants in the convertible bond market.

10 'Hedge Funds, Leverage, and the Lessons of Long-Term Capital Management', Report of the Presidents Working Group on Financial Markets, April 1999: www.treas.gov/press/releases/reports/hedgfund.pdf.

11 Longs and shorts plus exposure through derivatives (delta adjusted for options and gross notional for futures).

12 www.world-exchanges.org/statistics/ytd-monthly

13 See www.bis.org/statistics/index.htm

14 Based upon information on the size of the convertible bond market from the BoA/ ML All Convertibles Index (US, Europe, Japan, Asia ex-Japan & Other) as at 31 October 2009.

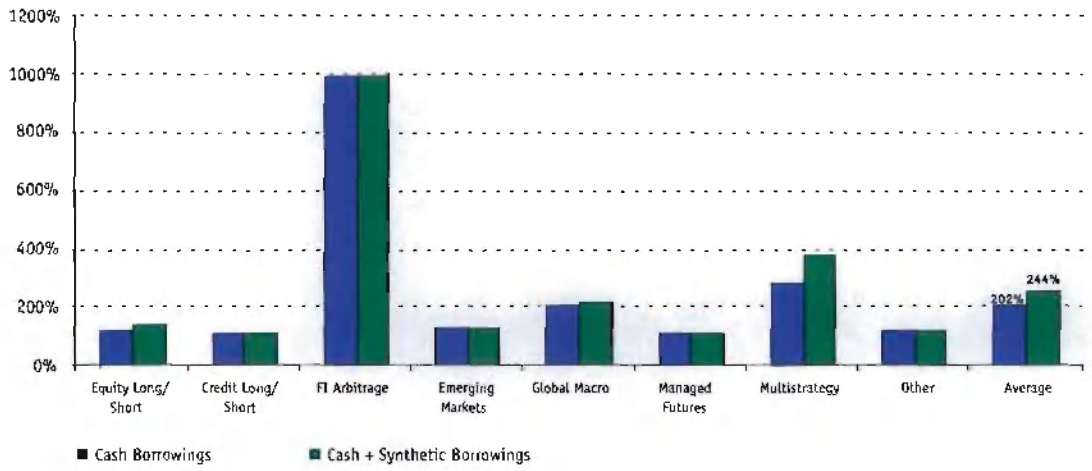
Borrowing

Most concepts of hedge fund leverage involve borrowed money or increasing exposure to an underlying asset via derivatives. The latter is particularly hard to assess given the complex nature of options. However, assessing the cash borrowing of hedge funds is more straightforward.

There are a number of channels through which hedge funds can borrow money. These include collateralised borrowing under prime brokerage agreements, sale and repurchase (repo) agreements, or synthetically using instruments like swaps and contracts for difference. Chart 2 shows hedge funds' cash borrowing as a multiple of net equity, firstly through prime brokerage and repo, and secondly with synthetic lending also included.

It can be seen that average cash borrowing for surveyed hedge funds is 202% of net equity.[15] There were few surprises in these results, with fixed income arbitrage funds borrowing the most (through repo) and equity long short funds among the least (137% when synthetic borrowing is also included). We will be able to monitor with future surveys how these borrowing metrics change over time.

Chart 2: Borrowings as a multiple of net equity



Asset/liability mismatch

Another important focus of the HFS is to examine the scale of any asset/liability mismatch among hedge funds. *The Turner Review* says: 'one of the striking developments of the last several decades has been that a growing proportion of aggregate maturity transformation has been occurring not on the banking books of regulated banks with central bank access, but in other forms of *shadow banking*'.[16] The HFS helps us to understand the degree to

15 As per market convention this is measured as: (cash borrowed + net equity)/ net equity. These numbers are consistent with previous FSA assessments estimates of 'leverage' for example 'Hedge fund leverage is typically well below that of banks – about two to three on average' from Turner review, p74 www.fsa.gov.uk/pubs/other/turner_review.pdf

16 www.fsa.gov.uk/pubs/other/turner_review.pdf page 23. See also Paul Tucker's speech on Shadow Banking for background www.bankofengland.co.uk/publications/speeches/2010/speech420.pdf.

which hedge funds may routinely engage in maturity transformation. Participants were asked to assess, in relation to the larger funds they managed, the liquidity of the investments being made compared with the liquidity of liabilities to investors and finance providers.[17] We realise that this data is often subjective – particularly regarding the liquidity of hedge fund's assets – and also not representative of likely liquidity in a distressed environment.

Chart 3: Liquidity of assets and liabilities

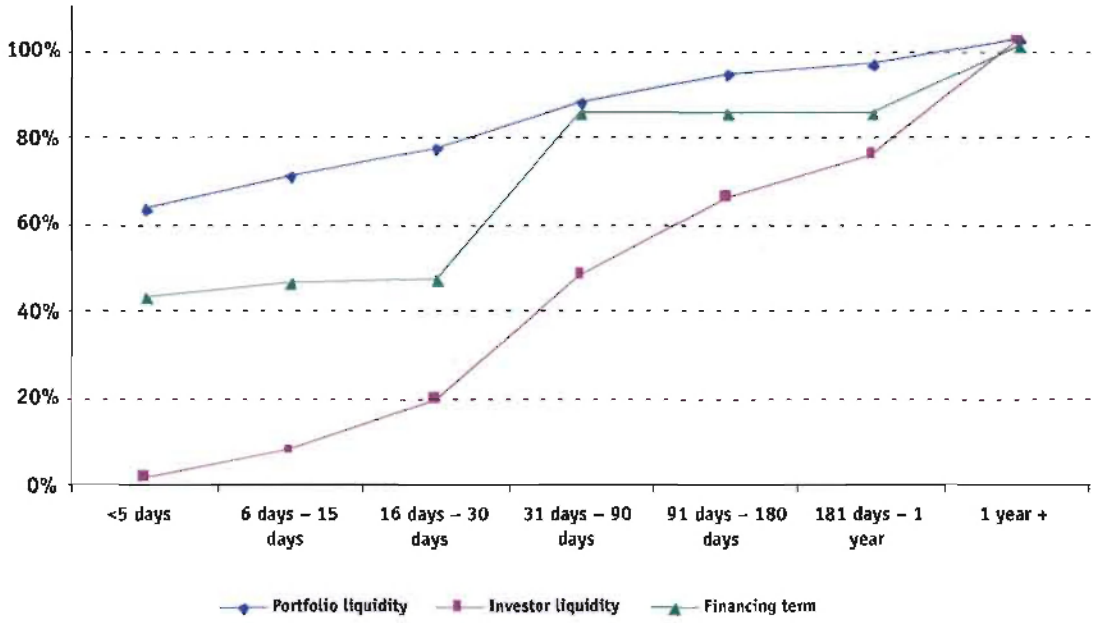


Chart 3 suggests that as at 31 October 2009, the assets of the surveyed hedge funds could be liquidated in a shorter timeframe than the period after which their liabilities (to investors and finance providers) would become due. However it is important to note that the assets held by hedge funds can be contractually long in maturity[18] and hedge funds are therefore performing a maturity transformation function. The risks involved in this transformation, for both individual hedge funds and the whole financial system, are only mitigated by market liquidity (the ability to sell contractually long assets in liquid markets) to the extent that markets can be assumed to stay liquid in stressed conditions.

On the subject of investor liquidity, data from the HFS showed that 8% of surveyed funds' assets under management were subject to special arrangements regarding redemptions and/or fees (such as so-called 'side pockets') as at 31 October 2009. Again, this is something we will monitor for significant changes over time.

17 Participants were asked to calculate Portfolio liquidity based upon average 90-day trading volumes and on the basis of trading a maximum of 25% of this amount in a single day. For less liquid positions, participants were asked to use best estimates for liquidity based on market conditions over the last six months and assuming no fire-sale discounting. Investor liquidity was calculated in a 'worst case'scenario, where gates were enforced, although funds not suspended.

18 Such as a corporate bond which matures in five year's time.

Credit counterparty risk

An important function of the two surveys is that they allowed us to examine the credit counterparty risks that exist between banks and hedge funds – helping us understand the possible transmission mechanisms for systemic risk through the 'credit channel'.

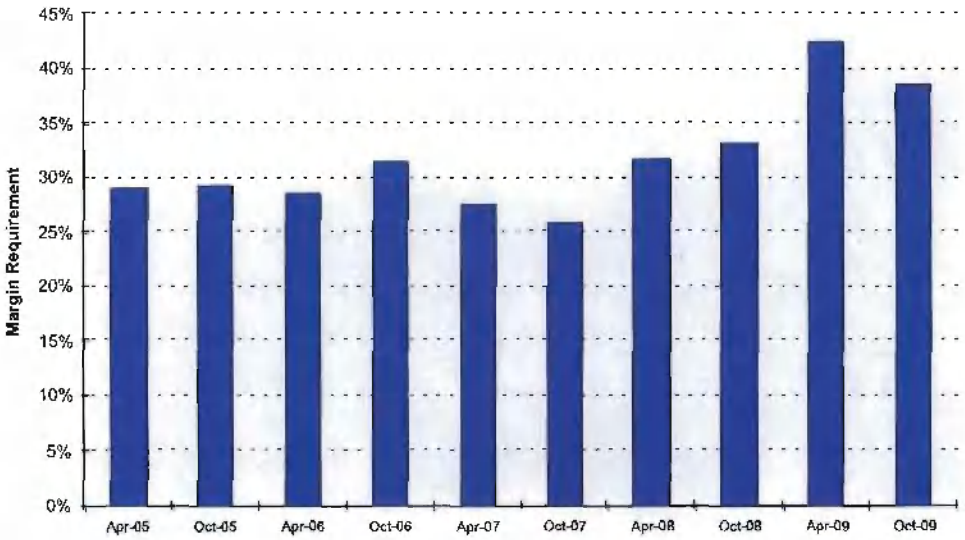
The HFACS identified those individual funds that posed the greatest counterparty credit risk across banks, and the HFS gave us information about those funds' activities.

Data from the HFACS suggested that the maximum potential credit exposure[19] any one bank in our survey had to any one hedge fund was less than $500m. The largest hedge fund in terms of aggregate credit exposure accounted for just over $1bn of credit exposure across a number of banks. While these are large numbers, they are manageable in the context of the overall credit risks and capital requirements of the surveyed banks.

Average margin requirement and excess collateral

Chart 4 shows the average margin requirement[20] of surveyed prime brokers has increased reasonably significantly[21] since October 2007 and in a pro-cyclical fashion. Firms and supervisors will need to make sure that margins do not fall to unsustainably low levels during benign market conditions in the future to avoid this strong pro-cyclical effect.

Chart 4: Average margin requirement



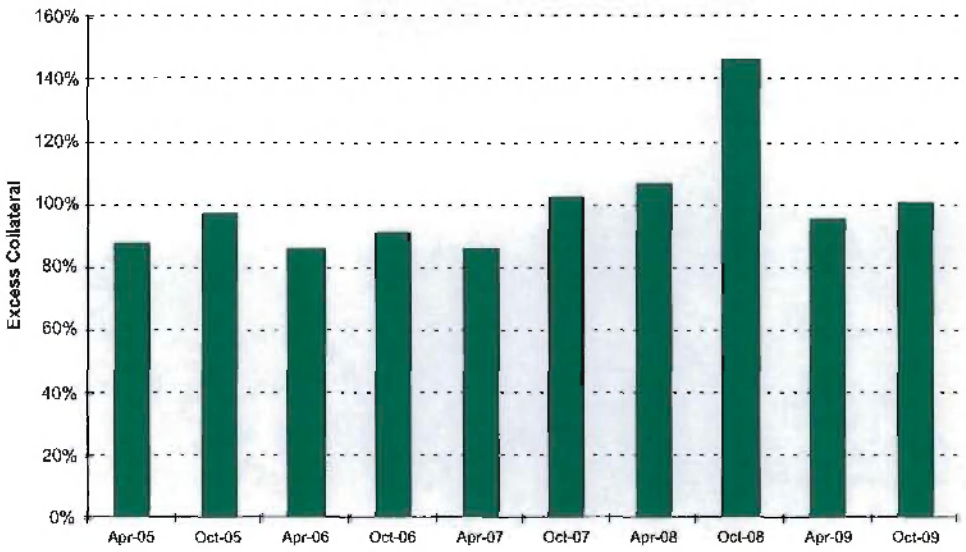
19 "Potential Exposure" is defined as potential exposure which is equal to an unsecured exposure plus a risk based element (typically VaR-based) standardised to a 99% confidence interval and 10-day holding period.

20 Margin Requirement is expressed as a percentage of aggregate Long Market Value.

21 We note that there may be other drivers of increased margins beyond heightened risk aversion, such as a change in the composition or volatility of assets within prime brokerage accounts.

Excess collateral is also a focus of the HFACS; defined as the buffer remaining in prime brokerage accounts above the base margin requirement. Chart 5 shows that prime brokers have excess collateral in these accounts, although we note there are other factors that could influence these numbers, such as the increasing use of custody accounts and other developments in hedge funds' cash management. Furthermore, this excess collateral may not provide the protection it suggests if it can be moved rapidly.

Chart 5: Average excess collateral[22]



Informing supervisory activities

The survey work also gives us information that is helpful in our supervision of FSA-authorised firms. For example, it informs us that as at 31 October 2009 approximately half of hedge funds' main share classes by assets were below their high water mark.[23]

We can also use information on hedge fund performance and change in net asset value (NAV) to identify those funds that had lower or higher than average performance and those that had significant changes in the level of their assets under management (see Charts 6 and 7). This can help our supervisors identify emerging risks to hedge fund managers' business models, a key focus of our supervisory process. For example, we can monitor 'leverage' trends and asset outflows for managers with poor performing funds that are trading below their high water mark and where there may be incentives to take greater risk.

22 Excess Collateral: the net equity held in a prime brokerage account, in excess of the margin requirement..

23 "Where a hedge fund applies a high water mark (HWM) to an investor's money, this means that the manager will only receive performance fees, on that particular pool of invested money, when its value is greater than its previous greatest value. Should the investment drop in value then (typically) the manager must bring it back above the previous greatest value before they can receive performance fees again." (Source: Eurekahedge) Note that a fund's main share class being below its HWM does not necessarily mean that performance fees are not being charged, because different investors may have different HWMs.

Chart 6: Fund performance (per share basis) in six months to 31 October 2009

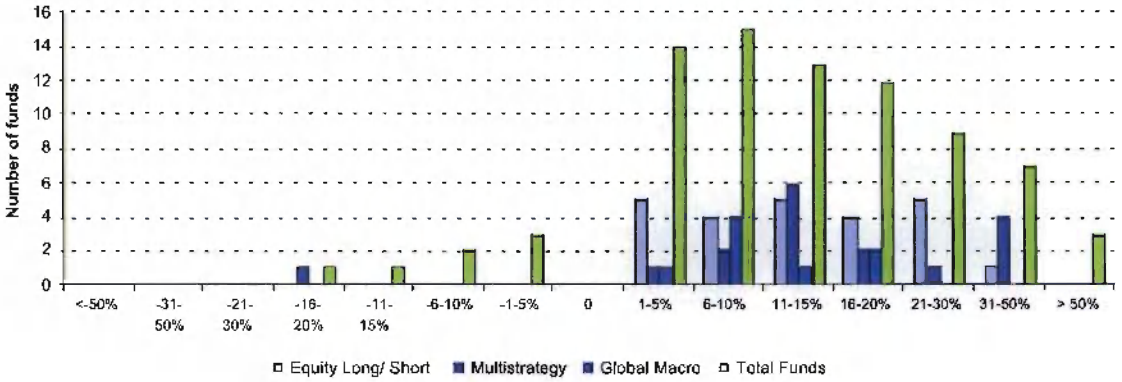
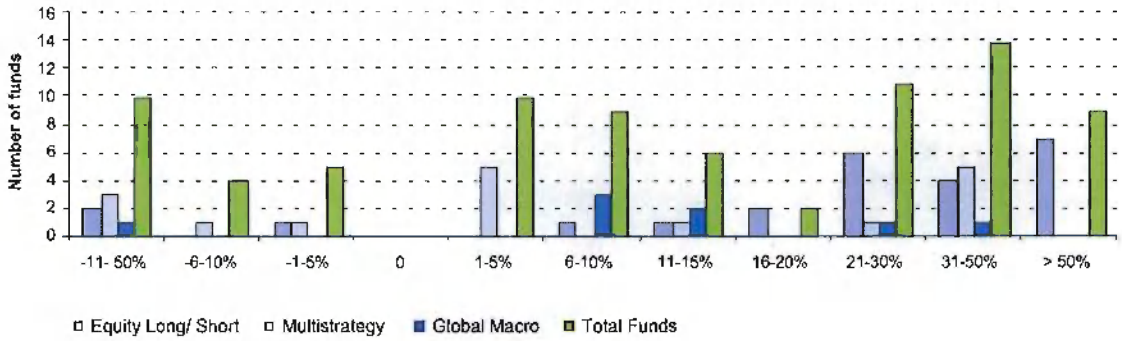
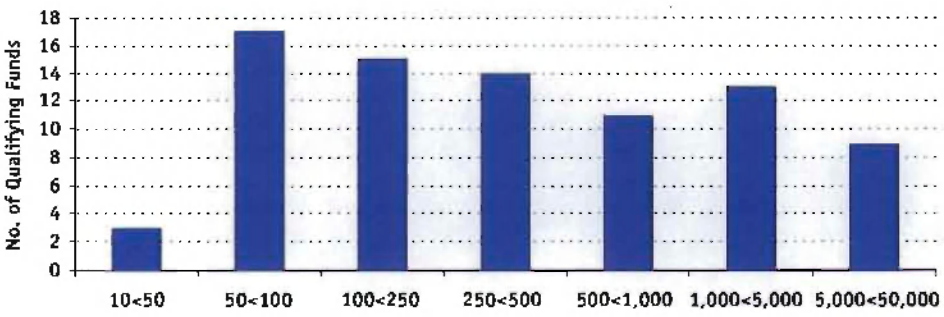


Chart 7: Change in Fund NAV in six months to 31 October 2009



Results from the HFS also showed that the number of open positions that a fund can have varies enormously (see Chart 8). This would have exposed LTCM as an outlier, as it is understood that, at the time the fund became distressed, it had approximately 60,000 open positions. Where funds have high numbers of positions this could suggest that operational risk is a greater concern and may require more attention from supervisors for some firms.

Chart 8: Fund total number of open positions



We also gather information about derivative clearing mechanisms and this shows that approximately 70% of surveyed funds cleared at least a proportion of their derivatives trades centrally, with 16% of funds using a central clearing counterparty exclusively. Most of the surveyed funds with a large number of open positions are clearing a large proportion of these trades centrally.

Conclusion

Surveying managers of hedge funds and some of their key bank counterparts helps to inform our supervisory work and improve our understanding of any systemic risks that might arise through the activities of hedge funds.

The results from this survey work were mostly in line with our expectations. The HFACS data suggests that on 31 October 2009 major hedge funds did not pose a potentially destabilising credit counterparty risk across the surveyed banks. HFS data shows a relatively low level of 'leverage' under our various measures and suggests a contained level of risk from hedge funds at that time. While our analysis revealed no clear evidence to suggest that, from the banks and hedge fund managers surveyed, any individual fund posed a significant systemic risk to the financial system at the time, this position could change and future surveys will be an important tool in identifying emerging risks.

It is also notable that the Alternative Investment Fund Managers Directive, which is currently under negotiation in Europe, may at some point in the future require national supervisory authorities such as the FSA to collect certain data from alternative investment fund management sectors, including hedge funds. We hope that our work in this area can contribute to the ongoing debate about the Directive.

Our intention is to repeat these surveys at six monthly intervals and build a time series of data that will help us monitor trends in hedge funds as they relate to systemic risk. Discussions are taking place within the Financial Stability Board and IOSCO to ensure consistency in the timing and content of systemic risk data collection for hedge funds and we hope our work will help inform that process. A consistent and proportionate global approach will help deliver G20 commitments of better coordination between regulators and, through improved data sharing, the clearer identification of global risks.

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MANAGED FUNDS ASSOCIATION
The Voice of the Global Alternative Investment Industry
WASHINGTON, DC | NEW YORK

November 5, 2010

Via Electronic Filing:

The Honorable Timothy F. Geithner
Chairman
Financial Stability Oversight Council
1500 Pennsylvania, Ave., NW
Washington, DC 20220

Re: MFA Comments on Systemically Important Institutions

Dear Secretary Geithner:

Managed Funds Association ("MFA")[1] appreciates the opportunity to comment on the Financial Stability Oversight Council's (the "Council") advance notice of proposed rulemaking (the "Advance Notice") on the criteria that the Council should consider when determining whether to designate a nonbank financial company as systemically significant pursuant to section 113 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act"). We strongly support the goals of the Dodd-Frank Act in establishing the Council to address potential systemic risks before they arise, and mandating enhanced regulation of systemically important financial companies. MFA also strongly supports efforts by regulators to gather data from different types of market participants, including investment advisers and the funds they manage, which we believe is a critical component of effective systemic risk monitoring and regulation.

Overview

MFA believes that the Council should analyze financial institutions based on quantitative data to determine whether nonbank financial companies should be deemed systemically important in light of the criteria set out in section 113 of the Dodd-Frank Act and, therefore, subject to supervision by the Board of Governors of the Federal Reserve System (the "Fed"). It is also critical that the process by which the Council determines whether nonbank financial companies should be deemed systemically important be transparent and based on objective criteria. Uncertainty with regard to how firms could be subject to designation, or designating an overly broad set of firms, could

[1] MFA is the voice of the global alternative investment industry. Its members are professionals in hedge funds, funds of funds and managed futures funds, as well as industry service providers. Established in 1991, MFA is the primary source of information for policy makers and the media and the leading advocate for sound business practices and industry growth. MFA members include the vast majority of the largest hedge fund groups in the world who manage a substantial portion of the approximately $1.5 trillion invested in absolute return strategies. MFA is headquartered in Washington, D.C., with an office in New York.

have significant unintended consequences for markets and for the broader economy. Congress recognized the importance of avoiding an overly broad designation of systemically relevant firms. The statutory text and legislative history of the Dodd-Frank Act clearly indicate Congress's intention that the Council designate as systemically important and regulate only those financial institutions that were previously considered "too big to fail," *i.e.*, those companies that, if they failed, would threaten U.S. financial stability.[2]

In considering the potential systemic implications of hedge funds, we believe that it is important for the Council to have a clear picture of the size, concentration, leverage and structure of the hedge fund industry in the context of other financial market participants. It is also important for the Council to consider changes made over the last decade to improve counterparty risk management by banks and broker-dealers, and regulatory requirements that the Dodd-Frank Act mandates.

As discussed in more detail below, the hedge fund industry, as well as individual firms and the funds they manage, are relatively small, both in comparison to the broader financial industry and to the markets in which they operate. Hedge funds also generally do not use a significant amount of leverage and typically post collateral in connection with their borrowing, thereby reducing the risk to their counterparties. Further, the enhanced regulation of hedge fund managers and the markets in which they participate following the passage of the Dodd-Frank Act ensures that regulators will have a timely and complete picture of hedge funds and their activities. We encourage the Council to consider these factors, which we believe are relevant to the criteria set out in section 113 of the Dodd-Frank Act with respect to the hedge fund industry.

Hedge Fund Industry Discussion

Size and Concentration.

Although the hedge fund industry is important to capital markets and the financial system, it is relatively small in size when considered in the context of the wider financial landscape.[3] For example, the hedge fund industry is significantly smaller than both the global mutual fund industry and the U.S. banking industry. The global mutual fund

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[2] In a July 2007 report, the staff of the Federal Reserve Bank of New York offered a similar view of systemic risk, stating that a central element of systemic risk is "when financial shocks have the potential to lead to substantial, adverse effects on the *real* economy." See, Kambhu, John, Schuermann, Til, and Stiroh, Kevin J., *Federal Reserve Bank of New York Staff Reports: Hedge Funds, Financial Intermediation, and Systemic Risk*, July 2007, page 10. Available at: http://www.ny.frb.org/research/staff_reports/sr291.pdf.

[3] Our comments are intended only to provide perspective regarding the size and concentration of the hedge fund industry; we are not commenting on the systemic importance of other financial market participants or industries.

industry managed $21.44 trillion in assets, as of June 30, 2010.[4] The top 50 U.S. bank holding companies alone had $14.4 trillion in assets, as of June 30, 2010.[5] By comparison, the global hedge fund industry had an estimated $1.7 trillion in assets under management, as of July 1, 2010.[6]

Moreover, the hedge fund industry is not concentrated, as illustrated by the fact that the largest hedge fund adviser manages assets equal to only approximately 3%[7] of the entire hedge fund industry. The lack of concentration in the industry reduces the risk of that the failure of any one manager or fund would create systemic risk. It would be unlikely for any one hedge fund to be so interconnected with other financial companies that such fund's failure would result in an overall vulnerability of any such major financial institution.

Leverage

Similarly, though hedge funds are often mischaracterized as being highly leveraged financial institutions, the industry is, and has been, significantly less leveraged than other financial market participants. According to a recent Columbia University study, the leverage ratio of investment banks during the period from December 2004 to October 2009 was 14.2, with a peak of 40.7 for investment banks in 2009, and the leverage ratio of the entire financial sector during that period was 9.4.[8] By comparison, this study found that the leverage ratio for the hedge fund industry was 1.5 as of October 2009, with an average ratio of 2.1 from December 2004 to October 2009, and a high of 2.6. The findings of this study with respect to the leverage ratio of the hedge fund industry are consistent with other studies, which report leverage ratios below 3.0 for an extended period of time.[9]

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4 Source: Investment Company Institute, available at: http://www.ici.org/research/stats/worldwide/ww_06_10.

5 Source: Federal Financial Institutions Examination Council, available at: http://www.ffiec.gov/nicpubweb/nicweb/Top50Form.aspx.

6 Source: http://www.marketwire.com/press-release/Combined-Assets-Billion-Dollar-Hedge-Funds-Nearly-Flat-First-Half-2010-AR-Magazine-Survey-1327660.htm, citing *AR* Magazine, available at: http://www.absolutereturn-alpha.com/. The article also cites *AR* Magazine as reporting the assets under management for the industry at $1.9 trillion, as of September 30, 2010.

7 Source: http://www.finalternatives.com/node/14018, citing *AR* Magazine's Billion Dollar Club, available at: http://www.absolutereturn-alpha.com/.

8 Hedge Fund Leverage, available at: http://www2.gsb.columbia.edu/faculty/aang/papers/HFleverage.pdf.

9 See, BofA Merrill Lynch study, which finds the leverage ratio for the industry was 1.16 as of July, 2010 http://www.reuters.com/article/idUSTRE67G28220100817; see also, FSA study, Assessing possible sources of systemic risk from hedge funds, July 2010 (finding a leverage ratio of 272% [2.72], as of April, 2010), available at: http://www.fsa.gov.uk/pubs/other/hedge_funds.pdf, and The Turner Review, A regulatory response to the global banking crisis, March 2009 (finding that the leverage ratio of the hedge

Such leverage is generally obtained from financial counterparties that conduct substantial due diligence and engage in ongoing risk monitoring. Hedge fund borrowings are done almost exclusively on a secured basis (*i.e.,* secured by each fund's overall assets or specifically posted collateral), which limits the amount of leverage that any fund may obtain.[10] This collateral posting by hedge funds reduces the credit exposure of counterparty financial institutions and makes hedge funds substantially less likely to contribute to systemic risk by causing the failure of a systemically important institution, such as a major bank. Given the limited leverage and the collateral posted by hedge funds, any losses that hedge funds incur are almost exclusively borne by their investors, not the general financial system.

Structure of the Industry.

In analyzing systemic risk in the context of the asset management industry, it is important to consider the distinction between the investment adviser and the investment funds it manages. The advisers (also frequently referred to as the managers) themselves do not have substantial financial assets, but rather manage the assets of the funds in exchange for a fee. It is the funds which hold the financial assets, which transact with trading counterparties on a collateralized basis, and to which investors commit capital. As such, the risks and rewards of the investment portfolios are borne by a diverse group of underlying sophisticated investors, institutions or ultra-high net worth individuals, who typically invest in hedge funds as part of a diversified portfolio. (Hedge funds neither transact with retail investors nor do they take in investments (or deposits) from retail investors.[11]) As recognized in the Dodd-Frank Act, the extent to which a financial institution manages assets owned by others rather than managing assets owned by the institution itself is a key consideration in whether a financial institution should be designated as systemically important.

A second key structural aspect of the hedge fund industry is that hedge fund investors typically are subject to a variety of liquidity restrictions, including: limited periods of redemption (often monthly, quarterly, annual, or longer); significant advance

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fund industry since 2000 has been two- or three-to one), available at: http://www.fsa.gov.uk/pubs/other/turner_review.pdf.

The above studies use different formulas for calculating leverage ratios, which explains the slight differences in leverage ratios determined by each study. Our purpose in this letter is not to endorse any particular formula, but to demonstrate that the leverage ratios for the hedge fund industry are significantly less than the ratios for many other types of financial institutions.

[10] Various rules, for example, Regulations T, U and X with respect to securities, and regulations mandated under Title VII of the Dodd-Frank Act with respect to derivatives (discussed in more detail below), impose margin or collateral requirements, thereby restricting the amount of credit that a financial institution can extend to counterparties, including hedge funds.

[11] MFA consistently has urged Congress and the SEC to raise investment thresholds to address the effects of inflation and to prevent hedge funds from becoming a retail product.

notice requirements (often 30 to 90 days) prior to withdrawals; the ability of managers to impose gates or suspend redemptions (at the investor and/or the fund level), when necessary; and side pocket vehicles for highly illiquid assets. These liquidity provisions help reduce the likelihood that redemptions of investor capital will be disruptive to a fund or to markets over short periods of time, because they allow managers to better match the assets and liabilities of the funds they manage and to manage orderly outflows of investor funds.

The principals of hedge fund advisers also typically invest significant amounts of their own capital in the funds they advise, which promotes an alignment of interests between management and investors. The structure of performance fees earned by hedge fund advisers, which typically includes high-water marks, also serves to align the interests of the adviser and the investors by encouraging the adviser to manage the funds with the objectives of generating attractive risk-adjusted returns and discouraging excessive short-term risk taking.

Another key structural aspect of the hedge fund industry is the legal separation of different funds managed by the same adviser. The legally distinct funds, even when managed by the same adviser, often have different investors and often engage in entirely distinct trading activities in different assets and markets. Any losses at one fund are borne almost exclusively by the investors in that fund and do not subject other funds managed by the same adviser to losses. Further, unlike related entities in a holding company or other similar structures, the different funds managed by a common adviser do not typically have the kind of intercompany loans or transactions that can create interconnectedness and tie the risks associated with one company to other companies in the same ownership structure. Unlike bank holding companies and other nonbank financial institutions such as insurance companies, hedge funds tend to engage in one distinct business – namely, making investments for investors in the fund, so the risk of contagion is less likely.

Changes in the Industry since 1998.

The failure of Long Term Capital Management ("LTCM") in 1998 is often cited as an example of a hedge fund that created a systemic risk to the financial system. First, it is important to note that the failure of LTCM did not result in any use of taxpayer funds. The firm's financial counterparties worked out a private sector resolution of the firm's liabilities under the careful eye of the financial regulators, but at no point was assistance offered or used. Lessons were learned, however, by both market participants and regulators, which have led to sounder practices. The resulting changes may be one of the reasons that hedge funds were not the focus of the recent global financial crisis.

Excessive position size and leverage and inadequate counterparty risk management by LTCM and its counterparties are often cited as the primary risks associated with LTCM. As a reminder, LTCM, as of January 1, 1998, was leveraged

more than 25-to-1,[12] which is approximately 10 times the amount of the highest leverage ratio for the hedge fund industry (2.6-to-1) during the period from December 2004 to October 2009.[13] Perhaps most importantly, LTCM was able to achieve such leverage because its counterparties did not require LTCM to post initial margin on its OTC derivatives trades.

Since the failure of LTCM, however, there have been significant changes in the market with respect to counterparty risk management, particularly with respect to limiting the amount of leverage used by hedge funds through the use of collateral to secure the financing provided to hedge funds. Also, as a result of improvements to counterparty risk management best practices, financial institutions today conduct substantial due diligence on and have a much greater degree of transparency with respect to their hedge fund clients' overall portfolios. Many of these changes have been brought about by the work done by the Counterparty Risk Management Policy Group, which led to strengthening counterparty risk management practices.[14] The improvements in risk management and limitations on leverage are well recognized, as noted by Fed Chairman Bernanke, who said:

> Since the LTCM crisis, ongoing improvements in counterparty risk management and the resultant strengthening of market discipline appear to have limited hedge fund leverage and improved the ability of banks and broker-dealers to monitor risk, despite the rapidly increasing size, diversity, and complexity of the hedge fund industry. Many hedge funds have been liquidated, and investors have suffered losses, but creditors and counterparties have, for the most part, not taken losses.[15]

New Regulatory Requirements for the Industry.

In addition to risk management and market improvements made over the past decade, the Dodd-Frank Act imposes a variety of regulations to ensure appropriate oversight on hedge funds and their advisers. Following passage of the Dodd-Frank Act, all hedge fund advisers with at least $150 million in assets under management will be required to register with the Securities Exchange Commission (the "SEC").[16] These registered advisers will be required to maintain books and records, make reports to the

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12 Hedge Funds, Leverage and the Lessons of Long-Term Capital Management, Report of The President's Working Group on Financial Markets, April 1999 available at: http://www.ustreas.gov/press/releases/reports/hedgfund.pdf.

13 See the discussion in the section above regarding the leverage of the industry.

14 Copies of the reports are available at: http://www.crmpolicygroup.org/index.html.

15 Speech by Chairman Ben S. Bernanke, *Hedge Funds and Systemic Risk*, May 16, 2006. Available at: http://www.federalreserve.gov/newsevents/speech/bernanke20060516a.htm.

16 See sections 403 and 408 of the Dodd-Frank Act.

SEC and be subject to examination by the agency. Congress specifically amended the Investment Advisers Act of 1940 to provide that the recordkeeping and reporting requirements for hedge fund advisers apply to the funds as well as the adviser.[17] As a consequence, the SEC and the Council will have full access to information about hedge fund advisers and the funds they manage. It is also important to note that one of the criteria the Council is to consider under section 113 of the Dodd-Frank Act is whether a financial institution is already regulated by another financial regulatory agency.

The Dodd-Frank Act also creates a comprehensive regulatory regime for over-the-counter derivatives where none existed previously. These new regulations: (1) require certain standardized transactions to be cleared and exchange traded; [18] (2) require "Swap Dealers" and "Major Swap Participants" to register with the SEC/CFTC, and subjects them to significant requirements; (3) impose initial and variation margin requirement on both cleared and uncleared transactions; and (4) provide for significant incremental transparency, including transaction reporting, to market participants and regulators. These rules will significantly reduce the potential for systemic risk involving the derivatives markets and their participants, such as hedge funds. For cleared swaps, central counterparties possess the ability to manage their risks by imposing margin requirements and other risk mechanisms that limit their exposure to potential losses from defaults by members and participants. The margin requirements must be sufficient to cover potential exposures in almost all market conditions. These provisions are well designed to ensure that central counterparties' operations would not be disrupted and non-defaulting members would not be exposed to unexpected losses.

In addition, the Dodd-Frank Act increases supervision of banks and broker-dealers, incorporating enhanced review of counterparty exposure and other risks associated with the prime brokerage and over-the-counter derivatives businesses in their examinations of these institutions, which provides regulators with critical information with respect an institution's aggregate exposure to individual hedge funds as well as the hedge fund industry as a whole.

In summary, MFA believes that the size, concentration, structure, and levels of leverage of the hedge fund industry, financial services industry incentives and practices, and the substantial regulatory framework that the Dodd-Frank Act institutes over hedge fund advisers, banks, and broker-dealers and the OTC derivatives markets, substantially reduce the likelihood that the failure of a hedge fund would have systemic implications.

Criteria for Determination of Systemically Important Financial Companies

Section 113 of the Dodd-Frank Act sets out a list of criteria the Council must consider when it determines whether a financial institution should be deemed systemically significant, many of which are discussed above with respect to the hedge

[17] See section 404 of the Dodd-Frank Act, amending Section 204 of the Investment Advisers Act.

[18] See *e.g.*, section 723 of the Dodd-Frank Act.

fund industry.[19] As a general proposition, we do not believe systemic importance should be based upon any one criterion set out in the Dodd-Frank Act. To assist the Council in its deliberations, we have highlighted below those criteria listed in section 113 (with their specific reference letter in the Dodd-Frank Act) that we think are most relevant to the determination of whether a hedge fund is systemically significant.

- *(A) The extent of the leverage of the company; (I) the amount and nature of the financial assets of the company; and (J) the amount and types of the liabilities of the company, including the degree of reliance on short-term funding.*
    - In considering leverage as a contributor to systemic risk, it is important to consider not only the aggregate amount of such leverage (inclusive of off-balance liabilities), but importantly the sources and terms of such leverage. Debt that is secured, for example, significantly mitigates systemic risk compared to debt that is unsecured. Similarly, short-term leverage (such as overnight borrowing) introduces greater risk than term borrowings, which more closely match the term of the asset and the financing which funds it. Finally, the degree of an investment fund's portfolio leverage must be considered in the context of its asset mix, including the liquidity of those assets, the liquidity rights of fund investors, as well as the size and nature of the capital markets in which those assets are transacted.

[19] Section 113(a)(2) of the Dodd-Frank Act provides:

> (2) CONSIDERATIONS.—In making a determination under paragraph (1), the Council shall consider—
>
> (A) the extent of the leverage of the company;
> (B) the extent and nature of the off-balance-sheet exposures of the company;
> (C) the extent and nature of the transactions and relationships of the company with other significant nonblank financial companies and significant bank holding companies;
> (D) the importance of the company as a source of credit for households, businesses, and State and local governments and as a source of liquidity for the United States financial system;
> (E) the importance of the company as a source of credit for low-income, minority, or underserved communities, and the impact that the failure of such company would have on the availability of credit in such communities;
> (F) the extent to which assets are managed rather than owned by the company, and the extent to which ownership of assets under management is diffuse;
> (G) the nature, scope, size, scale, concentration, interconnectedness, and mix of the activities of the company;
> (H) the degree to which the company is already regulated by 1 or more primary financial regulatory agencies;
> (I) the amount and nature of the financial assets of the company;
> (J) the amount and types of the liabilities of the company, including the degree of reliance on short-term funding; and
> (K) any other risk-related factors that the Council deems appropriate.

- *(B) The extent of the off-balance sheet exposures of the company.*
    - Off-balance sheet exposures should be considered as part of determining overall leverage. However, the market value or risk of loss must be considered from a risk exposure perspective, as opposed to simply looking at notional values. Additionally, the nature of the instruments in question and risk of loss must be considered. For example, a purchased option has substantially less risk than a sold option. Similarly, collateral arrangements, as well as offsetting positions across a portfolio (a hedge), must be taken into account.

- *(C) The extent and nature of the transactions and relationships of the company with other significant nonbank financial companies and significant bank holding companies.*
    - The degree of a firm's interconnectedness to major financial institutions should be measured by such institutions' unsecured credit exposure (including potential exposure) to the firm in question, indicating the overall vulnerability of other major financial institutions if the firm in question were to fail.
    - However, counterparty risk in and of itself is not an indicator of systemic risk. Counterparties need to take risks in order to earn returns; they are responsible for managing such risk during the normal course of their business. Such risk only should rise to potential systemic significance when it could cause harm to the financial stability of the U.S.
    - Systemic risk and counterparty risk should not be conflated. The risk that a financial institution, including a systemically significant financial institution, may suffer losses from its dealings with its counterparties should not be sufficient to warrant a determination that the counterparties themselves are systemically significant.

- *(G) The nature, scope, size, scale, concentration, interconnectedness, and mix of the activities of the company.*
    - The ability of hedge fund advisers to appropriately match the assets and liabilities of a fund (in light of the fund's leverage, sources of leverage, and equity capital stability) should prevent or mitigate the extent to which a fund is likely to become subject to a forced unwind.

- The size of individual investment fund portfolios managed by an investment adviser should not in and of itself be an indicator of systemic riskiness but must be considered in the context of its activities, the amount of leverage, the specific capital market segments in which such funds are active and the capital structure of the fund.

- *(K) Any other risk factors that the Council deems appropriate.*

Other potential considerations include:

- Whether an investment fund or other financial institution has an implicit or explicit government guarantee (*e.g.*, FDIC deposit insurance and debt guarantees; government-issued charter), access to government-funded capital (*e.g.*, TARP) or other access to government assistance (*e.g.*, access to the Federal Reserve's discount window), any of which would pose losses to taxpayers from the firm's failure.

- The extent to which the persons managing investment funds have substantial stakes in such investment funds' equity capital, which incentivizes such persons not to take inappropriate investment or operational risks that could contribute to the failure of those funds.

We are happy to work with the Council to expand upon the thoughts outlined above or to discuss further any of the criteria in the Dodd-Frank Act.

****

Conclusion

We believe that, in light of the structure of the hedge fund industry and the market and regulatory changes regarding counterparty risk management, leverage and use of collateral, as described above, applying the criteria in Section 113 to the hedge fund industry should lead to the conclusion that it is highly unlikely that any hedge fund is systemically important at this time. We recognize, however, that circumstances can change and that there is a possibility that a hedge fund may, in the future, become systemically important.

We support robust reporting requirements to regulators (with appropriate confidentiality protections) to ensure that regulators have the information they need to assess all financial market participants, including hedge funds. Such periodic assessments, combined with oversight from the relevant regulators would help the Council assess whether circumstances have changed and that the Council should re-evaluate whether a hedge fund might have become systemically significant.

MFA appreciates the opportunity to comment on the Advance Notice. We recognize that the Council has an ongoing responsibility to monitor and assess the systemic risk of market participants and we look forward to continuing the dialogue on this subject with the Council.

If you have any questions regarding any of these comments, or if we can provide further information with respect to these or other regulatory issues, please do not hesitate to contact Stuart J. Kaswell or me at (202) 367-1140.

Respectfully submitted,

/s/ Richard H. Baker

Richard H. Baker
President and CEO

CC: The Honorable Sheila C. Bair, Chairman, Federal Deposit Insurance Corporation
The HonorableBen S. Bernanke, Chairman, Board of Governors of the Federal Reserve System
Edward J. DeMarco, Acting Director, Federal Housing Finance Agency
The Honorable Gary Gensler, Chairman, Commodity Futures Trading Commission
The Honorable Debbie Matz, Chairman, National Credit Union Administration
The HonorableMary L. Schapiro, Chairman, U.S. Securities and Exchange Commission
John Walsh, Acting Comptroller of the Currency

MANAGED FUNDS ASSOCIATION
The Voice of the Global Alternative Investment Industry
WASHINGTON, DC | NEW YORK

February 25, 2011

Via Electronic Filing:

The Honorable Timothy F. Geithner
Chairman
Financial Stability Oversight Council
1500 Pennsylvania, Ave., NW
Washington, DC 20220

Re: MFA Comments on Systemically Significant Institutions

Dear Secretary Geithner:

Managed Funds Association ("MFA")[1] appreciates the opportunity to comment on the Financial Stability Oversight Council's (the "Council") notice of proposed rulemaking (the "Proposed Rule") on the criteria that the Council should consider when determining whether to designate a nonbank financial company as systemically significant pursuant to section 113 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act").[2] We strongly support the goals of the Dodd-Frank Act in establishing the Council to address potential systemic risks before they arise, and mandating enhanced regulation of systemically significant financial companies. MFA also strongly supports efforts by regulators to gather data from different types of market participants, including investment advisers and the funds they manage, which is a critical component of effective systemic risk monitoring and regulation.

Overview

MFA believes that the Council should analyze financial institutions based on objective, quantitative data to determine which nonbank financial companies should be deemed systemically significant and, therefore, subject to supervision by the Board of

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[1] MFA is the voice of the global alternative investment industry. Its members are professionals in hedge funds, funds of funds and managed futures funds, as well as industry service providers. Established in 1991, MFA is the primary source of information for policy makers and the media and the leading advocate for sound business practices and industry growth. MFA members include the vast majority of the largest hedge fund groups in the world who manage a substantial portion of the approximately $1.9 trillion invested in absolute return strategies. MFA is headquartered in Washington, D.C., with an office in New York.

[2] MFA also submitted a comment letter to the Council on November 5, 2010, in response to the Council's Advance Notice of Proposed Rulemaking. A copy of MFA's letter is available at: www.managedfunds.org.

Governors of the Federal Reserve System (the "Fed"). It is also critical that the Council's determination process is transparent to the marketplace. Uncertainty regarding the criteria or designation of an overly broad set of firms could have profound unintended consequences for financial markets and the broader economy. Congress recognized the importance of avoiding an overly broad designation of systemically significant firms. The statutory text and legislative history of the Dodd-Frank Act clearly indicate Congress's intention that the Council designate as systemically significant and regulate only those financial institutions that were previously considered "too big to fail," *i.e.*, those companies that would threaten U.S. financial stability if they failed.[3]

In considering the potential systemic implications of hedge funds, we believe that it is important that the Council has a clear picture of the size, concentration, leverage and structure of hedge funds within the broader financial market. It is also vital that the Council consider the improvements made by hedge fund counterparties (banks and broker-dealers) over the last decade to risk management practices, as well as the new regulatory requirements mandated in Title IV and Title VII of the Dodd-Frank Act.

As discussed in greater detail in the sections below, hedge funds have the following characteristics, which should be considered by the Council in fulfilling its obligations under section 113 of the Dodd-Frank Act:

- The hedge fund industry – as well as individual firms and the funds they manage – are relatively small, in comparison to other financial market participants, the broader financial industry, and the financial markets in which hedge funds operate. Within the hedge fund industry, there is no significant concentration of assets under the management of any individual adviser or group of advisers.

- Hedge funds generally do not employ a significant amount of leverage and typically post collateral in connection with any leverage employed (whether it be via borrowing arrangements or derivatives contracts), thereby substantially reducing the risk to their counterparties.

- Capital invested in hedge funds is subject to limited redemption rights, which helps ensure a stable equity base and helps prevent runs on the fund's cash/assets.

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[3] In a July 2007 report, the staff of the Federal Reserve Bank of New York offered a similar view of systemic risk, stating that a central element of systemic risk is "when financial shocks have the potential to lead to substantial, adverse effects on the *real* economy." See, Kambhu, John, Schuermann, Til, and Stiroh, Kevin J., *Federal Reserve Bank of New York Staff Reports: Hedge Funds, Financial Intermediation, and Systemic Risk*, July 2007, page 10. Available at: http://www.ny.frb.org/research/staff_reports/sr291.pdf.

- Hedge funds typically structure their borrowings to avoid a mismatch between their equity capital and investments on the one hand and their secured financing on the other hand.

- The enhanced regulation of hedge fund advisers and the markets in which they participate following the passage of the Dodd-Frank Act – including the substantially enhanced reporting requirements -- ensures that regulators will have a timely and complete picture of hedge funds and their activities.

Hedge Fund Industry Discussion

The Proposed Rule categorizes the statutory criteria set out in section 113 of the Dodd-Frank Act into six categories: size; lack of substitutes for the financial services and products the company provides; interconnectedness with other financial firms; leverage; liquidity risk and maturity mismatch; and existing regulatory scrutiny. Set out below is a discussion of key characteristics of hedge funds with respect to each of the categories proposed by the Council.

Size

Although the hedge fund industry is important to capital markets and the financial system, it is relatively small in size when considered in the context of the broader financial markets.[4] For example, the hedge fund industry is significantly smaller than both the global mutual fund industry and the U.S. banking industry. The global mutual fund industry managed $23.7 trillion in assets, as of September 30, 2010.[5] The top 50 U.S. bank holding companies alone had $14.4 trillion in assets, as of September 30, 2010.[6] By comparison, the global hedge fund industry had an estimated $1.9 trillion in assets under management, as of September 30, 2010.[7]

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[4] Our comments are intended only to provide perspective regarding the size and concentration of the hedge fund industry; we are not commenting on the systemic significance of other financial market participants or industries.

[5] Source: Investment Company Institute, available at: http://www.ici.org/research/stats/worldwide/ww_06_10.

[6] Source: Federal Financial Institutions Examination Council, available at: http://www.ffiec.gov/nicpubweb/nicweb/Top50Form.aspx.

[7] Source: http://www.marketwire.com/press-release/Combined-Assets-Billion-Dollar-Hedge-Funds-Nearly-Flat-First-Half-2010-AR-Magazine-Survey-1327660.htm, citing *AR* Magazine, available at: http://www.absolutereturn-alpha.com/.

Lack of substitutes for the financial services and products the company provides

In addition to the relatively small size of the hedge fund industry as a whole, hedge fund assets are not heavily concentrated in any individual adviser or group of advisers, as illustrated by the fact that the largest hedge fund adviser manages assets equal to only approximately 3% of the entire hedge fund industry.[8] Considering the fact that many advisers manage multiple funds, assets are even less concentrated when looking at asset concentration on a fund-level basis. The dispersion of assets among a broad group of advisers and funds significantly reduces the risk that the failure of any one fund or manager would create systemic risk due to a lack of substitutes. Indeed, each year, many hedge funds dissolve or fail for reasons as diverse as extended poor performance reducing their attractiveness to investors, the retirement or departure of senior personnel, or an investment strategy that no longer excels in a changed market environment. The fund's assets are sold, sometimes gradually over many months by the manager and sometimes suddenly in a "liquidation" mode by the prime brokers and exchanges with which the fund traded and that hold its collateral. This market discipline is a hallmark of the industry as funds and firms fail and other funds (existing or new) emerge.[9] Moreover, because hedge funds are one of many different types of asset management structures, other investment managers also replace the services of failed hedge funds.

Interconnectedness with other financial firms

In considering the interconnectedness of financial institutions, we understand that Council members are looking at a firm's relationships within a structure of related businesses (sometimes referred to as "intraconnectedness") and the firm's relationships with third party institutions ("interconnectedness"). In considering the intraconnectedness of hedge funds, there are important structural factors to consider. The advisers (also frequently referred to as the managers) do not have substantial assets; though the principals of the adviser have personal capital invested the funds they manage. It is the funds that hold the financial assets, that transact with trading counterparties on a collateralized basis, and to which investors commit capital. Accordingly, the risks and rewards of the funds' investment portfolios are borne by a diverse group of underlying sophisticated investors, institutions or ultra-high net worth individuals, who typically invest in hedge funds as part of a diversified portfolio. (Hedge funds neither transact with retail investors nor do they take in investments or deposits from retail investors.)[10]

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[8] Source: http://www.finalternatives.com/node/14018, citing *AR* Magazine's Billion Dollar Club, available at: http://www.absolutereturn-alpha.com/.

[9] According to a recent report from Hedge Fund Research, Inc., 945 hedge funds were formed in the most recent twelve-month period. Source: http://www.reuters.com/article/2010/12/15/us-hedgefunds-launches-idUSTRE6BE48120101215.

[10] The MFA has consistently urged Congress and the SEC to raise investment thresholds to address the effects of inflation and to prevent hedge funds from becoming accessible to retail investors.

The adviser typically is not liable for the obligations of the fund, nor does the fund have responsibility for the liabilities of the adviser. This is one reason why, as recognized in the Dodd-Frank Act, the extent to which a financial institution manages assets owned by others rather than managing assets owned by the institution itself is a key consideration in whether a financial institution should be designated as systemically significant.

Another structural aspect of hedge funds is the legal separation of different funds managed by the same adviser. These legally distinct funds even when managed by the same adviser, often have different investors and can engage in entirely distinct trading activities in different assets and markets. Any losses at one fund are borne exclusively by the investors in and counterparties to that fund (though counterparty losses are typically limited for the reasons discussed below) and do not subject other funds managed by the same adviser directly to losses. Further, unlike related entities in a holding company or other similar structures prevalent elsewhere in the financial services industry, the different funds managed by a common adviser do not typically have the kind of intercompany loans or transactions that can create intraconnectedness and tie the risks associated with one company to other companies in the same ownership structure. Unlike bank holding companies and other nonbank financial institutions such as insurance companies, hedge funds engage in one distinct business – namely, making investments for investors in that specific fund, reducing the risk of contagion substantially.

The interconnectedness of hedge funds predominantly arises from the relationships between a hedge fund and its prime brokers or similar financial counterparties. It is through these relationships that hedge funds typically receive financing. Such financing is generally obtained from large, sophisticated financial counterparties, such as global banks or broker-dealers, that conduct substantial due diligence and engage in ongoing risk monitoring. Hedge fund borrowings are done almost exclusively on a secured basis (*i.e.,* secured by each fund's overall assets or specifically posted collateral), which limits the amount of leverage that any fund may obtain.[11] In addition, this posting of collateral by hedge funds reduces the credit exposure of counterparty financial institutions to those funds. Consequently, hedge funds are substantially less likely to contribute to systemic risk by causing the failure of a systemically significant counterparty, such as a major bank. Given the limited leverage and the collateral posted by hedge funds, any losses that hedge funds incur are almost exclusively borne by their investors, not their creditors, counterparties, the general financial system, or taxpayers. Moreover, it is important to note that hedge funds often diversify their exposures across many counterparties, mitigating the risk that a fund poses to any one counterparty. For example, following the collapse of Lehman Brothers, many

[11] Various rules, for example, Regulations T, U and X with respect to securities, and regulations mandated under Title VII of the Dodd-Frank Act with respect to derivatives (discussed in more detail below), impose margin or collateral requirements, thereby restricting the amount of credit that a financial institution can extend to counterparties, including hedge funds.

large hedge funds increased the number of prime brokers they use, thus reducing their exposure to any individual prime broker.

Leverage

Though hedge funds are often mischaracterized as being highly leveraged financial institutions, the industry is, and has been, significantly less leveraged than other financial market participants. According to a recent Columbia University study, the leverage ratio of investment banks during the period from December 2004 to October 2009 was 14.2, with a peak of 40.7 for investment banks in 2009, and the leverage ratio of the entire financial sector during that period was 9.4.[12] By comparison, this study found that the leverage ratio for the hedge fund industry was 1.5 as of October 2009, with an average ratio of 2.1 from December 2004 to October 2009, and a high of 2.6.

The findings of the Columbia University study with respect to the leverage ratio of the hedge fund industry are consistent with other studies, which report leverage ratios below 3.0 for an extended period of time. The United Kingdom's Financial Services Authority (the "FSA") has conducted several studies on the hedge fund industry, most recently finding a leverage ratio of 272% [2.72], as of April, 2010 and a leverage ratio of 244% [2.44], as of October, 2009.[13] A 2009 study by Lord Turner, then Chairman of the FSA, found that the leverage ratio of the hedge fund industry since 2000 has been two- or three-to one.[14] A Bank of America Merrill Lynch study found the leverage ratio for the industry was 1.16 as of July, 2010.[15] Each of these studies demonstrates that the hedge fund industry has consistently employed relatively low levels of leverage.

Liquidity risk and maturity mismatch

Unlike many other financial market participants, hedge funds do not rely on unsecured, short term financing to support their investing activities. Instead, hedge funds rely on secured borrowings, which are designed to more closely match the term or

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12 Hedge Fund Leverage, available at: http://www2.gsb.columbia.edu/faculty/aang/papers/HFleverage.pdf.

13 FSA studies, Assessing possible sources of systemic risk from hedge funds, February 2010 and July 2010 (the "FSA Hedge Fund Studies"), available at: http://www.fsa.gov.uk/pages/search/index.shtml?cx=007702012814746907219%3An6pltugvaoc&cof=FORID%3A9&ie=UTF-8&q=hedge+fund#1327.

14 The Turner Review, A regulatory response to the global banking crisis, March 2009, available at: http://www.fsa.gov.uk/pubs/other/turner_review.pdf.

15 Available at: http://www.reuters.com/article/idUSTRE67G28220100817.

The above studies use different formulas for calculating leverage ratios, which explains the slight differences in leverage ratios determined by each study. Our purpose in this letter is not to endorse any particular formula, but to demonstrate that the leverage ratios for the hedge fund industry are significantly less than the ratios for many other types of financial institutions.

expected liquidity of the asset and the financing which funds it. Without the benefit of a federal safety net, the industry has evolved carefully crafted practices to manage liquidity risk.[16] The FSA Hedge Fund Studies confirm these practices, finding that the assets of the surveyed hedge funds could be liquidated in a shorter timeframe than the period after which their liabilities (to investors and finance providers) would become due.[17]

There are two sources of funds for a hedge fund: its investors and its bank/broker counterparties. As discussed above, the financing from counterparties is secured by collateral and inherently limited both by regulation and by the sophisticated counterparties' risk analysis. Most hedge funds build strong liquidity protections into their contractual relationships with investors who are subject to a variety of restrictions, including: limited periods of redemption (sometimes monthly, but more often quarterly, annual, or longer); significant advance notice requirements (often 30 to 90 days) prior to the requested withdrawal dates; the right of advisers to impose gates to manage outflows or even suspend redemptions (at the investor and/or the fund level), if deemed necessary; and side pocket vehicles for highly illiquid assets that allow redemptions only when realizations occur. These liquidity provisions help reduce the likelihood that redemptions of investor capital will be disruptive to a fund or to markets over extremely short periods of time, because they allow advisers to better match the assets and liabilities of the funds they manage and to manage orderly outflows of investor funds.

Moreover, the principals of hedge fund advisers also typically invest significant amounts of their own capital in the funds they advise, which provides an even greater capital cushion for the fund's business and promotes an alignment of interests between management and investors. The structure of performance incentives earned by hedge fund advisers, in which advisers earn a significant portion of their income by receiving a percentage of the gains of the funds they manage, also serves to align the interests of the adviser and the investors by encouraging the adviser to manage the funds with the objectives of generating attractive risk-adjusted returns over time and discouraging excessive short-term risk taking.

Existing regulatory scrutiny

The Dodd-Frank Act imposes a variety of regulations to ensure appropriate oversight of hedge funds and their advisers. Following passage of the Dodd-Frank Act, all hedge fund advisers with at least $150 million in assets under management will be required to register with the Securities and Exchange Commission (the "SEC").[18]

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16 See, MFA's Sound Practices for Hedge Fund Managers, available at: www.managedfunds.org; see, also, the President's Working Group on Financial Markets' Asset Managers' Committee report: Best Practices for Hedge Fund Managers, available at: http://amaicmte.org/Public/AMC%20Report%20-%20Final.pdf.

17 See, FSA Hedge Fund Studies.

18 See sections 403 and 408 of the Dodd-Frank Act.

Registered advisers are required to maintain books and records, make reports to the SEC, and are subject to examination by the agency. Congress specifically amended the Investment Advisers Act of 1940 to provide that the recordkeeping and reporting requirements for hedge fund advisers apply to the funds as well as the adviser.[19] The Dodd-Frank Act also explicitly provides that data collected by the SEC for systemic risk purposes will be shared with the FSOC. The SEC and the Commodity Futures Trading Commission (the "CFTC") recently proposed joint rules creating new Form PF to implement very detailed reporting requirements for private fund advisers and commodity pool operators.[20] As a consequence, the SEC, CFTC, and the Council will have comprehensive access to information about hedge fund advisers and the funds they manage.

The Dodd-Frank Act also creates a comprehensive regulatory regime for over-the-counter derivatives where none existed previously. These new regulations: (1) require certain standardized transactions to be cleared and exchange traded; [21] (2) require "Swap Dealers" and "Major Swap Participants" to register with the SEC and CFTC, and subjects them to significant requirements; (3) impose initial and variation margin requirement on both cleared and uncleared transactions; and (4) provide for significant incremental transparency, including transaction reporting, to market participants and regulators. These rules will significantly reduce the potential for systemic risk involving the derivatives markets and their participants, such as hedge funds. For cleared swaps, central counterparties possess the ability to manage their risks by imposing margin requirements and other risk mechanisms that limit their exposure to potential losses from defaults by members and participants. The margin requirements must be sufficient to cover potential exposures in almost all market conditions. These provisions are well designed to ensure that central counterparties' operations would not be disrupted and non-defaulting members would not be exposed to unexpected losses.

In addition, the Dodd-Frank Act mandates increased supervision of banks and broker-dealers, incorporating enhanced review of counterparty exposure and other risks associated with the prime brokerage and over-the-counter derivatives businesses. This provides regulators with critical information regarding an institution's aggregate exposure to individual hedge funds as well as the hedge fund industry as a whole.

Changes in the Industry since 1998

The failure of Long Term Capital Management ("LTCM") in 1998 is often cited as an example of a hedge fund that created a systemic risk to the financial system. First, it is important to note that the failure of LTCM did not result in any use of taxpayer

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19 See section 404 of the Dodd-Frank Act, amending Section 204 of the Investment Advisers Act.

20 Reporting by Investment Advisers to Private Funds and Certain Commodity Pool Operators and Commodity Trading Advisors on Form PF, available at: http://sec.gov/rules/proposed/2011/ia-3145.pdf.

21 See *e.g.*, section 723 of the Dodd-Frank Act.

funds. Regulators helped coordinate LTCM's financial counterparties, who worked out a private sector resolution of the firm's liabilities. But at no point were government funds offered or used. Lessons were learned, however, by both market participants and regulators, which have led to sounder practices. The resulting changes may be one of the reasons that hedge funds were not substantial contributors to the recent global financial crisis.

LTCM's excessive position size and leverage, along with its counterparties' inadequate risk management were the primary underlying causes of LTCM's failure. The seminal analysis of the matter, conducted by the President's Working Group on Financial Markets (the predecessor to the Council), found that LTCM, as of January 1, 1998, was leveraged more than 25-to-1,[22] as compared to the 2.6-1 peak leverage ratio for the hedge fund industry during the period from December 2004 to October 2009.[23] Perhaps most importantly, the President's Working Group found that LTCM was able to get such leverage because its counterparties did not require LTCM to post initial margin on its OTC derivatives trades.

Since the failure of LTCM, however, there have been significant changes in the market with respect to counterparty risk management. Counterparties now consistently limit the amount of leverage used by hedge funds by requiring the use of collateral to secure financing to hedge funds. Also, as a result of improvements to counterparty risk management best practices, financial institutions today conduct more in-depth due diligence on and have a much greater degree of transparency with respect to their hedge fund clients' overall portfolios. Many of these changes have been brought about by the work done by the Counterparty Risk Management Policy Group.[24] In 2006, Federal Reserve Chairman Bernanke noted the improvements in the market place:

> Since the LTCM crisis, ongoing improvements in counterparty risk management and the resultant strengthening of market discipline appear to have limited hedge fund leverage and improved the ability of banks and broker-dealers to monitor risk, despite the rapidly increasing size, diversity, and complexity of the hedge fund industry. Many hedge funds have been liquidated, and investors have suffered losses, but creditors and counterparties have, for the most part, not taken losses.[25]

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[22] Hedge Funds, Leverage and the Lessons of Long-Term Capital Management, Report of The President's Working Group on Financial Markets, April 1999 available at: http://www.ustreas.gov/press/releases/reports/hedgfund.pdf.

[23] See the discussion in the section above regarding the leverage of the industry.

[24] Copies of the reports are available at: http://www.crmpolicygroup.org/index.html.

[25] Speech by Chairman Ben S. Bernanke, *Hedge Funds and Systemic Risk*, May 16, 2006. Available at: http://www.federalreserve.gov/newsevents/speech/bernanke20060516a.htm.

In summary, MFA believes that, in considering hedge funds in light of the six categories set out in the Proposed Rule, it is unlikely that the failure of any hedge fund or hedge fund manager would have systemic implications. While we support the collection of information about hedge fund investment activity and the direct regulation of hedge fund advisors, we do not believe it would be appropriate to designate any hedge fund as a systemically significant nonbank financial company.

Process for public engagement with the Council

By grouping the statutory criteria into six categories, the Proposed Rule provides some clarity with respect to how the Council plans to analyze market participants. The Proposed Rule does not, however, discuss the risk metrics that will be used to analyze market participants or how the various criteria or categories will be weighed. We believe that both the risk metrics and weighting of the criteria are critical components of the Council's rules for implementing section 113 of the Dodd-Frank Act. As such, we believe that the metrics and weighting should be proposed by the Council for public review and comment. A public review and comment period will provide the Council with valuable feedback and, importantly, will help ensure that market participants understand how the Council will make a determination that a firm is systemically significant.

The Proposed Rule also sets out the formal process by which a market participant can request hearings with the Council and seek judicial review prior to being subject to supervision by the Fed as a systemically significant financial institution. We understand that the time periods for this formal process were set by the Dodd-Frank Act and provide limited flexibility for the Council in implementation. We encourage the Council to provide market participants the maximum amount of time permitted under the statute and the proposed rule to exercise their rights to hearings and judicial review. We further encourage the Council to provide firms that request hearings the opportunity to provide both written and oral testimony, if they so request.

We appreciate the Council's proposal to provide a mechanism for dialogue between the Council and market participants in advance of the formal designation process. As contemplated by the Proposed Rule, market participants would have 30 days to submit written materials to the Council prior to the Council beginning the formal designation process. In addition, we encourage the Council to engage in regular dialogue with market participants regarding relevant industry and market practices and, when appropriate, firm-specific practices. Such regular dialogue will better ensure that the Council has a full and complete understanding of markets and market participants. Regular dialogue with market participants may also help avoid the potential misperception and dampen rumors that any firm that engages with the Council is likely to be designated as systemically significant.

As the Council increases its understanding of industry segments and participants, we encourage the Council to provide guidance regarding specific metrics that it believes could make a firm or a fund systemically significant. Guidance, even if not a bright line

test, would provide greater certainty to market participants and allow them to proactively manage their business risks.

Coordination among member agencies

We believe it is important for the Council to coordinate the designation process with existing and proposed data collection efforts to avoid unnecessary duplication of efforts and to ensure that Council members have comprehensive information about markets and financial institutions when they undertake their monitoring and designation responsibilities. As discussed above, the SEC and CFTC have proposed extensive systemic risk reporting to collect a significant amount of information from private fund advisers and the funds they manage. We have worked with them since the passage of the Dodd-Frank Act to develop these tools, and will be submitting detailed comments to help them refine the survey tool. We support the SEC's and CFTC's data collection efforts and believe that a coordinated approach with Council members (and the Office of Financial Research) will be the most effective and efficient method for the Council and Council members to gather and analyze information about private funds. Multiple data collection reports are not only a significant burden for the industry, but likely to create duplicative or inconsistent reports, which could make it more difficult for regulators to analyze information. While we recognize that there may be circumstances when it will be necessary for regulators to collect additional information, we encourage the Council and its members to coordinate to the greatest extent possible data collection efforts.

Additionally, as the Council begins its research, we stand ready to assist in providing information about the industry and convening educational sessions for Office of Financial Research staff or staff from Council member agencies to learn more about the hedge fund industry and delve into the issues we have discussed in greater detail. Given the potential for rumors about designation of any single firm to potentially harm such a firm, we encourage the Council to conduct its research through the MFA or other similar organizations to the extent possible, particularly in these early stages.

We are happy to work with the Council to expand upon the thoughts outlined above or to discuss further any of the criteria in the Dodd-Frank Act.

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Conclusion

We believe that, in light of the structure of hedge funds and the market and regulatory changes regarding counterparty risk management, leverage and use of collateral, as described above, applying the criteria in section 113 and the six categories set out in the Proposed Rule to hedge funds should lead to the conclusion that it is highly unlikely that any hedge fund is systemically significant at this time. We recognize, however, that circumstances can change and that there is a possibility that a hedge fund may, in the future, become systemically significant.

We support robust reporting requirements to regulators (with appropriate confidentiality protections) to ensure that regulators have the information they need to assess all financial market participants, including hedge funds. Such periodic assessments, combined with oversight from the relevant regulators would help the Council assess whether circumstances have changed and that the Council should re-evaluate whether a hedge fund might have become systemically significant.

MFA appreciates the opportunity to comment on the Proposed Rule. We recognize that the Council has an ongoing responsibility to monitor and assess the systemic risk of market participants and we look forward to continuing the dialogue on this subject with the Council.

If you have any questions regarding any of these comments, or if we can provide further information with respect to these or other regulatory issues, please do not hesitate to contact Stuart J. Kaswell or me at (202) 730-2600.

Respectfully submitted,

/s/ Richard H. Baker

Richard H. Baker
President and CEO

CC: The Honorable Sheila C. Bair, Chairman, Federal Deposit Insurance Corporation
The Honorable Ben S. Bernanke, Chairman, Board of Governors of the Federal Reserve System
Edward J. DeMarco, Acting Director, Federal Housing Finance Agency
The Honorable Gary Gensler, Chairman, Commodity Futures Trading Commission
The Honorable Debbie Matz, Chairman, National Credit Union Administration
The Honorable Mary L. Schapiro, Chairman, U.S. Securities and Exchange Commission
John Walsh, Acting Comptroller of the Currency