

# Overview of Industry Structure & Economics of CIS: What's out there and What do we know about it?

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# Outline

- Definition of terms
- Basic statistics
- Fund of Funds
- Conflicts of Interest
- Regulatory Issues
  - Approaches
  - Limitations
  - Exposures

## Definition of Terms

*CIS – “an open ended collective investment scheme that issues redeemable units and invests primarily in transferable securities or money market instruments”*

Report on Investment Management of the  
Technical Committee of IOSCO, July 1995

# Types of CIS (US Model)

- Registered
  - Mutual Funds
- Unregistered
  - Venture Capital
  - Private Equity
  - Hedge Funds
- Characterized by:
  - Daily purchase and redemption at NAV
  - No limits on investor
  - Limits on investment strategy
- Characterized by:
  - Limited purchase and redemption
  - Limits on investors to maintain legal status
  - No limits on investment strategy

## Definitions (2)

- IOSCO 2006 survey on hedge funds reveals no respondent (0 out of 20) has an official legal definition.
- Other potential definitions
  - “An aggressively managed fund portfolio taking positions in both safe and speculative opportunities.”  
(thefreedictionary.com)
  - “Private investment vehicles where the manager has a personal stake in the fund and enjoys high level of flexibility to employ a broad spectrum of strategies...in order to enhance returns and better manage risk”  
(Agarwal and Naik)

## Definitions (3)

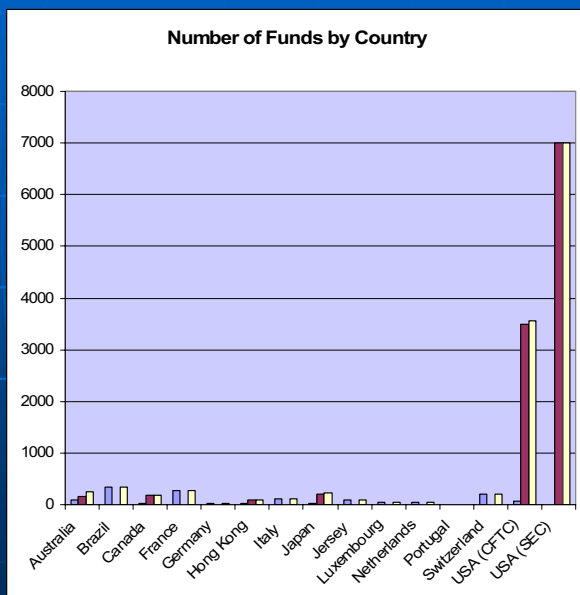
- General characteristics of hedge funds
  - Reduced borrowing and leverage restrictions
  - Significant performance based fees
  - Managers may participate in fund
  - Restrictions allowed on investors ability to liquidate
  - Ability to use derivative securities and take a short position
- IOSCO (2006)
  - Decreased transparency

## Definitions (4)

- Performance Measures
  - Return – total, cost-adjusted, or benchmarked
  - Beta – performance due to market exposure.
  - Alpha – performance due to the manager's security/asset picking ability
  - Sharpe Ratio – a commonly used measure of risk-adjusted performance
- Major open question-
  - Do hedge funds produce "risk-adjusted positive alpha," especially after costs?

# Basic Statistics

Source - IOSCO 2006



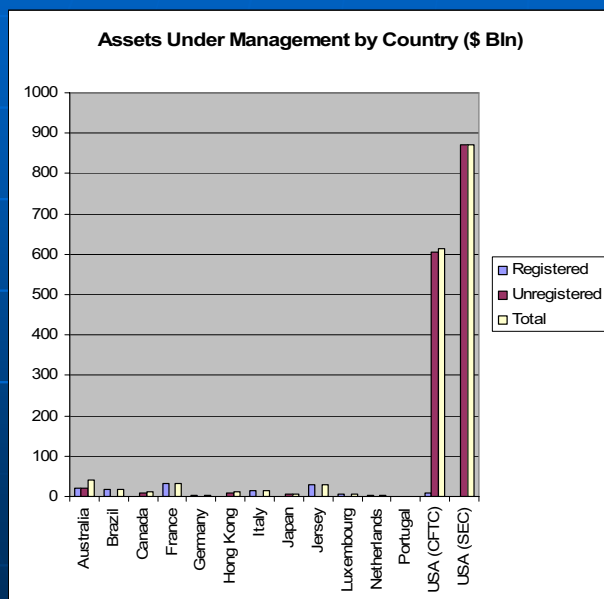
Country	Registered	Unregistered	Total
Australia	100	160	260
Brazil	337	0	337
Canada	13	178	191
France	269	0	269
Germany	18	0	18
Hong Kong	13	87	100
Italy	123	0	123
Japan	23	208	231
Jersey	98	0	98
Luxembourg	42	0	42
Netherlands	40	0	40
Portugal	4	0	4
Switzerland	206	0	206
USA (CFTC)	57	3500	3557
USA (SEC)	0	7000	7000

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# Basic Statistics (2)

Source - IOSCO 2006



Country	Registered	Unregistered	Total
Australia	20	20	40
Brazil	17.486	0	17.486
Canada	0.5	10	10.5
France	32	0	32
Germany	1.68506	0	1.68506
Hong Kong	1.17	10.1	11.27
Italy	14.235	0	14.235
Japan	1.2	5.9	7.1
Jersey	28.835	0	28.835
Luxembourg	5.5	0	5.5
Netherlands	2.5	0	2.5
Portugal	0.25	0	0.25
USA (CFTC)	7.6	606.4	614
USA (SEC)	0	870	870

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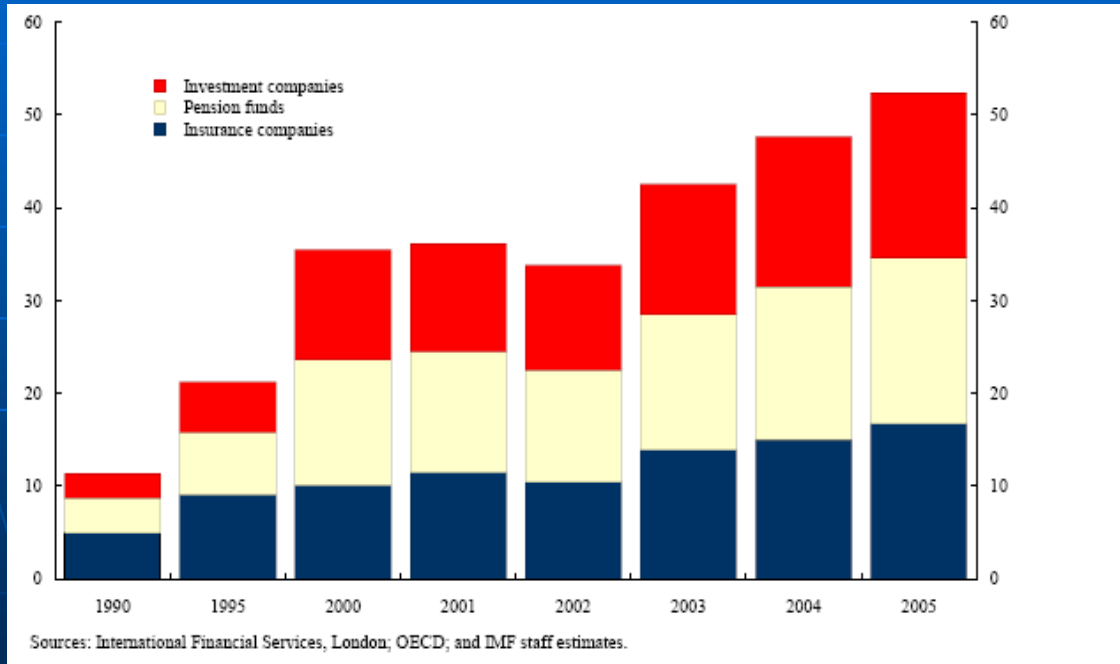
# What do we know about hedge funds?

- Most of what we know about HF's is from proprietary, voluntary data bases
- DB's include information about returns, costs and "style" but not holdings
- DB's suffer from:
  - Selection bias
  - Backfill bias
  - Survivorship bias

# Growth of the Hedge Fund Market

- Approximately 8,800 HF's
  - Last year alone, approximately 2,000 new funds opened up
- Approximately \$1.2 trillion in assets
  - 3,000% growth in HF assets in the last 16 years
- Represents 5% of all U.S. AUM
  - Account for about 30% of U.S. equity trading volume

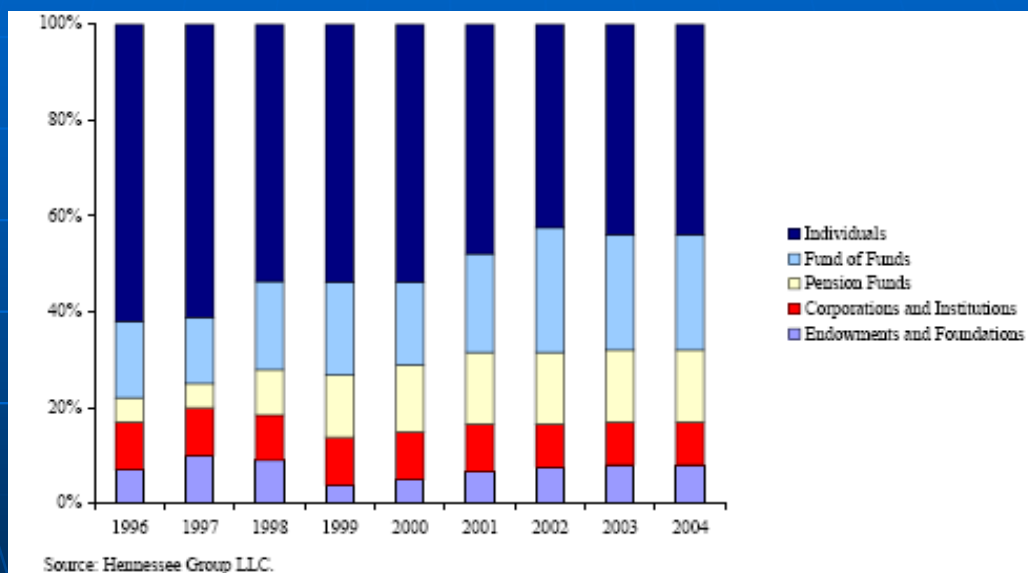
# AUM of Institutional Investors in Mature Markets (in trillions of US \$)



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# Global Hedge Funds, Investor Base



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# Hedge Fund Investment Styles

- Convertible Arbitrage
- Emerging Markets
- Equity Market Neutral
- Event Driven
- Fixed Income Arbitrage
- Global Macro
- Long/Short Equity
- Managed Futures
- Dedicated Short
- Equally Weighted Portfolio

Source - Ibbotson and Chen, 2006

## **New Exotic Focus For Hedge Funds: Uranium Market -- - Speculators Drive Up Price, Irking Utilities; Adit Capital's Big Bet**

5 March 2007, [The Wall Street Journal](#)

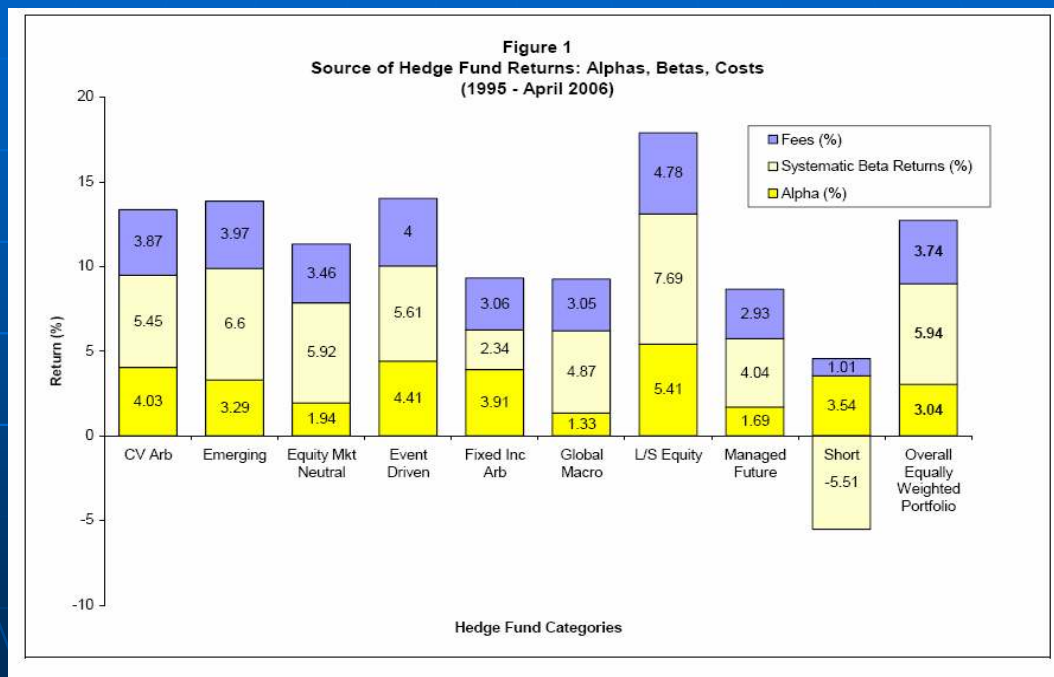
“In a new type of nuclear-arms race, hedge funds and other institutional investors in search of higher returns are competing with energy companies to amass scarce fuel-grade uranium, hoping to profit from revived interest in nuclear power.”

“The intense quest for uranium by speculators has sparked a debate over private investors driving up the price and increasing the scarcity of the world's most sensitive natural resource.”



# Hedge Funds Returns Broken Down

Source - Ibbotson and Chen, 2006



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# Returns and Sharpe Ratios

Source – Asness, Krail and Liew, 2001

**Table 1**  
Summary Statistics for Hedge Fund Returns Based on Monthly Data  
January 1994 to September 2000

Portfolio	Annualized Excess Return	Annualized Standard Deviation	Annualized Sharpe Ratio	Correlation With S&P 500	Maximum Monthly Return	Month of Maximum Return	Minimum Monthly Return	Month of Minimum Return
Aggregate Hedge Fund Index	8.0%	10.0%	0.80	0.52	8.1%	12/99	-8.0%	08/98
Convertible Arbitrage	5.4%	5.1%	1.07	0.13	3.1%	04/00	-5.1%	08/98
Event Driven	7.0%	6.7%	1.05	0.60	3.4%	01/94	-12.2%	08/98
Equity Market Neutral	6.4%	3.5%	1.85	0.48	2.8%	07/97	-1.6%	03/97
Fixed Income Arbitrage	1.6%	4.4%	0.36	0.08	1.5%	04/95	-7.3%	10/98
Long / Short Equity	11.8%	12.6%	0.94	0.62	12.6%	12/99	-11.9%	08/98
Emerging Markets	2.3%	20.8%	0.11	0.50	16.1%	08/94	-23.4%	08/98
Global Macro	7.7%	14.4%	0.54	0.36	10.1%	08/95	-11.9%	10/98
Managed Futures	-1.2%	11.1%	-0.10	0.01	9.5%	08/98	-9.8%	09/95
Dedicated Short Bias	-7.1%	18.6%	-0.38	-0.76	22.3%	08/98	-9.1%	02/00
S&P 500	14.6%	14.2%	1.03	1.00	9.3%	03/00	-14.9%	08/98

Notes: All returns are excess of the 1-month T-bill return. Annualized Excess Return is calculated by multiplying monthly excess returns by 12. Annualized Sharpe Ratio equals the ratio of the Annualized Excess Return and the Annualized Standard Deviation.

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# Fund of Funds

- Increasing proportion of HF industry- from 15% in 2000 to 23% in 2003
- Product that can overlay mutual fund structure to a pool of hedge funds
  - If registered, increased transparency at the top level but not below
  - No requirement to register FoF
- Provides exposure and diversification
  - But at what cost?

## Performance and Risk: FoF vs. HF

Source – Brown, Goetzmann and Liang, 2004

	Fund of Funds <sup>c</sup>			Hedge Funds <sup>c</sup>			t-value	t-value
Year	Mean Return	Median Return	Sharpe Ratio	Mean Return	Median Return	Sharpe Ratio	(return)	(Sharpe)
1994	-0.3233	-0.4530	-0.2961	0.1072	0.1642	-0.0141	-4.54 **	-6.51**
1995	0.8238	0.8613	0.2399	1.3895	1.2888	0.3835	-5.43 **	-3.75**
1996	1.0470	1.0800	0.4074	1.4447	1.3631	0.4480	-5.45 **	-1.13
1997	1.0036	1.1218	0.3590	1.4596	1.3407	0.3845	-5.54 **	-0.84
1998	0.0530	0.1694	-0.0478	0.4210	0.6672	0.0988	-3.38 **	-6.26**
1999	1.6584	1.4776	0.5696	2.0594	1.4181	0.4013	-3.76 **	5.80**
2000	0.5910	0.6875	0.2228	0.7589	0.8900	0.2050	-2.09 *	0.62
2001	0.3187	0.4236	0.1045	0.5002	0.5568	0.1678	-3.39 **	-2.59**
2002	0.1480	0.1682	0.0898	0.2100	0.2475	0.1428	-1.26	-1.63
2003	0.7914	0.7658	0.8206	1.3736	1.0117	0.5795	-11.43 **	6.99**

\*\*Significant at 1% level.

\*Significant at 5% level.

# Conflicts of Interest

- Simple principal-agent conflicts
  - Agent favors self ahead of clients
  - Example: Embezzles money from client
- Conflicts across multiple clients
  - Favors one client over others
  - Allocates profitable trades to favored clients, allows different clients greater flexibility to invest or divest
- Conflicts across multiple business lines
  - Favors clients in one line of business over others
  - Trades between mutual fund and hedge fund (both self-managed) to increase hedge fund returns

# Regulatory Approaches

- Express authorization/registration of HF's offered to retail clients
- Prohibition of HF's offered to retail clients
- Registration of HF advisers
- Increased disclosure
  - Either directly or through counter-party risk
- Mandate Counter-Party Risk Management

# Limits to Regulation

- Legal limits
- Limits to authorization/registration
  - Does it confer a “seal of approval”?
  - Does it create an obligation to monitor?
- Limits to access
  - Retail exposure through alternate means
- Limits to disclosure
  - Potentially very costly to HF investors
  - What is the right information to disclose?

# Regulatory Exposure

- Systemic risk
- Fraud
- Misvaluation of assets
- Misallocation of capital
- Voting power in excess of CF rights
  - (one share – one vote)

# Is there a solution?

- To be explored over the next five days.....

# Papers Referenced

- "Fees on Fees in Funds of Funds," Stephen J. Brown, William N. Goetzmann and Bing Liang (2004)
- "The A, B, Cs of Hedge Funds: Alphas, Beta and Costs," Roger G. Ibbotson and Peng Chen (2006)
- "Do Hedge Funds Hedge?," Clifford Asness, Robert Krail and John Liew (2001)
- "Final Report - The Regulatory Environment for Hedge Funds: A Survey and Comparison," IOSCO (2006)
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