HILLSDALE
INVESTMENT MANAGEMENT INC.

"A Practical Guide to Benchmarking Hedge Fund Managers"

by

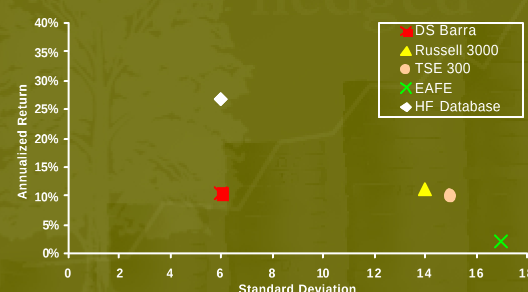
Chris Guthrie, President & CEO, Hillsdale Investment Management Inc.

"Efficient markets have great investment benchmarks, but are not great for investment"

Why do we need to talk about benchmarks?

1. *Evaluate entry into an asset class*
2. *Specify size of allocation*
3. *Frame expectations*
4. *Select vehicle*
5. *Search, hire, reward, fire*

Hedge Fund Alchemy… or "Why not 100% Hedge Funds?"



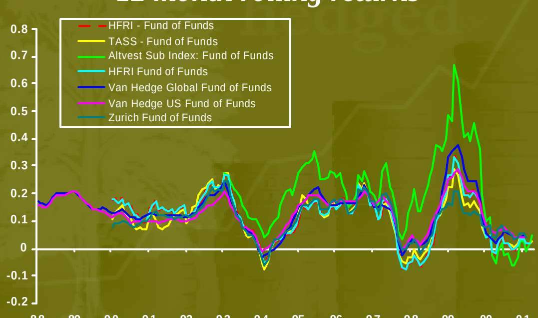
The dirty truth about broad hedge fund databases:

1. *Not investable, not a benchmark*
2. *Backfilled before 1994 = 150 bps/an*
3. *Reporting biases, self selection, survivorship, ‘instant history’ = 300bps/an*
4. *Monthly rebalancing = appearance of lower risk*

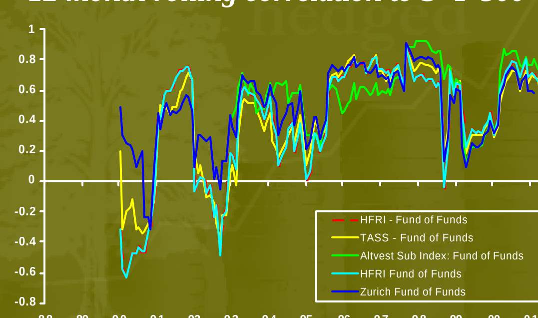
However, fund of funds databases do contain important information

1. *More reflective of the investor’s real hedge fund experience*
2. *Reflective of the ‘popular bets’ among hedge fund managers*
3. *Very little pro forma returns, all mistakes included, annual audit*
4. *Survivorship bias limited.. most stay in business*
5. *Rebalancing, if any, is real*

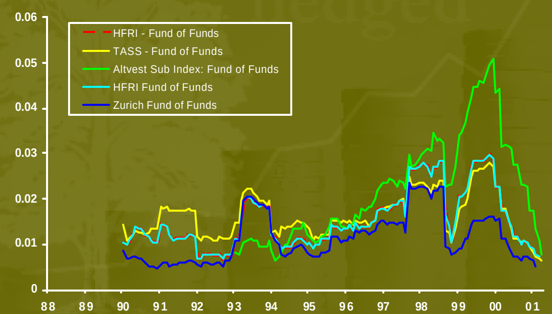
Fund of Funds
12 month rolling returns



Fund of Funds
12 month rolling correlation to S+P 500



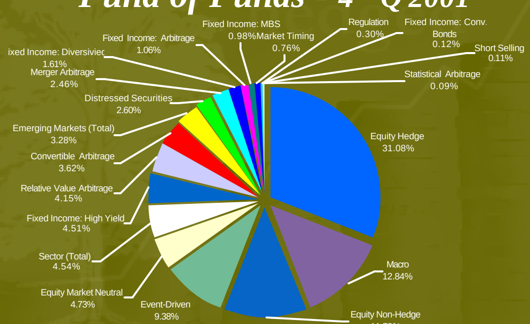
Fund of Funds
12 month rolling standard deviation



The hedge fund of fund investor's experience has been:

1. *Not alchemy!*
2. *More correlated to equity returns than advertised*
3. *More 'skewed' to down markets than advertised*
4. *Sometimes more volatile than advertised*
5. *Converging and maturing leading to rational and reasonable expectations*

Strategy Composition of Average Fund of Funds - 4th Q 2001

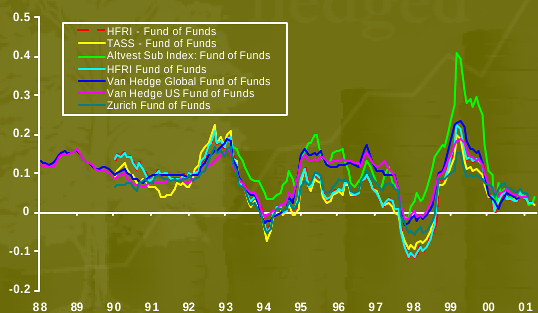


Important Benchmark No.1

*The investor in an **average** Fund of Funds today can hope to receive alpha of 5-10% per annum with annualized volatility of 3-6% and correlation of 40-60% with major equity indices.*

Fund of Funds

monthly alpha vs S+P 500



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Top 5 year monthly Alphas in Canada

Canadian Equity Funds (140 funds)			US Equity Funds (100 funds)		
1.	McElvaine Investment Trust	1.28	1.	Cambridge American Growth	0.89
2.	**Hillsdale Cdn Performance**	**1.25**	**2.**	**Hillsdale US Performance**	**0.81**
3.	Chou RRSP	0.98	3.	Vista American Stock 1	0.73
4.	Acuity Pooled Cdn Equity	0.79	4.	Vista American Stock 2	0.67
5.	Optima Strategy Cdn Eq Val	0.66	5.	North Growth US Equity	0.62
6.	Value Contrarian Cdn Equity	0.6	6.	All Points Index US Bear $US	0.53
7.	Mac Cundill Cdn Security A	0.57	7.	Chou Associates	0.51
8.	Co-operators Cdn Cons Foc Eq	0.53	8.	Fonds de Croissance Select	0.46
9.	Saxon Stock	0.49	9.	ABC American-Value	0.43
10.	Fidelity True North	0.43	10.	Optima Strat. US Eq Val Pool	0.43

*Source: BellCharts January 2002

**Hillsdale numbers audited as per AIMR by Deloitte & Touche

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Neither a broad based fund of funds nor a broad based index of hedge funds can capture the diverse characteristics of hedge fund styles or the true value of non-correlation.

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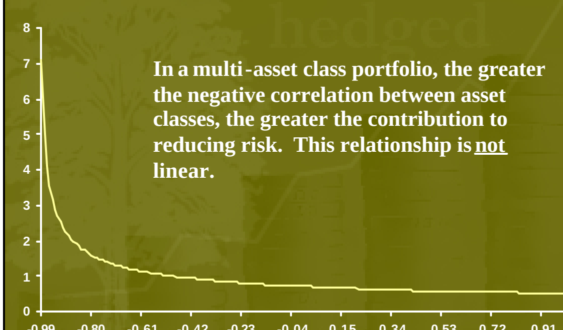
The Value of Non-Correlation



In a multi-asset class portfolio, the greater the negative correlation between asset classes, the greater the contribution to reducing risk. This relationship is <u>not</u> linear.

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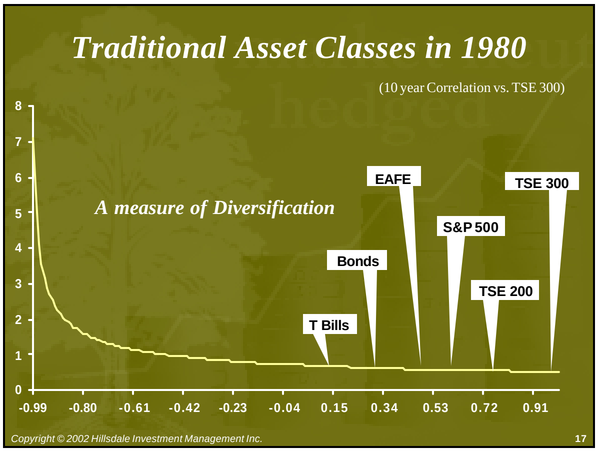
Traditional Asset Classes in 1980
(10 year Correlation vs. TSE 300)
A measure of Diversification
T Bills
Bonds
EAFE
S&P 500
TSE 200
TSE 300
0 1 2 3 4 5 6 7 8
-0.99 -0.80 -0.61 -0.42 -0.23 -0.04 0.15 0.34 0.53 0.72 0.91
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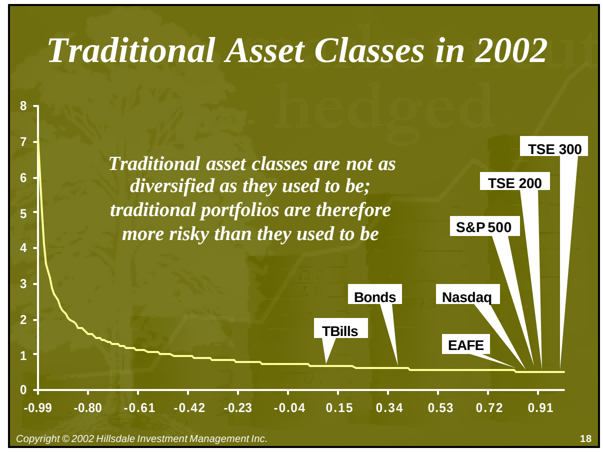
Traditional Asset Classes in 2002
Traditional asset classes are not as diversified as they used to be; traditional portfolios are therefore more risky than they used to be
TBills
Bonds
Nasdaq
EAFE
S&P 500
TSE 200
TSE 300
0 1 2 3 4 5 6 7 8
-0.99 -0.80 -0.61 -0.42 -0.23 -0.04 0.15 0.34 0.53 0.72 0.91
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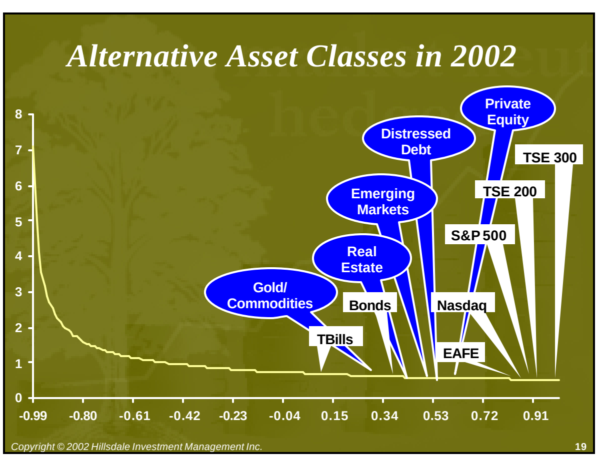
Alternative Asset Classes in 2002
Private Equity
Distressed Debt
Emerging Markets
Real Estate
Gold/ Commodities
TBills
Bonds
Nasdaq
EAFE
S&P 500
TSE 200
TSE 300
0 1 2 3 4 5 6 7 8
-0.99 -0.80 -0.61 -0.42 -0.23 -0.04 0.15 0.34 0.53 0.72 0.91
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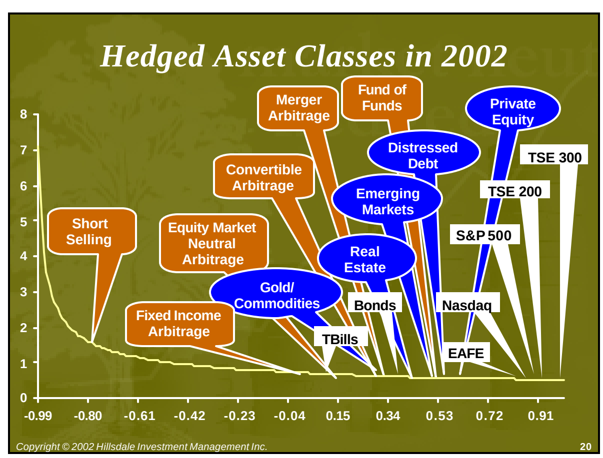
Hedged Asset Classes in 2002
Merger Arbitrage
Fund of Funds
Private Equity
Distressed Debt
Convertible Arbitrage
Emerging Markets
Short Selling
Equity Market Neutral Arbitrage
Real Estate
Gold/ Commodities
Fixed Income Arbitrage
TBills
Bonds
Nasdaq
EAFE
S&P 500
TSE 200
TSE 300
0 1 2 3 4 5 6 7 8
-0.99 -0.80 -0.61 -0.42 -0.23 -0.04 0.15 0.34 0.53 0.72 0.91
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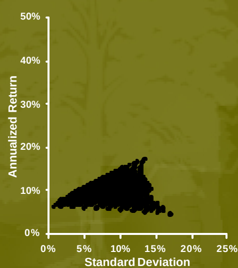
Benefiting from Diversity

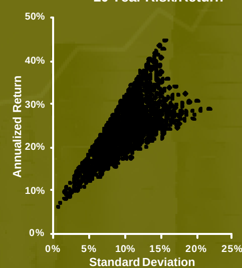
Unconstrained Optimization using Traditional Asset Classes only

10 Year Risk/Return

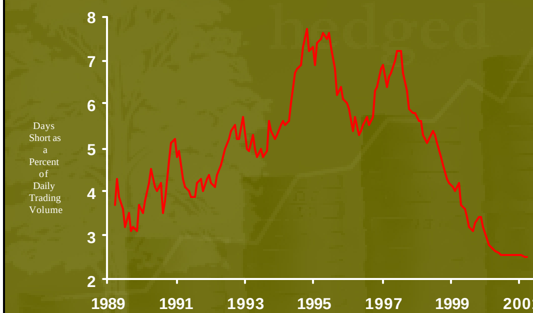


Unconstrained Optimization using Traditional *and* Hedged Asset Classes Including Short Selling

10 Year Risk/Return



S&P 500 Short Ratio



Source: Erlanger and Associates

Profit Opportunities in Down Markets

Year	*TSE 300*	*Hillsdale Shorts*
1987 oct *	-22.5%	+24.7%
1990 *	-14.8%	+34.7%
1994 *	-0.2%	+10.6%
1998	-1.6%	+20.3%
2001 sept.	-7.4%	+16.1%

* Simulated

"But, short sellers have notoriously lousy Sharpe Ratios…"

Bad Benchmark No. 1:

"The Sharpe Ratio is widely misused …" ,W.F. Sharpe (Apr. 3/02)

Technology

Emerging Markets Debt

Many good Sharpes do not equal a flat…ie.

Highly correlated, high Sharpe ratios have volatility which is additive.

A WIP:

The ***"Efficient Contribution"*** *Ratio*

Alpha (f)/ {Std Dev (f)/[1+(1-r)^2]}

Where a high number rewards a high alpha, low volatility (good risk control, not luck) and low to negative correlation.

Some Examples of Contribution:

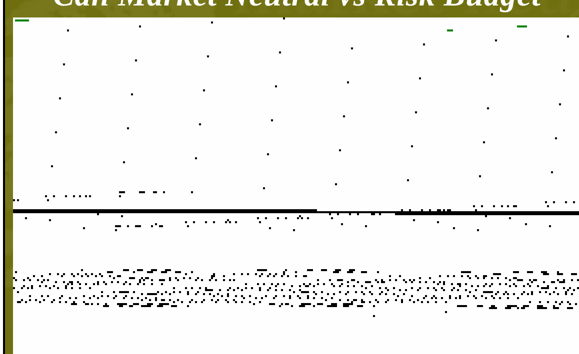
Index Fund	*0/{20/[1+(1-1)^2]}*	=	*0*
Top Decile Mgr	*4/{20/[1+(1-1)^2]}*	=	*0.2*
Fund of Funds	*8/{5/[1+(1-0.5)^2]}*	=	*0.4*
Eq Mkt Neutral	*8/{10/[1+(1-0.0)^2]}*	=	*0.8*
Short Seller	*6/{20/[1+(1+0.8)^2]}*	=	*1.0*
3 Short Sellers	*6/{10/[1+(1+0.8)^2]}*	=	*2.0*

Two Hedge Fund Mandates using Custom Benchmarks

	Long/Short Equity Fund	Market Neutral Equity Fund
Constraints		
Stocks long	30 to 40 positions	40 to 100 positions
Stocks short	30 to 40 positions	40 to 100 positions
Target weight	Equal	Equal
Rebalancing	+/- 33% of target	+/- 25% of target
Industry exposure	+/- 15% net long or short	+/- 5% net long or short
Market exposure	40% to 80%	-20% to 20%
Leverage	1x to 2x	0x to 1x
Typical Allocation	$1.60 long / $1.00 short	$0.90 long / $0.90 short
Annual turnover	150% of portfolio	80% of portfolio
Benchmarks over 2-3 years		
Return Expectation	TSE 300 + 6%	TB90 + 4%
Risk Budget	16 – 20% Annualised	6 – 8% Annualised
Correlation Budget	40%-60% relative to market	0% relative to market
Drawdown	½ of market	Maximum -5%
Time Underwater	½ of market	Maximum 6 months

Cdn Aggressive Hedged vs Risk Budget

Cdn Market Neutral vs Risk Budget



Congratulations! I think…

You have now substituted a controlled and measured exposure to a manager's "skill" for an open exposure to factors that are beyond your control (Inflation, Interest Rates, Equity Risk Premium, etc)

References

1. Brooks, Chris Kat, Harry " The Statistical Properties of Hedge Fund Index Returns and Their Implications for Investors" Working Paper October 2001 University of Reading.
2. Amin, G. S. and H. Kat, "Welcome to the Dark Side: Hedge Fund Attrition and Survivorship Bias Over the Period 1994-2001", Working Paper, ISMA Centre, University of Reading, December 2001.
3. Fung, William and Hsieh, David " Hedge Fund Benchmarks: Information Content and Biases" Working Paper February 2001 Duke University School of Management

Hedge fund databases were taken from the following:

- Altvest www.altvest.com
- MAR (Zurich Capital Markets) www.marhedge.com
- Hennessee Group www.hedgefnd.com
- CSFB/Tremont www.hedgeindex.com
- VanHedge www.vanhedge.com
- EACM 100 www.eacm.com
- HFR www.hfr.com