

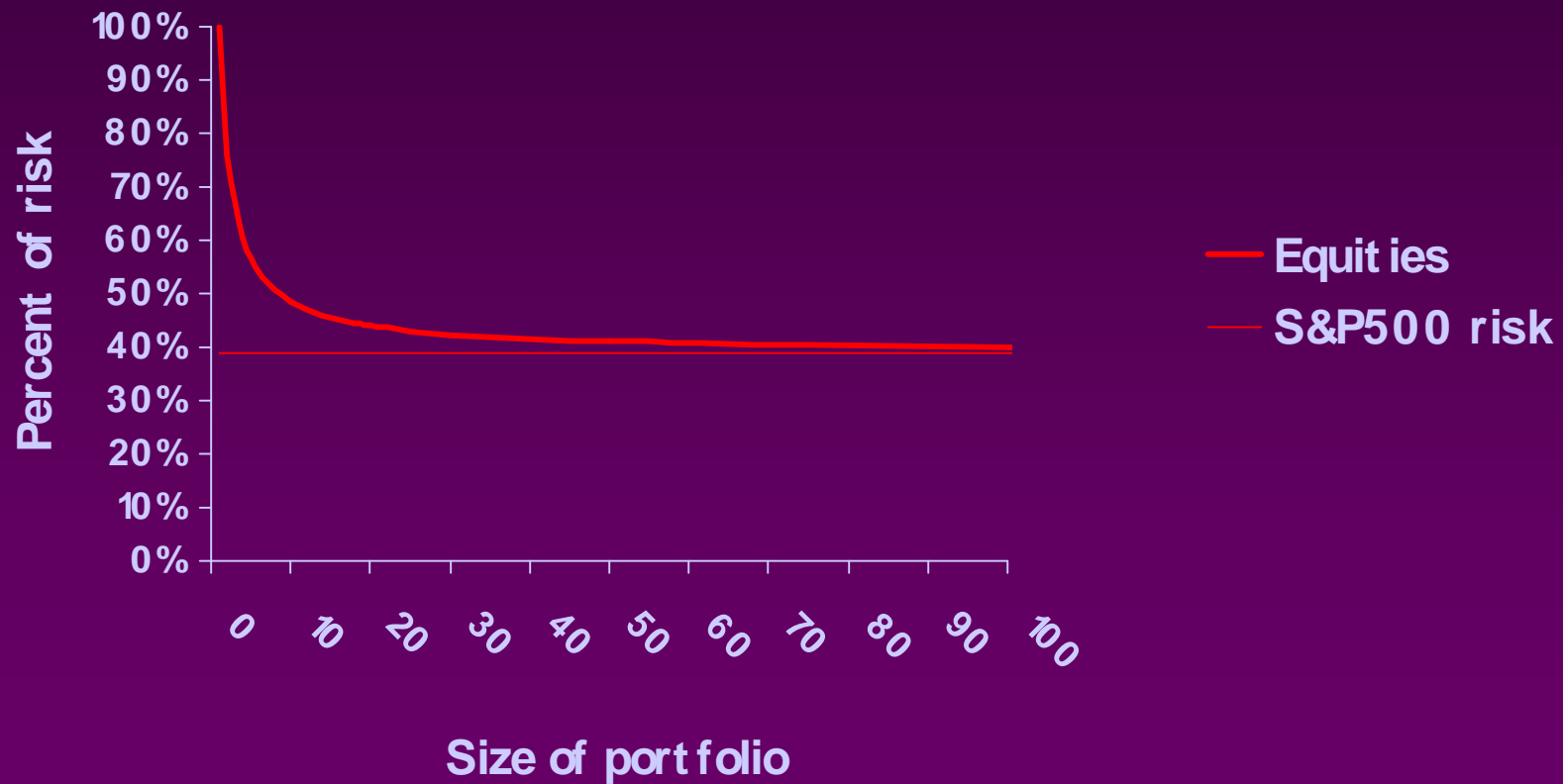
The Credit Crisis: Counterparty and Operational Risk Issues

Stephen Brown

**NYU Stern School of Business and
University of Melbourne**

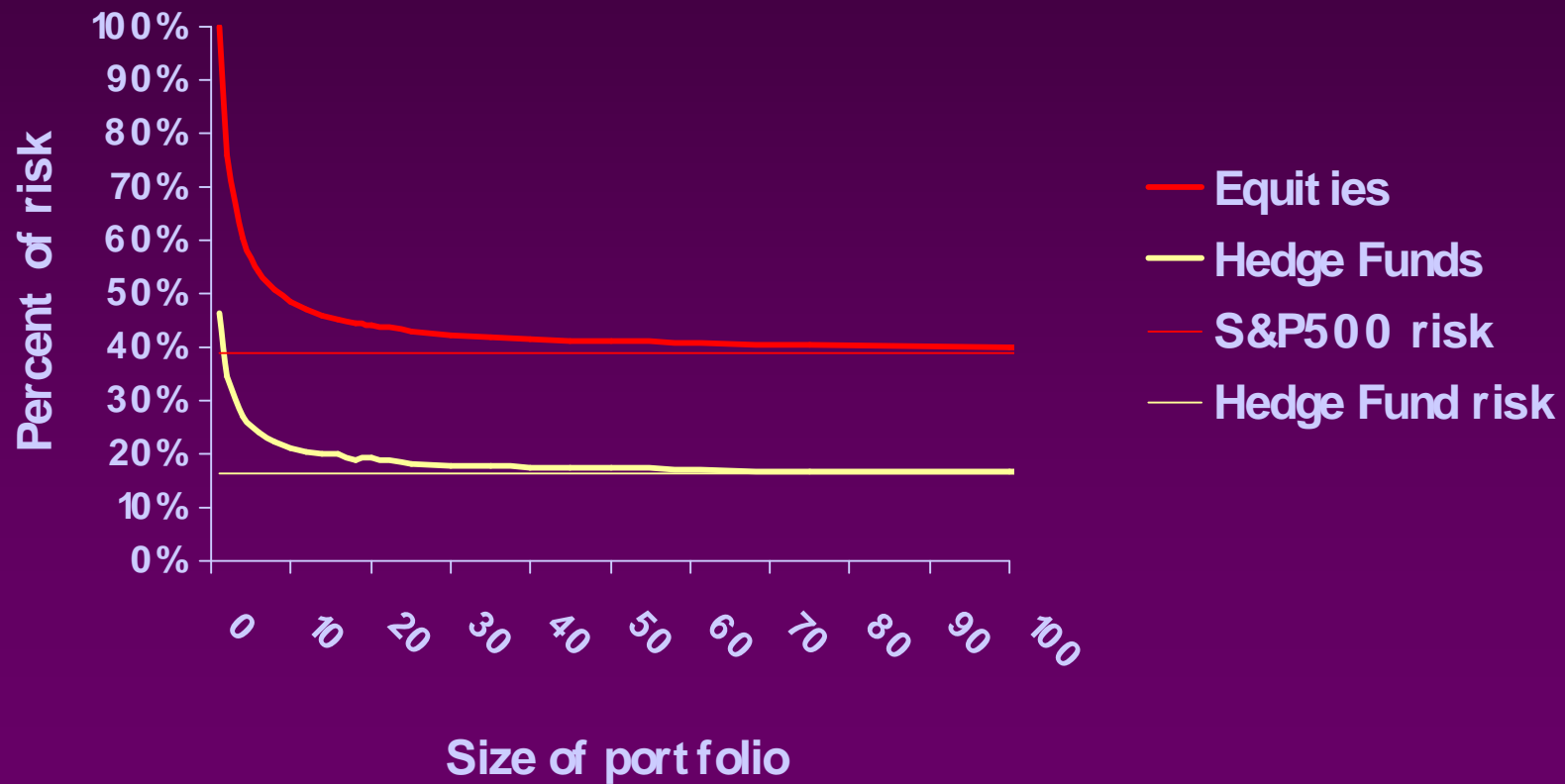
MCFS Twilight Seminar

Financial Risk



Source: Elton and Gruber 1995. Risk is measured relative to the standard deviation of the average stock

Financial Risk



Hedge fund failures January-August 2008

Style Category	Number of failures	Percent of style category (Dec 2007)
Convertible Arbitrage	5	3%
Dedicated Short Bias	2	5%
Emerging Markets	14	3%
Equity Market Neutral	24	5%
Event Driven	40	7%
Fixed Income Arbitrage	18	5%
Fund of Funds	94	3%
Global Macro	8	2%
Long/Short Equity Hedge	152	6%
Managed Futures	11	2%
Multi-Strategy	69	7%
Total	729	9%

Economies of Scale

Prior month assets under management

	1st quintile	2nd quintile	3rd quintile	4th quintile	5th quintile	All Funds	t-value (large - small)
All hedge Funds (excl. FoF)	14.47%	14.63%	12.87%	11.50%	11.03%	11.28%	-2.01
	<i>0.107</i>	<i>0.133</i>	<i>0.128</i>	<i>0.122</i>	<i>0.117</i>	<i>0.118</i>	
Funds of Funds	7.45%	9.25%	8.90%	9.54%	10.14%	9.98%	2.78
	<i>0.074</i>	<i>0.134</i>	<i>0.152</i>	<i>0.180</i>	<i>0.213</i>	<i>0.139</i>	

26% of Funds of Funds <\$25M !!!

All TASS \$US Funds 1995-2006. Value weighted returns, Sharpe ratio in italics

External conflicts

With:	Problem funds		Non problem funds	
	N	% Yes	N	% Yes
Broker/Dealer	359	73.1	1912	23.7
Investment Comp	359	50.3	1912	15.8
Investment Advisor	359	73.9	1912	41.6
Commodities Broker	359	53.5	1912	20.3
Bank	359	40.5	1912	9.8
Insurance	359	39.8	1912	9.4
Sponsor of LLP	359	56.8	1912	21.5

Internal conflicts

With:	Problem funds		Non problem funds	
	N	% Yes	N	% Yes
Trade securities with clients	359	30.7	1912	8.3
Allow trading on own account	359	84.8	1912	69.3
Recommend own securities	359	75.5	1912	50.4
In-house broker dealer	359	31.2	1912	2.3
Recommends own underwriting service	359	69.4	1912	46.8
Recommends commission fee items	359	22.6	1912	15.7
Recommends brokers	359	46.7	1912	38.0
Use broker provided external research	359	81.0	1912	70.5

A univariate measure of operational risk

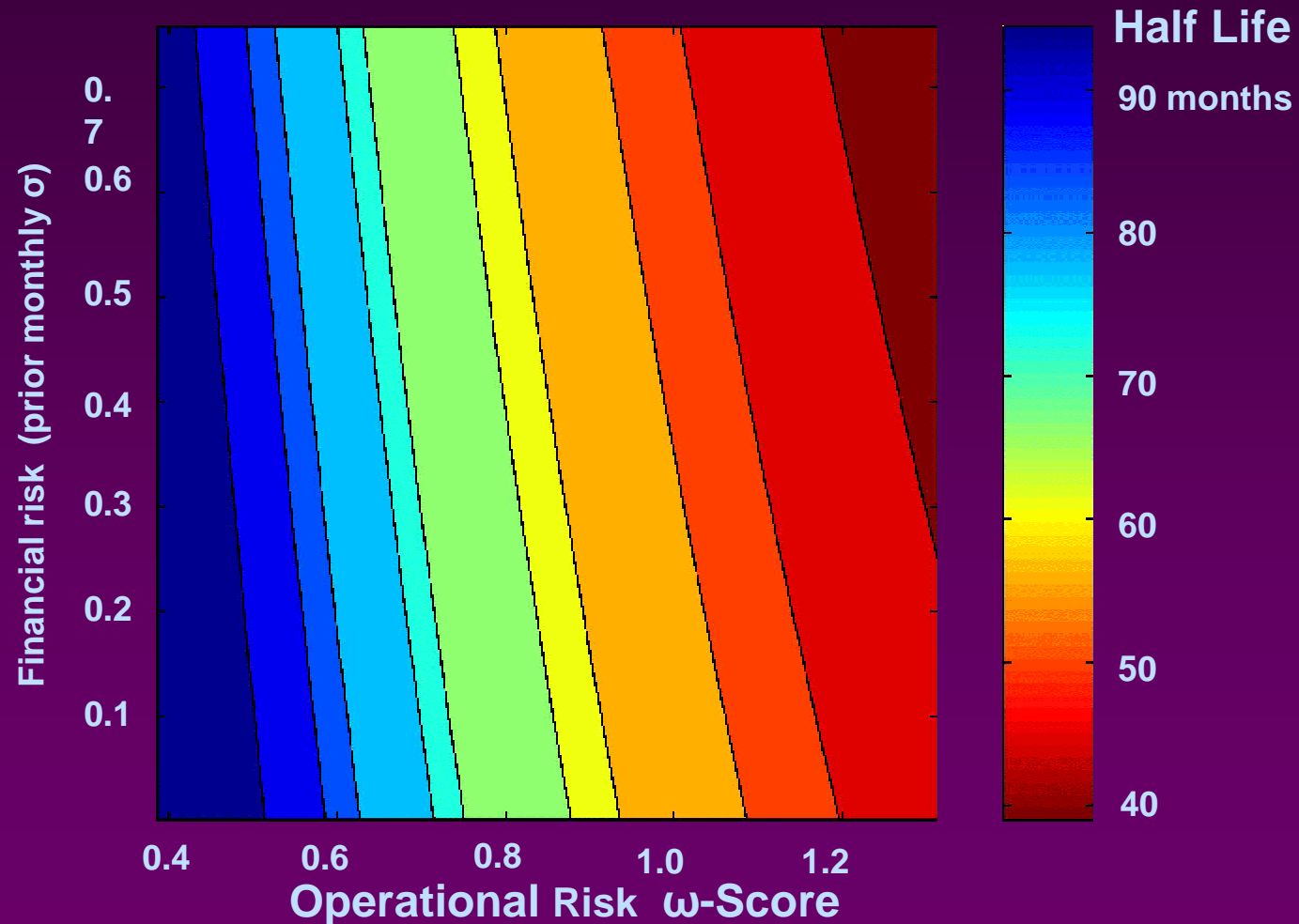
TASS		ADV	
Previous Returns	-0.27 ^{***}	AgencyCrossTrans	0.06 ^{**}
Previous Std. Dev.	-0.35 ^{***}	RelBrokerDealer	0.28 ^{***}
Fund Age	-0.07 ^{***}	RelInvestComp	0.24 ^{***}
Log of Assets	0.13 ^{***}	RelInvAdvisor	0.24 ^{***}
Reports Assets	0.12 ^{***}	RelPartSponser	0.30 ^{***}
Incentive Fee	-0.88 ^{***}	BuySellYouOwn	0.08 ^{**}
Margin	-0.29 ^{***}	BuySellYourClient	-0.08 ^{***}
Audited	-0.19 ^{***}	RecSecYouOwn	0.33 ^{***}
Personal Capital	-0.29 ^{***}	RecUnderwriter	0.26 ^{***}
Onshor	-0.05 ^{***}	RecSalesInterest	0.28 ^{***}
OpenToInv	0.08	RecBrokers	-0.33 ^{***}
Accepts Mgd. Accts.	-0.13 ^{***}	PercentOwner75	0.15 ^{***}
Corr ADV & TASS	0.42 ^{***}	DirectDomestic	0.31 ^{***}

The relationship between operational risk and subsequent returns

Year	Operational Risk ω -Score	t-value
1994	-2.28%	-2.2*
1995	0.10%	0.12
1996	-3.27%	-4.76**
1997	-2.61%	-3.71**
...
2002	-1.48%	-4.43**
2003	-0.41%	-1.12
2004	-0.67%	-2.45*
2005	-0.11%	-1.31
Average Value	-0.92%	-2.66**
Avg. Adjusted R²	40.17%	
Average Observations	1,027	

Cross sectional return regression on prior operational risk, financial risk and style dum

Operational risk and the half life of USD funds



Conclusion

- Important to quantify operational risk
 - **This risk is associated with conflicts of interest**
- Operational risk
 - **leads to low returns**
 - **Increases the likelihood of a financial risk event**
- Due diligence an important source of hedge fund alpha