
Panel Discussion of David Modest
What is Risk?

- Market / Price risk: *What causes prices to move?*
  - Fundamental risk
  - Liquidity / Noise risk

- Operational risk: *Do the pipes and control mechanisms work?*

- Financing risk: *Are the assets and liabilities duration matched and is the financing prudent?*

- Systemic risk: *Can any of the above cause markets to behave in a less than orderly fashion?*
The Persistence of Global Financial Crises

1987

Stock Market Crash 1987
- DJIA drops 23% & S&P falls 20% in 1 day
- Contagion ripples through other global stock markets as Nikkei falls 17% over 2 days, Hang Seng drops 34% over 2 weeks and FTSE falls 28% over a similar period
- Rolling 50-day volatility exceeds 60% for 3 months

Nikkei Crash, 1990
- From peak, Nikkei drops 46% during the year
- Nikkei continues to fall until 2003 with peak to trough decline of 53%
- Numerous episodes of short term volatility exceeding 50%

Mexican Peso Crisis, 1994-1995
- Peso loses 32% of its value in December 1994 relative to US$
- Peak to trough decline of 41% versus the US$ over 1994-1995 period
- Three different episodes of short term Peso volatility exceeding 80% during Q1 '94 and Q1 '95

Brazil Crisis, 1999
- Brazilian Real loses 41% of its value relative to US$ during January
- Bovespa stock index loses 62% of its value during the first two weeks of January but manages to gain in 20% for the month
- Rolling short term stock index volatility exceeds 100% for significant periods of time in the second half of '98 & the first half of '99

1990

High Yield Crash 1990
- Citigroup/Salomon High Yield index experiences peak to trough decline of 13%
- Drexel, Burnham Lambert collapses and declares bankruptcy in February

Latin American Crisis, 1994-1995 (Sept thru March)
- Peak to trough, Brazilian Bovespa stock index drops 61%, Mexican Bolsa stock index falls 49% and Argentine Merval stock index drops 58%

European Currency Crisis, 1992
- Band breaks on European Rate Mechanism
- Rate hikes and devaluations follow

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Asian Crisis, 1997
- Thai Bhat falls 16% in one day in July
- Peak to trough, Bhat loses 58% of its value relative to the US$
- Contagion ripples through other Asian currencies---with the Korean Won losing 5%, the Malaysian Ringgit losing 47%, and the Indonesian Rupiah losing 7% peak to trough versus the US$

Long Term Capital Management 1998
- $4.5B hedge fund fails
- All trades in which LTCM involved come under extreme price pressure
- Quoted five-year CAC and DAX implied stock volatilities exceed 50%

Russian Default 1998
- Peak to trough Russian Ruble loses 70% of it value--ending September down 61% (Rubles starts floating Sept 17) and suspends payments to foreign creditors

Emerging Market Equity Jitters 2000-2002
- Peak to trough S&P 500 stock index drops 15% and the associated CCC index drops 29%

Technology bubble bursts, 2000-2002
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U.S. and European bond market crash 1994
- Fed funds short term target raised six times during the year from 0% to 5.5%

Japanese Yen Appreciation 1998
- Japanese Yen appreciates 35% against the US$ between August 1998 and January 1999—with over 18% appreciation during October '98

Emerging Market Equity Jitters 2000-2002
- Peak to trough Saudi Arabia drops 51%, India falls 29%, and Turkey falls 33%

Accounting Scandals and Credit Market Collapse 2001-2002
- Enron defaults Dec '01, Adelphia defaults June '02 and WorldCom defaults July '02
- Peak to trough Citigroup/Salomon high yield index down 15% and the associated CCC index down 29%

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Are the Market Risk Profiles of Hedge Funds Changing Over Time?

Possible sources of change:

- Fundamentals change affecting asset volatilities (e.g. apparent fragile equilibrium in global energy markets)
- Liquidity / noise dynamics change (e.g. de-levering of FNMA, expansion in the scope of HF investments) — affecting volatility of particular assets
- Leverage changes affecting NAV / equity volatilities
- Portfolio dynamics change (e.g. correlations of price movements)
- Opportunity set changes due to financial innovation (e.g. credit derivative and tranche markets)
The Serial Correlation of Hedge Fund Returns
The Persistence of Hedge Fund Failures

- **1994**
  - **Granite Fund** (David Askin), 1994
    - Collateralized mortgage positions
    - Leverage

- **1998**
  - **Long-Term Capital Management** (John Meriwether), 1998
    - $4.5B hedge fund fails
    - All trades in which LTCM involved come under extreme price pressure
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- **2000**
  - **Maricopa Funds** (David Mobley), 2000
    - Falsified financial statements
    - Fraud
  - **Manhattan Fund** (Michael Berger), 2000
    - Technology stocks
    - Falsified financial statements

- **2002**
  - **Eifuku Master Fund** (John Koomen), 2002
    - Japanese stocks
    - Leverage and concentration of positions
  - **Lancer Offshore Fund** (Michael Lauer), 2003
    - Distressed small cap stocks
    - Falsified financial statements
  - **Maricopa Funds** (David Mobley), 2003
    - Collateralized mortgage positions
    - Leverage

- **2003**
  - **Aman Capital** (Mayur Ghelani & Michael Syn), 2003
    - Derivatives trades
    - Asian markets
  - **Beacon Hill Asset Management** (John D. Barry), 2002
    - Falsified financial statements
    - Fraud
  - **Lipper & Company Funds** (Edward Strafaci), 2002
    - Convertible arbitrage
    - Falsified financial statements

- **2005**
  - **Bailey Coates Cromwell Fund** (Jonathan Bailey & Stephen Coates), 2005
    - Event arbitrage
    - 2004 Eurohedge Best New Equity Fund
    - Concentrated positions
  - **Lancer Offshore Fund** (Michael Lauer), 2003
    - Distressed small cap stocks
    - Falsified financial statements
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- **2006**
  - **Lancer Offshore Fund** (Michael Lauer), 2003
    - Distressed small cap stocks
    - Falsified financial statements
  - **Mother Rock** (Bo Collins), 2006
    - Commodities
    - Concentrated natural gas positions
  - **Beacon Hill Asset Management** (John D. Barry), 2002
    - Falsified financial statements
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- **2007**
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Are the Operational Risk Profiles of Hedge Funds Changing Over Time?

- Possible sources of change:
  - Financial Innovation
    - Trade confirm procedures
      - A July 2005 report by a new Counterparty Risk Management Policy Group (CRMPG II) called attention to the fact that the clearing and settlement infrastructure for credit derivatives (and over-the-counter derivatives generally) had not kept pace with the volume of trading. In particular, a backlog of unsigned trade confirmations was growing, and the acceptance by dealers of assignments of trades by one counterparty without the prior consent of the other, despite trade documentation requirements for such consent, was becoming widespread.’’ (Testimony of Patrick M. Parkinson Deputy Director, Division of Research and Statistics before the Subcommittee on Securities and Investment, Committee on Banking, Housing, and Urban Affairs, U.S. Senate May 16, 2006)
    - Derivative settlement procedures (e.g. Delphi)
  - Position marking procedures
    - Third party vendors
  - Mark to market process
    - Bilateral vs. one-way
    - Netting
  - Fund segregation procedures
    - Refco
Are the Financing Risk Profiles of Hedge Funds Changing Over Time?

Possible sources of change:

- Collateral and the duration match between assets and liability
  - Hedge fund push in less and less liquid assets

Counterparty risk management

- Counterparty Risk Management Policy Group (CRMPG), which in July 1999 issued its own complementary recommendations for improving counterparty risk management practices.
- The BCBS sound practices have been incorporated into Federal Reserve supervisory guidance and examination procedures applicable to banks’ capital market activities. In general terms, routine supervisory reviews of counterparty risk management practices with respect to hedge funds and other counterparties seek to ensure that banks (1) perform appropriate due diligence in assessing the business, risk exposures, and credit standing of their counterparties; (2) establish, monitor, and enforce appropriate quantitative risk exposure limits for each of their counterparties; (3) use appropriate systems to measure and manage counterparty credit risk; and (4) deploy appropriate internal controls to ensure the integrity of their processes for managing counterparty credit risk.’’ (Testimony of Patrick M. Parkinson, Deputy Director, Division of Research and Statistics before the Subcommittee on Securities and Investment, Committee on Banking, Housing, and Urban Affairs, U.S. Senate May 16, 2006)

Financing triggers
Is the Systemic Risk due to Hedge Funds Changing Over Time?

Possible sources of change:
- Market risks
- Operational risks
- Financing risks

- Regulatory policies
- Legal arrangements
  - Side-car agreements
- Disclosure policies
- Quality of management teams
- Risk management policies and procedures
- Crowdedness of trades