Evolution of the Hedge Fund Industry

Keith Black, CFA, CAIA

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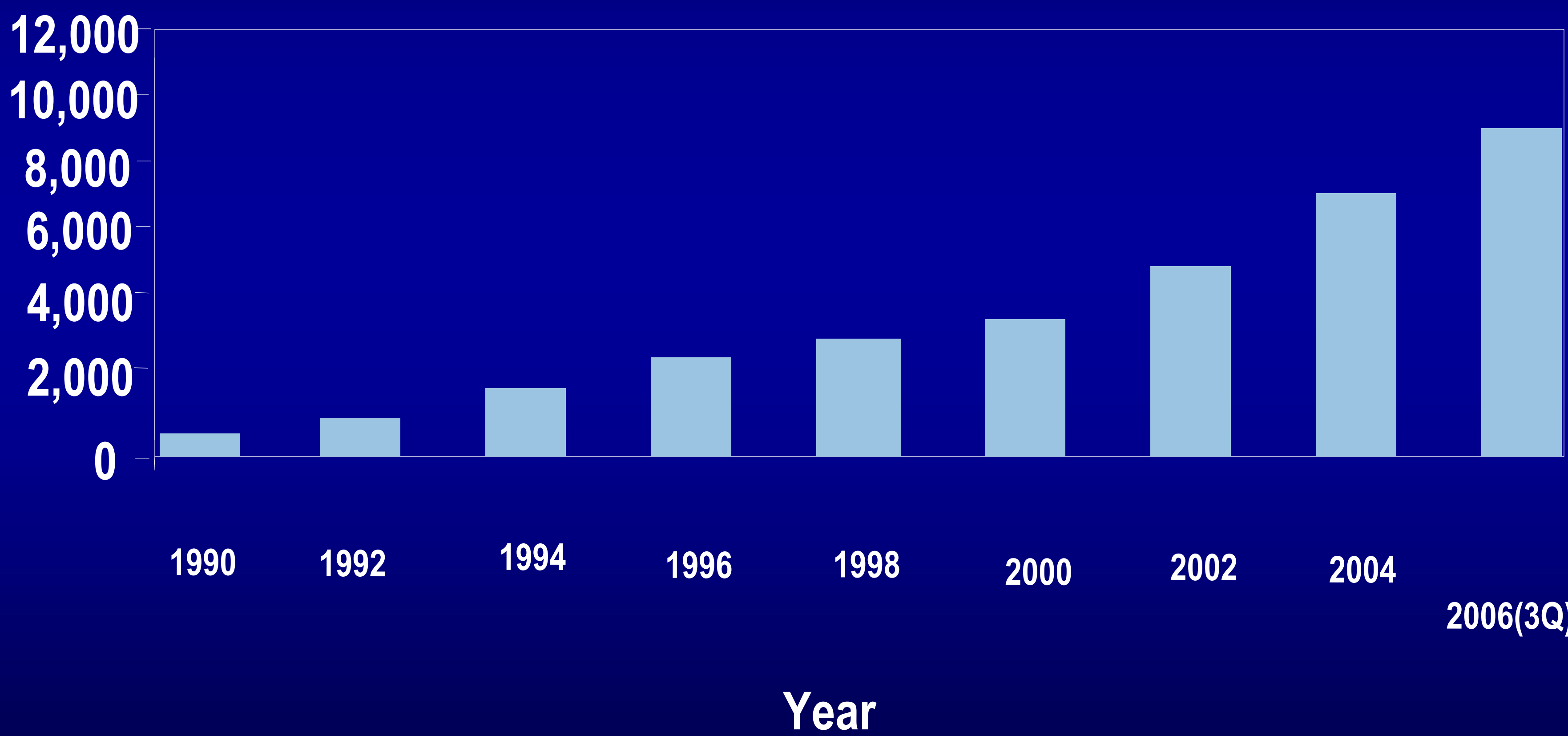
What are Hedge Funds?

- Far from a homogenous asset class
- Some hedge, and offer low volatility and correlation to traditional asset classes
- Others take levered, directional positions and have very high volatility
- Technically, they are private partnerships, frequently characterized by their incentive fee structure

Growth in Hedge Funds

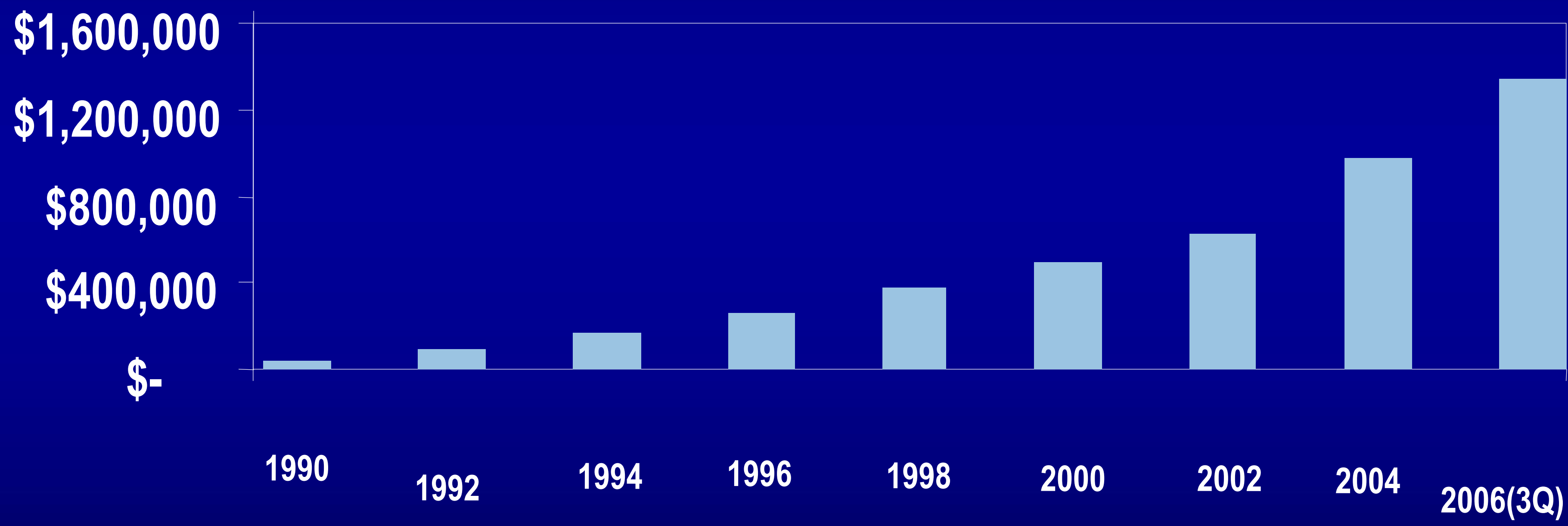
Estimated Number of Hedge Funds 1990 - 3Q 2006



Source: HFR

Growth in Hedge Funds (cont'd.)

Estimated Growth of Hedge Fund Assets 1990 – Present ($ in Millions)

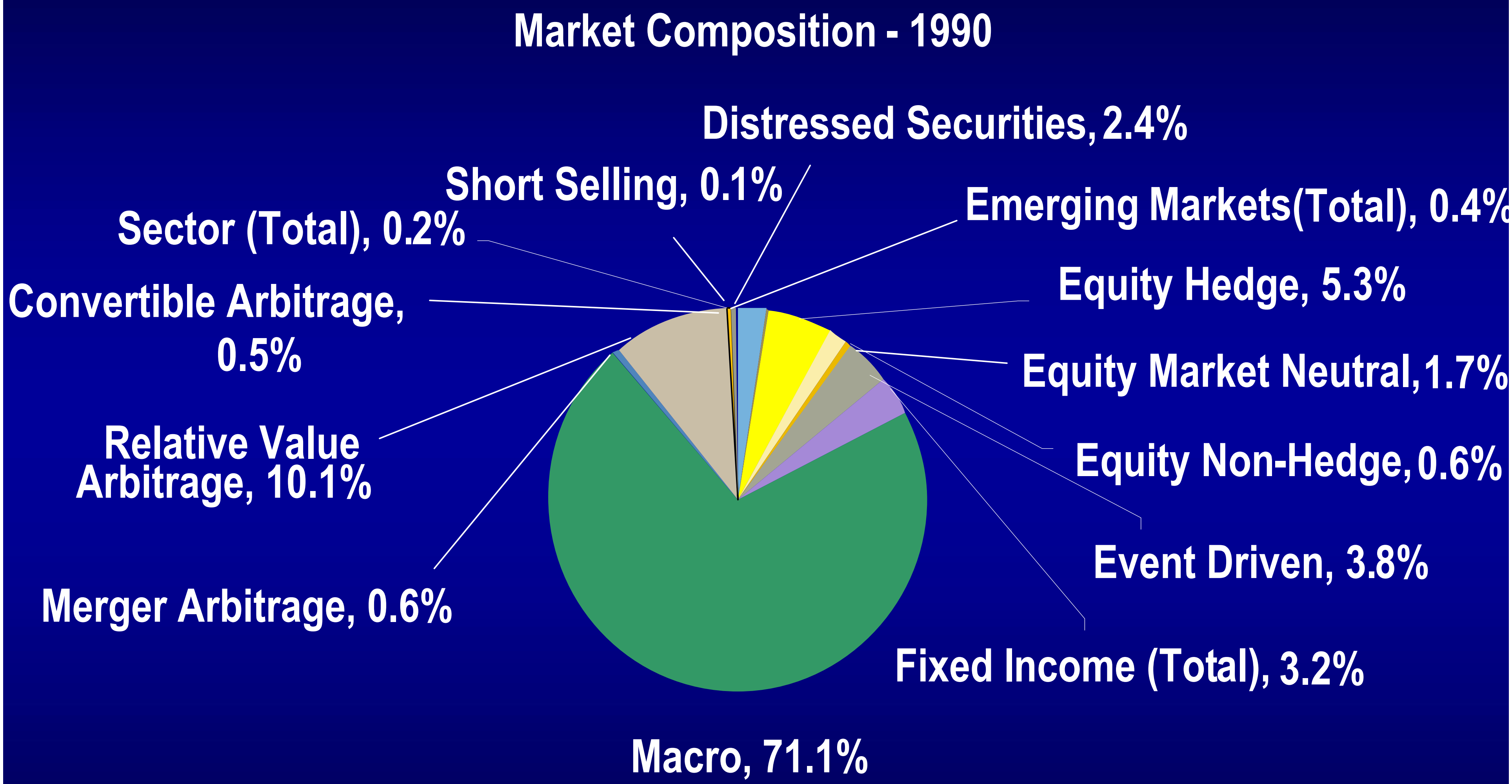


Source: HFR

The Industry is Changing

- More diversified style exposures
- Consolidation
- Convergence

Diversifying Hedge Fund Styles



Source: HFR

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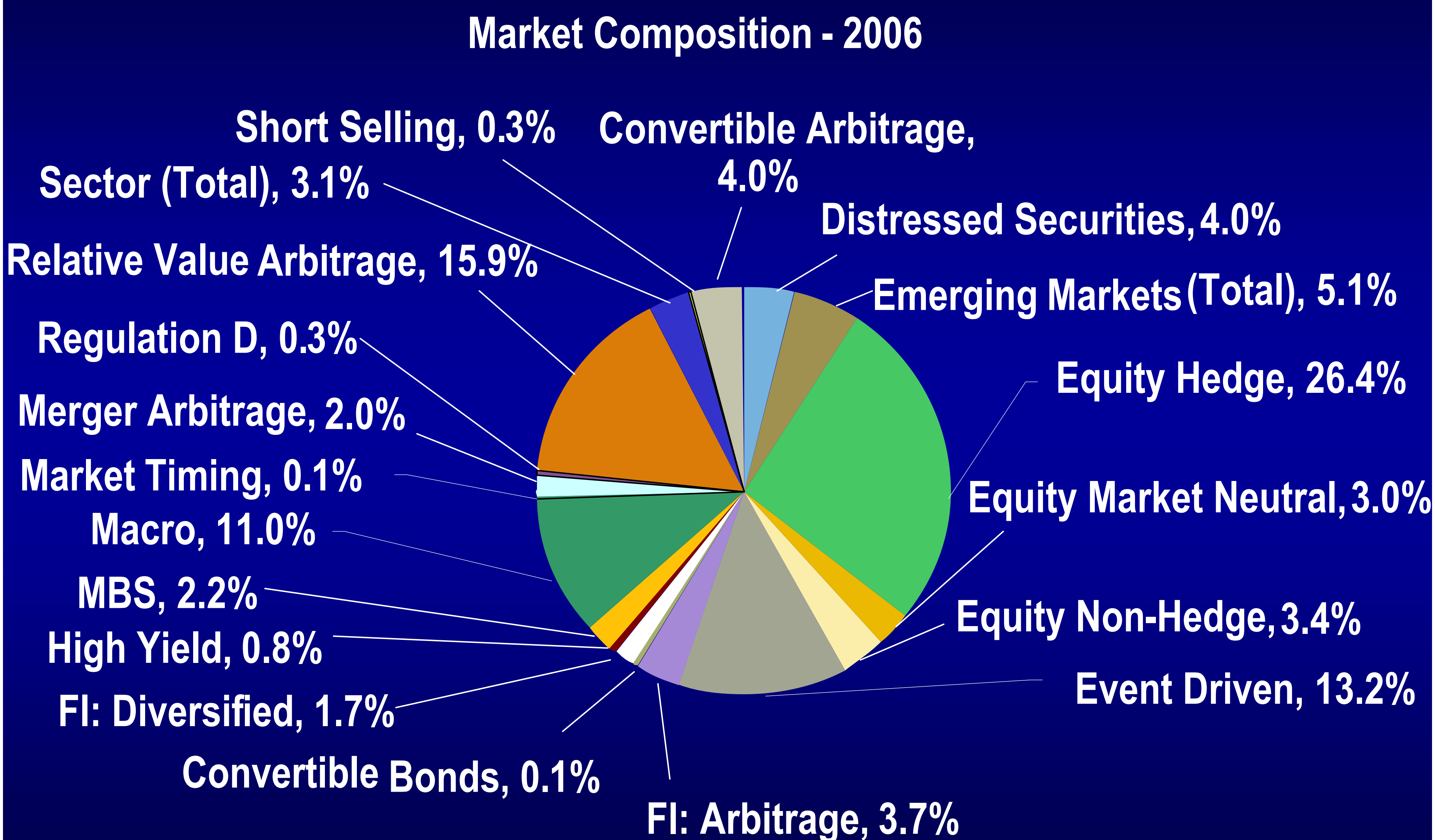
Diversifying Hedge Fund Styles (cont'd.)



Consolidation

- The majority of new assets allocated to hedge funds are from institutions, not individuals
- Institutional investors have higher standards of risk management and transparency

Consolidation (cont'd.)

- The big are getting bigger!
- "If hedge funds were a country, it would be the eighth biggest on the planet," *Janet Bush, New Statesman*
- 9,228 managers have over $1.3 trillion AUM
- But the smallest 9,000 managers control only $200 billion!
- Fifty managers control half of all hedge fund assets

Number of Managers	Minimum AUM	Total AUM
29	$10 billion	$484 billion
50	$7 billion	$650 billion
240	$1 billion	$1,198 billion

Source: Absolute Return Magazine, January 2007

Why The Consolidation?

- Institutional investors are showing a clear preference for "institutional quality" managers

- Institutional quality managers
  - Have invested significant amounts in people, systems, and risk management
  - Have a reasonable level of transparency
  - Have a large enough asset base to have proven the ability to accept institutional levels of assets

Who Are The Largest Managers?

Manager	AUM
J. P. Morgan	$56.2 Billion
Goldman Sachs	$40 Billion
D. E. Shaw	$34 Billion
Bridgewater Assoc.	$32 Billion
Och-Ziff Cap. Mgmt.	$29 Billion

Source: Absolute Return, September 2007

Hedge Fund Acquisitions

- Some of the largest managers are buying hedge fund management firms
- Large commercial and investment banks are aggressively acquiring (or maintaining ownership stakes in) hedge fund management firms

Owner/Acquirer	Target
Morgan Stanley	Front Point Partners Lansdowne Partners
JP Morgan	Highbridge Capital Management
Citigroup	Old Lane
Lehman Bros.	GLG Partners

Alternative Manager IPO's

- While some alternative investment managers sell to acquirers, others are considering an IPO
- Revenues and market capitalization rival that of some mutual fund managers who have much larger AUM

Company	Status
AQR Capital Management	25% owned by AMG, considering IPO
Blackstone Group	IPO
Fortress Investment Group	IPO
GLG Partners	Reverse merger of public company
Oaktree Capital Management	Considering IPO

Convergence

- What is a hedge fund?
- Blurring the lines between hedge funds, traditional managers, and private equity

Hedge Funds vs. Private Equity

- Hedge funds and private equity firms are competing for the same targets
- Overlap is most likely in distressed funds
- More assets chasing targets can lead to higher deal prices and falling returns

Hedge Funds vs. Traditional Managers

- Both institutional and retail asset management firms are introducing products that mimic hedge fund strategies
- The most popular strategies are long-short equity and 130-30

Converging Fee Structures

- Typical hedge fund fees
  - Management fee 2% + incentive fee 20%
- Typical institutional manager fees
  - Management fee 0.50%
- Typical 130-30 fees
  - 0.8% fixed management fee OR
  - 0.60% management fee + 10% of profits above the stock market index

Now The Fun (Or Scary) Part

- What causes hedge funds to blow up?
- Defining operational risk and market risk
- Case studies
  - Bear Stearns = LTCM?
  - Wood River
  - Lancer
  - Bayou

- Extreme leverage
  - $5 billion in customer assets, $125 billion in assets before OTC positions
  - Swaps, options, and derivatives had $1.25 trillion in notional exposure
  - Many positions were designed as spreads

LTCM: The Strategy

- Invested in fixed income products after a dramatic tightening in credit spreads in a low volatility market
  - Long risky and illiquid bonds in 30 countries
  - Convertible bonds, mortgage backed, Russian government
  - Short U.S. Treasuries
  - Underestimated the flight to quality market reflex
- Style drift
  - Also invested in merger arbitrage and short equity volatility positions
  - Losses from these positions exceeded their fixed income losses
  - Most positions were illiquid and suffered in times of rising volatility

LTCM: Risk Management

- Reliance on value at risk
  - Assume historical volatility and correlation
  - Underestimate rising volatility and correlation
- Violation of risk models
  - Target a daily volatility of $45 million
  - Why not reduce positions when daily volatility exceeded $200 million at times in 1995-1997?
- Large position sizes
  - Losses grow rapidly when the market knows your positions and you are forced to liquidate

Bear Stearns

- Strangely similar to the LTCM scenario
- Borrow large sums of money to invest in CDOs
  - Invest in the AAA tranche of CDOs backed by subprime mortgage-backed securities (MBS)
  - Hedged against a general decline in credit quality, but subprime spreads widen much more than investment grade credit spreads

Bear Stearns (cont'd.)

- The High Grade Structured Credit Strategies Fund raised $916 million from investors
  - $9.7 billion in long positions, $4 billion in short positions
  - Position value of 15x investor capital
- The Enhanced Leverage Fund raised $642 million
  - $11.5 billion in long positions, $4.5 billion in short positions
  - Position value of 25x investor capital
- As we learned from LTCM, it is dangerous to
  - Buy risky fixed income products at low credit spreads over Treasury securities
  - Have large leverage on illiquid and difficult-to-price securities

Wood River Capital Management

- Equity hedge fund with $265 million AUM
- Offering memorandum “typically limited” position sizes to 10% of portfolio
- Invested 25% of the fund in one stock that declined in value by 75%
- Counterparty risk: declined to settle a trade, which cost the broker $8 million in losses

Lancer Group

- Michael Lauer had a good pedigree
  - Graduate of Columbia University
  - Six time member of Institutional Investor All-Stars
- Equity fund raised $613 million in capital
- Mix investments of public and private shares in small capitalization firms

Lancer Group (cont'd.)

- Assets valued at $1.2 billion, but fund only held securities worth $70 million
- Portfolio manager earning incentive fees and valuing all securities in the fund
- Buy 1.7 million illiquid shares
  - Purchase private shares at 23¢ each
  - Buy 2800 public shares at $19.50 each
  - Window dressing: last trade of the month
  - Value all shares at public market value
- Earn incentive fees on phantom 8000% gain

Lancer Group (cont'd.)

- Lack of 13D filings
  - Required when you reach 5% ownership in a firm
  - 13D filings can be used to measure position size and diversification
  - In 15 companies, Lancer failed to disclose 5% holdings as required by law
- Big Four auditor asked questions, but ultimately verified valuations
  - Asked for appraisal of 10 positions, only received four
  - Appraisal written by a biased party who owned the shares of the underlying firms

Bayou Management

- Samuel Israel III
  - Overstated resume by claiming trading authority at Omega Advisors
- Long-short, day trading equity fund
- Claimed $400 million AUM
  - Only raised $160 million AUM
  - Arizona seized $100 million in investor assets when Israel tried to move these funds into personal accounts

Bayou Management (cont'd.)

- **Red flags**
  - The CFO of the fund was also a principal of the firm's auditor
  - No independent audit was conducted, which would have revealed overstated AUM and fraudulent returns
  - Trades were cleared through an affiliated brokerage firm
  - Trading volume declined markedly in last 18 months of the fund
  - The CEO and CFO were a quorum of the board

What Lessons Have We Learned?

- Focus on the relevant risks in each of these case studies
- Operational risks – losing money due to fraud or disregard of investment guidelines
- Market risks – losing money due to investment losses
- 54% of hedge fund failures are at least partially attributable to operational risks
- 38% of hedge fund failures solely from market risks
- 8% of hedge fund failures attributable to business and other risks (Kundro and Feffer, 2004/2005)

Operational Risk Factors

- Is the fund audited by a reputable auditing firm?
- Are there appropriate separations between
  - Trading and risk management?
  - Trading and security valuation?
  - Investor and manager assets?
- Are there significant changes in trading volume and the types of trades implemented?

Operational Risk Factors (cont'd.)

- Has the fund become less correlated to other funds trading the same style?
- Verify the AUM with banks and brokers
  - Verifies honesty of manager
  - Volatility in AUM shows large contributions and withdrawals
- Estimate pricing at a random mid-month date
  - Avoid window dressing
  - Danger when mid-month valuations differ dramatically from month-end valuations in quiet market
  - Third-party verification of month-end valuations

Market Risk Factors

- Investor capital vs. total asset size allows calculation of leverage
  - Watch futures, swaps and options where notional value can be much larger than invested value
- Diversification
  - Number of positions
  - Size of largest, average, and largest 10 positions
  - Diversification across security issuers
  - Diversification across security types and economic sectors
  - Do all trades have the same short volatility or short credit spread theme?

Market Risk Factors (cont'd.)

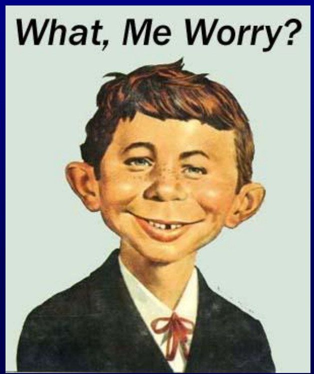
- Liquidity
  - Listed vs. OTC products
  - Leverage and liquidity should be inversely related
  - % of trading volume and market size owned
- Market risks
  - Equity risk, credit spread risk, volatility risk

Should We Worry?

- Hedge fund failures are dramatic, but relatively infrequent events

- We shouldn't let hedge fund failures prevent us from investing with talented and careful fund managers

- Learning from the past debacles can help us avoid them in the future



EnnisKnupp Due Diligence

- The opportunistic strategies group at EnnisKnupp is well aware of the potential for losses in hedge fund investments

- Our focus is on finding institutional quality managers who demonstrate skill and attempt to reduce operational and market risks