BY PRASENJIT CHAUDHURI ('84 CHEMICAL)

Hedge Funds

Mathematicians, physicists, financial engineers, economics Nobel laureates, and even the occasional Field's medal winner – the world of hedge funds attracts them all.

Today, Wall St. as we know it is a virtual continuum tying four cities (collectively known as money centers - NY, London, Hong Kong, Tokyo) together electronically, in a 24-hour work day. Wall Street opens when Tokyo is heading to bed, and preceded in succession by HK and London markets.

Contrary to glamorous folklore, foundations for Wall Street's mystique were laid by pioneering work from Black, Merton and Scholes back in the early '70s (winning the 1997 Nobel prizes). The heart of it lives in a world not open to public view or even the business press. This is the world of hedge funds (also see **BITSians on Wall Street**) and proprietary traders. Citizens include mathematicians, physicists, financial engineers and the occasional economics laureate and even the occasional Field's medal winner.

During a recent conversation with a Wall Street proprietary trader and a fellow BITSian, I had the chance to learn more. Our friend graduated dual Maths. & CS from BITS and earned a Masters & PhD in Mathematics from a well-known US university. He currently heads the proprietary quantitative trading desk at a major international bank. We respect his request for anonymity in order to comply with SEC guidelines.

Why are hedge funds and private equity so much in the news lately?

The negative performance of the stock market in the years 2000-2002 and its mediocre performance this year, as well as a regime of historically low interest rates has created an uncertain investment environment for institutional investors in the traditional (also known as "long only") stock and bond investments.

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Traditional stock or bond funds target relative returns and seek to outperform a specific underlying market (defined by passive benchmark indices – such as the S&P 500 & the MSCI Barra). In contrast, hedge funds and private equity funds (also called alternative investments) target absolute returns with much of their performance driven by the active management skills of the fund manager.

As a result institutional investors are increasingly adding more risk exposure through investments that meet their long-term assets growth goals. Hedge funds and private equity funds (which provide this opportunity to increase risk exposure) have therefore seen a marked increase in capital entrusted to them. The business press naturally followed.

Tell me about the various roles in a hedge fund

Portfolio Manager: He/she makes investment decisions for the firm and implements the firm's trading strategies. They oversee research & trading, and build and analyze new trading models while improving existing ones. Although their backgrounds range from the arts/humanities to the sciences, they tend to be numerate, creative and thorough.

Trader: In some hedge funds, the "Traders" role is the same as a "Portfolio-manager", while in others it typically refers to execution traders (i.e., those who primarily execute trades within preset performance parameters).

Quant: Their main job is to carry out quantitative research, develop and implement various quantitative models, and review academic research. They work closely with traders and/or portfolio managers, and are required to have strong communication skills. Typically they would have an advanced degree in a quantitative discipline, solid computing skills, some experience with a statistical software package like S-Plus or Matlab and a very strong academic track record.

Software Developer: They develop research and trading applications, integrate real-time and historical data feeds, build database applications and deploy quantitative models and libraries. They typically have some quantitative background, good programming skills and prior experience with financial applications. Many quantitative traders even started their careers on the software side.

What makes proprietary trading different from other financial trading activities on Wall St.?

There are basically two types of traders: flow traders and proprietary traders. The "flow" refers to client order flow. Flow traders trade on behalf of the bank's clients with the bank's salespeople acting as intermediaries between the two parties. They are primarily concerned with market making and hedging. On the other hand, proprietary traders trade on behalf of the bank i.e., they trade the bank's own capital.

Are hedge funds serving a useful purpose for financial markets?

Absolutely. They provide diversification for investors (their returns tend to have low correlations with traditional funds) and make the markets more efficient. Many will argue that they add liquidity to the markets, although clearly there are times when they exacerbate liquidity problems as well.

Why do hedge funds charge higher fees relative to traditional long-only funds?

Any investment's risk can be decomposed into market (passive) risk and residual (active) risk. As you know, the expected return of market risk is called "beta" while the expected return of active risk is called "alpha". By definition active risk is uncorrelated to market risk. Investors in traditional funds primarily target beta while investors in alternative investments primarily target alpha. The overall risk-reward profile of a traditional portfolio can be greatly enhanced by adding some active risk to it without significantly increasing its aggregate risk.

Any common investor can take advantage of beta (by investing in a garden variety index fund) paying a small management fee. On the other hand, achieving a "real" alpha is very valuable to any investor looking for above-market returns. It is here that hedge fund investors pay skilled managers high fees for getting exposure to what they consider desirable active risk, for their portfolio.

Hedge funds have often been labeled "high-risk" in recent times.

People tend to think of hedge funds as risky schemes largely due to negative publicity from a few bad apples. From time to time, there have been firms that indulged in accounting irregularities or frauds. There are several publicized examples of poor risk management. However, you shouldn't expect all hedge funds to make money for their investors. In any industry at any given time there will always be below average firms. Rigorous due diligence on the part of investors is therefore critically important.

Where do you see this industry heading in the future?

The hedge fund industry is rapidly evolving from one that's focused on a few niche strategies to a much broader one covering a wider universe of investment opportunities. It is clear that the game is getting harder. Therefore older business models built around one or two main trading strategies are giving way to newer business models that involve multiple businesses. It is a natural evolution from a simple business model to a more complex one where various differentiated units (think of them as imperfectly correlated revenue streams) interact and are integrated into one body through an adaptive learning process.

It is not surprising to see hedge funds introduce new products and forge into non-traditional investment areas even for their taste. The obvious goal is to diversify their revenue streams and to create new ones. Those who do not invest in their future are not going to last long in this space.

Although this has been a relatively tough year for the industry as measured by the average performance of hedge funds, this is part of the industry's evolutionary process. Below average managers get eliminated from the business and the bar is raised for the industry as a whole.

While on one hand the industry is maturing, it's also the kind of tough environment that usually leads to major innovations and break-through. There is still a lot of creative energy in this space today and its changing old forms and shapes. In some ways, the hedge fund industry is also beginning to look as if it's getting closer to the mainstream. One thing however will remain the same - investors should always bet on people and their businesses, not appearances or business labels.

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BITSian Women in Business

Anuradha Parthasarathy (Anu), ***Founder, Global Executive Talent***

Anuradha (Anu) Parthasarathy is the Founder and CEO of Global Executive Talent, a senior executive search firm finding leadership talent for US-based companies going offshore and Asia-based companies making forays into the US market. Global Executive Talent is based in Menlo Park, CA.

Anu is an industry veteran in cross-border executive search and offshoring, and has helped build leadership teams for several succesful companies in the US and India. **She** brings to her clients a deep knowledge of the local markets, a strong rolodex of contacts, and sound judgment in the selection and hiring process. In the 1990s Anu founded and built Nexus Search Consultants as the No.1 Search Firm for the Technology Sector, out of Bangalore, India. Her clients at Nexus included technology giants such as Autodesk, Cadence, Compaq, CA, 3COM, Cisco, Epson, HP, IBM, Sanyo, SUN and Siemens, as also start ups such as Aspect, Aztec, Entevo, IDEA, Silicon Automation, Sierra and Talisma.

In 2000 Anu co-founded e4e in the US. e4e provides business process and engineering outsourcing services through its portfolio companies. As the Vice President HR at e4e, **she** helped find senior executive talent for e4e portfolio companies including Aztec, iSeva, iCelerate, Vinciti and Vigyanix.

Prior to founding Nexus, Anu was the Head of Marketing for Wipro's International Operations Division. She has been an impressive speaker at Stanford and various offshoring Conferences.

Anu is a management graduate from BITS Pilani, India. She enjoys reading, and also spends time advising people in companies facing the offshore challenge. Anu lives in the San Francisco bay area with her husband and two sons.

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