Hofstra University

<u>Annual Business Conference</u>

Capturing Return and Controlling Risin Equity Market Neutral Hedge Fund

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#### Overview

#### Who is DIAM and DIAM USA?

- DIAM is a global money management firm formed in 2000 that combined the investment management businesses of the Mizuho Financial Group and Daiichi Mutual Life.
- DIAM manages \$65 billion worldwide and includes DIAM Tokyo, DIAM International in London and DIAM USA in New York.
- DIAM USA manages over \$2 billion including \$200 million in its US equity market neutral and Japanese equity market neutral hedge funds.

#### Overview

#### **Discussion topics**

- Introduction to market neutral hedge funds.
- The quantitative investment process.
- Returns and risk data.
- Careers in quantitative investment management.



Introduction to Market Neutral Hedge Funds



## What do we mean by the term market neutral?

- Any hedged strategy where returns are uncorrelated to the broader equity and fixed income markets and . . .
- . . . where sector, industry and certain style exposures are also minimized.

### Types of market neutral strategies

- Equity market neutral.
- Convertible arbitrage.
- Merger arbitrage.
- Mortgage arbitrage.
- Fixed income arbitrage.

### Advantages of market neutral strategies

- Low correlation with stock and bond markets
- Lower risk
- Double alpha
- Less index-constrained
- Portable alpha

## Portfolio structure of a \$50 million market neutral hedge fund

- \$47 million long portfolio of 75 top-ranked stocks
- \$47 million short portfolio of 75 bottom-ranked stocks
- \$3 million cash reserve for added collateral

# Positive return in up or down markets

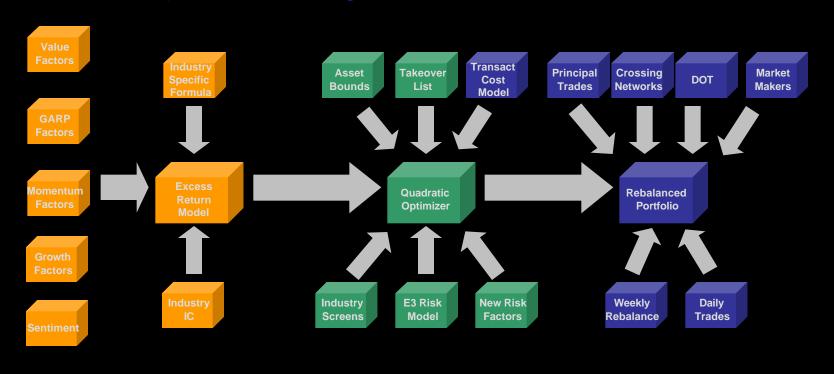
|                                | Down Market    | Up Market           |
|--------------------------------|----------------|---------------------|
| Market Return                  | -30%           | +20%                |
| Long portfolio return          | -25%           | +25%                |
| Short portfolio return         | +35%           | -15%                |
| Rebate                         | +4%            | +4%                 |
| Total Return Calculation -25%+ | <br>35%+4%=14% | <br>+25%-15%+4%=14% |

## **Quantitative Equity Market Neutral**

# DIAM QLS Quantitative Investment Process

#### **Quantitative Investment Process**

## Quadratic optimization integrates return, risk and transaction cost models



Return Risk Implementation

#### **Quantitative Investment Process**

#### What is unique about our quantitative process?

- Industry specific excess return model is a composite of 55 unique models formulated for 55 different industries.
- A non-style biased excess return model incorporates factors from multiple categories including value, growth, GARP, momentum and sentiment.
- Dynamic allocation process shifts capital into industries where excess return model is more robust.
- Advanced risk control isolates stock selection risk and minimizes market risk, industry risk and style risk exposures.

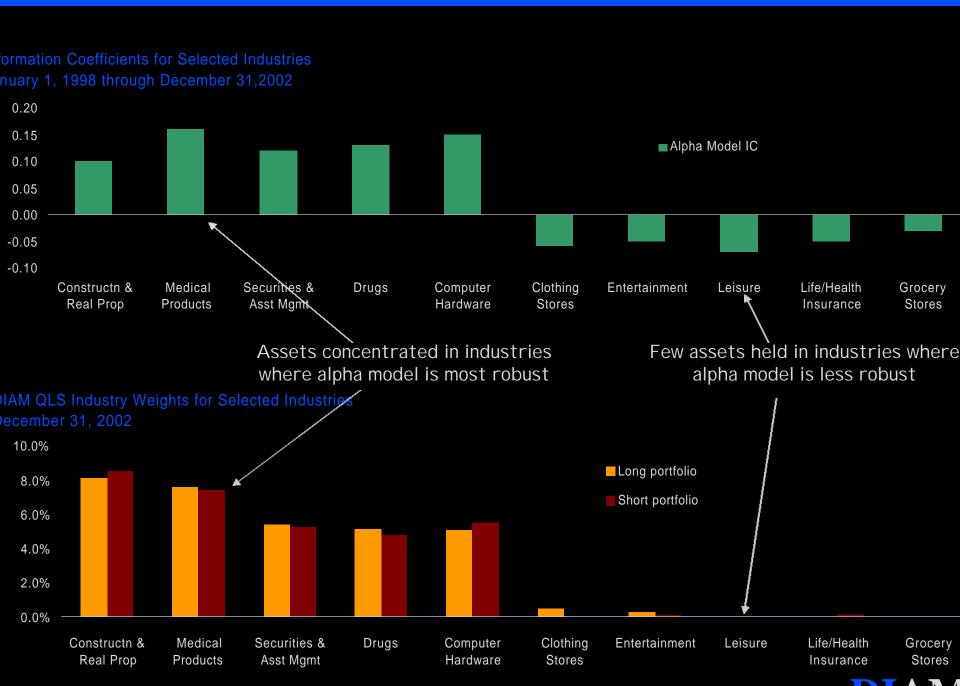
## Excess return models are non-style biased, industry specific and dynamic

| Industry    | Company               | Model<br>Components | Raw<br>Rank | Industry<br>Model<br>Weight | Composite<br>Rank | Industry<br>Neutralized<br>Rank | Standardizeck<br>Score | Industry<br>Informationx<br>Coefficient | Specific =<br>Risk | Fore<br>A |
|-------------|-----------------------|---------------------|-------------|-----------------------------|-------------------|---------------------------------|------------------------|---|--------------------|-----------|
| Apparel     | Reebok                |                     |             |                             | 20                | 16                              | 3.5                    | 0.22                                    | 39.20%             | 3         |
|             |                       | Value sub-model     | 57          | 0%                          |                   |                                 |                        |   |                    |           |
|             |                       | Growth sub-model    | 5           | 20%                         |                   |                                 |                        |   |                    |           |
|             |                       | Momentum sub-model  |             | 50%                         |                   |                                 |                        |   |                    |           |
|             |                       | Sentiment sub-model | 12          | 30%                         |                   |                                 |                        |   |                    |           |
| Apparol     | Columbia Sportswear   |                     |             |                             | 48                | 90                              | -2.8                   | 0.22                                    | 37.19%             | -2        |
| Apparel     | Columbia Sportswear   | Value sub-model     | 35          | 0%                          | 40                | 90                              | -2.0                   | ₩ 0.22                                  | 37.1970            | -4        |
|             |                       | Growth sub-model    | 35<br>35    | 20%                         | -                 |                                 | /                      |   |                    |           |
|             |                       | Momentum sub-model  |             | 50%                         |                   | Industry                        | specific 🖊             |   |                    |           |
|             |                       | Sentiment sub-model | 46          | 30%                         | m                 | ndels res                       | ult in more            |   |                    |           |
|             |                       | Contamont das meder | .0          | 3373                        |                   |                                 |                        |   |                    |           |
|             |                       |                     |             |                             | /                 | robust fo                       | orecasts 、             |   |                    |           |
|             |                       |                     |             |                             |                   |                                 | \                      |   |                    |           |
|             |                       |                     |             | Industry                    |                   | Industry                        | \                      | Industry                                |                    |           |
|             |                       | Model               | Raw         | Model                       | Composite         | Neutralized                     | Standardizeck          | Informationx                            | Specific =         | For€      |
| Industry    | Company               | Components          | Rank        | Weight                      | Rank              | Rank                            | Score                  | Coefficient                             | Risk               | Α         |
| Telephone   | Citizen Communication | nns                 |             | _ *                         | 21                | 2                               | 3.8                    | 0.05                                    | 50.58%             |           |
| rolopriorio |                       | Value sub-model     | 7           | 50%                         |                   | _                               | 3.3                    | 3.33                                    | 00.0070            |           |
|             |                       | Growth sub-model    | 77          | 0%                          |                   |                                 |                        |   |                    |           |
|             |                       | Momentum sub-model  |             | 40%                         |                   |                                 |                        |   |                    |           |
|             |                       | Sentiment sub-model | 18          | 10%                         |                   |                                 |                        |   |                    |           |
|             |                       |                     |             |                             |                   |                                 |                        |   |                    |           |
| Telephone   | CenturyTel            |                     |             |                             | 90                | 96                              | -3.5                   | 0.05                                    | 36.67%             |           |
|             |                       | Value sub-model     | 99          | 50%                         |                   |                                 |                        |   |                    |           |
|             |                       | Growth sub-model    | 51          | 0%                          |                   |                                 |                        |   |                    |           |
|             |                       | Momentum sub-model  |             | 40%                         |                   |                                 |                        |   |                    |           |
|             |                       | Sentiment sub-model | 75          | 10%                         |                   |                                 |                        |   |                    |           |
|             |                       |                     |             |                             |                   |                                 |                        |   |                    | 74        |

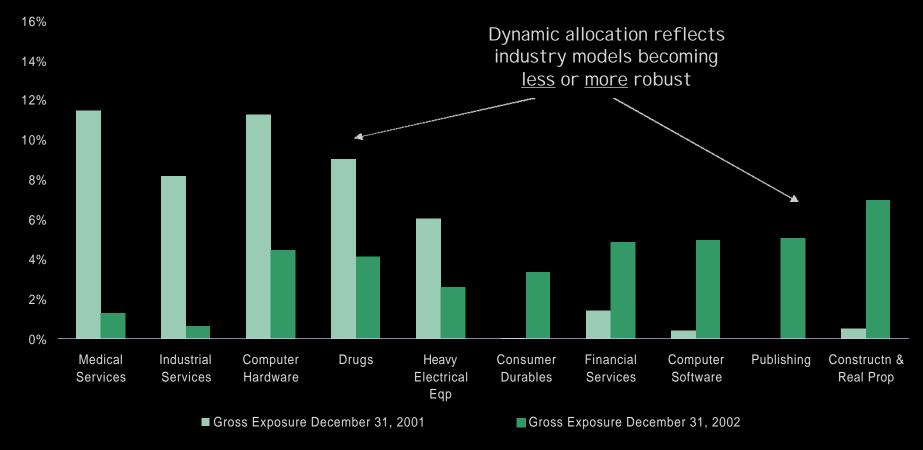
# Sub-Model Information Coefficients for Selected Industries January 1, 1998 through December 31, 2002



Past performance is not necessarily indicative of future performance. Please see important information on the last page regarding the impact of fees and other factors on performance and the use of benchmarks.

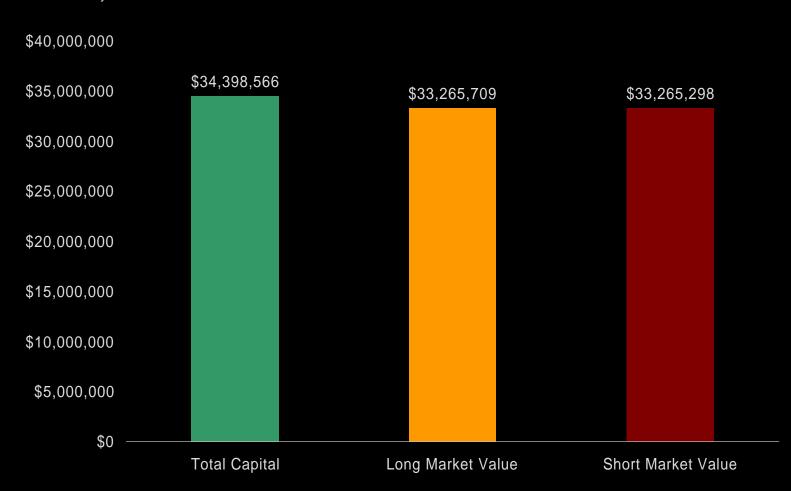


# Gross Long and Short Exposure to Selected Industries December 31, 2001 and December 31, 2002

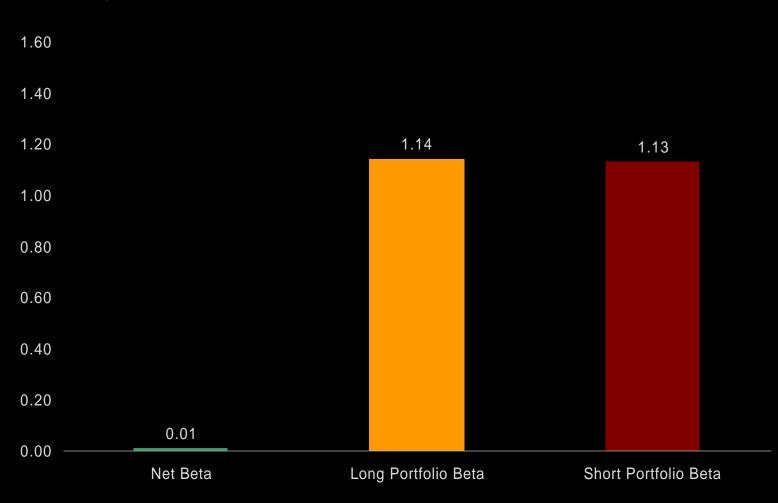


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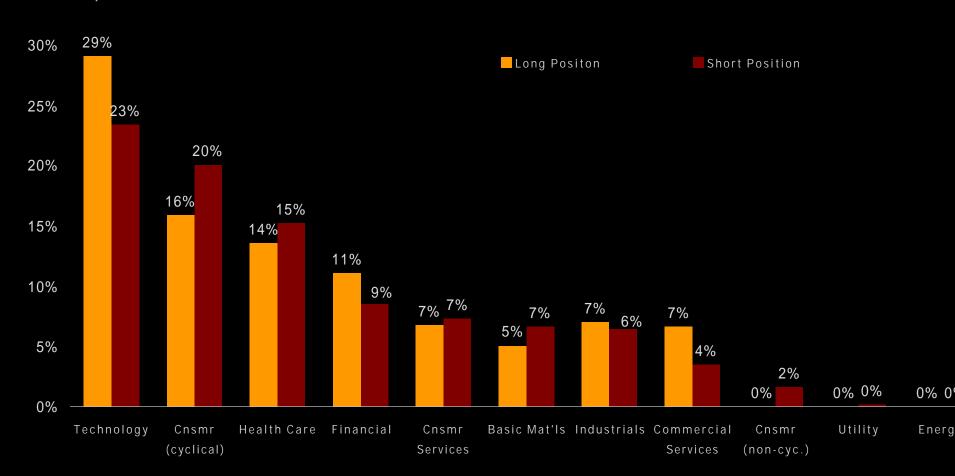
# DIAM QLS Long and Short Market Values March 31, 2002



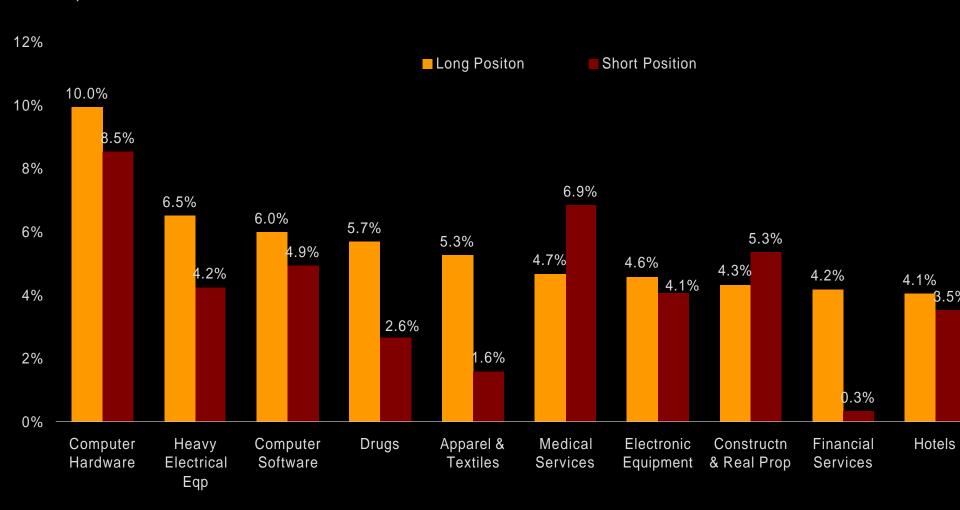
#### DIAM QLS Portfolio Betas March 31, 2002



# DIAM QLS Sector Portfolio Sector Weights March 31, 2002

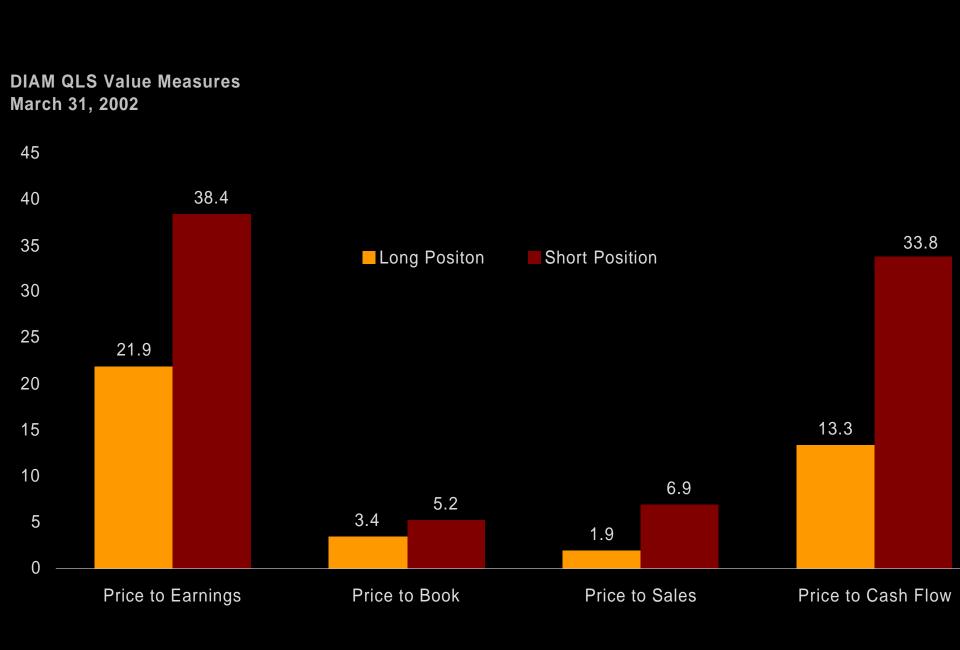


DIAM QLS Weights in Selected Industries
March 31, 2002





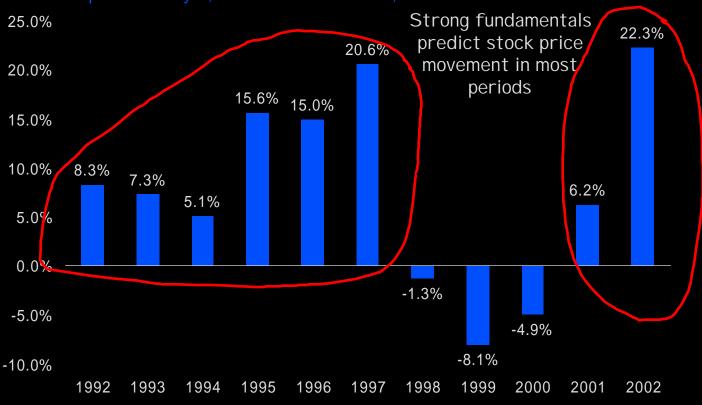




## **Quantitative Equity Market Neutral**

## DIAM QLS Return, Risk and Correlation Data





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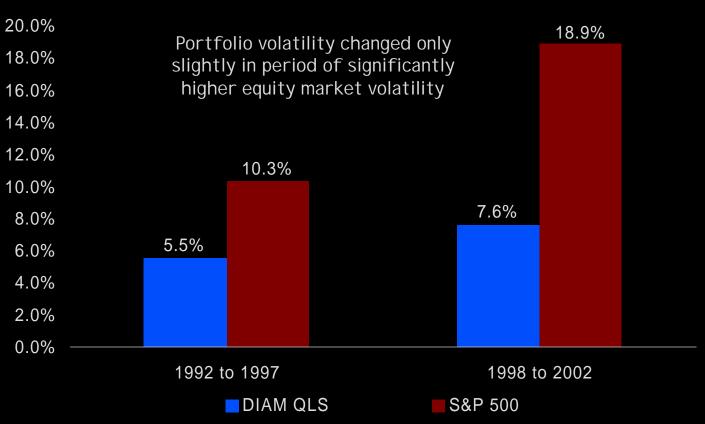
Past performance is not necessarily indicative of future performance. Please see important information on the last page regarding use of back-tested performance, impact of fees and other factors on performance and the use of benchmarks.

#### Cumulative Return from Equity Market Peak April 1, 2000 to February 28, 2003



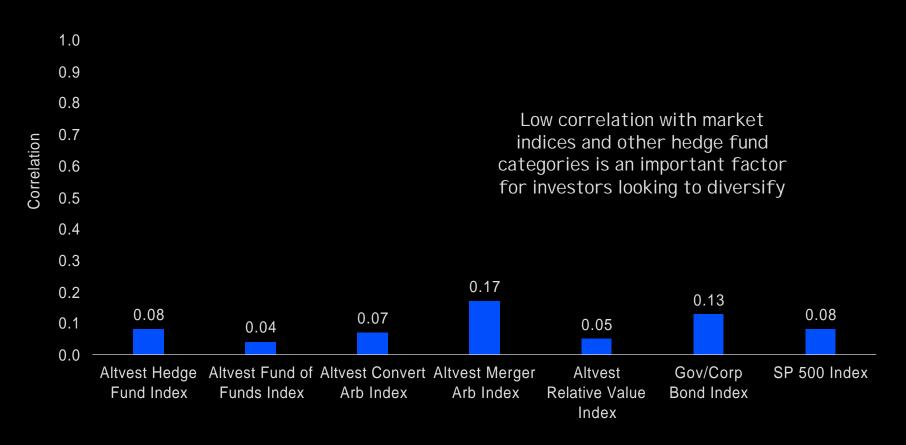
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DIAM QLS
Annualized Standard Deviation



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#### DIAM QLS Correlations with Major Indices January 1, 1996 to December 31, 2002



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#### Careers

#### Pursuing a career in quantitative investment management

- Pass the CFA.
- Computer skills are critical.
- Take a healthy dose of statistics courses.
- Resume first, salary second.
- Use the internet, <a href="www.hedgeworld.com">www.barra.com</a>, <a href="www.barra.com">www.barra.com</a>, <a href="www.barra.com">www.barra.com</a>,

### **Quantitative Equity Market Neutral**

#### Important disclosure information

#### Not a solicitation to invest

The information contained in this presentation is only provided as reference for an accredited investor. It is not an offer or solicitation of an offer to buy or sell securities, which can only be made by means of a private offering memorandum. The information contained in this document is intended only for professional and accredited investors to whom it is distributed.

#### The use of performance returns

The performance results shown are net of fees and have not been audited by a third party, and are composite returns from the Offshore Fund, the U.S. Limited Partnership and individually managed accounts. The performance shown is for information only and is not necessarily indicative of future performance. The fund has been managed by several subsidiaries of The Industrial Bank of Japan "IBJ" (now part of the Mizuho Group) consisting of IBJ Whitehall Bank & Trust Co. (May 1992 - March 1997), Innovest Capital Management (March 1997 - December 2001), Whitehall Asset Management (January 2002 - June 2002) and is presently managed by DLIBJ Asset Management USA Inc.

#### The impact of fees and other factors on returns

The returns shown are net of fees unless stated otherwise. The investment advisory fees are described in Part II of the Form ADV, which is available on request. All performance results are unaudited and reflect the reinvestment of dividends

#### **Benchmarks**

All benchmarks are for information purposes only and may or may not be comprised of securities held in the fund. It is important to note that the fund consists of long and short positions in securities which have certain risks not associated with securities in the benchmark such as volatility, illiquidity and the risk of loss of capital.

| Statistic                               |           | Period                                |
|---|-----------|---------------------------------------|
| 1 month return                          | 2.6%      | December 2002                         |
| 3 month return                          | -0.2%     | September 30 to December 31, 2002     |
| Year to date return                     | 22.3%     | January 1 to December 31, 2002        |
| 12 month return                         | 22.3%     | January 1 to December 31, 2002        |
| Annualized gross return since inception | n 8.8%    | May 1, 1992 to December 31, 2002      |
| Annualized net return since inception   | 7.7%      | May 1, 1992 to December 31, 2002      |
| Annualized risk since inception         | 6.6%      | May 1, 1992 to December 31, 2002      |
| Return/risk ratio                       | 1.17      | May 1, 1992 to December 31, 2002      |
| Sharpe ratio                            | 0.47      | May 1, 1992 to December 31, 2002      |
| S&P 500 beta                            | 0.01      | May 1, 1992 to December 31, 2002      |
| R-squared versus S&P 500                | 0.004     | May 1, 1992 to December 31, 2002      |
| Highest 12 month return                 | 29.5%     | October 1, 1996 to September 30, 1997 |
| Lowest 12 month return                  | -11.0%    | February 1, 1999 to January 31, 2000  |
| Highest 1 month return                  | 5.4%      | June 2002                             |
| Lowest 1 month return                   | -4.6%     | November 2002                         |
| Longest consecutive up months           | 16 Months | June 1996 to September 1997           |
| Longest consecutive down months         | 7 Months  | September 1999 to March 2000          |
|   |           |                                       |

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**Fund Characteristics** 

Quantitative process integrates multi-factor return, risk and transaction cost models **Investment process:** 

through quadratic optimization.

Annual return objective: US T-Bill + 6% net of fees and expenses.

Annual risk objective: 6.0%

Proprietary multi-factor and industry specific model combining value, growth, **Excess return models:** 

momentum and sentiment sub-models.

Risk model: Barra US E3 equity risk model enhanced plus proprietary risk factors.

**Transaction cost model: Proprietary** 

Target beta vs. S&P 500: 0.0

80 positions long and 80 positions short. Number of positions:

Max leverage: 2/1

Approximately 2000 companies including stocks with greater than \$400 million in market cap, \$5 share price and 1 year of operations. Selection universe:

Max position size: 2%

**Max net industry exposure:** 3%

**Annual turnover:** 200%

**Total strategy capacity:** \$500 million

**Total strategy AUM:** \$101 million

Investment vehicles Offshore Fund, US Limited Partnership and separate accounts.