Hedge Funds
Course Number: MGT 647
Final Exam

Instructions:

Please limit your analysis to a brief memo in executive-summary format. You may turn in three pages ONLY. Any pages beyond three will be discarded before reading.

All of the work on this exam must be your own work. Do not discuss your answers with your classmates.

Any questions of fact should be E-mailed to the instructors or the teaching assistants for the course.

The exam is due 5:00 PM, Wednesday, May 7, in paper form, at Will Goetzmann’s office in 46 Hillhouse Avenue.

Exam:

You work for a $2 billion fund of funds with multiple managers and strategies. You are considering a substantial investment in another manager, Best company. Best has provided you with some background materials and will make a presentation to your firm. Prepare a memo on Best that addresses the following issues:

1) Should you invest in this fund? Why or why not?

2) List five important due diligence questions that you will ask during a meeting with management. Explain why they matter.

3) What type of return and risk characteristics should you expect from this style of trading? Does Best meet expectations?

4) What should the do to increase money under management – or should this be their goal?
**Introduction**

**Best Asset Management** is a quantitative alternative investment money management firm formed to take advantage of the members’ proven expertise and experience with financial quantitative analysis, statistically-based trading models, and trade execution. The key principals, Mr. X (formerly a portfolio manager at BIG, and Winning Fund) and Mr. Y (formerly a fixed-income arbitrage trader and associate member of the Chicago Board of Trade), contribute a broad range of product knowledge and experience that create significant potential for a portfolio of robust uncorrelated trading models.

While the majority of the alternative investing community is chasing around the “hot hands,” managers lose sight of the investor’s dual goal of capital appreciation and capital preservation. Managers have abandoned less-exciting strategies to find the “better mousetrap” of investing. In reality, these managers need to learn what makes their strategies successful (or not successful) in various market environments, and re-engineer them to navigate the dynamic financial trading environment. Pure arbitrage-based strategies lose their edge quickly and most must be retired within one to three years as the markets become more efficient. To succeed in this environment, **Best** is utilizing a statistically based approach to system development and deployment. Unlike many firms who rely on a single strategy applied to a single market, **Best** plans to employ many models that achieve their edge from various market dynamics in different markets under a variety of market conditions. The principals are committed to developing an efficient research platform that allows them to continually improve upon existing models and discover other market inefficiencies. The diversification of evolving strategies should serve to enhance statistical edge, lower correlation to indices and other strategies, and produce the potential for consistent returns on a firm-wide basis.

**Strategy Overview**

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Sector Bias</strong></td>
<td>A dynamically adaptive trading strategy designed to uncover short-term investor money-flows into and out of various market sectors and industry groups.</td>
</tr>
<tr>
<td><strong>PiMaxx</strong></td>
<td>A Global commodities macro investing model. Extraordinary caution has been taken to reduce the volatility of returns typical of this type of investment without the sacrifice of a significant portion of the positive potential returns.</td>
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<tr>
<td><strong>Sector Neutral Equities</strong></td>
<td>A dollar-neutral, sector-neutral long/short trading strategy. Targets consistent returns regardless of the sector or market direction.</td>
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<tr>
<td><strong>Long/Short Equity Volatility</strong></td>
<td>Captures short-term trading inefficiencies while minimizing overall market exposure.</td>
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<tr>
<td><strong>Automated Market-Making</strong></td>
<td>Capitalizes on the evolving opportunities available to investors through electronic execution venues such as ECN’s and GLOBEX.</td>
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**Strategies**

**Sector Bias Fund - IN OPERATION - EXCESS CAPACITY: $500 Million**

Equity price movements can often appear random when observed on an individual basis, but often patterns emerge when security prices move in concert, often due to sector or industry-specific news or events. This fund uses a model that gains its statistical edge by trading in the direction of these correlated moves. **Sector** utilizes a trading strategy that attempts to minimize any given stock’s impact on the portfolio, while gaining the benefit of a core position in its industry group or sector.

**Sector Fund** investors may choose from two types of hedging programs: Adaptive-hedging and Dollar-neutral. The fund employs Regulation-T (as high as 2:1) leverage on its positions from time-to-time. Since the model can be directional from time to time, index futures are used to hedge the fund’s market exposure. Adaptive-hedging utilizes a proprietary hedging algorithm that allows the model to hedge between 25% and 100% of the fund’s dollar market exposure. Dollar-neutral hedging employs a strict 100% dollar-for-dollar hedge to offset any of the fund’s dollar exposure to the market.

**Sector Simulation Results (10 year simulation) - HYPOTHETICAL**

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<tr>
<td>Average Annual Return</td>
<td>31.19%</td>
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<tr>
<td>Annual Standard Deviation</td>
<td>9.88%</td>
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<tr>
<td>Sharpe Ratio (Measured Daily)</td>
<td>2.65</td>
</tr>
<tr>
<td>Maximum Daily Peak-to-trough Drawdown</td>
<td>6.8%</td>
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<tr>
<td>Worst Monthly Return</td>
<td>-3.44%</td>
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**ACTUAL PERFORMANCE**

<table>
<thead>
<tr>
<th></th>
<th>Jan</th>
<th>Feb (10 days)</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>TOTAL</th>
</tr>
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<tbody>
<tr>
<td>2002</td>
<td>-2.94%</td>
<td>4.42%</td>
<td>1.98%</td>
<td>0.16%</td>
<td>3.20%</td>
<td>6.91%</td>
<td>2.09%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15.83%</td>
</tr>
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**Sector Relative Performance (net of fees)**

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Firm Description

• Best Asset Management is a quantitative trading firm formed to take advantage of the over 35 years of combined experience of the principals in quantitative modeling, statistical anomaly trading, arbitrage, trade execution and risk management.

Mission Statement

• Best seeks to systematically identify and capture statistically-significant investment opportunities, while managing risk rigorously.

• Best uses its principal’s extensive execution experience to continually monitor and adapt strategy implementation.

• The firm is committed to the development and implementation of portable and robust investment strategies, sound risk management and high quality research.

• The firm’s commitment to research should provide investors with consistent alpha as well as market-independent performance.
Best Asset Management, LLC

- **Focus on Implementation and Execution**

- **Seasoned Experience in Many Markets, Financial Products, Environments, and Strategies**

- **Market-Independent Performance**

- **Strong Risk Management Skills**
Best Asset Management seeks to provide investors with various products, all of which are:

- **Quantitative**
- **Long/Short or Market-Neutral**
- **Systematically Implemented**
Sector Trading Model

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Managed Accounts For Institutions

Sector Trading Model

The Program

- Sector Trading Model is a managed account program for institutions.

Investment Manager

- Best Asset Management, LLC serves as the Investment Manager for the Sector Trading Model.

Fund Objective and Approach

- The Model seeks to provide maximum risk adjusted returns, non-correlated with traditional equity and hedge fund benchmarks, while preserving capital.
- The Model will utilize multiple quantitative strategies including Sector Rotation, Sector-Neutral Relative Value, and Sector-Neutral Divergence.
**Sector Rotation**

- The Sector Rotation strategy seeks to capitalize on the movements of large traditional portfolio managers seeking to outperform their benchmarks by over/under-weighting various sectors.
- The firm uses proprietary quantitative models to build diversified, sector biased (both positively and negatively) portfolios.
- The portfolio is constructed using large and mid-cap NYSE and NASDAQ.
- Excess market exposure is then hedged away with ETF’s or exchange-listed derivatives.

**Sector-Neutral Relative Value**

- In the effort to balance alpha risk, portfolio managers must rebalance portfolios on a regular basis. Portfolio rebalancing is often easily modeled and anticipated.
- To take advantage of this, the firm has developed algorithms that generate sector-neutral portfolios that anticipate these rebalance trades.
- The resulting portfolio has a large alpha diversification while remaining neutral to the movements of any specific sector.
- The portfolio is constructed using primarily liquid NYSE and NASDAQ listed issues.
**Sector-Neutral Divergence**

- Generally, securities within the same sector have clustered returns (cross-correlation).
- Using a proprietary model, the firm seeks to take positions in securities where information lag and fragmentation cause cross-correlation to break down.
- Sector exposure is hedged using same-sector securities, or exchange-listed derivatives.
- The portfolio is constructed using primarily liquid NYSE and NASDAQ listed issues.
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<th><strong>Summary Terms</strong></th>
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<td><strong>Term Sheet</strong></td>
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<table>
<thead>
<tr>
<th>The Model:</th>
<th>Sector Trading Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment Advisor:</td>
<td>Best Asset Management, LLC</td>
</tr>
<tr>
<td>Minimum Subscription:</td>
<td>One Million USD</td>
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<tr>
<td>Management Fee:</td>
<td>2% per annum of the Net Asset Value paid monthly in advance</td>
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<tr>
<td>Incentive Fee:</td>
<td>25% of net returns</td>
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<tr>
<td>High Water Mark:</td>
<td>Perpetual</td>
</tr>
<tr>
<td>Prime Broker:</td>
<td>Choice of investor</td>
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### Summary of Terms

#### Disclosure

**Considerations and Risks**

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**Risk Factors**

Investment in the Fund involves significant risk factors and is suitable only for persons who can bear the economic risk of the loss of their entire investment and who have limited need for liquidity in their investment. There can be no assurance that the Fund will achieve its investment objective. Investment in the Fund carries with it the inherent risks associated with investments in securities as well as additional risks including, but not limited to, the use of options, short sales, futures, and leverage. Each prospective shareholder should carefully review the Confidential Explanatory Memorandum and its related agreements before deciding to invest in the Fund.
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Mr. X
Mr. X is co-founder and a Managing Member of Best Asset Management, LLC. He is also the founder and Managing Member of Best Methods, LLC - an intellectual property firm specializing in trade execution algorithms for quantitative equities investing. Before forming Best, Mr. X successfully managed several quantitative trading funds for Winning Fund, LLC. Earlier, he worked at BIG, a multi-billion dollar hedge fund from 1994 to 1996. As a member of a small team he and his partner built the foundation for a very successful quantitative equity trading group at BIG. Mr. X gained his experience in execution both at Bear Stearns & Company, Inc. and Winning where he was instrumental in the development and use of both firms’ proprietary basket trading and quantitative analytic software. Prior to his trading career, Mr. X worked as an Information Technology Analyst at Consultants & Company. Mr. X holds a Bachelor of Science in Industrial Engineering from Lehigh University.

Mr. Y
Mr. Y is co-founder and a Managing Member of Best Asset Management, LLC. He also established and headed a successful commodity brokerage firm, Asset Group LLC. His 25 years experience in all aspects of the financial markets includes equities brokerage, 8 years experience as an exchange floor trader, and 3 years as top producer at Top Market Brokerage, Inc. - an electronic commodities brokerage firm.

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