W. P. Carey School of Business

Undergraduate Fund

Semi-Annual Meeting

April 29th, 2011
Today’s Agenda

• Team Introduction
• Review of Asset Allocation Strategy
• Portfolio Performance
• Opportunity Costs
• Succession
Team

Fund Manager

Tyler Rives

Fundamental Analysts

Tom Bochenko

Vincent Mendez

Quantitative Analysts

Rob Hill

Michael Cohn

Dan Tram

Ryan Detlaff

Jay Joshi

Steven Kutos
Review of Asset Allocation
Mean-Variance Optimizer

Constrained MVO

Data

FI
Ex-US
US

Introduction
Asset Allocation
Portfolio Update
Opportunity Cost
Education
Succession
Black-Litterman Model

- FI
- Ex-US
- US

Fundamental Analysis

Black-Litterman

Sector Weights

Data

Asset Allocation

Portfolio Update

Opportunity Cost

Education

Succession
Portfolio Update
Performance Graph

Undergraduate SIM Fund

- SHY
- VDC
- VHT
- SIMF
- VFWIX
- VDE
- VIS
- XLY
- XLB
- VHT
- VIS
- XLK
- XLB
- VFWIX
- IPE
- SHY
- CASH
- SIMF

Introduction
Asset Allocation
Portfolio Update
Opportunity Cost
Education
Succession
SIMF Performance

- "SIMF"
- "Custom Benchmark"
- "Russell 3000"

Introduction
Asset Allocation
Portfolio Update
Opportunity Cost
Education
Succession
## Performance vs. benchmarks table w/ volatility

<table>
<thead>
<tr>
<th></th>
<th>Return</th>
<th>Annualized Return</th>
<th>Volatility</th>
<th>Sharpe</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIMF</td>
<td>10.12%</td>
<td>19.87%</td>
<td>12.1%</td>
<td>.56</td>
</tr>
<tr>
<td>Custom Benchmark</td>
<td>10.7%</td>
<td>21.1%</td>
<td>12.5%</td>
<td>.59</td>
</tr>
<tr>
<td>Russell 3000</td>
<td>19.5%</td>
<td>31.7%</td>
<td>14.7%</td>
<td>.82</td>
</tr>
<tr>
<td>MSCI World</td>
<td>11.8%</td>
<td>24.47%</td>
<td>14.4%</td>
<td>.64</td>
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</table>
## Holdings

<table>
<thead>
<tr>
<th>Sector</th>
<th>Ticker</th>
<th>Original Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer</td>
<td>XLY</td>
<td>9.8%</td>
</tr>
<tr>
<td>Discretionary</td>
<td></td>
<td></td>
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<tr>
<td>Con Staples</td>
<td>VDC</td>
<td>12.6%</td>
</tr>
<tr>
<td>Energy</td>
<td>VDE</td>
<td>8.0%</td>
</tr>
<tr>
<td>Financials</td>
<td>XLF</td>
<td>3.5%</td>
</tr>
<tr>
<td>Healthcare</td>
<td>VHT</td>
<td>9.6%</td>
</tr>
<tr>
<td>Industrials</td>
<td>VIS</td>
<td>2.6%</td>
</tr>
<tr>
<td>Technology</td>
<td>XLK</td>
<td>12.6%</td>
</tr>
<tr>
<td>Utilities</td>
<td>XLU</td>
<td>3.4%</td>
</tr>
<tr>
<td>Ex-Us</td>
<td>VFWIX</td>
<td>21.3%</td>
</tr>
<tr>
<td>TIPS</td>
<td>IPE</td>
<td>15.7%</td>
</tr>
</tbody>
</table>

### Introduction

- **Student Investment Management Fund (SIM Fund)**

### Asset Allocation

- **Portfolio Update**

### Opportunity Cost

- **Succession**

### Education

- **Undergraduate SIM Fund**

- **Student Investment Management Fund**
Rebalancing

• Eliminating Drift
• Turnover
• Change in asset allocation
## Holdings

<table>
<thead>
<tr>
<th>Sector</th>
<th>Ticker</th>
<th>Original Weight</th>
<th>Current Weight</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer Discretionary</td>
<td>XLY</td>
<td>9.8%</td>
<td>6.81%</td>
<td>-2.99%</td>
</tr>
<tr>
<td>Con Staples</td>
<td>VDC</td>
<td>12.6%</td>
<td>3.75%</td>
<td>-8.86%</td>
</tr>
<tr>
<td>Energy</td>
<td>VDE</td>
<td>8.0%</td>
<td>9.78%</td>
<td>1.78%</td>
</tr>
<tr>
<td>Financials</td>
<td>XLF</td>
<td>3.5%</td>
<td>13.58%</td>
<td>10.08%</td>
</tr>
<tr>
<td>Healthcare</td>
<td>VHT</td>
<td>9.6%</td>
<td>5.22%</td>
<td>-4.38%</td>
</tr>
<tr>
<td>Industrials</td>
<td>VIS</td>
<td>2.6%</td>
<td>7.76%</td>
<td>5.16%</td>
</tr>
<tr>
<td>Technology</td>
<td>XLK</td>
<td>12.6%</td>
<td>14.06%</td>
<td>1.46%</td>
</tr>
<tr>
<td>Utilities</td>
<td>XLU</td>
<td>3.4%</td>
<td>0.00%</td>
<td>-3.40%</td>
</tr>
<tr>
<td>Ex-Us</td>
<td>VFWIX</td>
<td>21.3%</td>
<td>25.00%</td>
<td>3.7%</td>
</tr>
<tr>
<td>TIPS</td>
<td>IPE</td>
<td>15.7%</td>
<td>0.00%</td>
<td>-15.7%</td>
</tr>
<tr>
<td>1-3 yr Treasury</td>
<td>SHY</td>
<td>0%</td>
<td>12.14%</td>
<td>12.14%</td>
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</table>
Opportunity Costs
Without Geographic Constraints

Portfolio Performance

<table>
<thead>
<tr>
<th></th>
<th>SIMF</th>
<th>No Geographical Constraints</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return</td>
<td>19.87%</td>
<td>23.33%</td>
</tr>
<tr>
<td>Volatility</td>
<td>12.09%</td>
<td>13.19%</td>
</tr>
<tr>
<td>Sharpe Ratio</td>
<td>0.564</td>
<td>0.635</td>
</tr>
</tbody>
</table>
Without Constraints

Portfolio Performance

<table>
<thead>
<tr>
<th></th>
<th>SIMF</th>
<th>No Constraints</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return</td>
<td>19.87%</td>
<td>20.47%</td>
</tr>
<tr>
<td>Volatility</td>
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<td>11.39%</td>
</tr>
<tr>
<td>Sharpe Ratio</td>
<td>0.564</td>
<td>0.598</td>
</tr>
</tbody>
</table>
Without Rebalancing

Portfolio Performance

<table>
<thead>
<tr>
<th></th>
<th>SIMF</th>
<th>Drifting SIMF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return</td>
<td>19.9%</td>
<td>21.0%</td>
</tr>
<tr>
<td>Volatility</td>
<td>12.1%</td>
<td>11.7%</td>
</tr>
<tr>
<td>Sharpe</td>
<td>0.56</td>
<td>0.60</td>
</tr>
</tbody>
</table>
Education
Education

• Methods of Portfolio Construction
• Portfolio Analysis
• Turnover, Rebalancing, Monitoring
• Tools
Succession Planning
Succession planning

• Education
  – Bloomberg
  – Statistics and probability
  – Basic portfolios
  – Videos, readings, etc

• Fully trained before summer
Recruiting

• Class visits, emails postings
• Application to interview process
• Trade-offs when selecting applicants
Bio on new managers

Michael Cohn

• Sophomore, Finance & Mathematics major
• Worked as a research assistant for the W. P. Carey School of Business and interned with Merrill Lynch's WM division.
• Run an online trading card business that has generated over $140,000 in revenue with a 28% cumulative profit margin

Steven Kutos

• Junior, Finance & Statistics major
• Worked on a long/short pan-European equity hedge fund last summer and spent the prior summer at LGT Capital Management as a summer intern.
• Co-leading the Investment Banking Industry Scholar program and have been a quantitative analyst for the Student Investment Management this year.
## New Members

<table>
<thead>
<tr>
<th>Name</th>
<th>Major(s)</th>
<th>Internship/Study Abroad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aaron Baker</td>
<td>Finance &amp; Mathematics (Statistics)</td>
<td>Honors Study Abroad in Paris, France Working, Self-Employed</td>
</tr>
<tr>
<td>Ajay G.</td>
<td>Finance &amp; Economics</td>
<td></td>
</tr>
<tr>
<td>Jenna Hoppe</td>
<td>Finance &amp; Accounting (minor in Economics)</td>
<td></td>
</tr>
<tr>
<td>Jonathan Lozano</td>
<td>Mathematics, Finance &amp; Economics</td>
<td>Interning with Vanguard Undecided</td>
</tr>
<tr>
<td>Kenneth Qian</td>
<td>Finance &amp; Management (Entrepreneurship)</td>
<td>Interning with Humana at Louisville</td>
</tr>
<tr>
<td>Michael Ham</td>
<td>Finance &amp; Mathematics (Statistics)</td>
<td>Interning with E&amp;Y in Risk Management</td>
</tr>
<tr>
<td>Rima Reddy</td>
<td></td>
<td>Interning with Goldman Sachs (Operations)</td>
</tr>
</tbody>
</table>