Undergraduate Student Investment Management Fund

Semi-Annual Presentation
Friday December 5th, 2014
Meet The Fund:
Student Investment Management Fund

Andrew Farber  Rob McCoach  Sam Wilson  Andy Paulus  Kean Thomas  Carter Wendt  Karina Rodriguez  Iskandar Pashayev  Alex Green

Allocation

Dividend Premium Strategy (60%)

Weighting Justification:
• Lower volatility compared to MOM

Domestic / International Momentum (40%)

Weighting Justification:
• Aggregate portfolio weight of 40% allows for a 50/50 split between INTL and DOM securities
• Charter constraint: 25% INTL exposure
• INTL exposure with ADRs
• Expected upward drift in MOM weights due to higher expected returns
Dividend Month Premium
Dividend Timeline (Hartzmark & Solomon, 2012)

- **Announcement Date (A/D)**
- **Ex-Day (X/D)**: Interim
  - Median: 10 days
- **Date of Record (DOR)**: 3 days
- **Payment Date**: Median: 14 days
Dividend Month Premium – Theory/Overview

- **Key finding**: Abnormal returns exist in all three periods (A/D, interim, X/D)
- Potential theory for abnormal returns: investor desire for cash and a “safe” income stream creates upward pricing pressure
  - Support: Higher returns for less-liquid, higher-dividend yield securities; reversal after ex-day; dividends less volatile than prices
  - **88% of firms** who issued a quarterly dividend twelve months ago will issue another dividend in the next month
- Arbitrageurs are unable to offset increased demand: tax treatment, liquidity concerns, limitations on predictability/front-running
Dividend Month Premium – Returns

• 41bp/month return on equal-weight portfolio
Two Portfolios

• Three-factor alpha, **between companies** portfolio (t-statistic)
  • Long: 36.1 bp/month (7.87)
  • Short: -0.2 bp/month (-4.47)
  • Difference 51.9 bp/month (12.57)

• Three-factor alpha, **within companies** portfolio (t-statistic)
  • Long: 36.1 bp/month (7.87)
  • Short: 0.9 bp/month (0.21)
  • Difference 34.9 bp/month (15.10)
Universe

• Security Type: Common Stock

• Minimum Market Cap: > $1.2 Billion

• 30 Day Avg. Volume: > 8,000

• Country of Incorporation: US

• Price: > $5.00
Hartzmark & Solomon Portfolio Schedule (AAPL 2014 Q1)

Purchase: Jan 1
Actual A/D: Mon, Jan 27
Forecasted A/D: Weds, Jan 29
Sell: Feb 1
X/D: Feb 5
DOR: Feb 10
Pay: Feb 13
Mar 1

63 t. days

SIM Fund Portfolio Schedule (AAPL 2014 Q1)

Purchase: Weds, Jan 23 2013
Year-Prior A/D: Mon, Jan 20 2014
Forecasted A/D: Weds, Jan 22
Actual A/D: Mon, Jan 27
X/D: Feb 1
DOR: Feb 5
Sell: Mon, Feb 10
Pay: Feb 13

1.26 day error
Purchases

• Forecast A/D for next week

• Filter out:
  • Negative momentum
  • Lawsuits or major, negative corporate events
  • Dividend misses in past year

• Rank on dividend yield, purchase 15

• Hold 30 securities (2 week)
  • If below 30 securities, invest in the Russell 3000

• Sell on Monday after X/D
  • Also: 2-week A/D, 4-week X/D, 60-day Payment cutoffs
Momentum Strategy
Momentum Theory

• “Stocks that have done well in the past continue to do well in the future”

• Support for the theory has been found in both academia and in practice
Supporting Research

• “Momentum”
  - Drs. N. Jegadeesh and S. Titman

• “ADRs Under Momentum and Contrarian Strategies”
  - Drs. A.M. Pahrizgari and D. Nguyen
Portfolio Universe

U.S. Equity Universe
• Country of Domicile: U.S.
• Security Type: Common Stock
• Sector: Exclude Financials
• Mkt Cap: >$1.2 Billion
• Price 1 Day Ago: > $10
• 30d Avg. Volume: > 10,000
• Exclude IPOs Within 3 Years

ADR Universe
• Security Type: ADR
• Sector: Exclude Financials
• Mkt Cap: >$1.2 Billion
• Price 1 Day Ago: > $10
• 30d Avg. Volume: > 10,000
• Exclude IPO’s Within 3 years
Security Selection

• Choose top 15 from both U.S. and ADR universes (for a total of 30 securities) based on \((t-12)\) to \((t-1)\) monthly returns

• Perform analysis to ensure that:
  - No selected securities have major threats to their share value
  - No more than 20% exposure to a foreign country or industry
Portfolio Timing

• Minimum holding period of one month

• Rebalance monthly to incorporate new data

• Upon rebalance, repeating winners are kept until the cumulative value of the particular security reaches 2.25% of the total portfolio
Portfolio Performance

<table>
<thead>
<tr>
<th>Portfolio</th>
<th>Returns</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dividend</td>
<td>0.97%</td>
<td>1.91% (Russell 1000)</td>
</tr>
<tr>
<td>ADR MOM</td>
<td>0.08%</td>
<td>2.20% (ACWI ex. US)</td>
</tr>
<tr>
<td>US MOM</td>
<td>1.82%</td>
<td>1.91% (Russell 1000)</td>
</tr>
<tr>
<td>Total Portfolio</td>
<td>0.96%</td>
<td>1.97% (Custom)</td>
</tr>
</tbody>
</table>
Dividend Premium Sector Holdings

Dividend Premium

- Consumer Staples: 3%
- Consumer Discretionary: 6%
- Telecommunication Services: 9%
- Financials: 10%
- Industrials: 11%
- Utilities: 13%
- Health Care: 14%
- Materials: 17%
- Financials: 18%
- Health Care: 20%

Russell 1000

- Consumer Staples: 12%
- Consumer Discretionary: 9%
- Telecommunication Services: 4%
- Financials: 17%
- Industrials: 14%
- Materials: 8%
- Health Care: 3%
- Utilities: 2%
Dividend Premium Market Cap Holdings

- **Dividend Premium**
  - Large Cap: 73%
  - Mid Cap: 24%
  - Small Cap: 3%

- **Russell 1000**
  - Large Cap: 95.3%
  - Mid Cap: 4.5%
  - Small Cap: 0.2%
  - Cash: 0.1%
ADR Momentum Country Holdings

- China 21%
- Japan 13%
- Mexico 13%
- United Kingdom 7%
- Ireland 7%
- Denmark 7%
- India 7%
- Argentina 6%
- Brazil 5%
- France 5%
- Macau 5%
- Portugal 5%
- Thailand 5%

ACWI ex US

- China 21%
- Japan 13%
- Mexico 13%
- United Kingdom 7%
- Ireland 7%
- Denmark 7%
- India 7%
- Argentina 6%
- Brazil 5%
- France 5%
- Macau 5%
- Portugal 5%
- Thailand 5%
ADR Momentum Market Cap Holdings

ADR Momentum
- Large Cap: 60%
- Mid Cap: 33%
- Small Cap: 7%

ACWI ex US
- Large Cap: 93.9%
- Mid Cap: 5.7%
- Small Cap: 0.4%
US Momentum Sector Holdings

**US Momentum**
- Industrials: 13%
- Energy: 13%
- Consumer Staples: 13%
- Health Care: 19%
- Information Technology: 20%
- Materials: 21%

**Russell 1000**
- Industrials: 17%
- Energy: 17%
- Consumer Staples: 12%
- Health Care: 11%
- Information Technology: 3%
- Materials: 14%
- Consumer Discretionary: 2%
US Momentum Market Cap Holdings

- US Momentum: 40%
- Mid Cap: 33%
- Small Cap: 27%
- Cash: 0%

Russell 1000:
- Large Cap: 95.3%
- Mid Cap: 4.5%
- Small Cap: 0.1%
- Cash: 0.2%
Moving Forward

• Continue weekly tracking of performance, attribution, and holdings

• Add filters to Dividend Premium Strategy Universe to reduce overlapping with Momentum Strategy Universe

• Construct paper portfolio to evaluate performance of a short momentum portfolio
Questions?