Equity Portfolio Management Strategies

- An Overview
- Passive Equity Portfolio Management Strategies
- Active Equity Portfolio Management Strategies
- Investment Styles
- Asset Allocation Strategies
An Overview

• Passive Investment Management
  • Long-term buy-and-hold strategy
  • Usually tracks an index over time
  • Designed to match market performance
  • Manager is judged on how well they track the target index

• Active equity portfolio management
  • Attempts to outperform a passive benchmark portfolio on a risk-adjusted basis by seeking the “alpha” value
An Overview

<table>
<thead>
<tr>
<th>Strategy</th>
<th>2005 (Billions)</th>
<th>2004 (Billions)</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Equity</td>
<td>$1,979.5</td>
<td>$1,905.1</td>
<td>3.9</td>
</tr>
<tr>
<td>Passive Equity</td>
<td>1,098.5</td>
<td>983.1</td>
<td>11.7</td>
</tr>
<tr>
<td>Active Fixed Income</td>
<td>1,780.8</td>
<td>1,628.5</td>
<td>9.4</td>
</tr>
<tr>
<td>Passive Fixed Income</td>
<td>225.8</td>
<td>207.4</td>
<td>9.9</td>
</tr>
</tbody>
</table>

An Overview

• **Passive Investment Management**
  - Long-term buy-and-hold strategy
  - Usually tracks an index over time
  - Designed to match market performance
  - Manager is judged on how well they track the target index

• **Active equity portfolio management**
  - Attempts to outperform a passive benchmark portfolio on a risk-adjusted basis by seeking the “alpha” value
What is an 'Index Fund'

- An index fund is a type of mutual fund with a portfolio constructed to match or track the components of a market index, such as the Standard & Poor’s 500 Index (S&P 500).
- An index mutual fund is said to provide broad market exposure, low operating expenses and low portfolio turnover.
- These funds adhere to specific rules or standards (e.g. efficient tax management or reducing tracking errors) that stay in place no matter the state of the markets.
Index Portfolio Construction Techniques

• Full Replication
  • All securities in the index are purchased in proportion to weights in the index
  • This helps ensure close tracking
  • Increases transaction costs, particularly with dividend reinvestment
Index Portfolio Construction Techniques

• Sampling
  • Buys a representative sample of stocks in the benchmark index according to their weights in the index
  • Fewer stocks means lower commissions
  • Reinvestment of dividends is less difficult
  • Will not track the index as closely, so there will be some tracking error
Index Portfolio Construction Techniques

• Quadratic Optimization (or programming techniques)
  • Historical information on price changes and correlations between securities are input into a computer program that determines the composition of a portfolio that will minimize tracking error with the benchmark
  • Relies on historical correlations, which may change over time, leading to failure to track the index
The goal of the passive manager should be to minimize the portfolio’s return volatility relative to the index, i.e., to minimize tracking error.

### Tracking Error Measure

- **Return differential in time period** $t$
  
  \[ \Delta_t = R_{pt} - R_{bt} \]

  where $R_{pt}$ = return to the managed portfolio in Period $t$
  
  $R_{bt}$ = return to the benchmark portfolio in Period $t$

- **Tracking error** is measured as the standard deviation of $\Delta_t$, normally annualized (TE)
Tracking Error and Index Portfolio Construction

**Exhibit 15.3** Expected Tracking Error between the S&P 500 Index and Portfolios Comprised of Samples of Fewer than 500 Stocks

Methods of Index Portfolio Investing

• Index Funds
  • In an indexed portfolio, the fund manager will typically attempt to replicate the composition of the particular index exactly
  • The fund manager will buy the exact securities comprising the index in their exact weights
  • Change those positions anytime the composition of the index itself is changed
  • Low trading and management expense ratios
  • Advantage: provide an inexpensive way for investors to acquire a diversified portfolio
Methods of Index Portfolio Investing

• ETFs
  • Depository receipts that give investors a pro rata claim on the capital gains and cash flows of the securities that are held in deposit by a financial institution that issued the certificates
  • Advantage of ETFs over index mutual funds is that they can be bought and sold (and short sold) like common stock
  • The notable example of ETFs
    • Standard & Poor’s 500 Depository Receipts (SPDRs)
    • Regional or country ETFs
    • Sector ETFs
Active Equity Portfolio Management Strategies

- Goal is to earn a portfolio return that exceeds the return of a passive benchmark portfolio, net of transaction costs, on a risk-adjusted basis
  - Need to select an appropriate benchmark
- Practical difficulties of active manager
  - Transactions costs must be offset by superior performance vis-à-vis the benchmark
  - Higher risk-taking can also increase needed performance to beat the benchmark
Active Equity Portfolio Management Strategies

EXHIBIT 15.4: Performance of Active Mutual Funds vs. S&P 500: January 1980–June 2004

Graph showing the performance of active mutual funds vs. the S&P 500 from January 1980 to June 2004. The graph plots the percentage of years in which active mutual funds have outperformed the S&P 500.
Fundamental Strategies

• **Top-Down versus Bottom-Up Approaches**
  
  • **Top-Down**
    
    - Broad country and asset class allocations
    - Sector allocation decisions
    - Individual securities selection
  
  • **Bottom-Up**
    
    - Emphasizes the selection of securities without any initial market or sector analysis
    - Form a portfolio of equities that can be purchased at a substantial discount to what his or her valuation model indicates they are worth
Fundamental Strategies

• Three Generic Themes
  • Time the equity market by shifting funds into and out of stocks, bonds, and T-bills depending on broad market forecasts
  • Shift funds among different equity sectors and industries (e.g., financial stocks, technology stocks) or among investment styles (e.g., value, growth large capitalization, small capitalization). This is basically the sector rotation strategy
  • Do stock picking and look at individual issues in an attempt to find undervalued stocks
The Stock Market and the Business Cycle

Fundamental Strategies:

• The 130/30 Strategy
  • Long positions up to 130% of the portfolio’s original capital and short positions up to 30%
  • Use of the short positions creates the leverage needed, increasing both risk and expected returns compared to the fund’s benchmark
  • Enable managers to make full use of their fundamental research to buy stocks they identify as undervalued as well as short those that are overvalued
Technical Strategies

• **Contrarian Investment Strategy**
  • The belief that the best time to buy (sell) a stock is when the majority of other investors are the most bearish (bullish) about it
  • The concept of mean reverting
  • The overreaction hypothesis

• **Price Momentum Strategy**
  • Focus on the trend of past prices alone and makes purchase and sale decisions accordingly
  • Assume that recent trends in past prices will continue
## Technical Strategies: Price Momentum Strategies

### Exhibit 15.7 Profitability of Momentum Strategies: 1994–1998

<table>
<thead>
<tr>
<th></th>
<th>1 (Low)</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10 (High)</th>
<th>10–1 (PPS)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Classification Based on Prior Six-Month Return</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1994</td>
<td>−12.00</td>
<td>−6.10</td>
<td>0.40</td>
<td>2.10</td>
<td>0.50</td>
<td>−0.90</td>
<td>−1.80</td>
<td>3.10</td>
<td>−4.50</td>
<td>−6.40</td>
<td>5.40</td>
</tr>
<tr>
<td>1995</td>
<td>35.70</td>
<td>27.40</td>
<td>32.30</td>
<td>35.00</td>
<td>32.30</td>
<td>32.20</td>
<td>30.30</td>
<td>36.70</td>
<td>35.30</td>
<td>42.10</td>
<td>6.40</td>
</tr>
<tr>
<td>1996</td>
<td>11.90</td>
<td>15.60</td>
<td>17.90</td>
<td>20.20</td>
<td>27.90</td>
<td>22.50</td>
<td>22.00</td>
<td>21.90</td>
<td>20.40</td>
<td>15.30</td>
<td>3.40</td>
</tr>
<tr>
<td>1997</td>
<td>7.20</td>
<td>5.70</td>
<td>14.80</td>
<td>20.80</td>
<td>26.60</td>
<td>32.80</td>
<td>35.60</td>
<td>37.30</td>
<td>37.50</td>
<td>23.80</td>
<td>16.60</td>
</tr>
<tr>
<td>1998</td>
<td>−2.30</td>
<td>−4.40</td>
<td>−7.00</td>
<td>−3.30</td>
<td>−0.40</td>
<td>0.00</td>
<td>4.50</td>
<td>0.10</td>
<td>−0.80</td>
<td>4.40</td>
<td>6.70</td>
</tr>
<tr>
<td>1994–1998 average</td>
<td>8.10</td>
<td>7.64</td>
<td>11.68</td>
<td>14.96</td>
<td>17.38</td>
<td>17.32</td>
<td>18.12</td>
<td>19.82</td>
<td>17.58</td>
<td>15.84</td>
<td>7.74</td>
</tr>
</tbody>
</table>

|                  |         |       |       |       |       |       |       |       |       |           |           |
| **B. Classification Based on Standardized Unexpected Earnings** |         |       |       |       |       |       |       |       |       |           |           |
| 1994             | −2.30   | −2.40 | −6.80 | −1.00 | −4.60 | −1.20 | −0.10 | −3.30 | 0.90  | −2.00     | 0.30      |
| 1995             | 36.70   | 25.40 | 27.80 | 31.00 | 33.40 | 27.50 | 36.10 | 36.90 | 38.60 | 40.60     | 3.90      |
| 1996             | 16.30   | 17.90 | 19.20 | 16.30 | 21.90 | 19.60 | 23.10 | 22.70 | 24.70 | 18.40     | 2.10      |
| 1997             | 25.50   | 21.70 | 23.50 | 22.80 | 24.10 | 24.50 | 25.20 | 28.40 | 29.60 | 28.10     | 2.60      |
| 1998             | −3.20   | −5.20 | −1.30 | 4.40  | −0.60 | 5.00  | −0.10 | −0.60 | 0.00  | −6.20     | −3.00     |
| 1994–1998 average| 14.60   | 11.48 | 12.48 | 14.70 | 14.84 | 15.08 | 16.84 | 16.82 | 18.76 | 15.78     | 1.18      |


Copyright 1999, CFA Institute. Reproduced and republished from the Financial Analysts Journal with permission from CFA Institute. All rights reserved.
Technical Strategies

• Earnings Momentum Strategy
  • Momentum is measured by the difference of actual EPS to the expected EPS
  • Purchases stocks that have accelerating earnings and sells (or short sells) stocks with disappointing earnings
Anomalies and Attributes

• Calendar-Related Anomalies
  • The Weekend Effect
  • The January Effect

• Firm-Specific Attributes
  • Firm Size
  • P/E and P/BV ratios
Investment Styles

• Value Versus Growth
  • A growth investor focuses on the current and future economic “story” of a company, with less regard to share valuation
  • Focus on EPS and its economic determinants
  • Look for companies expected to have rapid EPS growth
Investment Styles

• Value Versus Growth
  • Value investor focuses on share price in anticipation of a market correction and improving company fundamentals
  • Value stocks generally have offered somewhat higher returns than growth stocks, but this does not occur with much consistency from one investment period to another
  • Focus on the price component
  • Not care much about current earnings
  • Assume the P/E ratio is below its natural level
Style Analysis

• Construct a portfolio to capture one or more of the characteristics of equity securities
• Small-cap stocks, low-P/E stocks, etc...
• Value stocks (those that appear to be under-priced according to various measures)
  • Low Price/Book value or Price/Earnings ratios
• Growth stocks (above-average earnings per share increases)
  • High P/E, possibly a price momentum strategy
## Style Analysis

### Exhibit 15.14: A Style Analysis Grid

<table>
<thead>
<tr>
<th>Large Cap Value</th>
<th>Large-Cap Blend</th>
<th>Large-Cap Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid-Cap Value</td>
<td>Mid-Cap Blend</td>
<td>Mid-Cap Growth</td>
</tr>
<tr>
<td>Manager A</td>
<td>Small-Cap Blend</td>
<td>Small-Cap Growth</td>
</tr>
</tbody>
</table>

**Value**  
  
**Growth**  

**Large**  

**Small**  

---

27
Does Style Matter?

- Choice to align with investment style communicates information to clients
- Determining style is useful in measuring performance relative to a benchmark
- Style identification allows an investor to diversify by portfolio
- Style investing allows control of the total portfolio to be shared between the investment managers and a sponsor
- Intentional and unintentional style drift
Does Style Matter?
Does Style Matter?
Asset Allocation Strategies

• Integrated asset allocation
  • Capital market conditions
  • Investor’s objectives and constraints

• Strategic asset allocation
  • Constant-mix
Asset Allocation Strategies

- Tactical asset allocation
  - Mean reversion
  - Inherently contrarian
- Insured asset allocation
  - Constant proportion
Asset Allocation Strategies

- Selecting an Active Allocation Method
  - Perceptions of variability in the client’s objectives and constraints
  - Perceived relationship between the past and future capital market conditions
  - The investor’s needs and capital market conditions are can be considered constant and can be considered variable