

Introduction

- Thompson Asset Management firm
- Earned returns of 300-500 basis points above benchmarks
- ETF Usage

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Thompson invited to manage college endowment fund.

Holding Period Return

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\$4.03060084	Ending Value				
\$1.00000000	Beg Value				
\$3.03060084					
303.0601%	Holding period return				
0.2407%	Daily return				
60.660%	Annualized return				
1259	Trading days				
4.996	years				
1.91%	Average STD	fund			
30.31%	Average yearly STD(1.91X sq rt of 252(15.87))				
1.23%	Average STD	S&P			
19.52%	Average yearly STD S&P				

Correlation

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Correlation coefficient
65.11%

$$b_i = \left(\frac{\sigma_i}{\sigma_M} \right) \rho_{iM}$$

(6-8)

$$b_i = (.3031 / .1952) \cdot 6511$$

$$b_i = 1.011$$

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Other Performance Measures

Sharpe ratio		
$.6061 - .0057 / .3032 = 1.98$		
Treynor Ratio		
$.6061 - .0057 / 1.011 = .5938$		
Jensen's Alpha		
$(.6061 - .0057) - 1.011 \times (.2093 - .0057) = .39456$		
Daily tracking error		
$.24 - .08 = .16\%$		
Annualized tracking error		
$.16 \times 15.874 = 2.53$		
Information ratio		
$.6061 - .2093 / 2.53 = .$	0.157	

2. What are the Return and risk characteristics of the Provalue Fund?

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Pro-Value Fund

Holding Period Return

Used Exhibit 6: ProValue Market Value

$(\text{Ending value} - \text{Investment}) / \text{Investment}$

\$7,828,719 Ending Value

\$5,509,070 Investment

\$2,319,649

Year

42.1060%

Daily

0.1671%

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Pro Value Fund

Standard Deviation

1. Calculated daily returns Exhibit 12
2. mean return
3. Subtracted (return-mean return)
4. Squared the returns
6. Squared returns times the weights
7. Number 6/ number of sample
8. Number 7* Variance Covariance matrix

Standard
Deviation
Monthly
6.920%
Yearly
23.97%

$$\sigma = \sqrt{\sum_{i=1}^N w_i^2 \sigma_i^2 + \sum_{i=1}^{N-1} \left(\sum_{j=i+1}^N 2 w_i w_j \text{COV}_{ij} \right)}$$

ProValue Fund

Beta

Exhibit 12

1. Daily Returns for each stock and the market
2. Used Excel formula Covariance/Variance
3. Multiplied result times weight of each stock
4. Added amounts

Beta 1.34

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