

thought it was important to break this asset class into short-term use of the implications that it places on the liquidity and the folio. The next obstacle was to define the meaning of a short-govels were run using the Merrill Lynch 1-3 year Government Lynch 3-5 year Government Bond Index. The effect on the al and the Merrill Lynch 3-5 year Government Bond Index short-term bonds because it was deemed that the other index was too liquid. Unlike other studies, this one includes the use Defensive assets are becoming increasingly popular due to h the equity and fixed income classes. Real estate and t defensive asset classes in this study. The ten asset classes m bonds m bonds p Growth stocks p Value stocks p Growth stocks p Value stocks naal stocks ie ties is used for each of the above asset classes.

	Class Name	Description
Bonds	Merrill Lynch 3-5 Year Government Bonds	Index consisting of intermediate U.S. treasury securities maturing in 3 to 5 years with coupons higher than 4.5%
	Merrill Lynch 15 Year and Up Government Bonds	Index of U.S. treasury securities maturing in 15 or more years with coupon rates higher than 4.5%
	MSCI EAFE Equity Index	Morgan Stanley Capital International, Europe, Australia and the Far East. It is a market value-weighted average of the performance of more than 900 stocks listed on the stock exchanges of countries in Europe, Australia and the Far East.
Stocks	Russell 2000 Growth	Measures the performance of the 2,000 smallest companies in the Russell 3000 Index, which represents approximately 8% of the total market capitalization of the Russell 3000 Index. This index measures the performance of those Russell 2000 companies with higher price-to-book ratios and higher forecasted growth values.
	Russell 2000 Value	Measures the performance of the 2,000 smallest companies in the Russell 3000 Index, which represents approximately 8% of the total market capitalization of the Russell 3000 Index. This index measures the performance of those Russell 2000 companies with lower price-to-book ratios and lower forecasted growth values.
	S&P/BARRA 500 Growth	The S&P 500 includes 500 of the largest U.S. stocks measured in terms of the total market value of shares outstanding. This index is based on price to book value ratio, the growth sector is the half of the S&P 500 with the highest price to book value ratios.
	S&P/BARRA 500 Value	The S&P 500 includes 500 of the largest U.S. stocks measured in terms of the total market value of shares outstanding. This index is based on price to book value ratio, the value sector is the half of the S&P 500 with the lowest price to book value ratios.
Cash	US 30 Day Treasury Bills	Index based upon the average monthly yield of 30-day U.S. treasury bills. Treasury bills are secured by the full faith and credit of the U.S. government and offer a fixed rate of return.
Real Estate	NAREIT-REIT ALL	National Association of Real Estate Investment Trusts Equity Index, which measures the total return of equity real estate investment trusts. Currently consists of 211 companies.
Commodities	Goldman Sachs Commodity Index	A composite index of commodity sector returns; contains 26 commodities from all commodity sectors: six energy products, nine metals, and eleven agricultural products

Table 3.1 Asset Class Indices

Using the InvestmentView Version 9.0 software by Wiesenberger, twenty years of annual return data was compiled for each of these indices and the return percentages are displayed in Table 3.2.

	Bonds	Cash	Int'l Stocks	Small Cap	Large Cap	Real Estate	Commodities
1981	9.49	1.15	14.03	-2.24	-2.85	-9.81	0.05
1982	26.92	40.7	10.86	-0.86	-20.95	-28.55	21.04
1983	7.18	1.28	8.87	24.61	-20.13	-35.64	10.23
1984	14.45	14.94	9.85	7.86	-15.83	2.27	2.34
1985	19.48	31.52	7.35	56.72	30.97	31.01	33.31
1986	13.72	24.03	5.78	69.94	3.58	7.01	14.49
1987	3.54	-2.6	5.17	24.93	-10.48	-7.11	6.5
1988	5.95	9.32	6.14	28.59	20.37	28.47	11.95
1989	12.94	19.23	7.8	10.8	20.17	12.43	36.4
1990	9.87	6.14	7.25	-23.2	-17.41	-21.77	0.2
1991	15.15	18.43	5.18	12.5	51.19	41.7	38.37
1992	7.41	7.92	3.22	-11.85	7.77	29.14	5.07
1993	8.99	17.75	2.74	32.94	13.36	23.84	16.68
1994	-2.74	-7.7	3.84	8.06	-2.43	-1.55	3.13
1995	16.1	31.41	4.94	11.55	31.04	25.75	38.12
1996	3.56	-1.21	4.74	6.38	11.26	21.37	23.97
1997	8.03	15.38	4.8	2.06	12.95	31.69	36.53
1998	9.08	13.78	4.48	20.33	1.24	-6.45	42.16
1999	0.04	-9.25	4.18	27.3	43.1	-1.49	28.26
2000	10.86	21.01	5.1	-13.96	-22.44	22.81	-22.08

Table 3.2 Asset Class Annual Returns

For the purpose of this study, no short selling is allowed in any of the models and the cost of making a trade is not considered. The investment horizon for this project is three to five years.