

SENIOR CONSULTANT

The Voice of the Investment Management Consultant

Surz/Senior Consultant Style Analysis: 2003 Risk/Reward Analysis

A year ago at this time, *Senior Consultant* published a similar review of market history entitled “*Perspectives*” (Surz/Senior Consultant Style Analysis, January 2003, <http://www.SrConsultant.com/Articles/2003-01-Surz-SC-Analysis.pdf>). You will find it interesting to re-read parts of this commentary, which follow. The years 2000-2003 were gloomy indeed. Here’s what we said a year ago.

77-Year History. There have been only six other years when the S&P500 lost more than 20% in real terms (return net of inflation) – 1930, 1931, 1937, 1946, 1973 and 1974. In other words, 2002 has its place in infamy.

Notice all the green years in Table 1, indicating the 1990s. Those were good times indeed. In fact, it can be argued that we are paying the price now for the excesses of the 90s and 80s. The 20 years ending March 31, 2000 was the best ever, delivering a 2,759% cumulative gain. The question is when have we had a sufficient correction. One measure of rich valuations is price/earnings ratio, or P/E. The long-run average P/E of the S&P is around 18. Today it’s 24, but some argue that this number is understated. In 1999, P/E was 35, so we’ve got that going for us.

Here’s another way to put the past three years into perspective. There have been only three other times that the S&P has suffered consecutive calendar year losses. The following table puts these into perspective, focusing on real losses, which are nominal losses, plus the effects of inflation.

History of S&P 2-year, or more, losses

Period	# Years	Nominal Loss	Real (Purchasing Power) Loss
1929-1932	4	64%	36%
			(Because there was 28% deflation)
1939-1941	3	30	28
1973-1974	2	37	58
			(21% inflation)
2000-2002	3	38	50

This past three years has been worse than the market crash of 1929 in real terms, ranking a close second to the free-fall of 1973-1974. We are significantly less wealthy today than we were 3 short years ago, granted we were very wealthy to begin with..”

Now let’s move forward one short year and see what has changed. At year-end, when your clients ask you, “How well am I doing?” it is a wonderful opportunity, particularly in an “up” year to not just cite 2003 performance but to provide a historical context that illustrates how the market works. This will hold you in good stead in less forgiving times. I hope you will find the following market analysis useful in helping you build and cement your client relationships.

I always look forward to Ron Surz’s year-end risk/reward analysis as an important anchor in managing client relationships. We assess what has occurred over the past year and prepare for whatever the market may bring us. Ron has created the following tables of data that are particularly useful with clients.

Happily, the memories of 2002 – one of the worst years on record – 2001 and 2000 – which were not much better – are behind us. U.S. common stocks were up 28.6% in 2003, coming in above the historical mode return. Interestingly, the mean stock return is 7.9%, while the mode is in the 10%-20% range, which suggests stock returns are not normally distributed in a bell-shaped curve. This provides an opportunity to counsel clients on post-Modern Portfolio Theory (as MPT presumes a normal distribution) methodology which can enhance your counsel and improve your client’s performance.

From Table 2, it appears that there’s nothing new in bond returns. 2003 was smack dab in the middle of historical returns.

Now, let’s move on to Table 3. Surprisingly, stock and bond returns have delivered about the same return per unit of risk, approximately .33%, over the entire 78-year history. Looking at the 78 years divided into two 39-year periods, stocks returned about the same in both periods, but the risk of stocks is lower in the more recent 39-year period. You would think that this would result in a higher Sharpe ratio (which measures reward per unit of risk) in the more recent period, but it doesn’t. This is because Treasury bill returns were substantially higher in the recent past, and the Sharpe ratio defines “reward” as the return above Treasury bills. Bond investing also has become much less efficient in the more recent past. You’ll find other lessons like these in the table that should be helpful to investment policy consulting, and in setting client expectations.

Table 4 shows the best 20-year return on stocks occurred in the 20 years ending March 2000. We know what happened afterwards. The best 20-year return for bonds is the 20-years ending September 2001, but we have seen the correction yet.

Table 5 shows the probabilities of earning various stock and bond returns over cumulative time periods. If you were a betting person, you would place your long-term bets on nominal stock returns in the 10%-15% range and nominal bond returns in the 0%-5% range. Of course, there are persuasive arguments about stock returns falling below their historic mid-range, because we enjoyed such terrific markets in the 1990s. You be the judge. ■



Table 1.
78-Year Return History for Common Stocks
(Adjusted for Inflation)
1926-2003
Average Annually Compounded Real Return = 7.4%

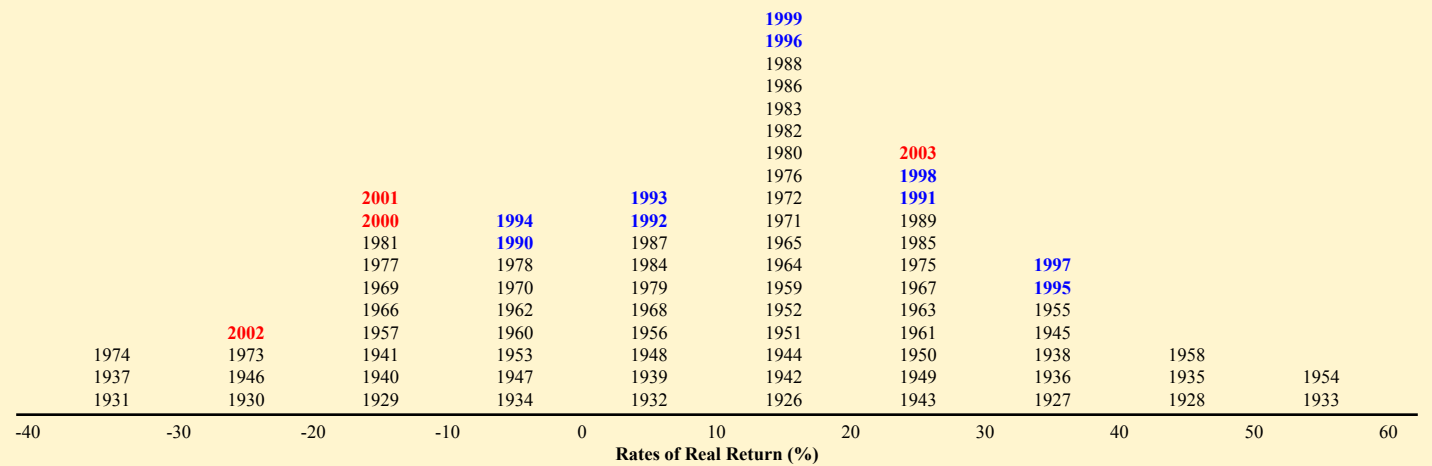


Table 2.
78-Year Return History of Long-Term Corporate Bonds
1926-2003
Average Annually Compounded Real Return = 3%

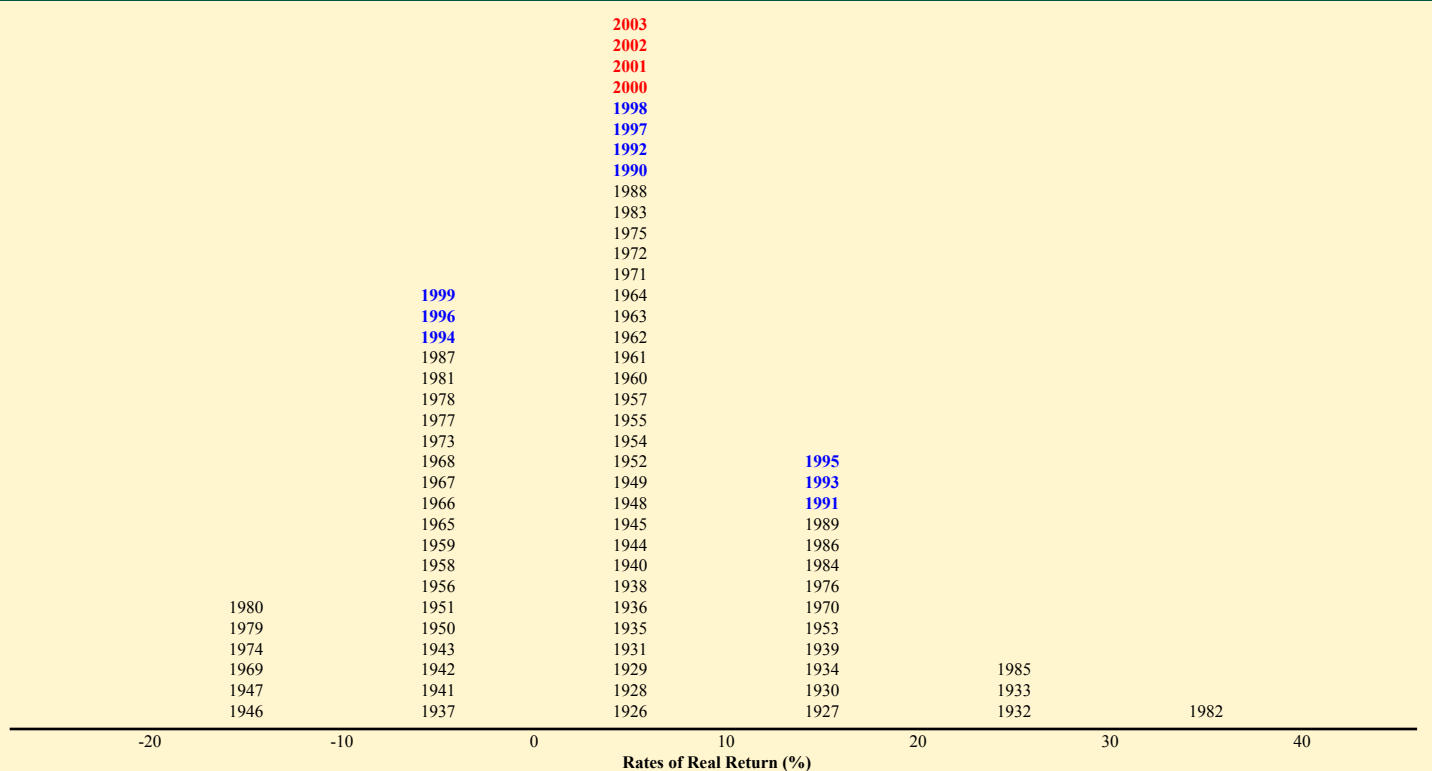




Table 3.
Market History for Years Ending December 2003

	Stocks			Bonds			T-Bills		CPI	
	Return	StdDev	Sharpe	Return	StdDev	Sharpe	Return	StdDev	Return	StdDev
2003 (1 Years)	28.86	11.38	2.42	6.03	13.34	.37	1.08	.03	1.96	.81
1926-2003 (78 Years)	10.43	19.49	.33	6.17	6.90	.33	3.79	.90	3.08	1.86
1926-1964 (39 Years)	10.38	22.94	.38	4.67	3.99	.79	1.45	.39	1.48	2.32
1965-2003 (39 Years)	10.47	15.30	.26	7.69	8.89	.16	6.18	.77	4.70	1.07
1934-1943 (10 Years)	7.17	23.50	.30	6.20	2.33	2.60	.14	.05	2.88	2.07
1944-1953 (10 Years)	14.31	12.85	1.03	3.13	4.34	.50	.96	.16	4.43	2.83
1954-1963 (10 Years)	15.91	13.02	1.02	2.65	4.15	.08	2.32	.25	1.40	.75
1964-1973 (10 Years)	6.01	12.40	.08	2.93	6.78	-.29	4.98	.37	4.12	.87
1974-1983 (10 Years)	10.61	16.36	.11	6.43	12.50	-.17	8.65	.89	8.16	1.27
1984-1993 (10 Years)	14.92	15.58	.51	13.82	7.86	.87	6.57	.61	3.69	.73
1994-2003 (10 Years)	11.10	15.92	.41	7.57	6.49	.49	4.29	.46	2.56	.61
1929-1933 (5 Years)	-11.24	47.12	-.27	8.17	6.19	.97	1.89	.50	-5.14	2.78
1934-1938 (5 Years)	10.68	25.98	.40	7.70	2.29	3.31	.15	.05	1.33	1.88
1939-1943 (5 Years)	3.78	20.88	.17	4.73	2.33	1.97	.13	.05	4.45	2.16
1944-1948 (5 Years)	10.86	14.66	.71	2.43	1.94	1.00	.46	.07	6.67	3.55
1949-1953 (5 Years)	17.86	10.82	1.49	3.83	5.85	.40	1.45	.10	2.23	1.67
1954-1958 (5 Years)	22.30	13.10	1.52	.96	4.93	-.19	1.91	.27	1.49	.88
1959-1963 (5 Years)	9.85	12.87	.54	4.36	3.15	.51	2.72	.18	1.31	.60
1964-1968 (5 Years)	10.15	10.37	.54	.37	5.18	-.74	4.32	.19	2.84	.62
1969-1973 (5 Years)	2.02	14.16	-.24	5.55	8.05	-.01	5.64	.42	5.41	.93
1974-1978 (5 Years)	4.33	17.59	-.10	6.03	7.80	-.03	6.24	.40	7.94	.94
1979-1983 (5 Years)	17.27	14.98	.36	6.83	15.94	-.25	11.13	.75	8.39	1.53
1984-1988 (5 Years)	15.36	17.95	.43	15.03	9.62	.77	7.21	.48	3.51	.71
1989-1993 (5 Years)	14.49	12.92	.63	12.62	5.64	1.12	5.93	.68	3.88	.74
1994-1998 (5 Years)	24.09	13.86	1.32	7.22	5.68	.37	5.05	.20	2.56	.42
1999-2003 (5 Years)	-.52	17.29	-.23	7.91	7.25	.58	3.53	.55	2.55	.76

Table 4.
Worst Drawdowns and Best Rallies from January 1926 to December 2003

		Number of Months				Number of Years				
		1	3	6	9	1	5	10	15	20
Worst Drawdowns										
Stock	Return	-30	-45	-51	-66	-68	-17	-5	0	2
	Date	3109	3205	3205	3205	3206	3408	3908	4408	4908
Bonds	Return	-9	-14	-21	22	-18	-2	1	1	2.
	Date	7910	8002	8002	8003	8003	7006	7408	6912	6911
T-Bills	Return	0	0	0	0	0	0	0	0	0
	Date	2812	3901	3904	3901	3901	4206	4205	4705	5101
Best Rallies										
Stock	Return	43	91	100	81	163	36	21	20	18
	Date	3304	3208	3308	3311	3306	3705	5905	9707	2000/3
Bonds	Return	14	25	35	43	50	24	17	14	13
	Date	8004	8006	8212	8210	8210	8609	9109	9609	2001/9
T-Bills	Return	1	4	8	11	15	11	9	8	8
	Date	8106	8108	8110	8111	8111	8409	8709	9112	9206



Table 5.

Probabilities of Earning Various Stock Returns Over Cumulative Periods from 1926 to 2003

5 Years (877 rolling periods): Worst : -17.36 (3408); Best : 36.12 (3705)

Under -10	_____	3.3
-10 to -5	_____	3.1
-5 to 0	_____	4.1
0 to 5	_____	10.8
5 to 10	_____	18.7
10 to 15	_____	27.3
Over 15	_____	32.7

10 Years (817 rolling periods): Worst : -4.95 (3908) ; Best: 21.43 (5905)

-5 to 0	_____	3.5
0 to 5	_____	10.6
5 to 10	_____	8.5
10 to 15	_____	26.2
Over 15	_____	31.1

20 Years (697 rolling periods): Worst: 1.89 (4908); Best: 18.25 (2000/3)

0 to 5	_____	4.7
5 to 10	_____	28.7
10 to 15	_____	51.2
Over 15	_____	15.4

25 Years (637 rolling periods): Worst: 5.62 (5408); Best: 17.24 (9912)

5 to 10	_____	32.5
10 to 15	_____	62.3
Over 15	_____	5.2

Probabilities of Earning Various Bond Returns Over Cumulative Periods from 1926 to 2003

5 Years (877 rolling periods): Worst: -2.31 (7006); Best: 24.06 (8609)

-5 to 0	_____	4.4
0 to 5	_____	39.9
5 to 10	_____	37.7
10 to 15	_____	13.8
Over 15	_____	4.1

10 Years (817 rolling periods): Worst: 1.21 (7408); Best: 16.88 (9109)

0 to 5	_____	49.9
5 to 10	_____	35.3
10 to 15	_____	13.2
Over 15	_____	1.6

20 Years (697 rolling periods): Worst: 1.76 (6911); Best: 12.63 (2001/9)

0 to 5	_____	55.1
5 to 10	_____	31.4
10 to 15	_____	13.5

25 Years (637 rolling periods) Worst : 1.80 (7006) Best : 10.09 (2003/5)

0 to 5	_____	54.2
5 to 10	_____	45.5
10 to 15	_____	.3



Table 6.

Style, Sector and Sector-Within-Sector Results for 4th Quarter 2003

		LrgeVal	LrgeCor	LrgeGro	MidlVal	MidlCor	MidlGro	MiniVal	MiniCor	MiniGro	Total
	Captzn	99.43	62.80	111.31	5.39	4.86	4.84	.60	.70	.53	67.93
	Prc/Er	14.17	22.09	52.78	13.59	20.65	-5.00	13.51	28.66	-5.00	25.42
	Yield	2.84	1.56	.50	2.56	.75	.33	3.08	.49	.18	1.55
	Return	11.89	12.24	11.08	14.44	12.66	14.42	14.82	14.50	16.46	12.60
	Comtmt	25.52	11.83	27.57	10.65	4.83	9.48	4.32	2.58	3.21	12.83
		Non-Dur	Durabls	Hlthcar	Cap Gds	Tchnlgy	Energy	Transpo	Utility	Finance	
	Captzn	65.63	20.12	73.56	10.86	108.09	101.50	27.17	9.17	50.48	
	Prc/Er	35.50	21.59	32.13	38.39	50.00	17.16	25.47	19.94	15.27	
	Yield	1.24	1.20	1.07	1.44	.94	2.25	1.25	4.08	2.35	
	Return	9.80	15.90	9.90	23.40	12.00	16.70	16.00	8.80	12.30	
	Comtmt	16.31	6.44	14.92	5.81	21.64	5.49	3.06	2.93	23.38	
		Non-Dur	Durabls	Hlthcar	Cap Gds	Tchnlgy	Energy	Transpo	Utility	Finance	Total
LrgeVal	Captzn	46.51	20.08	84.81	.00	179.02	150.95	24.51	16.80	80.00	99.67
	Prc/Er	12.70	12.15	16.92	.00	15.25	11.44	15.11	19.35	13.11	13.54
	Yield	3.63	3.67	2.96	.00	3.31	2.59	1.49	4.41	2.43	2.84
	Return	15.28	29.14	-2.99	.00	9.44	16.19	19.68	6.04	12.19	11.89
	Comtmt	8.26	2.93	6.84	.00	18.18	13.52	2.36	3.82	44.08	3.28
LrgeCor	Captzn	77.51	44.57	78.25	27.31	16.36	.00	59.50	.00	34.34	62.21
	Prc/Er	21.91	20.23	22.55	29.90	20.12	.00	20.13	.00	19.58	21.86
	Yield	1.59	1.27	1.78	2.41	1.47	.00	1.33	.00	.78	1.57
	Return	8.50	16.56	10.55	25.33	-8	-0.00	18.33	.00	11.90	12.24
	Comtmt	30.98	15.13	28.22	7.70	2.98	.00	6.49	.00	8.50	1.52
LrgeGro	Captzn	104.86	24.29	113.97	22.41	136.28	23.51	22.35	.00	89.11	109.14
	Prc/Er	-5.00	34.54	37.50	-5.00	39.17	-5.00	99.00	.00	28.36	94.87
	Yield	.44	.07	.72	1.29	.37	1.69	1.18	.00	.65	.54
	Return	6.09	8.69	12.76	22.28	11.69	11.91	12.09	.00	12.95	11.08
	Comtmt	21.51	3.12	20.49	3.29	39.22	1.10	3.02	.00	8.26	3.54
MidlVal	Captzn	5.81	4.32	6.69	4.65	6.62	5.67	4.63	5.62	4.65	5.12
	Prc/Er	12.27	14.29	11.85	12.25	17.28	9.92	14.58	14.30	14.37	13.37
	Yield	2.57	1.63	.52	1.61	2.44	2.19	1.58	4.33	3.36	2.79
	Return	15.34	14.16	9.24	24.23	19.55	19.83	22.61	10.01	12.39	14.44
	Comtmt	12.30	9.72	4.99	9.44	2.51	6.74	2.00	13.95	38.35	1.37
MidlCor	Captzn	5.30	5.25	4.17	4.49	4.55	3.29	6.42	2.17	4.40	4.69
	Prc/Er	20.62	17.99	18.31	21.96	17.74	17.95	27.53	-5.00	36.84	21.59
	Yield	.72	.46	.44	1.05	.29	1.29	1.42	6.81	.90	.76
	Return	10.34	11.08	12.71	19.24	11.49	20.21	19.27	7.50	9.04	12.66
	Comtmt	22.01	8.85	19.06	15.06	10.63	2.53	3.80	.63	17.45	.62
MidlGro	Captzn	4.59	3.54	5.16	4.45	4.80	4.18	2.76	6.85	3.60	4.58
	Prc/Er	-5.00	57.50	54.71	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
	Yield	.63	.58	.18	1.03	.08	.67	.31	1.39	.76	.43
	Return	12.17	16.04	9.41	23.79	15.53	10.16	-3.08	10.93	16.54	14.42
	Comtmt	14.32	6.63	14.94	10.54	35.52	5.30	1.74	2.27	8.74	1.22
MiniVal	Captzn	.61	.66	.59	.65	.69	.72	.76	.82	.57	.62
	Prc/Er	13.84	9.04	7.06	13.38	3.24	12.71	11.56	16.42	13.89	10.94
	Yield	1.93	.81	.58	2.05	.89	3.73	1.63	4.08	4.50	3.19
	Return	15.05	15.14	20.60	22.95	13.07	24.12	18.59	10.66	11.67	14.82
	Comtmt	7.47	10.79	4.03	11.57	3.79	5.20	2.82	3.77	50.58	.55
MiniCor	Captzn	.75	.75	.64	.70	.64	.74	.70	.86	.57	.67
	Prc/Er	29.28	23.97	25.39	31.77	28.19	22.37	26.19	35.29	30.58	27.76
	Yield	.34	.08	.15	.67	.11	.10	.11	1.08	1.65	.51
	Return	10.25	12.30	15.20	22.39	15.10	25.90	12.27	4.74	9.76	14.50
	Comtmt	11.46	11.34	14.46	15.05	19.91	3.70	4.71	1.28	18.09	.33
MiniGro	Captzn	.64	.59	.53	.56	.52	.54	.70	.91	.57	.55
	Prc/Er	-4.64	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
	Yield	.10	.30	.02	.27	.06	.54	.18	1.34	.84	.22
	Return	17.46	17.79	9.18	28.52	15.78	32.91	17.94	21.44	16.01	16.46
	Comtmt	7.96	6.15	24.09	11.67	31.51	2.34	1.63	.96	13.67	.41



Table 6. (continued)

		Staple	Dscrnry	Hlthcar	Materls	Infotek	Energy	Iindstrl	Tel&Utl	Finance	
	Captzn	90.88	22.67	73.35	11.99	89.39	93.74	85.37	27.30	53.64	
	Prc/Er	21.36	.01	32.08	.01	.01	15.37	25.87	27.55	15.68	
	Yield	1.82	.77	1.18	2.11	.27	2.25	1.56	3.65	2.37	
	Return	8.52	13.83	8.73	25.01	12.73	16.17	15.09	11.53	12.25	
	Comtmt	9.37	12.83	12.95	3.20	16.60	5.72	9.85	5.97	23.52	
		Staple	Dscrnry	Hlthcar	Materls	Infotek	Energy	Iindstrl	Tel&Utl	Finance	Total
LrgeVal	Captzn	48.06	19.46	84.81	.00	.00	150.95	208.40	46.47	80.81	99.67
	Prc/Er	12.93	10.06	16.92	.00	.00	11.44	18.99	13.32	13.10	13.54
	Yield	3.70	3.85	2.96	.00	.00	2.59	2.25	4.28	2.46	2.84
	Return	15.76	29.44	-2.99	.00	.00	16.19	9.24	11.89	12.10	11.89
	Comtmt	7.91	2.26	6.84	.00	.00	13.52	13.58	12.38	43.50	3.28
LrgeCor	Captzn	82.57	36.68	85.17	27.73	18.00	.00	48.10	.00	32.32	62.21
	Prc/Er	22.42	18.87	22.74	39.13	18.98	.00	21.60	.00	19.42	21.86
	Yield	1.73	.90	1.82	2.81	.99	.00	1.70	.00	.79	1.57
	Return	8.85	13.23	10.30	23.79	-4.15	.00	20.37	.00	11.94	12.24
	Comtmt	28.44	15.82	25.47	5.64	2.21	.00	12.84	.00	9.59	1.52
LrgeGro	Captzn	180.89	40.80	122.42	21.51	138.97	23.51	24.18	16.68	103.63	109.14
	Prc/Er	27.59	-5.00	44.52	99.00	44.09	-5.00	51.90	63.41	22.65	94.87
	Yield	.64	.16	.90	2.56	.33	1.69	.87	1.39	.47	.54
	Return	.20	11.12	11.91	22.71	11.63	11.91	17.52	2.67	12.61	11.08
	Comtmt	9.43	16.86	15.73	2.18	38.05	1.10	5.18	.92	10.55	3.54
MidlVal	Captzn	6.32	4.61	6.97	3.77	7.66	5.40	5.45	5.67	4.67	5.12
	Prc/Er	14.34	10.64	11.41	17.10	21.68	10.20	17.59	14.23	14.40	13.37
	Yield	1.69	1.88	.14	2.14	2.45	2.40	2.13	4.33	3.41	2.79
	Return	11.88	17.96	8.29	21.62	14.03	19.66	20.10	10.02	12.62	14.44
	Comtmt	5.97	16.66	4.52	3.75	.95	7.24	8.84	13.72	38.34	1.37
MidlCor	Captzn	4.19	5.29	4.37	5.11	4.69	3.29	4.68	3.67	4.39	4.69
	Prc/Er	18.60	19.40	17.80	25.58	18.86	15.21	22.02	42.02	44.76	21.59
	Yield	.48	.63	.27	1.43	.22	.54	.95	3.39	1.22	.76
	Return	11.17	9.61	11.57	19.49	10.46	17.01	19.26	1.35	10.50	12.66
	Comtmt	5.55	23.70	17.74	9.12	10.21	2.45	14.86	1.42	14.95	.62
MidlGro	Captzn	4.60	4.45	4.89	4.79	4.81	5.03	2.63	4.73	3.84	4.58
	Prc/Er	-5.00	-5.00	84.76	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
	Yield	2.34	.28	.21	1.54	.06	.77	.27	.69	1.07	.43
	Return	11.58	15.35	7.55	28.51	15.80	8.04	7.76	16.68	15.75	14.42
	Comtmt	2.32	14.37	13.95	6.52	36.82	6.21	5.88	6.79	7.13	1.22
MiniVal	Captzn	.62	.66	.62	.62	.62	.68	.67	.77	.57	.62
	Prc/Er	13.30	9.38	7.11	16.38	11.93	11.86	13.55	4.44	13.92	10.94
	Yield	2.38	.88	.37	3.89	1.16	3.67	1.47	3.70	4.48	3.19
	Return	19.53	14.98	18.64	31.21	9.72	22.29	18.43	10.92	11.70	14.82
	Comtmt	3.10	15.53	3.63	4.07	2.03	6.24	11.00	5.25	49.14	.55
MiniCor	Captzn	.56	.75	.64	.81	.67	.67	.68	.69	.58	.67
	Prc/Er	30.80	24.82	25.71	42.11	28.79	24.30	27.24	29.68	31.84	27.76
	Yield	.55	.18	.10	1.06	.08	.06	.35	1.00	2.00	.51
	Return	14.73	10.47	11.96	27.64	15.45	22.53	17.93	15.56	8.37	14.50
	Comtmt	3.99	16.27	13.96	4.86	20.60	5.08	18.58	2.04	14.61	.33
MiniGro	Captzn	.33	.61	.53	.55	.54	.51	.54	.73	.59	.55
	Prc/Er	-4.43	-4.73	-5.00	-5.00	-5.00	-5.00	-5.00	-1.03	-5.00	-5.00
	Yield	.19	.22	.01	.57	.07	.22	.11	.46	.89	.22
	Return	17.57	15.87	6.66	38.44	17.23	25.22	23.43	17.62	14.78	16.46
	Comtmt	.77	11.18	20.98	5.52	35.44	2.56	8.16	3.13	12.26	.41