2/24/2017 Test Market Timing Models

# **Test Market Timing Models**

This tool allows you to test different market timing and tactical asset allocation models based on moving averages, momentum, market valuation and target volatility. The supported models include:

- Shiller PE Ratio Market Valuation
- Moving Averages Single Asset
- Moving Averages Portfolio Assets
- Momentum Relative Strength
- Momentum Dual Momentum
- Momentum Adaptive Allocation
- Target Volatility

You can find a summary of the selected tactical asset allocation model below, and a more detailed description in the FAQ section.

### Momentum - Dual Momentum

The dual momentum model uses relative momentum to select the best performing model assets and incorporates absolute momentum as a filter to invest in cash if the excess return of the selected asset over cash is negative.

### **Timing Model**

Dual Momentum

#### **Start Year**

1985

#### **End Year**

2016

#### **Initial Amount**

\$ 10000

#### **Tickers**

Single absolute momentum		
No		
Out of Market Asset		
Select asset		
Specify out of market asset		
FGOVX	(	Q
Performance Periods		
Single Period		
Timing Period		
12 months		
Assets to hold		
1		
Trading Frequency		
Monthly		
Trade Execution		
Trade at end of month price		
Benchmark		
Vanguard 500 Index Fund		
Fee Structure		
None		

# Market Timing Results (Jan 1987 - Dec 2016)

Market timing results from 1987 to 2016 are based on dual momentum model holding the best performing asset. Absolute momentum based trend following filter is used to switch any selected assets that have a negative excess return over the risk free rate to Fidelity Government Income Fund (FGOVX). The model uses a single performance window of 12 month(s). Timing model trades are executed using the end of month close price. The selected year range for the timing test was automatically adjusted based on the available data for Vanguard 500 Index Fund (VFINX) (May 1985-Jan 2017).

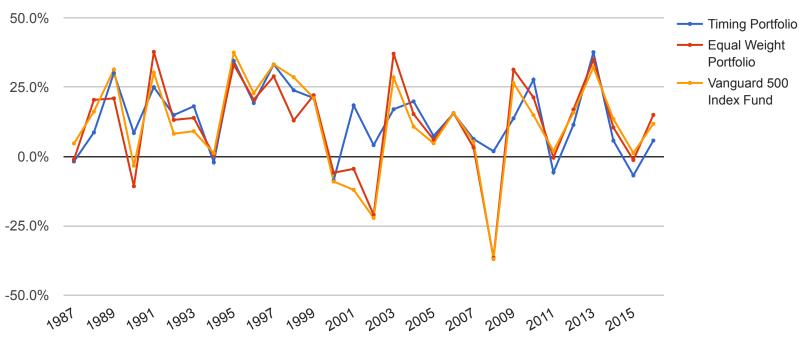
Portfolio	Initial Balance	Final Balance	CAGR	Std.Dev.	Best Year	Worst Year	Max. Drawdown	Sharpe Ratio	Sortino Ratio	US Mkt Correlation
Timing Portfolio	\$10,000	\$372,785	12.82%	14.13%	37.62%	-8.63%	-29.78%	0.71	1.09	0.71
Equal Weight Portfolio	\$10,000	\$184,854	10.21%	16.91%	37.72%	-36.55%	-52.11%	0.48	0.67	0.98
Vanguard 500 Index Fund	\$10,000	\$174,986	10.01%	15.21%	37.45%	-37.02%	-50.97%	0.50	0.72	0.99





Annual Return





Year

#### Notes on results:

- Past performance is not a guarantee of future returns and data and other errors may exist. See Disclaimer and Terms of Use
- · An equal-weight allocation is used for the assets held by the momentum model
- The equal-weight buy-and-hold benchmark portfolio assumes annual rebalancing
- The results for the timing portfolio assume monthly rebalancing trades
- The relative strength signal is based on total return including dividends
- · Additional trading costs and taxes for timing models are not reflected in the results
- CAGR = Compound Annual Growth Rate
- StdDev = Standard Deviation based on annualized standard deviation of monthly log returns
- Sharpe and Sortino ratios are calculated and annualized from monthly excess returns over risk free rate (1-month t-bills)
- Stock market correlation is based on the correlation of monthly returns
- Drawdowns are calculated based on monthly returns
- Refer to the FAQ regarding the list of data sources and methodology for additional details

Year	Timing Return	Equal Weight Portfolio Return	Vanguard 500 Index Fund Return	Vanguard 500 Index Fund (VFINX)	Vanguard Small- Cap Index Fund (NAESX)	Fidelity Government Income Fund (FGOVX)	Timing Balance	Equal Weight Portfolio Balance	Vanguard 500 Index Fund Balance
1987	-1.78%	-1.14%	4.71%	4.71%	-6.99%	1.06%	\$9,822	\$9,886	\$10,471
1988	8.67%	20.43%	16.22%	16.22%	24.63%	6.36%	\$10,673	\$11,905	\$12,169
1989	30.11%	20.96%	31.36%	31.36%	10.55%	12.62%	\$13,887	\$14,400	\$15,985
1990	8.48%	-10.73%	-3.32%	-3.32%	-18.13%	9.53%	\$15,065	\$12,855	\$15,454
1991	25.01%	37.72%	30.19%	30.19%	45.26%	15.96%	\$18,832	\$17,705	\$20,119
1992	14.95%	13.21%	8.21%	8.21%	18.20%	7.97%	\$21,648	\$20,043	\$21,771
1993	18.10%	13.91%	9.12%	9.12%	18.70%	12.32%	\$25,566	\$22,832	\$23,756
1994	-2.10%	0.33%	1.18%	1.18%	-0.51%	-5.21%	\$25,030	\$22,908	\$24,036
1995	34.47%	33.09%	37.45%	37.45%	28.74%	18.07%	\$33,658	\$30,489	\$33,036
1996	19.30%	20.49%	22.86%	22.86%	18.12%	2.08%	\$40,152	\$36,736	\$40,588

Year	Timing Return	Equal Weight Portfolio Return	Vanguard 500 Index Fund Return	Vanguard 500 Index Fund (VFINX)	Vanguard Small- Cap Index Fund (NAESX)	Fidelity Government Income Fund (FGOVX)	Timing Balance	Equal Weight Portfolio Balance	Vanguard 500 Index Fund Balance
1997	33.21%	28.90%	33.21%	33.21%	24.59%	8.93%	\$53,487	\$47,352	\$54,067
1998	23.88%	13.00%	28.62%	28.62%	-2.61%	8.59%	\$66,261	\$53,509	\$69,540
1999	21.07%	22.10%	21.07%	21.07%	23.13%	-2.25%	\$80,221	\$65,334	\$84,191
2000	-8.63%	-5.86%	-9.06%	-9.06%	-2.67%	12.63%	\$73,302	\$61,505	\$76,566
2001	18.43%	-4.46%	-12.02%	-12.02%	3.10%	6.72%	\$86,811	\$58,761	\$67,360
2002	4.12%	-21.08%	-22.15%	-22.15%	-20.02%	10.94%	\$90,386	\$46,372	\$52,443
2003	17.03%	37.07%	28.50%	28.50%	45.63%	2.22%	\$105,782	\$63,560	\$67,391
2004	19.85%	15.30%	10.74%	10.74%	19.85%	3.60%	\$126,782	\$73,282	\$74,629
2005	7.40%	6.09%	4.77%	4.77%	7.40%	2.42%	\$136,168	\$77,744	\$78,192
2006	15.53%	15.65%	15.64%	15.64%	15.66%	3.53%	\$157,315	\$89,910	\$90,422
2007	6.32%	3.27%	5.39%	5.39%	1.16%	7.91%	\$167,255	\$92,851	\$95,293
2008	1.89%	-36.55%	-37.02%	-37.02%	-36.07%	11.01%	\$170,418	\$58,918	\$60,015
2009	13.74%	31.30%	26.49%	26.49%	36.12%	1.30%	\$193,838	\$77,361	\$75,910
2010	27.72%	21.32%	14.91%	14.91%	27.72%	5.11%	\$247,570	\$93,852	\$87,231
2011	-5.72%	-0.42%	1.97%	1.97%	-2.80%	7.88%	\$233,402	\$93,459	\$88,946
2012	11.43%	16.93%	15.82%	15.82%	18.04%	2.69%	\$260,075	\$109,285	\$103,022
2013	37.62%	34.90%	32.18%	32.18%	37.62%	-2.58%	\$357,913	\$147,423	\$136,169
2014	5.72%	10.44%	13.51%	13.51%	7.37%	5.43%	\$378,383	\$162,811	\$154,564
2015	-6.83%	-1.27%	1.25%	1.25%	-3.78%	0.51%	\$352,539	\$160,750	\$156,493
2016	5.74%	15.00%	11.82%	11.82%	18.17%	1.05%	\$372,785	\$184,854	\$174,986

Year	Month	Timing Return	Equal Weight Portfolio Return	Vanguard 500 Index Fund Return	Vanguard 500 Index Fund (VFINX)	Vanguard Small- Cap Index Fund (NAESX)	Fidelity Government Income Fund (FGOVX)	Timing Balance	Equal Weight Portfolio Balance	Vanguard 500 Index Fund Balance
1987	1	13.27%	12.96%	13.27%	13.27%	12.65%	0.94%	\$11,327	\$11,296	\$11,327
1987	2	3.97%	6.00%	3.97%	3.97%	8.04%	0.34%	\$11,776	\$11,973	\$11,776
1987	3	2.86%	1.58%	2.86%	2.86%	0.35%	-0.49%	\$12,113	\$12,163	\$12,113
1987	4	-0.99%	-1.34%	-0.99%	-0.99%	-1.68%	-2.66%	\$11,992	\$12,000	\$11,992
1987	5	1.04%	2.01%	1.04%	1.04%	2.99%	-0.49%	\$12,117	\$12,242	\$12,117
1987	6	5.02%	2.94%	5.02%	5.02%	0.90%	1.35%	\$12,725	\$12,602	\$12,725
1987	7	4.91%	4.24%	4.91%	4.91%	3.56%	0.12%	\$13,351	\$13,137	\$13,351
1987	8	3.84%	4.42%	3.84%	3.84%	5.03%	-0.58%	\$13,863	\$13,718	\$13,863
1987	9	-2.29%	-1.62%	-2.29%	-2.29%	-0.94%	-1.63%	\$13,547	\$13,496	\$13,547
1987	10	-21.73%	-26.90%	-21.73%	-21.73%	-32.10%	2.73%	\$10,603	\$9,866	\$10,603
1987	11	-8.19%	-8.56%	-8.19%	-8.19%	-8.99%	0.66%	\$9,735	\$9,022	\$9,735
1987	12	0.89%	9.58%	7.55%	7.55%	11.96%	0.89%	\$9,822	\$9,886	\$10,471
1988	1	2.76%	4.00%	4.17%	4.17%	3.83%	2.76%	\$10,093	\$10,282	\$10,908
1988	2	1.24%	6.78%	4.59%	4.59%	8.98%	1.24%	\$10,218	\$10,979	\$11,408
1988	3	-0.69%	1.03%	-3.04%	-3.04%	4.95%	-0.69%	\$10,148	\$11,092	\$11,061
1988	4	-0.29%	2.23%	1.01%	1.01%	3.32%	-0.29%	\$10,118	\$11,339	\$11,173
1988	5	-0.59%	-0.93%	0.81%	0.81%	-2.45%	-0.59%	\$10,058	\$11,234	\$11,264
1988	6	1.51%	4.71%	4.56%	4.56%	4.85%	1.51%	\$10,210	\$11,763	\$11,777
1988	7	-0.19%	-0.78%	-0.37%	-0.37%	-1.16%	-0.19%	\$10,191	\$11,671	\$11,734
1988	8	0.11%	-2.76%	-3.40%	-3.40%	-2.17%	0.11%	\$10,202	\$11,349	\$11,335

Year	Month	Timing Return	Equal Weight Portfolio Return	Vanguard 500 Index Fund Return	Vanguard 500 Index Fund (VFINX)	Vanguard Small- Cap Index Fund (NAESX)	Fidelity Government Income Fund (FGOVX)	Timing Balance	Equal Weight Portfolio Balance	Vanguard 500 Index Fund Balance
1988	9	1.69%	3.13%	4.25%	4.25%	2.13%	1.69%	\$10,375	\$11,705	\$11,817
1988	10	1.45%	0.87%	2.73%	2.73%	-0.84%	1.45%	\$10,525	\$11,806	\$12,140
1988	11	-4.81%	-3.19%	-1.47%	-1.47%	-4.81%	-0.91%	\$10,019	\$11,429	\$11,961
1988	12	6.53%	4.16%	1.74%	1.74%	6.53%	0.16%	\$10,673	\$11,905	\$12,169
1989	1	4.93%	6.13%	7.32%	7.32%	4.93%	1.23%	\$11,199	\$12,634	\$13,059
1989	2	-1.83%	-2.15%	-2.47%	-2.47%	-1.83%	-0.54%	\$10,994	\$12,362	\$12,737
1989	3	2.92%	2.59%	2.26%	2.26%	2.92%	0.49%	\$11,315	\$12,682	\$13,025
1989	4	5.18%	4.72%	5.18%	5.18%	4.26%	1.91%	\$11,902	\$13,281	\$13,700
1989	5	4.04%	3.98%	4.04%	4.04%	3.93%	1.80%	\$12,382	\$13,810	\$14,253
1989	6	-0.59%	-1.88%	-0.59%	-0.59%	-3.20%	2.82%	\$12,310	\$13,550	\$14,170
1989	7	9.01%	6.15%	9.01%	9.01%	3.16%	1.81%	\$13,418	\$14,383	\$15,446
1989	8	1.86%	2.98%	1.86%	1.86%	4.22%	-1.38%	\$13,668	\$14,812	\$15,733
1989	9	-0.40%	-0.76%	-0.40%	-0.40%	-1.15%	0.39%	\$13,613	\$14,699	\$15,669
1989	10	-2.34%	-4.44%	-2.34%	-2.34%	-6.73%	2.05%	\$13,294	\$14,046	\$15,303
1989	11	2.04%	1.34%	2.04%	2.04%	0.54%	0.91%	\$13,565	\$14,234	\$15,614
1989	12	2.38%	1.17%	2.38%	2.38%	-0.24%	0.51%	\$13,887	\$14,400	\$15,985
1990	1	-6.72%	-7.51%	-6.72%	-6.72%	-8.31%	-1.29%	\$12,954	\$13,318	\$14,911
1990	2	1.27%	1.62%	1.27%	1.27%	1.97%	0.39%	\$13,119	\$13,534	\$15,101
1990	3	2.61%	3.71%	2.61%	2.61%	4.83%	0.12%	\$13,461	\$14,036	\$15,495
1990	4	-2.50%	-2.96%	-2.50%	-2.50%	-3.41%	-0.35%	\$13,125	\$13,621	\$15,107
1990	5	9.69%	8.38%	9.69%	9.69%	7.06%	2.07%	\$14,397	\$14,762	\$16,572

Year	Month	Timing Return	Equal Weight Portfolio Return	Vanguard 500 Index Fund Return	Vanguard 500 Index Fund (VFINX)	Vanguard Small- Cap Index Fund (NAESX)	Fidelity Government Income Fund (FGOVX)	Timing Balance	Equal Weight Portfolio Balance	Vanguard 500 Index Fund Balance
1990	6	-0.66%	-0.20%	-0.66%	-0.66%	0.27%	1.39%	\$14,302	\$14,732	\$16,462
1990	7	-0.35%	-2.30%	-0.35%	-0.35%	-4.27%	1.28%	\$14,252	\$14,394	\$16,405
1990	8	-0.52%	-10.92%	-9.03%	-9.03%	-12.91%	-0.52%	\$14,177	\$12,822	\$14,923
1990	9	0.75%	-6.77%	-4.89%	-4.89%	-8.85%	0.75%	\$14,284	\$11,954	\$14,193
1990	10	1.49%	-2.99%	-0.41%	-0.41%	-5.96%	1.49%	\$14,497	\$11,596	\$14,135
1990	11	2.21%	7.07%	6.44%	6.44%	7.84%	2.21%	\$14,817	\$12,416	\$15,045
1990	12	1.67%	3.54%	2.72%	2.72%	4.54%	1.67%	\$15,065	\$12,855	\$15,454
1991	1	0.73%	6.47%	4.35%	4.35%	8.58%	0.73%	\$15,174	\$13,687	\$16,126
1991	2	7.12%	9.29%	7.12%	7.12%	11.38%	0.79%	\$16,254	\$14,958	\$17,274
1991	3	2.41%	4.74%	2.41%	2.41%	6.91%	0.42%	\$16,645	\$15,668	\$17,690
1991	4	0.20%	-0.14%	0.20%	0.20%	-0.44%	0.93%	\$16,678	\$15,646	\$17,724
1991	5	4.27%	4.32%	4.27%	4.27%	4.36%	0.51%	\$17,390	\$16,321	\$18,482
1991	6	-4.56%	-5.08%	-4.56%	-4.56%	-5.54%	-0.23%	\$16,597	\$15,493	\$17,639
1991	7	4.63%	4.18%	4.63%	4.63%	3.79%	1.24%	\$17,365	\$16,141	\$18,455
1991	8	2.33%	3.25%	2.33%	2.33%	4.08%	2.57%	\$17,771	\$16,666	\$18,886
1991	9	0.42%	-0.57%	-1.67%	-1.67%	0.42%	2.28%	\$17,845	\$16,571	\$18,571
1991	10	2.74%	2.08%	1.33%	1.33%	2.74%	0.86%	\$18,334	\$16,917	\$18,817
1991	11	-5.02%	-4.55%	-4.01%	-4.01%	-5.02%	0.93%	\$17,415	\$16,147	\$18,063
1991	12	8.14%	9.65%	11.39%	11.39%	8.14%	3.95%	\$18,832	\$17,705	\$20,119
1992	1	7.96%	3.05%	-1.86%	-1.86%	7.96%	-1.71%	\$20,331	\$18,245	\$19,745
1992	2	3.50%	2.42%	1.24%	1.24%	3.50%	0.20%	\$21,041	\$18,687	\$19,991

Year	Month	Timing Return	Equal Weight Portfolio Return	Vanguard 500 Index Fund Return	Vanguard 500 Index Fund (VFINX)	Vanguard Small- Cap Index Fund (NAESX)	Fidelity Government Income Fund (FGOVX)	Timing Balance	Equal Weight Portfolio Balance	Vanguard 500 Index Fund Balance
1992	3	-3.38%	-2.69%	-1.93%	-1.93%	-3.38%	-0.65%	\$20,331	\$18,184	\$19,606
1992	4	-3.04%	-0.21%	2.91%	2.91%	-3.04%	0.62%	\$19,713	\$18,145	\$20,177
1992	5	1.18%	0.84%	0.48%	0.48%	1.18%	2.06%	\$19,944	\$18,297	\$20,275
1992	6	-4.80%	-3.19%	-1.49%	-1.49%	-4.80%	1.71%	\$18,987	\$17,713	\$19,973
1992	7	3.58%	3.81%	4.04%	4.04%	3.58%	3.07%	\$19,666	\$18,388	\$20,780
1992	8	-2.44%	-2.25%	-2.07%	-2.07%	-2.44%	0.86%	\$19,187	\$17,974	\$20,351
1992	9	1.69%	1.43%	1.17%	1.17%	1.69%	1.32%	\$19,512	\$18,231	\$20,589
1992	10	0.33%	1.76%	0.33%	0.33%	3.17%	-1.62%	\$19,576	\$18,551	\$20,656
1992	11	6.98%	5.23%	3.40%	3.40%	6.98%	0.07%	\$20,943	\$19,522	\$21,359
1992	12	3.36%	2.67%	1.93%	1.93%	3.36%	1.88%	\$21,648	\$20,043	\$21,771
1993	1	3.77%	1.93%	0.10%	0.10%	3.77%	2.37%	\$22,463	\$20,430	\$21,792
1993	2	-1.85%	-0.28%	1.36%	1.36%	-1.85%	2.45%	\$22,048	\$20,374	\$22,088
1993	3	2.11%	2.59%	2.11%	2.11%	3.07%	0.53%	\$22,512	\$20,902	\$22,553
1993	4	-2.42%	-2.64%	-2.42%	-2.42%	-2.84%	0.99%	\$21,967	\$20,351	\$22,006
1993	5	4.25%	3.46%	2.65%	2.65%	4.25%	-0.40%	\$22,900	\$21,054	\$22,590
1993	6	0.27%	0.27%	0.27%	0.27%	0.27%	2.46%	\$22,962	\$21,111	\$22,651
1993	7	0.93%	0.26%	-0.42%	-0.42%	0.93%	0.64%	\$23,176	\$21,166	\$22,555
1993	8	4.23%	4.01%	3.79%	3.79%	4.23%	2.79%	\$24,156	\$22,015	\$23,408
1993	9	2.79%	1.03%	-0.79%	-0.79%	2.79%	0.39%	\$24,829	\$22,243	\$23,222
1993	10	2.65%	2.38%	2.08%	2.08%	2.65%	0.52%	\$25,487	\$22,771	\$23,705
1993	11	-2.88%	-1.98%	-1.00%	-1.00%	-2.88%	-1.42%	\$24,753	\$22,321	\$23,469

Year	Month	Timing Return	Equal Weight Portfolio Return	Vanguard 500 Index Fund Return	Vanguard 500 Index Fund (VFINX)	Vanguard Small- Cap Index Fund (NAESX)	Fidelity Government Income Fund (FGOVX)	Timing Balance	Equal Weight Portfolio Balance	Vanguard 500 Index Fund Balance
1993	12	3.29%	2.29%	1.22%	1.22%	3.29%	0.44%	\$25,566	\$22,832	\$23,756
1994	1	3.64%	3.51%	3.38%	3.38%	3.64%	1.61%	\$26,496	\$23,632	\$24,559
1994	2	-0.37%	-1.54%	-2.71%	-2.71%	-0.37%	-2.97%	\$26,398	\$23,268	\$23,892
1994	3	-5.07%	-4.73%	-4.39%	-4.39%	-5.07%	-2.66%	\$25,061	\$22,167	\$22,843
1994	4	0.72%	1.00%	1.29%	1.29%	0.72%	-0.95%	\$25,240	\$22,389	\$23,138
1994	5	-0.84%	0.37%	1.60%	1.60%	-0.84%	-0.09%	\$25,028	\$22,472	\$23,509
1994	6	-3.26%	-2.85%	-2.45%	-2.45%	-3.26%	-0.53%	\$24,212	\$21,832	\$22,934
1994	7	1.75%	2.52%	3.28%	3.28%	1.75%	2.23%	\$24,636	\$22,382	\$23,686
1994	8	5.50%	4.77%	4.08%	4.08%	5.50%	-0.06%	\$25,991	\$23,451	\$24,651
1994	9	-0.31%	-1.39%	-2.45%	-2.45%	-0.31%	-1.96%	\$25,909	\$23,125	\$24,048
1994	10	-0.38%	0.93%	2.25%	2.25%	-0.38%	-0.39%	\$25,811	\$23,341	\$24,588
1994	11	-3.65%	-3.79%	-3.65%	-3.65%	-3.92%	-0.09%	\$24,868	\$22,457	\$23,690
1994	12	0.65%	2.01%	1.46%	1.46%	2.57%	0.65%	\$25,030	\$22,908	\$24,036
1995	1	1.88%	0.79%	2.58%	2.58%	-1.00%	1.88%	\$25,500	\$23,089	\$24,657
1995	2	2.33%	3.76%	3.88%	3.88%	3.64%	2.33%	\$26,095	\$23,958	\$25,613
1995	3	2.95%	2.56%	2.95%	2.95%	2.15%	0.55%	\$26,866	\$24,570	\$26,370
1995	4	2.94%	2.59%	2.94%	2.94%	2.23%	1.25%	\$27,656	\$25,207	\$27,145
1995	5	3.95%	2.94%	3.95%	3.95%	1.87%	3.99%	\$28,750	\$25,948	\$28,219
1995	6	2.31%	3.58%	2.31%	2.31%	4.95%	0.70%	\$29,414	\$26,878	\$28,871
1995	7	3.30%	4.53%	3.30%	3.30%	5.82%	-0.39%	\$30,386	\$28,096	\$29,825
1995	8	0.26%	1.19%	0.26%	0.26%	2.15%	1.15%	\$30,466	\$28,432	\$29,904

Year	Month	Timing Return	Equal Weight Portfolio Return	Vanguard 500 Index Fund Return	Vanguard 500 Index Fund (VFINX)	Vanguard Small- Cap Index Fund (NAESX)	Fidelity Government Income Fund (FGOVX)	Timing Balance	Equal Weight Portfolio Balance	Vanguard 500 Index Fund Balance
1995	9	4.21%	2.97%	4.21%	4.21%	1.72%	0.92%	\$31,749	\$29,277	\$31,163
1995	10	-0.36%	-2.32%	-0.36%	-0.36%	-4.34%	1.55%	\$31,634	\$28,596	\$31,050
1995	11	4.38%	4.16%	4.38%	4.38%	3.93%	1.52%	\$33,020	\$29,787	\$32,410
1995	12	1.93%	2.36%	1.93%	1.93%	2.81%	1.33%	\$33,658	\$30,489	\$33,036
1996	1	3.39%	1.77%	3.39%	3.39%	0.16%	0.53%	\$34,797	\$31,029	\$34,155
1996	2	0.92%	2.16%	0.92%	0.92%	3.43%	-2.14%	\$35,119	\$31,699	\$34,470
1996	3	0.98%	1.42%	0.98%	0.98%	1.87%	-0.84%	\$35,462	\$32,151	\$34,807
1996	4	1.46%	3.52%	1.46%	1.46%	5.59%	-0.78%	\$35,978	\$33,284	\$35,314
1996	5	3.93%	3.25%	2.54%	2.54%	3.93%	-0.16%	\$37,393	\$34,367	\$36,212
1996	6	-3.83%	-1.78%	0.38%	0.38%	-3.83%	1.18%	\$35,961	\$33,754	\$36,351
1996	7	-4.42%	-6.43%	-4.42%	-4.42%	-8.41%	0.26%	\$34,371	\$31,585	\$34,744
1996	8	2.10%	3.99%	2.10%	2.10%	5.94%	-0.29%	\$35,091	\$32,846	\$35,472
1996	9	5.61%	4.68%	5.61%	5.61%	3.76%	1.58%	\$37,059	\$34,382	\$37,461
1996	10	2.76%	0.67%	2.76%	2.76%	-1.45%	2.21%	\$38,080	\$34,611	\$38,493
1996	11	7.56%	6.00%	7.56%	7.56%	4.36%	1.64%	\$40,960	\$36,689	\$41,405
1996	12	-1.97%	0.13%	-1.97%	-1.97%	2.41%	-1.02%	\$40,152	\$36,736	\$40,588
1997	1	6.23%	4.25%	6.23%	6.23%	2.27%	0.11%	\$42,654	\$38,298	\$43,117
1997	2	0.79%	-0.81%	0.79%	0.79%	-2.46%	0.07%	\$42,991	\$37,989	\$43,458
1997	3	-4.14%	-4.43%	-4.14%	-4.14%	-4.74%	-1.08%	\$41,213	\$36,307	\$41,661
1997	4	5.96%	3.27%	5.96%	5.96%	0.37%	1.41%	\$43,668	\$37,494	\$44,142
1997	5	6.09%	8.42%	6.09%	6.09%	11.08%	0.78%	\$46,326	\$40,650	\$46,829

Year	Month	Timing Return	Equal Weight Portfolio Return	Vanguard 500 Index Fund Return	Vanguard 500 Index Fund (VFINX)	Vanguard Small- Cap Index Fund (NAESX)	Fidelity Government Income Fund (FGOVX)	Timing Balance	Equal Weight Portfolio Balance	Vanguard 500 Index Fund Balance
1997	6	4.45%	4.83%	4.45%	4.45%	5.24%	1.07%	\$48,389	\$42,614	\$48,915
1997	7	7.97%	6.75%	7.97%	7.97%	5.43%	2.84%	\$52,244	\$45,489	\$52,811
1997	8	-5.61%	-1.89%	-5.61%	-5.61%	2.24%	-1.09%	\$49,314	\$44,631	\$49,849
1997	9	5.47%	6.36%	5.47%	5.47%	7.26%	1.56%	\$52,011	\$47,468	\$52,575
1997	10	-3.35%	-3.89%	-3.35%	-3.35%	-4.42%	1.53%	\$50,268	\$45,623	\$50,814
1997	11	4.60%	2.06%	4.60%	4.60%	-0.52%	0.48%	\$52,580	\$46,562	\$53,150
1997	12	1.72%	1.70%	1.72%	1.72%	1.66%	0.98%	\$53,487	\$47,352	\$54,067
1998	1	1.11%	-0.24%	1.11%	1.11%	-1.60%	1.48%	\$54,080	\$47,236	\$54,667
1998	2	7.19%	7.34%	7.19%	7.19%	7.49%	-0.27%	\$57,970	\$50,702	\$58,599
1998	3	5.10%	4.63%	5.10%	5.10%	4.15%	0.28%	\$60,929	\$53,050	\$61,590
1998	4	1.01%	0.76%	1.01%	1.01%	0.50%	0.36%	\$61,543	\$53,452	\$62,211
1998	5	-5.36%	-3.52%	-1.74%	-1.74%	-5.36%	0.98%	\$58,244	\$51,572	\$61,126
1998	6	4.07%	2.05%	4.07%	4.07%	-0.12%	1.07%	\$60,616	\$52,632	\$63,615
1998	7	-1.05%	-4.33%	-1.05%	-1.05%	-8.02%	0.08%	\$59,977	\$50,352	\$62,944
1998	8	-14.47%	-16.65%	-14.47%	-14.47%	-19.29%	2.09%	\$51,296	\$41,967	\$53,834
1998	9	6.41%	6.90%	6.41%	6.41%	7.53%	2.53%	\$54,584	\$44,863	\$57,285
1998	10	8.16%	6.42%	8.16%	8.16%	4.21%	-0.51%	\$59,041	\$47,744	\$61,962
1998	11	6.07%	5.74%	6.07%	6.07%	5.31%	0.06%	\$62,625	\$50,485	\$65,724
1998	12	5.81%	5.99%	5.81%	5.81%	6.23%	0.16%	\$66,261	\$53,509	\$69,540
1999	1	4.20%	2.72%	4.20%	4.20%	1.23%	0.66%	\$69,046	\$54,961	\$72,463
1999	2	-3.12%	-5.58%	-3.12%	-3.12%	-8.11%	-2.33%	\$66,889	\$51,894	\$70,199

Year	Month	Timing Return	Equal Weight Portfolio Return	Vanguard 500 Index Fund Return	Vanguard 500 Index Fund (VFINX)	Vanguard Small- Cap Index Fund (NAESX)	Fidelity Government Income Fund (FGOVX)	Timing Balance	Equal Weight Portfolio Balance	Vanguard 500 Index Fund Balance
1999	3	4.00%	2.79%	4.00%	4.00%	1.48%	0.38%	\$69,562	\$53,342	\$73,004
1999	4	3.85%	6.23%	3.85%	3.85%	8.87%	0.36%	\$72,242	\$56,664	\$75,816
1999	5	-2.39%	-0.42%	-2.39%	-2.39%	1.67%	-1.04%	\$70,516	\$56,425	\$74,005
1999	6	5.56%	5.65%	5.56%	5.56%	5.74%	-0.35%	\$74,434	\$59,611	\$78,117
1999	7	-3.13%	-2.65%	-3.13%	-3.13%	-2.15%	-0.44%	\$72,104	\$58,034	\$75,672
1999	8	-0.50%	-2.14%	-0.50%	-0.50%	-3.79%	-0.03%	\$71,746	\$56,795	\$75,296
1999	9	-2.74%	-1.46%	-2.74%	-2.74%	-0.14%	1.02%	\$69,781	\$55,963	\$73,233
1999	10	6.33%	3.37%	6.33%	6.33%	0.37%	0.20%	\$74,195	\$57,847	\$77,867
1999	11	2.02%	3.93%	2.02%	2.02%	5.98%	-0.13%	\$75,696	\$60,121	\$79,442
1999	12	5.98%	8.67%	5.98%	5.98%	11.46%	-0.54%	\$80,221	\$65,334	\$84,191
2000	1	-1.69%	-3.36%	-5.03%	-5.03%	-1.69%	-0.12%	\$78,861	\$63,137	\$79,954
2000	2	16.51%	7.46%	-1.91%	-1.91%	16.51%	1.37%	\$91,880	\$67,847	\$78,430
2000	3	-6.69%	0.69%	9.76%	9.76%	-6.69%	1.39%	\$85,734	\$68,314	\$86,084
2000	4	-5.96%	-4.51%	-3.01%	-3.01%	-5.96%	-0.23%	\$80,628	\$65,231	\$83,497
2000	5	-5.78%	-3.92%	-2.04%	-2.04%	-5.78%	-0.00%	\$75,968	\$62,673	\$81,795
2000	6	9.43%	5.91%	2.49%	2.49%	9.43%	2.02%	\$83,130	\$66,379	\$83,829
2000	7	-3.50%	-2.52%	-1.49%	-1.49%	-3.50%	0.74%	\$80,217	\$64,708	\$82,580
2000	8	7.60%	6.90%	6.19%	6.19%	7.60%	1.58%	\$86,317	\$69,175	\$87,691
2000	9	-2.98%	-4.11%	-5.29%	-5.29%	-2.98%	0.50%	\$83,747	\$66,329	\$83,053
2000	10	-4.34%	-2.44%	-0.43%	-0.43%	-4.34%	0.94%	\$80,114	\$64,711	\$82,696
2000	11	-10.27%	-9.08%	-7.88%	-7.88%	-10.27%	1.84%	\$71,891	\$58,834	\$76,181

Year	Month	Timing Return	Equal Weight Portfolio Return	Vanguard 500 Index Fund Return	Vanguard 500 Index Fund (VFINX)	Vanguard Small- Cap Index Fund (NAESX)	Fidelity Government Income Fund (FGOVX)	Timing Balance	Equal Weight Portfolio Balance	Vanguard 500 Index Fund Balance
2000	12	1.96%	4.54%	0.50%	0.50%	8.61%	1.96%	\$73,302	\$61,505	\$76,566
2001	1	0.90%	4.40%	3.55%	3.55%	5.25%	0.90%	\$73,958	\$64,209	\$79,280
2001	2	1.07%	-7.86%	-9.14%	-9.14%	-6.60%	1.07%	\$74,752	\$59,164	\$72,036
2001	3	0.19%	-5.60%	-6.36%	-6.36%	-4.87%	0.19%	\$74,896	\$55,854	\$67,457
2001	4	-0.73%	7.76%	7.77%	7.77%	7.76%	-0.73%	\$74,352	\$60,190	\$72,699
2001	5	0.40%	1.58%	0.65%	0.65%	2.45%	0.40%	\$74,648	\$61,139	\$73,172
2001	6	4.04%	0.92%	-2.45%	-2.45%	4.04%	0.38%	\$77,661	\$61,701	\$71,382
2001	7	2.32%	-3.23%	-1.00%	-1.00%	-5.17%	2.32%	\$79,465	\$59,706	\$70,668
2001	8	1.05%	-4.68%	-6.27%	-6.27%	-3.23%	1.05%	\$80,299	\$56,913	\$66,235
2001	9	1.72%	-10.95%	-8.09%	-8.09%	-13.47%	1.72%	\$81,680	\$50,679	\$60,876
2001	10	2.39%	3.91%	1.90%	1.90%	5.79%	2.39%	\$83,635	\$52,661	\$62,029
2001	11	-2.12%	7.71%	7.65%	7.65%	7.75%	-2.12%	\$81,862	\$56,719	\$66,777
2001	12	6.05%	3.60%	0.87%	0.87%	6.05%	-0.96%	\$86,811	\$58,761	\$67,360
2002	1	0.77%	-1.27%	-1.47%	-1.47%	-1.06%	0.77%	\$87,479	\$58,017	\$66,368
2002	2	1.02%	-2.32%	-1.94%	-1.94%	-2.70%	1.02%	\$88,374	\$56,671	\$65,083
2002	3	-2.11%	5.88%	3.74%	3.74%	8.02%	-2.11%	\$86,510	\$60,002	\$67,519
2002	4	0.92%	-2.51%	-6.07%	-6.07%	0.92%	2.20%	\$87,307	\$58,494	\$63,418
2002	5	-4.33%	-2.64%	-0.75%	-0.75%	-4.33%	0.67%	\$83,530	\$56,952	\$62,939
2002	6	1.35%	-5.81%	-7.13%	-7.13%	-4.57%	1.35%	\$84,661	\$53,644	\$58,449
2002	7	1.95%	-11.54%	-7.72%	-7.72%	-15.01%	1.95%	\$86,311	\$47,451	\$53,937
2002	8	2.00%	0.20%	0.65%	0.65%	-0.25%	2.00%	\$88,041	\$47,546	\$54,289

Year	Month	Timing Return	Equal Weight Portfolio Return	Vanguard 500 Index Fund Return	Vanguard 500 Index Fund (VFINX)	Vanguard Small- Cap Index Fund (NAESX)	Fidelity Government Income Fund (FGOVX)	Timing Balance	Equal Weight Portfolio Balance	Vanguard 500 Index Fund Balance
2002	9	2.15%	-9.03%	-10.87%	-10.87%	-7.20%	2.15%	\$89,933	\$43,251	\$48,385
2002	10	-0.90%	5.93%	8.78%	8.78%	3.21%	-0.90%	\$89,126	\$45,816	\$52,635
2002	11	-1.02%	8.04%	6.16%	6.16%	9.92%	-1.02%	\$88,218	\$49,497	\$55,875
2002	12	2.46%	-6.31%	-6.14%	-6.14%	-6.48%	2.46%	\$90,386	\$46,372	\$52,443
2003	1	-0.26%	-2.69%	-2.62%	-2.62%	-2.75%	-0.26%	\$90,149	\$45,127	\$51,067
2003	2	1.63%	-2.27%	-1.52%	-1.52%	-3.02%	1.63%	\$91,622	\$44,103	\$50,291
2003	3	-0.55%	1.09%	0.96%	0.96%	1.22%	-0.55%	\$91,122	\$44,582	\$50,773
2003	4	0.54%	8.81%	8.25%	8.25%	9.36%	0.54%	\$91,618	\$48,508	\$54,963
2003	5	2.55%	7.40%	5.26%	5.26%	9.54%	2.55%	\$93,953	\$52,097	\$57,856
2003	6	-0.80%	1.64%	1.26%	1.26%	2.01%	-0.80%	\$93,206	\$52,952	\$58,585
2003	7	-4.20%	3.59%	1.74%	1.74%	5.36%	-4.20%	\$89,291	\$54,855	\$59,607
2003	8	4.83%	3.44%	1.93%	1.93%	4.83%	0.81%	\$93,604	\$56,741	\$60,759
2003	9	-1.64%	-1.37%	-1.07%	-1.07%	-1.64%	2.81%	\$92,074	\$55,964	\$60,108
2003	10	8.11%	6.94%	5.64%	5.64%	8.11%	-1.22%	\$99,542	\$59,847	\$63,499
2003	11	3.77%	2.41%	0.86%	0.86%	3.77%	0.15%	\$103,299	\$61,289	\$64,048
2003	12	2.40%	3.70%	5.22%	5.22%	2.40%	0.92%	\$105,782	\$63,560	\$67,391
2004	1	3.94%	2.88%	1.82%	1.82%	3.94%	0.76%	\$109,948	\$65,390	\$68,618
2004	2	1.36%	1.37%	1.38%	1.38%	1.36%	1.20%	\$111,446	\$66,286	\$69,563
2004	3	1.18%	-0.16%	-1.51%	-1.51%	1.18%	0.82%	\$112,756	\$66,183	\$68,511
2004	4	-4.77%	-3.21%	-1.58%	-1.58%	-4.77%	-3.03%	\$107,373	\$64,057	\$67,430
2004	5	1.92%	1.64%	1.36%	1.36%	1.92%	-0.15%	\$109,433	\$65,107	\$68,346

Year	Month	Timing Return	Equal Weight Portfolio Return	Vanguard 500 Index Fund Return	Vanguard 500 Index Fund (VFINX)	Vanguard Small- Cap Index Fund (NAESX)	Fidelity Government Income Fund (FGOVX)	Timing Balance	Equal Weight Portfolio Balance	Vanguard 500 Index Fund Balance
2004	6	4.06%	3.01%	1.93%	1.93%	4.06%	0.44%	\$113,879	\$67,065	\$69,665
2004	7	-5.88%	-4.62%	-3.31%	-3.31%	-5.88%	0.84%	\$107,186	\$63,966	\$67,358
2004	8	-0.35%	0.01%	0.38%	0.38%	-0.35%	1.92%	\$106,812	\$63,976	\$67,616
2004	9	4.21%	2.64%	1.07%	1.07%	4.21%	0.08%	\$111,305	\$65,666	\$68,337
2004	10	2.23%	1.88%	1.51%	1.51%	2.23%	0.72%	\$113,786	\$66,899	\$69,373
2004	11	7.53%	5.83%	4.05%	4.05%	7.53%	-0.91%	\$122,351	\$70,796	\$72,179
2004	12	3.62%	3.51%	3.39%	3.39%	3.62%	0.96%	\$126,782	\$73,282	\$74,629
2005	1	-3.54%	-3.00%	-2.45%	-2.45%	-3.54%	0.45%	\$122,291	\$71,085	\$72,797
2005	2	2.09%	2.09%	2.09%	2.09%	2.09%	-0.65%	\$124,843	\$72,571	\$74,321
2005	3	-2.26%	-2.01%	-1.76%	-1.76%	-2.26%	-0.13%	\$122,017	\$71,112	\$73,013
2005	4	-4.61%	-3.25%	-1.91%	-1.91%	-4.61%	1.34%	\$116,391	\$68,801	\$71,617
2005	5	6.17%	4.64%	3.17%	3.17%	6.17%	0.94%	\$123,577	\$71,991	\$73,886
2005	6	3.52%	1.81%	0.13%	0.13%	3.52%	0.56%	\$127,926	\$73,294	\$73,980
2005	7	6.25%	4.99%	3.71%	3.71%	6.25%	-1.07%	\$135,915	\$76,949	\$76,722
2005	8	-1.67%	-1.30%	-0.91%	-0.91%	-1.67%	1.38%	\$133,646	\$75,950	\$76,021
2005	9	0.71%	0.75%	0.79%	0.79%	0.71%	-0.97%	\$134,592	\$76,519	\$76,625
2005	10	-3.23%	-2.47%	-1.68%	-1.68%	-3.23%	-0.69%	\$130,242	\$74,631	\$75,338
2005	11	4.61%	4.19%	3.76%	3.76%	4.61%	0.40%	\$136,246	\$77,759	\$78,175
2005	12	-0.06%	-0.02%	0.02%	0.02%	-0.06%	0.88%	\$136,168	\$77,744	\$78,192
2006	1	7.85%	5.25%	2.65%	2.65%	7.85%	0.02%	\$146,863	\$81,826	\$80,260
2006	2	-0.16%	0.04%	0.25%	0.25%	-0.16%	0.19%	\$146,624	\$81,859	\$80,464

Year	Month	Timing Return	Equal Weight Portfolio Return	Vanguard 500 Index Fund Return	Vanguard 500 Index Fund (VFINX)	Vanguard Small- Cap Index Fund (NAESX)	Fidelity Government Income Fund (FGOVX)	Timing Balance	Equal Weight Portfolio Balance	Vanguard 500 Index Fund Balance
2006	3	4.20%	2.75%	1.24%	1.24%	4.20%	-0.97%	\$152,784	\$84,113	\$81,461
2006	4	0.03%	0.66%	1.33%	1.33%	0.03%	-0.09%	\$152,832	\$84,667	\$82,548
2006	5	-4.94%	-3.95%	-2.90%	-2.90%	-4.94%	-0.06%	\$145,286	\$81,324	\$80,157
2006	6	0.20%	0.16%	0.13%	0.13%	0.20%	0.23%	\$145,572	\$81,457	\$80,259
2006	7	-3.31%	-1.39%	0.61%	0.61%	-3.31%	1.26%	\$140,748	\$80,322	\$80,746
2006	8	2.36%	2.30%	2.36%	2.36%	2.24%	1.35%	\$144,073	\$82,170	\$82,653
2006	9	2.56%	1.73%	2.56%	2.56%	0.90%	0.69%	\$147,766	\$83,591	\$84,772
2006	10	3.25%	4.22%	3.25%	3.25%	5.20%	0.45%	\$152,570	\$87,115	\$87,528
2006	11	3.10%	2.49%	1.88%	1.88%	3.10%	1.04%	\$157,293	\$89,284	\$89,175
2006	12	0.01%	0.70%	1.40%	1.40%	0.01%	-0.63%	\$157,315	\$89,910	\$90,422
2007	1	2.39%	1.94%	1.49%	1.49%	2.39%	-0.13%	\$161,076	\$91,656	\$91,773
2007	2	-1.97%	-1.04%	-1.97%	-1.97%	-0.12%	1.45%	\$157,904	\$90,703	\$89,965
2007	3	1.11%	1.16%	1.11%	1.11%	1.22%	0.08%	\$159,660	\$91,760	\$90,965
2007	4	4.42%	3.53%	4.42%	4.42%	2.67%	0.46%	\$166,713	\$94,998	\$94,984
2007	5	3.48%	3.95%	3.48%	3.48%	4.41%	-0.82%	\$172,510	\$98,749	\$98,287
2007	6	-1.67%	-1.64%	-1.67%	-1.67%	-1.60%	-0.02%	\$169,630	\$97,134	\$96,646
2007	7	-3.09%	-4.44%	-3.09%	-3.09%	-5.76%	1.20%	\$164,386	\$92,823	\$93,658
2007	8	1.50%	1.42%	1.50%	1.50%	1.34%	1.39%	\$166,849	\$94,141	\$95,061
2007	9	3.72%	2.94%	3.72%	3.72%	2.15%	0.67%	\$173,062	\$96,907	\$98,601
2007	10	1.58%	2.09%	1.58%	1.58%	2.62%	0.68%	\$175,795	\$98,935	\$100,158
2007	11	-4.19%	-5.48%	-4.19%	-4.19%	-6.79%	2.54%	\$168,434	\$93,515	\$95,965

Year	Month	Timing Return	Equal Weight Portfolio Return	Vanguard 500 Index Fund Return	Vanguard 500 Index Fund (VFINX)	Vanguard Small- Cap Index Fund (NAESX)	Fidelity Government Income Fund (FGOVX)	Timing Balance	Equal Weight Portfolio Balance	Vanguard 500 Index Fund Balance
2007	12	-0.70%	-0.71%	-0.70%	-0.70%	-0.72%	0.18%	\$167,255	\$92,851	\$95,293
2008	1	-6.02%	-6.12%	-6.02%	-6.02%	-6.23%	2.40%	\$157,194	\$87,166	\$89,561
2008	2	0.81%	-2.94%	-3.25%	-3.25%	-2.62%	0.81%	\$158,472	\$84,607	\$86,649
2008	3	0.63%	-0.49%	-0.44%	-0.44%	-0.53%	0.63%	\$159,471	\$84,195	\$86,267
2008	4	-1.20%	5.17%	4.86%	4.86%	5.48%	-1.20%	\$157,562	\$88,548	\$90,462
2008	5	-0.83%	3.23%	1.28%	1.28%	5.16%	-0.83%	\$156,251	\$91,409	\$91,624
2008	6	0.41%	-8.67%	-8.44%	-8.44%	-8.90%	0.41%	\$156,896	\$83,480	\$83,892
2008	7	0.33%	0.45%	-0.83%	-0.83%	1.67%	0.33%	\$157,412	\$83,853	\$83,195
2008	8	1.09%	2.31%	1.45%	1.45%	3.13%	1.09%	\$159,125	\$85,793	\$84,398
2008	9	0.32%	-9.17%	-8.91%	-8.91%	-9.41%	0.32%	\$159,634	\$77,926	\$76,881
2008	10	-0.82%	-19.25%	-16.79%	-16.79%	-21.52%	-0.82%	\$158,318	\$62,926	\$63,971
2008	11	4.32%	-9.35%	-7.17%	-7.17%	-11.49%	4.32%	\$165,154	\$57,041	\$59,381
2008	12	3.19%	3.29%	1.07%	1.07%	5.58%	3.19%	\$170,418	\$58,918	\$60,015
2009	1	-1.53%	-9.33%	-8.41%	-8.41%	-10.25%	-1.53%	\$167,810	\$53,422	\$54,966
2009	2	0.18%	-11.30%	-10.66%	-10.66%	-11.96%	0.18%	\$168,118	\$47,384	\$49,108
2009	3	1.77%	9.11%	8.76%	8.76%	9.48%	1.77%	\$171,097	\$51,701	\$53,410
2009	4	-0.65%	13.84%	9.56%	9.56%	18.25%	-0.65%	\$169,982	\$58,859	\$58,516
2009	5	-0.36%	4.66%	5.62%	5.62%	3.74%	-0.36%	\$169,367	\$61,600	\$61,803
2009	6	0.18%	0.69%	0.22%	0.22%	1.16%	0.18%	\$169,678	\$62,028	\$61,939
2009	7	0.65%	8.65%	7.58%	7.58%	9.68%	0.65%	\$170,775	\$67,394	\$66,633
2009	8	0.82%	4.04%	3.60%	3.60%	4.46%	0.82%	\$172,175	\$70,117	\$69,031

Year	Month	Timing Return	Equal Weight Portfolio Return	Vanguard 500 Index Fund Return	Vanguard 500 Index Fund (VFINX)	Vanguard Small- Cap Index Fund (NAESX)	Fidelity Government Income Fund (FGOVX)	Timing Balance	Equal Weight Portfolio Balance	Vanguard 500 Index Fund Balance
2009	9	0.66%	5.07%	3.72%	3.72%	6.34%	0.66%	\$173,316	\$73,674	\$71,596
2009	10	0.33%	-4.36%	-1.87%	-1.87%	-6.64%	0.33%	\$173,890	\$70,460	\$70,259
2009	11	3.33%	4.63%	5.98%	5.98%	3.33%	1.25%	\$179,686	\$73,722	\$74,462
2009	12	7.88%	4.94%	1.95%	1.95%	7.88%	-1.95%	\$193,838	\$77,361	\$75,910
2010	1	-3.35%	-3.48%	-3.60%	-3.60%	-3.35%	1.46%	\$187,351	\$74,673	\$73,175
2010	2	4.97%	4.03%	3.09%	3.09%	4.97%	0.28%	\$196,658	\$77,683	\$75,437
2010	3	8.08%	7.06%	6.01%	6.01%	8.08%	-0.46%	\$212,552	\$83,166	\$79,973
2010	4	5.54%	3.60%	1.58%	1.58%	5.54%	0.87%	\$224,329	\$86,159	\$81,235
2010	5	-7.80%	-7.89%	-8.00%	-8.00%	-7.80%	1.14%	\$206,839	\$79,359	\$74,740
2010	6	-7.57%	-6.46%	-5.25%	-5.25%	-7.57%	1.50%	\$191,184	\$74,236	\$70,817
2010	7	7.16%	7.08%	7.00%	7.00%	7.16%	0.64%	\$204,865	\$79,491	\$75,771
2010	8	-6.61%	-5.60%	-4.53%	-4.53%	-6.61%	1.56%	\$191,325	\$75,040	\$72,339
2010	9	11.98%	10.48%	8.92%	8.92%	11.98%	-0.05%	\$214,244	\$82,901	\$78,791
2010	10	4.08%	3.94%	3.79%	3.79%	4.08%	0.09%	\$222,989	\$86,167	\$81,776
2010	11	3.07%	1.58%	0.00%	0.00%	3.07%	-0.67%	\$229,829	\$87,532	\$81,776
2010	12	7.72%	7.22%	6.67%	6.67%	7.72%	-1.31%	\$247,570	\$93,852	\$87,231
2011	1	0.86%	1.61%	2.36%	2.36%	0.86%	0.08%	\$249,707	\$95,363	\$89,287
2011	2	5.34%	4.37%	3.42%	3.42%	5.34%	-0.12%	\$263,029	\$99,529	\$92,338
2011	3	2.42%	1.22%	0.03%	0.03%	2.42%	-0.01%	\$269,385	\$100,747	\$92,361
2011	4	2.94%	2.94%	2.95%	2.95%	2.94%	1.25%	\$277,293	\$103,710	\$95,084
2011	5	-2.00%	-1.58%	-1.15%	-1.15%	-2.00%	1.34%	\$271,736	\$102,071	\$93,995

Year	Month	Timing Return	Equal Weight Portfolio Return	Vanguard 500 Index Fund Return	Vanguard 500 Index Fund (VFINX)	Vanguard Small- Cap Index Fund (NAESX)	Fidelity Government Income Fund (FGOVX)	Timing Balance	Equal Weight Portfolio Balance	Vanguard 500 Index Fund Balance
2011	6	-2.02%	-1.85%	-1.67%	-1.67%	-2.02%	-0.30%	\$266,250	\$100,186	\$92,423
2011	7	-3.72%	-2.89%	-2.05%	-2.05%	-3.72%	1.40%	\$256,347	\$97,291	\$90,531
2011	8	-8.31%	-6.88%	-5.45%	-5.45%	-8.31%	2.03%	\$235,044	\$90,600	\$85,601
2011	9	-11.00%	-8.99%	-7.04%	-7.04%	-11.00%	1.20%	\$209,181	\$82,455	\$79,572
2011	10	10.91%	13.00%	10.91%	10.91%	15.26%	-0.41%	\$232,011	\$93,177	\$88,256
2011	11	-0.41%	-0.32%	-0.23%	-0.23%	-0.41%	0.32%	\$231,051	\$92,877	\$88,050
2011	12	1.02%	0.63%	1.02%	1.02%	0.22%	0.85%	\$233,402	\$93,459	\$88,946
2012	1	4.46%	5.71%	4.46%	4.46%	6.95%	0.51%	\$243,822	\$98,793	\$92,917
2012	2	4.31%	3.74%	4.31%	4.31%	3.19%	-0.43%	\$254,324	\$102,491	\$96,919
2012	3	3.28%	2.79%	3.28%	3.28%	2.30%	-0.61%	\$262,669	\$105,349	\$100,099
2012	4	-0.64%	-0.78%	-0.64%	-0.64%	-0.93%	1.16%	\$260,989	\$104,523	\$99,459
2012	5	-6.02%	-6.40%	-6.02%	-6.02%	-6.78%	1.33%	\$245,283	\$97,836	\$93,474
2012	6	-0.25%	4.31%	4.11%	4.11%	4.51%	-0.25%	\$244,674	\$102,052	\$97,315
2012	7	1.37%	0.27%	1.37%	1.37%	-0.82%	0.95%	\$248,026	\$102,332	\$98,648
2012	8	2.24%	2.84%	2.24%	2.24%	3.47%	0.03%	\$253,580	\$105,243	\$100,857
2012	9	2.58%	2.65%	2.58%	2.58%	2.73%	0.12%	\$260,113	\$108,036	\$103,456
2012	10	-1.46%	-1.66%	-1.86%	-1.86%	-1.46%	-0.14%	\$256,314	\$106,242	\$101,532
2012	11	0.56%	0.86%	0.56%	0.56%	1.16%	0.29%	\$257,749	\$107,156	\$102,100
2012	12	0.90%	1.99%	0.90%	0.90%	3.07%	-0.28%	\$260,075	\$109,285	\$103,022
2013	1	6.35%	5.76%	5.18%	5.18%	6.35%	-0.65%	\$276,590	\$115,584	\$108,354
2013	2	1.33%	1.34%	1.34%	1.34%	1.33%	0.48%	\$280,282	\$117,129	\$109,805

Year	Month	Timing Return	Equal Weight Portfolio Return	Vanguard 500 Index Fund Return	Vanguard 500 Index Fund (VFINX)	Vanguard Small- Cap Index Fund (NAESX)	Fidelity Government Income Fund (FGOVX)	Timing Balance	Equal Weight Portfolio Balance	Vanguard 500 Index Fund Balance
2013	3	4.69%	4.21%	3.74%	3.74%	4.69%	0.10%	\$293,414	\$122,065	\$113,910
2013	4	0.14%	1.01%	1.91%	1.91%	0.14%	0.67%	\$293,817	\$123,303	\$116,084
2013	5	3.61%	2.97%	2.33%	2.33%	3.61%	-1.59%	\$304,425	\$126,965	\$118,786
2013	6	-0.99%	-1.17%	-1.35%	-1.35%	-0.99%	-1.24%	\$301,404	\$125,479	\$117,182
2013	7	6.66%	5.87%	5.07%	5.07%	6.66%	-0.18%	\$321,480	\$132,850	\$123,126
2013	8	-3.17%	-3.05%	-2.91%	-2.91%	-3.17%	-0.57%	\$311,274	\$128,804	\$119,540
2013	9	5.69%	4.43%	3.12%	3.12%	5.69%	1.00%	\$329,000	\$134,507	\$123,272
2013	10	3.27%	3.91%	4.59%	4.59%	3.27%	0.52%	\$339,743	\$139,763	\$128,926
2013	11	2.71%	2.86%	3.03%	3.03%	2.71%	-0.16%	\$348,941	\$143,767	\$132,830
2013	12	2.57%	2.54%	2.51%	2.51%	2.57%	-0.95%	\$357,913	\$147,423	\$136,169
2014	1	-2.07%	-2.77%	-3.47%	-3.47%	-2.07%	1.54%	\$350,509	\$143,341	\$131,446
2014	2	5.06%	4.81%	4.56%	4.56%	5.06%	0.33%	\$368,238	\$150,237	\$137,440
2014	3	-0.31%	0.25%	0.82%	0.82%	-0.31%	-0.25%	\$367,090	\$150,614	\$138,573
2014	4	-2.33%	-0.81%	0.72%	0.72%	-2.33%	0.63%	\$358,531	\$149,394	\$139,576
2014	5	1.17%	1.76%	2.33%	2.33%	1.17%	1.02%	\$362,743	\$152,026	\$142,835
2014	6	2.05%	3.48%	2.05%	2.05%	4.96%	0.04%	\$370,186	\$157,320	\$145,766
2014	7	-4.94%	-3.16%	-1.39%	-1.39%	-4.94%	-0.25%	\$351,891	\$152,349	\$143,743
2014	8	3.99%	4.47%	3.99%	3.99%	4.97%	0.91%	\$365,922	\$159,159	\$149,474
2014	9	-1.42%	-3.33%	-1.42%	-1.42%	-5.31%	-0.44%	\$360,733	\$153,857	\$147,354
2014	10	2.42%	3.41%	2.42%	2.42%	4.48%	0.91%	\$369,475	\$159,105	\$150,925
2014	11	2.68%	1.85%	2.68%	2.68%	0.98%	0.79%	\$379,386	\$162,052	\$154,974

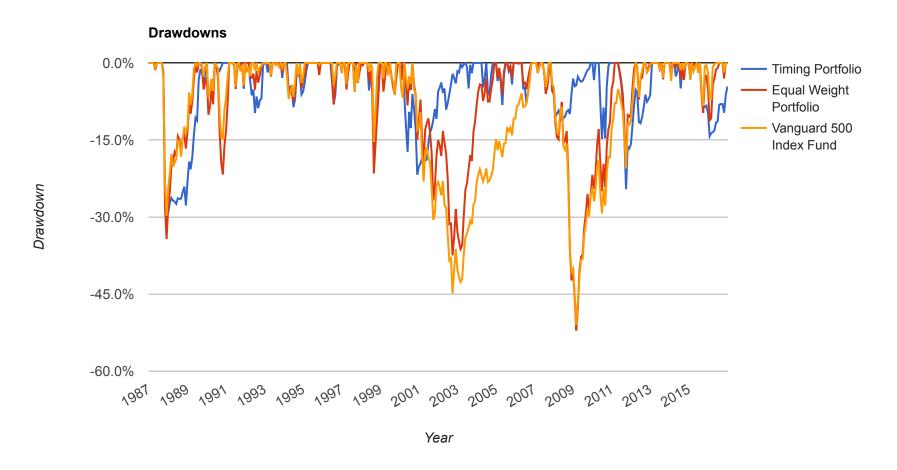
Year	Month	Timing Return	Equal Weight Portfolio Return	Vanguard 500 Index Fund Return	Vanguard 500 Index Fund (VFINX)	Vanguard Small- Cap Index Fund (NAESX)	Fidelity Government Income Fund (FGOVX)	Timing Balance	Equal Weight Portfolio Balance	Vanguard 500 Index Fund Balance
2014	12	-0.26%	0.47%	-0.26%	-0.26%	1.25%	0.08%	\$378,383	\$162,811	\$154,564
2015	1	-3.01%	-2.59%	-3.01%	-3.01%	-2.17%	2.12%	\$366,985	\$158,596	\$149,908
2015	2	5.73%	5.78%	5.73%	5.73%	5.82%	-1.29%	\$388,027	\$167,757	\$158,504
2015	3	-1.59%	-0.20%	-1.59%	-1.59%	1.18%	0.59%	\$381,843	\$167,423	\$155,977
2015	4	0.95%	-0.40%	0.95%	0.95%	-1.69%	-0.27%	\$385,467	\$166,760	\$157,458
2015	5	1.27%	1.64%	1.27%	1.27%	2.00%	-0.36%	\$390,373	\$169,492	\$159,462
2015	6	-1.93%	-1.40%	-1.93%	-1.93%	-0.87%	-0.84%	\$382,827	\$167,125	\$156,379
2015	7	2.08%	0.88%	2.08%	2.08%	-0.29%	0.88%	\$390,791	\$168,590	\$159,632
2015	8	-6.04%	-5.94%	-6.04%	-6.04%	-5.85%	-0.16%	\$367,181	\$158,569	\$149,988
2015	9	-2.49%	-3.50%	-2.49%	-2.49%	-4.50%	0.70%	\$358,038	\$153,024	\$146,253
2015	10	-0.23%	7.06%	8.42%	8.42%	5.68%	-0.23%	\$357,221	\$163,831	\$158,572
2015	11	0.29%	1.03%	0.29%	0.29%	1.81%	-0.26%	\$358,244	\$165,524	\$159,026
2015	12	-1.59%	-2.88%	-1.59%	-1.59%	-4.21%	-0.34%	\$352,539	\$160,750	\$156,493
2016	1	-4.98%	-6.32%	-4.98%	-4.98%	-7.66%	1.80%	\$334,994	\$150,596	\$148,705
2016	2	0.70%	0.38%	-0.15%	-0.15%	0.92%	0.70%	\$337,330	\$151,167	\$148,489
2016	3	0.23%	7.56%	6.78%	6.78%	8.35%	0.23%	\$338,099	\$162,590	\$158,550
2016	4	0.37%	1.05%	0.37%	0.37%	1.72%	-0.07%	\$339,362	\$164,292	\$159,143
2016	5	1.78%	1.86%	1.78%	1.78%	1.93%	0.06%	\$345,413	\$167,345	\$161,980
2016	6	0.25%	0.25%	0.25%	0.25%	0.25%	1.85%	\$346,276	\$167,764	\$162,385
2016	7	3.68%	4.38%	3.68%	3.68%	5.07%	0.22%	\$359,006	\$175,110	\$168,355
2016	8	0.13%	0.38%	0.13%	0.13%	0.62%	-0.34%	\$359,471	\$175,770	\$168,573

Year	Month	Timing Return	Equal Weight Portfolio Return	Vanguard 500 Index Fund Return	Vanguard 500 Index Fund (VFINX)	Vanguard Small- Cap Index Fund (NAESX)	Fidelity Government Income Fund (FGOVX)	Timing Balance	Equal Weight Portfolio Balance	Vanguard 500 Index Fund Balance
2016	9	0.01%	0.20%	0.01%	0.01%	0.39%	0.03%	\$359,501	\$176,128	\$168,587
2016	10	-1.83%	-2.99%	-1.83%	-1.83%	-4.12%	-0.83%	\$352,911	\$170,854	\$165,496
2016	11	3.70%	6.17%	3.70%	3.70%	8.61%	-2.35%	\$365,965	\$181,387	\$171,618
2016	12	1.86%	1.91%	1.96%	1.96%	1.86%	-0.18%	\$372,785	\$184,854	\$174,986

Metric	Timing Model	<b>Equal Weight Portfolio</b>	Vanguard 500 Index Fund
Mean Return (monthly)	1.09%	0.93%	0.89%
Mean Return (annualized)	13.93%	11.76%	11.27%
Compound Return (monthly)	1.01%	0.81%	0.80%
Compound Return (annualized)	12.82%	10.21%	10.01%
Volatility (monthly)	4.05%	4.76%	4.33%
Volatility (annualized)	14.13%	16.91%	15.21%
Max. Drawdown	-29.78%	-52.11%	-50.97%
Market Correlation	0.71	0.98	0.99
Beta <sup>(*)</sup>	0.63	1.04	1.00
Alpha (annualized)	6.37%	0.01%	-0.00%
R <sup>2</sup>	45.09%	89.27%	100.00%
Sharpe Ratio	0.71	0.48	0.50
Sortino Ratio	1.09	0.67	0.72
Treynor Ratio (%)	15.80	7.68	7.54
Skewness	-0.56	-1.06	-0.82

Metric	Timing Model	<b>Equal Weight Portfolio</b>	Vanguard 500 Index Fund
Excess Kurtosis	3.43	3.90	2.71
Historical Value-at-Risk (95%)	-5.60%	-7.48%	-7.03%
Delta Normal Value-at-Risk (95%)	-6.66%	-7.84%	-7.12%
Conditional Value-at-Risk (95%)	-8.37%	-11.28%	-9.98%
Positive Periods	237 out of 360 (65.83%)	232 out of 360 (64.44%)	232 out of 360 (64.44%)
Gain/Loss Ratio	1.06	0.91	0.94

<sup>(\*)</sup> Beta is calculated against Vanguard 500 Index Fund (the selected benchmark). Market correlation is against the US stock market.



## **Drawdowns for Timing Portfolio**

Rank	Drawdown Start	Drawdown End	Drawdown Length	Recovery By	Recovery Time	Drawdown
1	Sep 1987	Nov 1987	3 months	Dec 1989	2 years 4 months	-29.78%
2	May 2011	Sep 2011	5 months	Feb 2013	1 year 10 months	-24.56%
3	Mar 2000	Nov 2000	9 months	May 2003	3 years 3 months	-21.76%
4	May 1998	Aug 1998	4 months	Nov 1998	7 months	-16.65%
5	May 2010	Jun 2010	2 months	Nov 2010	7 months	-14.78%

Rank	Drawdown Start Drawdown End Drawdown Length Recovery By		Recovery By	Recovery Time	Drawdown	
6	Aug 2015	Jan 2016	6 months			-14.28%
7	Nov 2007	May 2008	7 months	Nov 2009	2 years 1 month	-11.12%
8	Mar 1992	Jun 1992	4 months	Dec 1992	10 months	-9.77%
9	Feb 1994	Jun 1994	5 months	Mar 1995	1 year 2 months	-8.62%
10	Jan 2005	Apr 2005	4 months	Jun 2005	6 months	-8.20%
11	Jun 1996	Jul 1996	2 months	Oct 1996	5 months	-8.08%
12	May 2006	Jul 2006	3 months	Nov 2006	7 months	-7.91%
13	Jan 1990	Jan 1990	1 month	May 1990	5 months	-6.72%
14	Jul 1999	Sep 1999	3 months	Nov 1999	5 months	-6.25%
15	Jul 2004	Aug 2004	2 months	Nov 2004	5 months	-6.21%
16	Aug 1997	Aug 1997	1 month	Nov 1997	4 months	-5.61%
17	Nov 1991	Nov 1991	1 month	Dec 1991	2 months	-5.02%
18	Jun 2003	Jul 2003	2 months	Oct 2003	5 months	-4.96%
19	Jul 2014	Jul 2014	1 month	Nov 2014	5 months	-4.94%
20	Apr 2004	Apr 2004	1 month	Jun 2004	3 months	-4.77%
21	Jun 2007	Jul 2007	2 months	Sep 2007	4 months	-4.71%
22	Jun 1991	Jun 1991	1 month	Aug 1991	3 months	-4.56%
23	Aug 2005	Oct 2005	3 months	Nov 2005	4 months	-4.17%
24	Mar 1997	Mar 1997	1 month	Apr 1997	2 months	-4.14%
25	Jan 2010	Jan 2010	1 month	Feb 2010	2 months	-3.35%
26	Dec 2014	Jan 2015	2 months	Feb 2015	3 months	-3.27%
27	Aug 2013	Aug 2013	1 month	Sep 2013	2 months	-3.17%

Rank	Drawdown Start	Drawdown Start Drawdown End Drawdown Length Reco		Recovery By	Recovery Time D	Drawdown
28	Feb 1999	Feb 1999	1 month	Mar 1999	2 months	-3.12%
29	Nov 1993	Nov 1993	1 month	Dec 1993	2 months	-2.88%
30	Mar 2014	Apr 2014	2 months	Jun 2014	4 months	-2.64%
31	Apr 1993	Apr 1993	1 month	May 1993	2 months	-2.42%
32	May 1999	May 1999	1 month	Jun 1999	2 months	-2.39%
33	Jan 2014	Jan 2014	1 month	Feb 2014	2 months	-2.07%
34	Dec 1996	Dec 1996	1 month	Jan 1997	2 months	-1.97%
35	Feb 2007	Feb 2007	1 month	Apr 2007	3 months	-1.97%
36	Jun 2015	Jun 2015	1 month	Jul 2015	2 months	-1.93%
37	Feb 1993	Feb 1993	1 month	Mar 1993	2 months	-1.85%
38	Jan 2000	Jan 2000	1 month	Feb 2000	2 months	-1.69%
39	Mar 2015	Mar 2015	1 month	May 2015	3 months	-1.59%
40	Jun 1990	Aug 1990	3 months	Oct 1990	5 months	-1.52%
41	Jun 2013	Jun 2013	1 month	Jul 2013	2 months	-0.99%
42	Apr 1987	Apr 1987	1 month	May 1987	2 months	-0.99%
43	Oct 1995	Oct 1995	1 month	Nov 1995	2 months	-0.36%
44	Feb 2006	Feb 2006	1 month	Mar 2006	2 months	-0.16%
45	Dec 2005	Dec 2005	1 month	Jan 2006	2 months	-0.06%

# **Drawdowns for Equal Weight Portfolio**

Rank Drawdown Start	Drawdown End	Drawdown Length	Recovery By	Recovery Time	Drawdown
1 Nov 2007	Feb 2009	1 year 4 months	Feb 2011	3 years 4 months	-52.11%
2 Sep 2000	Sep 2002	2 years 1 month	Nov 2004	4 years 3 months	-37.48%

	Drawdown Start Drawdown End Drawdown Length Recovery By		necovery by	Recovery Time	Drawdown	
3 S	Sep 1987	Nov 1987	3 months	May 1989	1 year 9 months	-34.24%
4 S	Sep 1989	Oct 1990	1 year 2 months	Feb 1991	1 year 6 months	-21.71%
5 N	May 1998	Aug 1998	4 months	Dec 1998	8 months	-21.49%
6 N	May 2011 Sep 2011		5 months	Mar 2012	11 months	-20.49%
7 J	Jun 2015	Jan 2016	8 months	Jul 2016	1 year 2 months	-11.15%
8 A	Apr 2000	May 2000	2 months	Aug 2000	5 months	-8.26%
9 J	Jun 1996	Jul 1996	2 months	Sep 1996	4 months	-8.09%
10 F	eb 1994	Jun 1994	5 months	Feb 1995	1 year 1 month	-7.62%
11 A	Apr 2012	May 2012	2 months	Sep 2012	6 months	-7.13%
12 J	Jul 1999	Sep 1999	3 months	Nov 1999	5 months	-6.12%
13 J	Jan 2005	Apr 2005	4 months	Jun 2005	6 months	-6.12%
14 J	Jun 2007	Jul 2007	2 months	Oct 2007	5 months	-6.00%
15 F	<sup>-</sup> eb 1999	Feb 1999	1 month	Apr 1999	3 months	-5.58%
16 N	Mar 1992	Jun 1992	4 months	Nov 1992	9 months	-5.21%
17 F	eb 1997	Mar 1997	2 months	May 1997	4 months	-5.20%
18 N	May 2006	Jul 2006	3 months	Oct 2006	6 months	-5.13%
19 J	Jun 1991	Jun 1991	1 month	Aug 1991	3 months	-5.08%
20 N	Nov 1991	Nov 1991	1 month	Dec 1991	2 months	-4.55%
21 0	Oct 1997	Oct 1997	1 month	Feb 1998	5 months	-3.89%
22 J	Jan 2000	Jan 2000	1 month	Feb 2000	2 months	-3.36%
23 S	Sep 2014	Sep 2014	1 month	Nov 2014	3 months	-3.33%
24 J	Jul 2014	Jul 2014	1 month	Aug 2014	2 months	-3.16%

Rank	Drawdown Start	awdown Start Drawdown End Drawdown Length Recovery By		Recovery By	Recovery Time	Drawdown
25	Aug 2013	Aug 2013	1 month	Sep 2013	2 months	-3.05%
26	Aug 2005	Oct 2005	3 months	Nov 2005	4 months	-3.01%
27	Oct 2016	Oct 2016	1 month	Nov 2016	2 months	-2.99%
28	Jan 2014	Jan 2014	1 month	Feb 2014	2 months	-2.77%
29	Apr 1993	Apr 1993	1 month	May 1993	2 months	-2.64%
30	Jan 2015	Jan 2015	1 month	Feb 2015	2 months	-2.59%
31	Oct 1995	Oct 1995	1 month	Nov 1995	2 months	-2.32%
32	Nov 1993	Nov 1993	1 month	Dec 1993	2 months	-1.98%
33	Aug 1997	Aug 1997	1 month	Sep 1997	2 months	-1.89%
34	Jun 1989	Jun 1989	1 month	Jul 1989	2 months	-1.88%
35	Oct 2012	Oct 2012	1 month	Dec 2012	3 months	-1.66%
36	Apr 1987	Apr 1987	1 month	May 1987	2 months	-1.34%
37	Jun 2013	Jun 2013	1 month	Jul 2013	2 months	-1.17%
38	Feb 2007	Feb 2007	1 month	Mar 2007	2 months	-1.04%
39	Apr 2014	Apr 2014	1 month	May 2014	2 months	-0.81%
40	Mar 2015	Apr 2015	2 months	May 2015	3 months	-0.59%
41	Sep 1991	Sep 1991	1 month	Oct 1991	2 months	-0.57%
42	May 1999	May 1999	1 month	Jun 1999	2 months	-0.42%
43	Feb 1993	Feb 1993	1 month	Mar 1993	2 months	-0.28%
44	Apr 1991	Apr 1991	1 month	May 1991	2 months	-0.14%
45	Dec 2005	Dec 2005	1 month	Jan 2006	2 months	-0.02%

## Drawdowns for Vanguard 500 Index Fund

Rank	Drawdown Start	Drawdown End	Drawdown Length	Recovery By	Recovery Time	Drawdown
1	Nov 2007	Feb 2009	1 year 4 months	Aug 2012	4 years 10 months	-50.97%
2	Sep 2000	Sep 2002	2 years 1 month	Nov 2006	6 years 3 months	-44.82%
3	Sep 1987	Nov 1987	3 months	May 1989	1 year 9 months	-29.78%
4	Jul 1998	Aug 1998	2 months	Nov 1998	5 months	-15.38%
5	Jun 1990	Oct 1990	5 months	Feb 1991	9 months	-14.70%
6	Aug 2015	Sep 2015	2 months	May 2016	10 months	-8.38%
7	Feb 1994	Mar 1994	2 months	Aug 1994	7 months	-6.98%
8	Jan 2000	Feb 2000	2 months	Mar 2000	3 months	-6.84%
9	Jan 1990	Jan 1990	1 month	May 1990	5 months	-6.72%
10	Jul 1999	Sep 1999	3 months	Nov 1999	5 months	-6.25%
11	Aug 1997	Aug 1997	1 month	Nov 1997	4 months	-5.61%
12	Apr 2000	May 2000	2 months	Aug 2000	5 months	-4.98%
13	Jun 2007	Jul 2007	2 months	Sep 2007	4 months	-4.71%
14	Jun 1991	Jun 1991	1 month	Aug 1991	3 months	-4.56%
15	Jul 1996	Jul 1996	1 month	Sep 1996	3 months	-4.42%
16	Sep 1991	Nov 1991	3 months	Dec 1991	4 months	-4.36%
17	Mar 1997	Mar 1997	1 month	Apr 1997	2 months	-4.14%
18	Sep 1994	Nov 1994	3 months	Jan 1995	5 months	-3.90%
19	Jan 2014	Jan 2014	1 month	Feb 2014	2 months	-3.47%
20	Dec 2014	Jan 2015	2 months	Feb 2015	3 months	-3.27%
21	Feb 1999	Feb 1999	1 month	Mar 1999	2 months	-3.12%
22	Aug 2013	Aug 2013	1 month	Sep 2013	2 months	-2.91%
						2.0170

Rank	Drawdown Start	Drawdown End	Drawdown Length	Recovery By	Recovery Time	Drawdown
23	Sep 1989	Oct 1989	2 months	Dec 1989	4 months	-2.73%
24	Jan 1992	Mar 1992	3 months	Apr 1992	4 months	-2.55%
25	Apr 1993	Apr 1993	1 month	May 1993	2 months	-2.42%
26	May 1999	May 1999	1 month	Jun 1999	2 months	-2.39%
27	Aug 1992	Aug 1992	1 month	Nov 1992	4 months	-2.07%
28	Dec 1996	Dec 1996	1 month	Jan 1997	2 months	-1.97%
29	Feb 2007	Feb 2007	1 month	Apr 2007	3 months	-1.97%
30	Jun 2015	Jun 2015	1 month	Jul 2015	2 months	-1.93%
31	Oct 2012	Oct 2012	1 month	Jan 2013	4 months	-1.86%
32	Oct 2016	Oct 2016	1 month	Nov 2016	2 months	-1.83%
33	May 1998	May 1998	1 month	Jun 1998	2 months	-1.74%
34	Mar 2015	Mar 2015	1 month	May 2015	3 months	-1.59%
35	Jun 1992	Jun 1992	1 month	Jul 1992	2 months	-1.49%
36	Sep 2014	Sep 2014	1 month	Oct 2014	2 months	-1.42%
37	Jul 2014	Jul 2014	1 month	Aug 2014	2 months	-1.39%
38	Jun 2013	Jun 2013	1 month	Jul 2013	2 months	-1.35%
39	Nov 1993	Nov 1993	1 month	Dec 1993	2 months	-1.00%
40	Apr 1987	Apr 1987	1 month	May 1987	2 months	-0.99%
41	Sep 1993	Sep 1993	1 month	Oct 1993	2 months	-0.79%
42	Jun 1989	Jun 1989	1 month	Jul 1989	2 months	-0.59%
43	Jul 1993	Jul 1993	1 month	Aug 1993	2 months	-0.42%
44	Oct 1995	Oct 1995	1 month	Nov 1995	2 months	-0.36%

#	Start	End	Months	Assets	Asset Performance	Timing Portfolio	Equal Weight Portfolio	Vanguard 500 Index Fund
1	Jan 1987	Nov 1987	11	100.00% Vanguard 500 Index Fund (VFINX)	VFINX: -2.65%	-2.65%	-9.78%	-2.65%
2	Dec 1987	Oct 1988	11	100.00% Fidelity Government Income Fund (FGOVX)	FGOVX: 8.11%	8.11%	30.86%	24.70%
3	Nov 1988	Mar 1989	5	100.00% Vanguard Small-Cap Index Fund (NAESX)	NAESX: 7.51%	7.51%	7.42%	7.29%
4	Apr 1989	Jul 1990	16	100.00% Vanguard 500 Index Fund (VFINX)	VFINX: 25.95%	25.95%	13.50%	25.95%
5	Aug 1990	Jan 1991	6	100.00% Fidelity Government Income Fund (FGOVX)	FGOVX: 6.47%	6.47%	-4.91%	-1.70%
6	Feb 1991	Aug 1991	7	100.00% Vanguard 500 Index Fund (VFINX)	VFINX: 17.11%	17.11%	21.76%	17.11%
7	Sep 1991	Sep 1992	13	100.00% Vanguard Small-Cap Index Fund (NAESX)	NAESX: 9.80%	9.80%	9.39%	9.02%
8	Oct 1992	Oct 1992	1	100.00% Vanguard 500 Index Fund (VFINX)	VFINX: 0.33%	0.33%	1.76%	0.33%
9	Nov 1992	Feb 1993	4	100.00% Vanguard Small-Cap Index Fund (NAESX)	NAESX: 12.63%	12.63%	9.83%	6.93%
10	Mar 1993	Apr 1993	2	100.00% Vanguard 500 Index Fund (VFINX)	VFINX: -0.37%	-0.37%	-0.11%	-0.37%
11	May 1993	Oct 1994	18	100.00% Vanguard Small-Cap Index Fund (NAESX)	NAESX: 17.50%	17.50%	14.69%	11.73%
12	Nov 1994	Nov 1994	1	100.00% Vanguard 500 Index Fund (VFINX)	VFINX: -3.65%	-3.65%	-3.79%	-3.65%
13	Dec 1994	Feb 1995	3	100.00% Fidelity Government Income Fund (FGOVX)	FGOVX: 4.94%	4.94%	6.68%	8.12%

#	Start	End	Months	Assets	Asset Performance	Timing Portfolio	Equal Weight Portfolio	Vanguard 500 Index Fund
14	Mar 1995	Apr 1996	14	100.00% Vanguard 500 Index Fund (VFINX)	VFINX: 37.87%	37.87%	38.93%	37.87%
15	May 1996	Jun 1996	2	100.00% Vanguard Small-Cap Index Fund (NAESX)	NAESX: -0.05%	-0.05%	1.41%	2.94%
16	Jul 1996	Apr 1998	22	100.00% Vanguard 500 Index Fund (VFINX)	VFINX: 71.14%	71.14%	58.36%	71.14%
17	May 1998	May 1998	1	100.00% Vanguard Small-Cap Index Fund (NAESX)	NAESX: -5.36%	-5.36%	-3.52%	-1.74%
18	Jun 1998	Dec 1999	19	100.00% Vanguard 500 Index Fund (VFINX)	VFINX: 37.73%	37.73%	26.68%	37.73%
19	Jan 2000	Nov 2000	11	100.00% Vanguard Small-Cap Index Fund (NAESX)	NAESX: -10.38%	-10.38%	-9.95%	-9.51%
20	Dec 2000	May 2001	6	100.00% Fidelity Government Income Fund (FGOVX)	FGOVX: 3.84%	3.84%	3.92%	-3.95%
21	Jun 2001	Jun 2001	1	100.00% Vanguard Small-Cap Index Fund (NAESX)	NAESX: 4.04%	4.04%	0.92%	-2.45%
22	Jul 2001	Nov 2001	5	100.00% Fidelity Government Income Fund (FGOVX)	FGOVX: 5.41%	5.41%	-8.07%	-6.45%
23	Dec 2001	Dec 2001	1	100.00% Vanguard Small-Cap Index Fund (NAESX)	NAESX: 6.05%	6.05%	3.60%	0.87%
24	Jan 2002	Mar 2002	3	100.00% Fidelity Government Income Fund (FGOVX)	FGOVX: -0.35%	-0.35%	2.11%	0.24%
25	Apr 2002	May 2002	2	100.00% Vanguard Small-Cap Index Fund (NAESX)	NAESX: -3.44%	-3.44%	-5.08%	-6.78%
26	Jun 2002	Jul 2003	14	100.00% Fidelity Government Income Fund (FGOVX)	FGOVX: 6.90%	6.90%	-3.68%	-5.29%

#	Start	End	Months	Assets	Asset Performance	Timing Portfolio	Equal Weight Portfolio	Vanguard 500 Index Fund
27	Aug 2003	Jul 2006	36	100.00% Vanguard Small-Cap Index Fund (NAESX)	NAESX: 57.63%	57.63%	46.43%	35.46%
28	Aug 2006	Oct 2006	3	100.00% Vanguard 500 Index Fund (VFINX)	VFINX: 8.40%	8.40%	8.46%	8.40%
29	Nov 2006	Jan 2007	3	100.00% Vanguard Small-Cap Index Fund (NAESX)	NAESX: 5.58%	5.58%	5.21%	4.85%
30	Feb 2007	Jan 2008	12	100.00% Vanguard 500 Index Fund (VFINX)	VFINX: -2.41%	-2.41%	-4.90%	-2.41%
31	Feb 2008	Oct 2009	21	100.00% Fidelity Government Income Fund (FGOVX)	FGOVX: 10.62%	10.62%	-19.17%	-21.55%
32	Nov 2009	Sep 2011	23	100.00% Vanguard Small-Cap Index Fund (NAESX)	NAESX: 20.30%	20.30%	17.02%	13.26%
33	Oct 2011	Oct 2011	1	100.00% Vanguard 500 Index Fund (VFINX)	VFINX: 10.91%	10.91%	13.00%	10.91%
34	Nov 2011	Nov 2011	1	100.00% Vanguard Small-Cap Index Fund (NAESX)	NAESX: -0.41%	-0.41%	-0.32%	-0.23%
35	Dec 2011	May 2012	6	100.00% Vanguard 500 Index Fund (VFINX)	VFINX: 6.16%	6.16%	5.34%	6.16%
36	Jun 2012	Jun 2012	1	100.00% Fidelity Government Income Fund (FGOVX)	FGOVX: -0.25%	-0.25%	4.31%	4.11%
37	Jul 2012	Sep 2012	3	100.00% Vanguard 500 Index Fund (VFINX)	VFINX: 6.31%	6.31%	5.86%	6.31%
38	Oct 2012	Oct 2012	1	100.00% Vanguard Small-Cap Index Fund (NAESX)	NAESX: -1.46%	-1.46%	-1.66%	-1.86%
39	Nov 2012	Dec 2012	2	100.00% Vanguard 500 Index Fund (VFINX)	VFINX: 1.47%	1.47%	2.87%	1.47%