



When to Sell - May 29, 1998

This purpose of this study is to show the effects of different holding periods, transaction costs, and quality screens on the performance of the selected stock list and Ford's Value/Momentum model. Every month, Ford publishes a list of selected stocks based on the Value/Momentum model. The select stock list can be used as a model portfolio for investors who are able to tolerate the level of turnover it generates (226% annually which translates into about a 5 month holding period). This study should provide those who would like longer holding periods some general selling guidelines.

We created three sets of portfolio screens: the quality of B or better with growth persistence of B or better replicates the screen used for the Ford Select stock list; the B- or better screen eliminates stocks which our analysis terms speculative; the no limits portfolios include all stocks in the Ford Universe. Within each of these quality groupings, the top 20 stocks based on Ford's value/momentum model were selected and held as long as they remained in the top 10%, 20%, 30%, etc. of stocks ranked by the value/momentum model. Holding through the various deciles achieved average holding periods ranging from 2 months to over 18 months. The 18-month holding period was targeted because of the 1997 tax law, which classifies a holding period of 18 months or longer as a long-term for tax purposes. The average annual performance over the 20 year period ended 12/97 is shown with no transaction costs as well as with 1%, 2% and 3% round trip transaction costs included.

The tables on the back of this report show the relationships between holding periods and returns under the various transaction cost levels we studied. For all portfolios shown, when no transaction costs are included, the most restrictive holding criteria result in the best returns and returns generally decline as holding criteria are eased. By including approximations of transaction costs in our analysis, we can find holding criteria that will provide the best average return for a given cost level. In the high quality portfolios, holding the top 20 Value/Momentum stocks as long as they rank among the top 30% of all stocks (VMO percentile of 70 or better) provides the best returns with 1% or 2% transaction costs (this is the same as the Select Stock list holding criteria). The B- or better quality portfolios show similar results to the high quality portfolio. The no limit portfolios had the highest returns (and standard deviation of returns) across the board.

The results of this study provide a good indication of the impact of transaction costs on portfolio returns. It clearly shows the critical importance of achieving low transaction costs for portfolios with holding periods of less than 12 months. The value/momentum percentile rankings will soon be available in the Ford Data Base.

20 Stock Value/Momentum Portfolios, Rebalanced Monthly 12/77 - 12/97

Quality of B or better, Growth persistence of B or better portfolio

Holding criteria	No trans return	1% trans return	2% trans return	3% trans return	Annual Turnover	Avg. months Turn	Standard Deviation
Top 10%	33.8	27.2	20.9	15.0	515	2	17.2
Top 20%	31.5	27.5	23.6	19.7	320	4	16.9
Top 30%	30.6	27.8	25.0	22.2	226	5	17.1
Top 40%	28.5	26.5	24.5	22.5	161	7	17.2
Top 50%	25.9	24.7	23.5	22.3	97	12	17.6
Top 60%	21.8	21.1	20.4	19.8	56	21	17.9

B- or better quality rating

Holding criteria	No trans return	1% trans return	2% trans return	3% trans return	Annual Turnover	Avg. months Turn	Standard Deviation
Top 10%	35.7	30.4	25.3	20.4	408	3	20.5
Top 20%	32.5	28.8	25.3	21.9	284	4	20.6
Top 30%	31.2	28.4	25.8	23.1	215	6	20.6
Top 40%	29.5	27.5	25.5	23.5	159	8	20.4
Top 50%	26.0	24.7	23.5	22.2	104	12	19.7
Top 60%	24.3	23.5	22.7	21.9	66	18	19.7

No quality or growth persistence limits

Holding criteria	No trans return	1% trans return	2% trans return	3% trans return	Annual Turnover	Avg. months Turn	Standard Deviation
Top 10%	38.4	33.2	28.1	23.3	394	3	21.8
Top 20%	34.1	30.3	26.7	23.1	289	4	22.5
Top 30%	32.7	29.8	26.9	24.1	226	5	21.9
Top 40%	28.9	26.8	24.8	22.7	167	7	21.7
Top 50%	26.2	24.6	23.1	21.6	125	10	21.9
Top 60%	27.3	26.3	25.3	24.4	78	15	20.5
Top 70%	25.4	24.8	24.2	23.7	47	26	19.8

All Ford Stocks 17.1

16.7