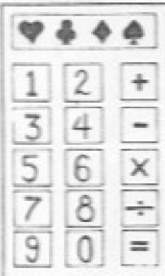

Joseph E. Granville: Prophet of Profits?

Mathematics of Gambling

Edward O. Thorp

Joseph E. Granville may have the most spectacular stock market forecasting record in the world today. In a weekly market newsletter, he predicts when the Dow Jones Industrial Average (DJIA) is going up and when it is going down. He does not issue forecasts for very short term moves. Rather, he'll predict moves that have a month or more duration and are likely to be changes of 10% or so.

For the last two years, Granville has been forecasting the direction of the DJIA without any of the usual double talk you expect in market newsletters. Granville's view is that the market is a tide and the stocks are boats carried by that tide. When the market is moving up, nearly all stocks are carried up with it. When the market is moving down, nearly all stocks are carried down with it.

Granville is willing to forecast the movement of individual stocks which he thinks will move against the market; but since these are relatively few in number he omits this from his advice to subscribers. Also, he may recommend certain stocks which he thinks will move very strongly in the same direction as his market forecast.

Granville's unusual record, plus his extensive worldwide series of speaking engagements, has developed an enormous following. His $250 a year newsletter has more than 20,000 subscribers. He has a telegraphic early warning system that has more than 1,000 subscribers at $500 a year. Add to this his tape cassette learning system and other revenues, and I would guess he now grosses more than $6 million a year.

Granville states emphatically that he does not invest his money in the stock market: He wants to avoid a conflict of interest between his own investments and his recommendations to subscribers. To do otherwise would generate potential conflict of interest charges. Also it would possibly reduce his objectivity in analyzing the market.

An indication of Granville's enormous following occurred on April 21, 1980. Over the weekend, he sent out a telegraphic early warning to subscribers. He told them that he was changing his recommendation from 100% short to 100% long. In addition, he suggested several specific stocks which he thought would be good buys at this point.

When the market opened Monday, it gapped up on heavy volume. The influx of buy orders, for the stocks which Granville recommended, was so large that trading was suspended. The market closed approximately 30 points up on that day.

Afterwards, Granville was asked how much his recommendation had to do with the 30 point move. He said that perhaps 5 or 6 points of it were due to his recommendations; the rest occurred because the market was ready to turn anyhow.

Some time later, Granville commented that he had read a list of the twelve most powerful men in the world. He noted that not one of them had the power to move the Dow Jones Averages one point, let alone 5, 6 or 30.

Granville became well known as a market forecaster when his book *A Strategy of Daily Stock Market Timing for Maximum Profit* was published in 1960. Over the years, he improved and updated his system. The latest version appeared in his *Granville's New Strategy of Daily Stock Market Timing for Maximum Profit* published in 1976.

In 1974, he missed some major market moves. Since then, however, he seems to have become increasingly accurate. His method is to follow a horde of technical indicators of which a dozen or so are the principal ones.

Among Granville's indicators are the advance decline line, the number of daily highs and lows, the 200 day moving average of the DJIA, General Motors, and the short interest ratio. Also important are volume based indicators which Granville has developed. These include the climax indicator, the net field trend indicator, and the on balance volume behavior for individual Dow Jones stocks. The above indicators and many others are discussed in detail in his book.

The basic idea is that he wants almost all of his indicators to agree that a market turn is at hand before he finally makes the call. He likes to talk about a tree of indicators with many branches. He says that he looks at all the branches.

In contrast, he says many analysts follow just one or a few indictors—and any one or any few are frequently unreliable. He refers to an analyst, who follows a single indicator, as someone who swings from a single branch of the tree. When the branch breaks . . .

Generally, his many indicators do not unanimously agree that there is a market turn. He refers to the occasional indicator, which is out of line with the others, as a "hook." He also likes to have news stories

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breaking at the time of the market turn. To the general public, that suggests the market is not going to turn. He also refers to the news stories as hooks.

For example, suppose all the indicators were going to forecast a market down turn. Then news stories, such as "Federal Government to Bail Out Chrysler," "New Hope for Release of Hostages," or "Federal Reserve Cuts Discount Rate," would serve to draw the last buyers into the ending bull market.

Some set of news stories, or hooks, (to discharge the last buying) seem to be important. They bring a bull market move to an end, paving the way for a down turn which the indicators say is imminent. When the market has been falling and the indicators say it is about to turn, similar hooks (only this time bad news stories) are also important. That is, these hooks are important in discharging final selling activity to clear the way for a market rebound.

I first became seriously interested in Granville's methods and his performance record because of a mutual friend, Wayne Shapiro. In 1969, some time after I wrote *Beat the Market,* Wayne contacted me. (Then, he was a broker in the midwest.) Wayne was excited by the possibility of making an excess return with low risk by using warrant hedging. That was the theme of *Beat the Market.*

He came to Newport Beach to take a special intensive weekend course from me on hedging techniques. When he went back, he developed an extensive list of satisfied clients with the aid of these methods.

Eventually, Wayne became head of the options department at First of Michigan, a large regional brokerage firm. Wayne went on (as did many *Beat the Market* readers and its author) to successfully apply the methods to the new listed options market.

A couple of years ago Wayne began applying the options market to Granville's predictions. The basic idea is to buy cheap calls to benefit from a market move up, and buy cheap puts to benefit from a market move down. Avoid buying stocks to benefit from a move down.

Whatever predictive power there is in Granville's methods, it could be leveraged many times by the use of options instead of stock. This method worked well for Wayne; and his clients are happier than ever.

Wayne commented on my warrant hedging methods and Granville's market timing method. He said they were the only two things he ever came across that worked in his more than 20 years experience in the stock market. He thought something exciting might happen if the two of us got together. In November 1979, Wayne brought Granville and me together in Newport Beach for what may have been a "historic meeting."

Granville was interested in an academic and statistical validation of techniques which he felt sure were working. I was fascinated by the possibility that somebody really could use technical methods to beat the market.

The academic world tested many such claims in the past on an informal basis. All reports have been negative however. No one seemed to have produced a technical system to beat the market. At least, there wasn't one which continued to work into the future after the claim was made for it.

From this point, I began to receive all of Granville's newsletters, telegrams and learning material. I attempted to formulate statistical tests to determine how well his forecasts worked. This led to a research effort on the part of myself, Jerome Baesel of the UCI Graduate School of Management, and George Shows, of the Oakley Sutton management Corporation. A summary of that work as it has so far progressed follows.

We tested whether Joseph Granville's forecasts of market direction were statistically and significantly better than chance. We compared the results from his "buy" and "sell" recommendations with actual market performance from December 4, 1978 through October

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31, 1980. We also covered the subperiod from November 8, 1979 through October 31, 1980.

Following Granville, we shall use the Dow Jones Average of 30 Industrials (DJIA) as a proxy for the market.

Granville has had a (biweekly, then) weekly market letter for many years. He said that since 1975 his market calls (predictions of market direction) have been accurate. For this study, he has kindly supplied us with copies of those gestion until the following Monday, December 4, 1978. For this reason we started this buy period with the Dow closing price on December 4, 1978. (This is typical of the timing of his calls, since many of his indicators depend on closing market statistics.)

The buy and sell short recommendations, and their corresponding time periods, are presented in the table. (Investors who cannot sell short should sell and put their funds in an alternate investment.)

Close After Which Call Was Made	Call	Data Examined
12/01/78	Buy	12/04/78 to 09/24/79
09/21/79	sell short	09/24/79 to 11/08/79
11/07/79	buy	11/08/79 to 02/15/80
02/14/80	sell short	02/15/80 to 04/22/80
04/21/80	buy	04/22/80 to 10/31/80

letters from October 1974 through November 1980.

We chose to start the study period at December 4, 1978. We felt that the market calls from this date on were totally unambiguous. From December 4th on, Granville's recommendations are unequivocal; an investor should be either 100% long, or 100% short, or in the case of one two week period, hold. Thus, we had a "mechanical" strategy which lent itself readily to statistical tests.

We chose the sub-period from November 8, 1979 through October 31, 1980 for separate analysis, because November 8, 1979 was the date that we began to monitor Granville's forecasts. This was *before* we intended to statistically test them. This eliminates some of the "data mining" problem which existed.

The Data

On December 1, 1978, Granville said buy after the market closed for the day. This was Friday, and no action could be taken on his sug-

After the close of January 24, 1980, Granville recommended no new buying. We do not treat this separately. We would have bought on November 8, 1979 and would not have sold until February 15, 1980.

For both the entire period, and the sub-period, we used two different statistical tests. We tested the null hypothesis that the results from Granville's calls are not significantly better than chance.

All our trades are assumed to be at the DJIA closing prices. Such trades cannot be made. However, actual trades of component DJIA stocks, made in suitable proportions during the day, should have an expected value near the closing price.

We expect a small adverse bias due to the liquidity costs of the market makers. This point is discussed in Baesel, J., Shows, G., Thorp, E., "The Cost of Liquidity Services in Listed Options." GSM Working Paper No. 2 in Finance.

(To be continued next month.) gt