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THEORY IN PRACTICE / Edward O. Thorp

Granville at UCI — Part 2

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Granville knows that because his market timing calls move the level of the market overnight, his subscribers may lose a substantial part of the benefit of his market timing forecasts, assuming they turn out to be correct.

For example, suppose the DJIA closes at 1000, and Granville sends an overnight early-warning telegram telling his subscribers to sell all stocks and go short. The market might, as it has in the past, open the next morning at the 970-point level and stay in that area for that day. Therefore, the subscribers go short at a price of 970 rather than at the better previous closing price of 1000.

Now imagine that the forecast is correct and the Dow drops until it closes at 900 on some later date. Suppose after this close Granville sends another overnight wire which states "cover all shorts and go long stocks," and that the market opens at 930 the next day and remains in that area.

Subscribers would then cover their short sales at 930 rather than at the more favorable price of 900. They would also go long at 930. On their short at 1000 they would make only 40 points before the commission costs.

If we assume one-way commissions are about 0.5%, they lose about 5 points in costs when they initiate their short positions, and about 5 more points when they cover them. If we deduct 10 points for these two rounds of commission costs, a net gain of 30 points is left for the subscribers.

But Granville correctly claims that he called a market move of 100 points. Of course, one of the problems is that he, through the actions of his followers, is causing a fair fraction of this because of the large following he has.

Now suppose the market fulfills Granville's forecast at 900 and moves up to 1000 again. Suppose Granville once again says sell all stocks and go short. Suppose the market again opens at 970 and stays in that area for that day. Then the subscribers who were previously long would sell their longs at 970. After estimated commission costs of 10 points they would make only 30 points, whereas Granville forecasted a 100 point move from 900 up to 1000.

If Granville has a perfect record and his following increases, he may be forced to wait for wider swings in the market.

From this we see that if Granville continues to have the following he had over the last year and the market impact he had over the last year, then if he calls swings as small as 100 points, subscribers may be left with a net gain of only 30 points.

Imagine that Granville called even smaller swings, let's say 70 points. The same argument shows us that subscribers would approximately only break even after commission costs. If he correctly called 50-point swings, they would lose 20 points per swing.

We can see why Granville might not want to call swings much under 100 points. He has not said precisely what I have said here, but I suspect he would agree. This also shows that if Granville has a perfect record and his following increases, he may be forced to wait for wider and wider swings in the market.

Panelist Professor Clive W.J. Granger, Professor of Economics from UC San Diego and a noted author of many books on the possibility of stock market prediction, had a series of questions which developed the following idea:

Consider Granville's market timing call after the close of January 6, 1981. He said go short after the market closed at 1004.68. At the close on the day before this meeting, the market was 983.96, so his call gained 20.72 points so far. But subscribers, even if we pretend for the moment that they sold short at 1004.68 instead of around 970, have been in this position for 4-2/3 months.

If instead he had told them to sell their stock, but buy Treasury bills or commercial paper instead of going short stock, they would have done better. For instance, if the average yield over this period to them was 15% per year, they would make about 5.83% times 1004.68 or about 58.61 points. On the other hand, the 20.72 points that they got from him was more like a substantial loss to date.

First, the market opened about 30 points lower, which we must subtract from this 20.72 point gain. Next, if we assume a commission for shorting stocks, that amounts to about 5 points. We should subtract that.

Then we need to subtract short dividends. Short dividends for 4-2/3 months at an assumed average dividend yield of 5% amounts to about 1.94%. Multiplying this by 1000 gives us about 19 points. So the profit of 20 points has 30 points and 5 points and 19 points subtracted for a net loss of about 34

Granville waits for moves of 100 points or more before he issues a call.

points to date for the investors versus a gain of about 58 points for the T-Bill strategy.

Doesn't he think that his investors would do much better if instead of simply calling the market up or down he had a third alternative? The third alternative would be a prediction that the market is going more or less sideways and that investors would be better off for the time buying Treasury bills or commercial paper.

To get a feeling for how important this third alternative is, suppose that we have a correct market up call and know the market is going to go up for the next six months. How much up does it have to go to be better than commercial paper or Treasury bills?

If commercial paper or Treasury bills were yielding 15%, then the interest yield for them on 1000 points would be 75 points.

If the Dow were at 1000 and were yielding 5%, then the dividend yield in six months would be 25 points. If commercial paper or Treasury bills were yielding 15%, then the interest yield for them on 1000 points would be 75 points.

Therefore, if the Dow were going to move from 1000 to more than 1050, investors would make more by betting on the Dow to go up than by putting their money in commercial paper or Treasury bills. Otherwise, it would be better to put their money in the latter.

What about the short side? If the Dow were at 1000 and was projected to fall in the next six months, short dividends which are paid to the person who sold the stock would amount to 25 points, so investors would have to overcome that.

In order to net 75 points before commissions the Dow would have to fall 100 points from 1000 to 900. Therefore, before we take into account commissions, we would go short only if the Dow were projected to fall more than 100 points in the next six months, given these hypothetical dividend yields and short term interest rates.

If we add commissions of 10 points then the band (within which Treasury bills or commercial paper is superior) becomes wider by 10 points on each end. The Dow would have to rise to more than 1060 from 1000, or would have to fall to below 890 in order to make going short worthwhile.

This is a surprisingly wide band within which commercial paper or Treasury bills are superior. Looked at this way, it seems that a very valuable addition to any market timing strategy would be the ability to choose this third alternative when it was appropriate.

The $1000 Bet

Panelist, Professor Jerome Baesel, of the Graduate School of Management, UC Irvine, asked Granville how far the market would have to move up above his call to go short at 1004 in order for him to be proven wrong. Granville said if it moved up more than 100 points on any subsequent daily close, he would be shown to be wrong.

Baesel then asked how far down the market would have to move before Granville could possibly issue a call to cover shorts and go long. Granville said he waits for moves of 100 points or more so the market would have to move down below 904.68 on a subsequent daily close before he would issue such a call.

A local stockbroker from the audience heatedly took issue with Granville's belief that the market will move down through 904 before it moves up through 1104. Granville and the broker expressed their opinions with vigor. This led to a suggestion that they back their opinions with money.

I pinned them down to a bet of $1000. If the market closes above 1104.68 before closing below 904.68 Granville pays the broker $1000. In the alternative, the broker pays Granville $1000. Perhaps by the time you read this you will know who the winner is. **gt**

To be continued next month.