

In response to questions regarding previous columns on Granville, this month has been devoted to their answers.

**Question:** Does Granville have investments which somehow profit from his market timing calls?

**Answer:** No. For example, Granville says he doesn't own stocks, which I believe to be true. If he did own stocks, word would leak out from the brokerage firm that handles his orders. Since he has made many enemies on Wall Street by severely criticizing brokers, bank trust officers and fund managers, many of them would be happy to produce evidence of wrongdoing on Granville's part. The SEC could then put him out of business.

Therefore, I think it is extremely unlikely that he would publicly say that he doesn't own stocks and then secretly own some. Besides, his profits from his market service are such that he can forego additional stock profits. I believe he will gross in excess of \$6 million in 1980.

**Q:** Granville likes to have cover stories when he calls a market turn. What were the cover stories on January 6, 1981?

**A:** Recall that a cover story is one which draws "suckers" in at the end of a market move, discharging the last buying if the market has been going up, and the last selling if the market has been going down. The cover stories during the day of January 6th included good news on the possible release of the hostages, and a second reduction in the prime rate.

**Q:** Large short interest figures are considered bullish. The December 15 short interest was the greatest ever. Shouldn't that have been bullish on January 6, and suggest that Granville not call for the market to go down?

**A:** According to Joe Granville, this indicator was out of step this time. It's what he calls a "hook:" when a clear majority of indicators call for a market turn, the minority which are out of step are called hooks.

Note that *each* indicator has a following. Since indicators may take turns being hooks, people who follow a single indicator get hooked frequently. Granville said that to use one indicator is to swing by one branch of the indicator "tree." But he "uses the whole tree." If one or a few branches desert him, he is still alright.

#### Comments on the Short Interest Indicator

In December of each year, investors frequently take short against the box positions for tax purposes. These have little to do with buying and selling pressures in the marketplace, but they may add substantially to the reported short interest figures.

If it were possible to separately list short against the box positions as a part of the total short interest, it would make interpretation of the short interest figures more precise. Also short interest may be due to specialists or member firms rather than the public. (Turov, in *Business Week*, January 26, 1981, page 7, says 85% is typical!)

If we could tell how much of the short interest was in each of these categories, we might better understand the meaning of the short interest. When these qualifiers are included, what appears to have been a bullish indicator may not have been one at all.

Further, the short interest on January 6, 1981 was three weeks later than the date of the latest short interest figures of approximately December 15, 1980. There

could have been a substantial change upward or downward during this period. So this indicator tends to be inaccurate over a short time.

Of course, if the short interest increased steadily over several months, it would infer a continuing trend over that period. One might then rely on it with greater assurance. This is all assuming that expanded short interest figures are bullish. I am not subscribing to that assumption, however.

In fact, the next short interest figures reported for the month (ended January 15, 1981) were down substantially on the New York Stock Exchange and the American Stock Exchange. Granville says this shows the shorts covered at the top, and they got nailed.

One of my students pointed out that if Granville's impact was so enormous, the short interest ought to increase rather than decrease due to his followers going short. This is hard to explain.

There are at least three factors mixed together. First, we have the short against the box positions which were probably closed between January 2 and 15. These would tend to decrease the short interest reported on January 15.

Second, shorts were hurt by a sharply rising market which spurted by 40 points in the few days ending January 6. Shorts may have covered on this spurt to avoid further loss. This would reduce the short interest figures or, at least, tend to reduce them as of January 15.

Then we have the third factor: Granville's followers shorting the market on January 7. This action would tend to increase the short interest. With this mixture of conflicting effects, you can see that

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the situation is complex. Furthermore it's not obvious whether the short interest is going to increase or decrease as of January 15.

Note that if Granville's major impact was on institutions, as reported, there still could have been relatively few "Granville" short sales. (Institutions are generally restricted in their ability to sell short.)

### Stanford Wong Comments on Granville Column

"When you use DJIA data," Wong said, "be sure you use the series with dividends added back in. Your paper does not mention whether you use those data or the unadjusted data. Second, be careful in the use of variance when analyzing stock returns, because variance probably doesn't exist. For your data, a simple chi-square test shows significance at the 1% level without some of the theoretical problems inherent in dealing with a distribution which is unstable.

|                         | Actually up | Actually down | Total |
|-------------------------|-------------|---------------|-------|
| Granville predicts up   | 120         | 83            | 203   |
| Granville predicts down | 17          | 28            | 45    |
| Total                   | 137         | 111           | 248   |

For the above table,  $\chi^2=6.78$  with 1 dof."

**Explanation:** We used the unadjusted DJIA data. We did not use the series with dividends added back in, because it is the unadjusted series that Granville used as input. It is also that number which he attempts to forecast, and which the public follows in the papers every day.

It is true that before [transactions] costs, the adjusted series corresponds to the gains and losses that a real investor will experience.

Therefore, in the part of our paper where we discuss how much an investor would have made or lost by following Granville's recommendations, the adjusted series would appear to be more appropriate. Omitting dividends from this calculation, however, is compensated for by the exclusion of [transactions] costs.

There are also other factors which tend to affect the rate of return somewhat. The rates of return that we estimate for an investor following the recommendations will be quite close to what he would have actually experienced. Therefore, the correction is considered important in this portion of the paper.

Wong suggests that "variance probably does not exist" for stock returns. This point is being debated in the financial literature. One group, who thinks that Mandelbrot's stable Paretian model of stock prices is better than the lognormal model, would tend to agree with Wong.

But the papers I have read generally conclude that this stock-price description is no better than, and perhaps less good than, the lognormal description. In addition, there are alternate models which are substantially superior and which do have finite variance. I don't agree that variance "probably does not exist."

As for the simple chi-square test that uses Wong's rearrangement of our period B data, we find  $\chi^2=6.7815$ . The probability of such an unusual value is 0.009211. This is about one chance in 108.57.

For comparison, our head-tail test gives a probability of .007439. That is about one chance in 134.43, making the head-tail test more precise for two reasons:

First, the probabilities estimated

are discrete. That means only a finite number of possible alternatives are in the table of results. The chi-square distribution is a "continuous" distribution which means it has an infinite number of possible values. Therefore, it can only be an approximation.

Second, the chi-square test simply measures whether Granville's predictions are unusual when compared with chance. They could be unusual in two ways: they could be considerably better than chance; or they could be considerably worse than chance. The chi-square test does not differentiate and counts both things as unusual. We want to test whether the results are better than chance. Therefore, we lose some significance by the chi-square test.

For further study, compare the period A table:

|                         | Actually up | Actually down | Total |
|-------------------------|-------------|---------------|-------|
| Granville predicts up   | 227         | 175           | 402   |
| Granville predicts down | 29          | 49            | 78    |
| Total                   | 256         | 224           | 480   |

The chi-square statistic is 9.7646 for this table, again with one degree of freedom. The probability of this large a value is .001779. This is one chance in 562.10. The corresponding values for the head-tail test were .001332 or one chance in 750.75. Once again, as it happens, the sharper test gives a higher level of significance.

**Ed.** For those who can attend, Mr. Granville will speak at UCI (University of California at Irvine) on May 27, from 7 p.m. to 10 p.m. Several finance experts, including Edward Thorp, will cross-examine Mr. Granville to contest his theory. For tickets, call (714) 833-5588.

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