ment is needed, in which case assessments are called. Consequently these mines will generally represent properties that have not in exploration found anything up to date, or old mines that are worked out or proved failures. If we go back to 1880 we find the same thing true. Very often a mine ultimately successful goes below the initial price at which it is put on, but the majority of those going below $10 have never paid a cent in dividend. Taking the list in June, 1881, the total of the lowest selling prices of Class B was from $37 to $41. The value, judging from their dividends and selling price in 1910, was only something like $12.45. On the other hand, the cost of a share of each of the stocks selling over $10 would be $384 or more, but would be worth discounting on a 7 per cent. basis their future dividends, $581.50. In other words, the yield is more than 7 per cent., and very nearly the 10 per cent. which we have said might be expected from unlisted copper stock. This is due to the fact that the Calumet and Hecla are selling on a 7 per cent. basis referred to its current dividend without allowance for the increase which began in 1896. In 1901, though the Class B mines make a better showing (owing solely to the presence of Trimountain among them, where it did not belong that year, although it went below $10 in 1899), their lowest prices sum up to $67, but their dividend worth was $74.16, of which $19.75 must be assigned to Trimountain. I thought it right to include Trimountain to represent the fact that among these cheaper mines there is an occasional fair one. It is pretty clear, however, whatever figures one takes, that it is the lowest annual value of these cheaper stocks that is nearest the value measured by yield, and is sometimes a little less than that value, or sometimes greater. That value is given by two or three out of the fifteen or sixteen which will ultimately prove successful.

Clearly then, the increase in the fluctuation factor is very largely due to an increase in range upward, not an increase in range downward. It is an added value given by organized speculation. It is not an added value due to marketability. The higher priced copper stocks have that already. In figuring the worth of the Class B stocks on a 7 per cent. basis I have already allowed for that, if my previous contention that 7 per cent. is a fair yield for a listed copper stock is correct. If we could say that the average value is exactly the mean between the highest and the lowest prices (which it is not) we could say that the fluctuation factor made the stock worth two and one-half times as much as before.

It must be remembered, too, that these stocks are of relatively little worth per share, and the case is something like the difference between a celluloid and an ivory poker chip. The celluloid poker chip would be as useful as the ivory poker chip. The value as chips is not an addition in a given ratio to the value of the raw material of which the chips are made. Therefore, it might not be fair to discuss the "poker chip" or fluctuation value as though it were an addition in a certain ratio to the value of a stock. Indeed, the more expensive stock with less fluctuation costs more to carry to get a given profit by fluctuation. It might be fairer to consider it as the addition of a certain amount to the value of a stock regardless of its value otherwise. An average difference in price from high to low in these smaller stocks would be something like $10 in 1899 to 1901, which were speculative years, whereas, in 1903 and 1904, the amount would be only $4. It might be fairer, then, to say that the value of activity was an addition on the average of $2 to $5 a share to the stock rather than to estimate it as a percentage of the whole cost of a share.

Loss of fluctuation value in consolidation. — This gives us the reason for the considerable protest made by smaller speculative mines like the La Salle, in going into the Calumet and Hecla on the terms proposed. Each share of the cheaper mines was assigned a part of a higher priced share. The prices at the time of merger were thought to be low, though they have been much lower since. Still they were values that were near the lowest for the year 1910. Assuming the ratio was fair enough if based on probable definite returns, but that the consolidation values were close to the low prices for the year, the smaller mines would have been reasonably sure to sell for two and one-half times more, and on the average for four times more, than their consolidation value; while the rise they might obtain in their high-priced share would not be nearly so much. As a matter of fact, however, the prices did not rise during the year 1911 (up to date).

Effect of Struggle for Control on Value in General Slight.

For the effect of the fifth factor, that is struggle for control, I have not been able to derive any average figures. Up to this point, I have been able to analyze fairly satisfactorily (at least to myself) the kind of effect and, to some extent, the amount of effect of various factors and the influence of organized speculation thereon. This last factor I can not at present isolate.

Buying for control is of two kinds. There is the slow, quiet, unostentatious accumulation when the real purchasers are so far as possible unknown. The effect of this, in as much as the people who are buying for control are generally well informed, might be expected to raise the lower prices rather than to increase higher prices. It is conceivable, however, that manipulation of one kind or another might depress prices while buying for control is going on.

The second type of buying is seen when a fight is on and a few shares are enough to give control one way or another. The Union Pacific panic price is the standard illustration of this. So far as I can judge in the Michigan field the highest and lowest prices seem much more closely correlated with other factors than with the struggle for control. It may be that the activity and wide range of prices in Osceola in 1907 was due to the struggle for control, though the high price for that year is, after all, only capitalizing the dividends of that year at 7 per cent. By this I do not mean to imply that the struggle for control does not have an effect upon prices. It simply implies that the kind of men who struggle for control are ordinarily so well posted in shrewd buying that their struggles hardly affect the annual range of the price. This is where a personal element may enter in the stock market and might not apply in other fields. The management of the Calumet and Hecla have a reputation which leads one to think that they would not put out false rumours to depress a stock that they wished to buy. On the whole, the effect of especial desire should appear in the average price.

Conclusion.

The net result of our essay is this, that organized speculation adds marketability and thus about 50 per cent. to the value of stock; and, in the cheaper