

Lecture Number One

May I welcome you all to this series of lectures. The large enrollment is quite a compliment to the Institute, and perhaps to the lecturer; but it also poses something of a problem. We shall not be able to handle this course on an informal or round-table basis. However, I should like to welcome as much discussion and as many intelligent questions as we can get, but I shall have to reserve the right to cut short discussion or not to answer questions in the interest of getting along with the course. You all understand our problem, I am sure.

I hope you will find that your time and money will be profitably spent in this course; but I want to add that the purpose of this course is to provide illustrative examples and discussions only, and not to supply practical ideas for security market operations. We assume no responsibility for anything said along the latter lines in this course; and so far as our own business is concerned we may or we may not have an interest in any of the securities that are mentioned and discussed. That is also a teaching problem with which we have been familiar through the years, and we want to get it behind us as soon as we can.

The subject of this course is "Current Problems in Security Analysis", and that covers a pretty wide field. Actually, the idea is to attempt to bring our textbook "Security Analysis" up to date, in the light of the experience of the last six years since the 1940 revision was published.

The subject matter of security analysis can be divided in various ways. One division might be in three parts: First, the techniques of security analysis; secondly, standards of safety and common stock valuation; and thirdly, the relationship of the analyst to the security market.

Another way of dividing the subject might be to consider, first, the analyst as an investigator, in which role he gathers together all the relevant facts and serves them up in the most palatable and illuminating fashion he can. And then to consider the analyst as a judge of values, or an evaluator. This first division of the subject is rather useful, I think, because there is a good field in Wall Street for people whose work it will be mainly to digest the facts, and to abstain from passing judgment on the facts, leaving that to other people.

Such sticking to the facts alone might be very salutary; for the judgment of security analysts on securities is so much influenced by market conditions down here that most of us are not able, I fear, to express valuation judgments as good analysts. We find ourselves almost always acting as a mixture of market experts and security experts. I had hoped that there would be some improvement in that situation over the years, but I must confess that I haven't seen a great deal of it. Analysts have recently been acting in Wall Street pretty much as they always have, that is to say, with one eye on the balance sheet and income account, and the other eye on the stock ticker. It might be best in this introductory lecture to deal with the third aspect of the security analyst's work, and that is his relationship to the security market. It is a little more interesting, perhaps, than the other subdivisions, and I think it is relevant as introductory material.

The correct attitude of the security analyst toward the stock market might well be that of a man toward his wife. He shouldn't pay too much attention to what the lady says, but he can't afford to ignore it entirely. That is pretty much the position that most of us find ourselves vis-à-vis the stock market.

When we consider how the stock market has acted in the last six years, we shall conclude that it has acted pretty much as one would expect it to, based upon past experience. To begin with, it has gone up and it has gone down, and different securities have acted in different fashion. We have tried to illustrate this simply, by indicating on the blackboard the behavior of some sample stocks since the end of 1938. Let me take occasion to point out some of the features in this record that may interest security analysts.

There are two elements of basic importance, I think, that the analyst should recognize in the behavior of stocks over the last six years. The first is the principle of continuity, and the other is what I would call the principle of deceptive selectivity in the stock market.

First, with regard to continuity: The extraordinary thing about the securities market, if you judge it over a long period of years, is the fact that it does not go off on tangents permanently, but it remains in continuous orbit. When I say that it doesn't go off on tangents, I mean the simple point that after the stock market goes up a great deal it not only comes down a great deal but it comes down to levels to which we had previously been accustomed. Thus we have never found the stock market as a whole going off into new areas and staying there permanently because there has been a permanent change in the basic conditions. I think you would have expected such new departures in stock prices. For the last thirty years, the period of time that I have watched the securities market, we have had two world wars; we have had a tremendous boom and a tremendous deflation; we now have the Atomic Age on us. Thus you might well assume that the security market could really have been permanently transformed at one time or another, so that the past records might not have been very useful in judging future values.

These remarks are relevant, of course, to developments since 1940. When the security market advanced in the last few years to levels which were not unexampled but which were high in relation to past experience, there was a general tendency for security analysts to assume that a new level of values had been established for stock prices which was quite different from those we had previously been accustomed to. It may very well be that individual stocks as a whole are worth more than they used to be. But the thing that doesn't seem to be true is that they are worth so much more than they used to be that past experience -- i.e., past levels and patterns of behavior -- can be discarded.

One way of expressing the principle of continuity in concrete terms would be as follows: When you look at the stock market as a whole, you will find from experience that after it has advanced a good deal it not only goes down -- that is obvious -- but it goes down to levels substantially below earlier high levels. Hence it has always been possible to buy stocks at lower prices than the highest of previous moves, not of the current move. That means, in short, that the investor who says he does not wish to buy securities at high levels, because they don't appeal to him on a historical basis or on an analytical basis, can point to past experience to warrant the assumption that he will have an opportunity to buy them at lower prices -- not only lower than current high prices, but lower than previous high levels. In sum, therefore, you can take previous high levels, if you wish, as a measure of the danger point in the stock market for investors, and I think you will find that past experience would bear you out using this as a practical guide. Thus, if you look at this chart of the Dow Jones Industrial Average, you can see there has never been a time in which the price level has broken out, in a once-for-all or permanent way, from its past area of fluctuations. That is the thing I have been trying to point out in the last few minutes.

Another way of illustrating the principle of continuity is by looking at the long-term earnings of the Dow-Jones Industrial Average. We have figures here running back to 1915, which is more than thirty years, and it is extraordinary to see the persistence with which the earnings of the Dow-Jones Industrial Average return to a figure of about \$10 per unit. It is true that they got away from it repeatedly. In 1917, for example, they got up to \$22 a unit; but in 1921 they earned nothing. And a few years later they were back to \$10. In 1915 the earnings of the unit were \$10.59; in 1945 they were practically the same. All of the changes in between appear to have been merely of fluctuations around the central figure. So much for this idea of continuity?

The second thing that I want to talk about is selectivity. Here is an idea that has misled security analysts and advisers to a very great extent. In the few weeks preceding the recent break in the stock market I noticed that a great many of the brokerage house advisers were saying that now that the market has ceased to go up continuously, the thing to do is to exercise selectivity in your purchases; and in that way you can still derive benefits from security price changes. Well, it stands to reason that if you define selectivity as picking out a stock which is going to go up a good deal later on -- or more than the rest -- you are going to benefit. But that is too obvious a definition. What the commentators mean, as is evident from their actual arguments, is that if you buy the securities which apparently have good earnings prospects, you will then benefit market-wise; whereas if you buy the others you won't.

History shows this to be a very plausible idea but an extremely misleading one; that is why I referred to this concept of selectivity as deceptive. One of the easiest ways to illustrate that is by taking two securities here in the Dow-Jones Average, National Distillers and United Aircraft. You will find that National Distillers sold at lower average prices in 1940-1942 than in 1935-1939. No doubt there was a general feeling that the company's prospects were not good, primarily because it was thought that war would not be a very good thing for a luxury type of business such as whiskey is politely considered to be.

In the same way you will find that the United Aircraft Company through 1940-1942, was better regarded than the average stock, because it was thought that here was a company that had especially good prospects of making money; and so it did. But if you had bought and sold these securities, as most people seem to have done, on the basis of these obvious differential prospects, you would have made a complete error. For, as you see, National Distillers went up from the low of 1940 more than fivefold recently, and is now selling nearly four times its 1940 price. The buyer of United Aircraft would have had a very small profit at its best price and would now have a loss of one third of his money.

This principle of selectivity can be explored in various other ways.

*** Now my point in going at these two things in such detail is to try to bring home to you the fact that what seems to be obvious and simple to the people in Wall Street, as well as to their customers, is not really obvious and simple at all. You are not going to get good results in security analysis by doing the simple, obvious thing of picking out the companies that apparently have good prospects -- whether it be the automobile industry, or the building industry, or any such combination of companies which almost everybody can tell you are going to enjoy good business for a number of years to come. That method is just too simple and too obvious -- and the main fact about it is that it does not work well. The method of selectivity which I believe does work well is one that is based on demonstrated value differentials representing the application of security analysis techniques which have been well established and well tested. These techniques frequently yield indications that a security is undervalued, or at least that it is definitely more attractive than other securities may be, with which it is compared.

As an example of that kind of thing, I might take the comparisons that were made in the Security Analysis*, 1940 edition, between three groups of common stocks. They were compared as of the end of 1938, or just before the war. Of these groups one contained common stocks said to be speculative because their price was high; the second contained those said to be speculative because of their irregular record; and the third contained those said to be attractive investments because they met investment tests from a quantitative standpoint. Let me now mention the names of the stocks, and indicate briefly what is their position as of today. Group A consisted of * "Security Analysis" by Graham & Dodd.

General Electric, Coca-Cola, and Johns-Manville. Their combined price at the end of 1938 was \$281, and at recent lows it was \$203.50 which meant that they have advanced eight per cent. The second group (about which we expressed no real opinion except that they could not be analyzed very well) sold in the aggregate for 124 at the end of 1938 and at recent lows for 150, which was an advance of 20 per cent.

The three stocks which were said to be attractive investments from the quantitative standpoint sold at 70 1/2 at the end of 1938 -- that is for one share of each -- and their value at the recent lows was 207, or an increase of 190 per cent.

Of course, these performances may be just a coincidence. You can't prove a principle by one or two examples. But I think it is a reasonably good illustration of the results which you should get on the average by using investment tests of merit, as distinct from the emphasis on general prospects which plays so great a part in most of the analysis that I see around the Street.

*** I want to pass on finally to the most vulnerable position of the securities market in the recent rise, and

that is the area of new common stock offerings. The aggregate amount of these offerings has not been very large in hundreds of millions of dollars, because the typical company involved was comparatively small. But I think the effect of these offerings upon the position of people in Wall Street was quite significant, because all of these offerings were bought by people who, I am quite sure, didn't know what they were doing and were thus subject to very sudden changes of heart and attitude with regard to their investments. If you made any really careful study of the typical offerings that we have seen in the last twelve months you will agree, I am sure, with a statement made (only in a footnote unfortunately) by the Securities and Exchange Commission on August 20, 1946. They say that: "The rapidity with which many new securities, whose evident hazards are plainly stated in a registration statement and prospectus, are gobbled up at prices far exceeding any reasonable likelihood of return gives ample evidence that the prevalent demand for securities includes a marked element of blind recklessness. Registration cannot cure that."

That is true. Among the astonishing things is the fact that the poorer the security the higher relatively was the price it was sold at. The reason is that most of the sounder securities had already been sold to and held by the public, and their market price was based on ordinary actions of buyers and sellers. The market price of the new securities has been largely determined, I think, by the fact that security salesmen could sell any security at any price; and there was therefore a tendency for the prices to be higher for these new securities than for others of better quality. I think it is worthwhile giving you a little resumé of one of the most recent prospectuses, which is summarized in the Standard Corporation Record of September 13, about a week ago. I don't think this stock was actually sold, but it was intended to be sold at \$16 a share. The name of the company is the Northern Engraving and Manufacturing Company, and we have this simple set-up: There are 250,000 shares to be outstanding, some of which are to be sold at \$16 for the account of stockholders. That meant that this company was to be valued at \$4-million in the market.

Now, what did the new stockholder get for his share of the \$4-million? In the first place, he got \$1,350,000 worth of tangible equity. Hence he was paying three times the amount of money invested in the business. In the second place, he got earnings which can be summarized rather quickly. For the five years 1936-40, they averaged 21cents a share; for the five years ended 1945, they averaged 65 cents a share. In other words, the stock was being sold at about 25 times the prewar earnings. But naturally there must have been some factor that made such a thing possible, and we find it in the six months ending June 30, 1946, when the company earned \$1.27 a share. In the usual parlance of Wall Street, it could be said that the stock was being sold at six and a half times its earnings, the point being the earnings are at the annual rate of \$2.54, and \$16 is six or seven times that much.

It is bad enough, of course, to offer to the public anything on the basis of a six months' earnings figure alone, when all the other figures make the price appear so extraordinarily high. But in this case it seems to me the situation is extraordinary in another respect -- that it is in relation to the nature of the business. The company manufactures metal nameplates, dials, watch-dials, panels, etc. The products are made only against purchase contracts and are used by manufacturers of motors, controls, and equipment, and so forth.

Now, we don't stress industrial analysis particularly in our course in security analysis, and I am not going to stress it here. But we have to assume that the security analyst has a certain amount of business sense. Surely he would ask himself, "how much profit can a company make in this line of business -- operating on purchase contracts with automobile and other manufacturers -- in relation both to its invested capital and its sales?"

In the six months ended June 1946 the company earned 15 per cent on its sales after taxes. It had previously tended to earn somewhere around three or four per cent on sales after taxes. It seems to me anyone would know that these earnings for the six months arose from the fact that any product could be sold provided only it could be turned out, and that extremely high profits could be realized in this kind of market. I think it would have been evident that under more sound conditions this is the kind of business which is doomed to earn a small profit margin on its sales and only a moderate amount on its net worth, for it has nothing particular to offer except the know-how to turn out relatively small gadgets for customer buyers.

That, I believe, illustrates quite well what the public had been offered in this recent new security market. There are countless other illustrations that I could give. I would like to mention one that is worth referring to, I think, because of its contrast with other situations.

The Taylorcraft Company is a maker of small airplanes. In June, 1946, they sold 20,000 shares of stock to the public at \$13, the company getting one dollar; and then they voted a four-for-one split up. The stock is now quoted around two and a half or two and three quarters, the equivalent of about \$11 for the stock that was sold.

If you look at the Taylorcraft Company, you find some rather extraordinary things in its picture. To begin with, the company is today selling for about \$3-million, and this is supposedly in a rather weak market. The working capital shown as of June 30, 1946, is only \$103,000. It is able to show even that much working capital, first, after including the proceeds of the sale of this stock, and secondly, after not showing as a current liability an excess profits tax of \$196,000 which they are trying to avoid by means of a "Section 722" claim. Well, practically every corporation that I know of has filed Section 722 claims to try to cut down their excess profits taxes. This is the only corporation I know of that, on the strength of filing that claim, does not show its excess profits tax as a current liability.

They also show advances payable, due over one year, of \$130,000, which of course don't have to be shown as current liabilities. Finally, the company shows \$2,300,000 for stock and surplus, which is not as much as the market price of the stock. But even here we note that the plant was marked up by \$1,150,000, so that just about half of the stock and surplus is represented by what I would call an arbitrary plant mark-up.

Now, there are several other interesting things about the Taylorcraft Company itself, and there are still other things even more interesting when you compare it with other aircraft companies. For one thing, the Taylorcraft Company did not publish reports for a while and it evidently was not in too comfortable a financial position. Thus it arranged to sell these shares of stock in an amount which did not require registration with the SEC. But it is also a most extraordinary thing for a company in bad financial condition to arrange to sell stock to tide it over, and at the same time to arrange to split up its stock four for one. That kind of operation -- to split a stock from \$11 to three dollars -- seems to me to be going pretty far in the direction of trading on the most unintelligent elements in Wall Street stock purchasing that you can find.

But the really astonishing thing is to take Taylorcraft and compare it, let us say, with another company like Curtiss-Wright. Before the split-up, Taylorcraft and Curtiss-Wright apparently were selling about the same price, but that doesn't mean very much. The Curtiss-Wright Company is similar to United Aircraft in that its price is now considerably lower than its 1939 average. The latter was eight and three quarters, and its recent price was five and three quarters. In the meantime, the Curtiss-Wright Company has built up its working capital from a figure perhaps of \$12-million to \$130-million, approximately. It turns out that this company is selling in the market for considerably less than two thirds of its working capital.

The Curtiss-Wright Company happens to be the largest airplane producer in the field, and the Taylorcraft Company probably is one of the smallest. There are sometimes advantages in small size and disadvantages in large size; **but it is hard to believe that a small company in a financially weak position can be worth a great deal more than its tangible investment, when the largest companies in the same field are selling at very large discounts from their working capital.** During the period in which Taylorcraft was marking up its fixed assets by means of this appraisal figure, the large companies like United Aircraft and Curtiss-Wright marked down their plants to practically nothing, although the number of square feet which they owned was tremendous. So you have exactly the opposite situation in those two types of companies.

The contrast that I am giving you illustrates to my mind not only the obvious abuses of the securities market in the last two years, but **it also illustrates the fact that the security analyst can in many cases come to pretty definite conclusions that one security is relatively unattractive and other securities are attractive.** I think the

same situation exists in today's market as has existed in security markets always, namely, that there are great and demonstrable discrepancies in value -- not in the majority of cases, but in enough cases to make this work interesting for the security analyst.

When I mentioned Curtiss-Wright selling at two thirds or less of its working capital alone, my mind goes back again to the last war; and I think this might be a good point more or less to close on, because it gives you an idea of the continuity of the security markets.

During the last war, when you were just beginning with airplanes, the Wright Aeronautical Company was the chief factor in that business, and it did pretty well in its small way, earning quite a bit of money. In 1922 nobody seemed to have any confidence in the future of the Wright Aeronautical Company. Some of you will remember our reference to it in Security Analysis. That stock sold then at eight dollars a share, when its working capital was about \$18 a share at the time. Presumably "the market" felt that its prospects were very unattractive. That stock subsequently, as you may know, advanced to \$280 a share.

Now it is interesting to see Curtiss-Wright again, after World War II, being regarded as presumably a completely unattractive company. For it is selling again at only a small percentage of its asset value, in spite of the fact that it has earned a great deal of money. I am not predicting that Curtiss-Wright will advance in the next ten years the way Wright Aeronautical did after 1922. The odds are very much against it. Because, if I remember my figures, Wright Aeronautical had only about 250,000 shares in 1922 and Curtiss-Wright has about 7,250,000 shares, which is a matter of great importance. **But it is interesting to see how unpopular companies can become, merely because their immediate prospects are clouded in the speculative mind.**

I want to say one other thing about the Curtiss-Wright picture, which leads us over into the field of techniques of analysis, about which I intend to speak at the next session. When you study the earnings of Curtiss-Wright in the last ten years, you will find that the earnings shown year by year are quite good; but the true earnings have been substantially higher still, because of the fact that large reserves were charged off against these earnings which have finally appeared in the form of current assets in the balance sheet. That point is one of great importance in the present-day technique of analysis.

In analyzing a company's showing over the war period it is quite important that you should do it by the balance sheet method, or at least use the balance sheet as a check. That is to say, subtract the balance sheet value shown at the beginning from that at the end of the period, and add back the dividends. This sum -- adjusted for capital transactions -- will give you the earnings that were actually realized by the company over the period. In the case of Curtiss-Wright we have as much as \$44-million difference between the earnings as shown by the single reports and the earnings as shown by a comparison of surplus and reserves at the beginning and end of the period. These excess or unraveled earnings alone are more than six dollars a share on the stock, which is selling today at only about that figure.

Lecture Number Two

Those of you who are familiar with our textbook know that **we recommend "the comparative balance sheet approach" for various reasons, one of which is to obtain a check on the reported earnings.** In the war period just finished that is particularly important because the reported earnings have been affected by a number of abnormal influences, the true nature of which can be understood only by a study of balance sheet developments.

I have put on the blackboard a simple comparative example to illustrate this point. It is not particularly spectacular. It occurred to me because I observed that early this year Transue Williams and Buda Company both sold at the same high price, namely \$33 1/2 a share; and in studying the companies' record I could see that buyers could easily have been misled by the ordinary procedure of looking at the reported earnings per share as they appear, let us say, in Standard Statistics reports.

Now, as to procedure: First, the balance sheet comparison is a relatively simple idea. You take the equity for the stock at the end of the period, you subtract the equity at the beginning of the period, and the difference is the gain. That gain should be adjusted for items that do not relate to earnings, and there should be added back the dividends paid. Then you get the earnings for the period as shown by the balance sheet.



. In the case of **Transue Williams** the final stock equity was \$2,979,000, of which \$60,000 had come from the sale of stock, so that the adjusted equity would be \$2,919,000. The indicated earnings were \$430,000, or \$3.17 a share. The transfer to a per share basis can be made at any convenient time that you wish. Dividends added back of \$9.15 give you earnings per balance sheet of \$12.32. But if you look at the figures that I have in the Standard Statistics reports, you would see that they add up to \$14.73 for the ten years, so that the company actually lost \$2.41 somewhere along the line.

The **Buda** situation is the opposite. We can take either the July 31, 1945 date or the July 31, 1946 date. It happens that only yesterday the July 31, 1946 figures came in, but it's a little simpler to consider July, 1945 for this purpose. We find there that the equity increased \$4,962,000 or \$25.54 per share, the dividends were much less liberal -- \$4.20; indicated earnings per balance sheet, \$29.74, but in the income account only \$24.57. So this company did \$5.17 better than it showed, if you assume that the reserves as given in the balance sheet are part of the stockholder's equity and do not constitute a liability of the company.

If you ask the reason for the difference in the results in these two companies, you would find it, of course, in the treatment of the reserve items. The Transue & Williams Company reported earnings after allowances for reserves, chiefly for renegotiation, each year (reserves added up to \$1,240,000 for 1942-45) and then almost every year they charged their actual payments on account of renegotiation to the reserves. It turned out that the amounts to be charged were greater than the amounts which they provided. The reserves set up by Transue and Williams, consequently, were necessary reserves for charges that they were going to have to meet; not only were they real, but they actually proved insufficient on the whole. I think I should perhaps correct what I said in this one respect: It may be that Transue and Williams called their reserve a reserve for contingencies, but actually it was a reserve for renegotiation which, as I said, proved insufficient.

. In the case of Buda you have the opposite situation. The Buda Company made very ample provision for renegotiation, which they charged to earnings currently, and in addition to that they set up reserves for contingencies. These apparently did not constitute in any sense real liabilities, because in July 1946 the reserves of a contingency nature remained at about a million dollars.

In the case of Transue, their reserves got up very high but the end of 1945 saw them down to \$13,000, which indicated how necessary were the Transue reserves.

Now, let me pause for a moment to see if there is any question in your mind about this explanation as to why you get different earnings on the two bases, and why Buda shows larger earnings than reported and Transue shows smaller earnings than reported. Maybe a question will clarify it.

QUESTION: Does the equity include reserves?

MR. GRAHAM: Yes. That's a good question. By equity we mean common stock plus surplus, plus whatever reserves are regarded as equivalent of surplus. Reserves which are for known liabilities or probable liabilities would, of course, not be part of the equity.

QUESTION: Might not depreciation charges, which make a great deal of difference in what your equity really was, not show up in there?

MR. GRAHAM: That is true. You can very well claim that certain charges for depreciation have created equities for stock which do not appear on the balance sheet, and I will go into that matter later. But that is a separate consideration from this item, in which we deal only with reserves for contingencies and the like. Are there other questions about that?

. Now, I have some other examples which I can go through very quickly to indicate more significant

differences in the reported earnings, and the actual earnings. They would be found in some of the real “war babies”, particularly the aircraft manufacturing companies.

I mentioned last week the case of Curtiss-Wright, particularly because its price was statistically so low in relation to its performance in the past and also by comparison with another small company which I mentioned. Now, in the case of Curtiss-Wright, if you follow this procedure, you will find that on the balance sheet basis in ten years they apparently earned \$18.53 per share but the reported earnings were only \$12.28. In other words, an average of \$1.22 is reported and \$1.84 is shown by the balance sheet figures. That’s a very considerable difference, -- an increase of 50 per cent. All of those extra earnings of \$6.25 in ten years are to be found in the reserves set up during the last five years by the Curtiss Wright Corporation, none of which apparently are needed for specific war purposes, such as renegotiation payments or reconversion expenditures. Actually, the situation is quite the opposite in Curtiss Wright and others of that type. Instead of having to spend a great deal of money on plant in the reconversion period, you found the opposite has proved true. For in going over from war conditions to peace conditions these companies have turned a great deal of plant account into cash, which we will touch upon later.

In the United Aircraft situation you have somewhat the same picture, not as extreme. The reported earnings for ten years were \$14.08 and the indicated earnings per balance sheet were \$49.84, -- a difference of about 20 per cent, or \$8.77.

. If you look at the balance sheet there you will see that they have set up reserves amounting to \$35-million or about \$14 a share, and you may ask why the difference in earnings is not equal to the full reserves of \$14 per share. Well, if you examine the report in detail you will see that part of those reserves were charged to earnings, and therefore served to decrease the reported earnings, but somewhat less than half, \$15-million, was taken out of surplus and transferred to reserve. Restoration of this last amount, of course, would not serve to increase your reported earnings, because it was not deducted before arriving at the reported earnings. I hope you are all familiar with the difference between making a charge to reserves which would appear in the income account before your reported earnings, and a charge on the balance sheet only where it is transferred from surplus to reserves. The latter is purely internal, and a matter of no special significance.

These are the examples that I wanted to give you of comparative balance sheets for the purpose of determining what we might call true earnings, as compared with reported earnings.

*** . You remember in comparative Industrial Analysis we sometimes study the net earnings before taxes and depreciation. For the net before taxes is a useful item, and the depreciation may well be treated separately since it is partly arbitrary. Now I suggest we do the same thing for railroads and find out what that shows us. Well, here are figures for the Denver under 1945 and 1944. What we call the operating revenue or gross was 74.8 million in 1945 as against 70.3 million in 1944. Then first I’ll give you the result of a calculation which won’t appear in your income account, -- namely, the single figure of net before income taxes and depreciation items. (That is not maintenance, of course; that’s depreciation, money for which cash has not been spent.) In 1944 this net was \$23,220,000 and in 1945 it was \$27,721,000. Hence the much poorer reported earnings for 1945 than in 1944 must be due to the fact that Denver charged off more in 1945 for taxes and depreciation. What are the figures? Depreciation, et cetera -- and that includes an unusual item in Denver called “deferred maintenance,” not a large amount -- was \$16-million this year, against \$6-million the year before. There’s \$10-million of difference, approximately. Next we have income taxes, and this is really a first-class surprise. You would assume that if Denver charged \$16-million for depreciation -- and that’s mainly amortization of emergency facilities -- that they would have shown a great benefit in their income taxes. Yet for 1945 they were able to work out an income tax bill of \$10,576,000, whereas the year before it was only \$5,338,000. Thus in 1945 both depreciation and income taxes were far greater than in 1944.

Now, you will raise two questions, of course. One is, did they really do better in 1945 than in 1944? And if they did, how was it possible for them to appear to have done so very much worse? The depreciation items

you can understand readily. All the railroads charged off the full amortization of emergency facilities in 1945, and therefore the charges were higher in 1945 than in 1944. I am not too sure why they all did it, because it seems to me that in some cases they may not have needed that amortization for income tax purposes; and if so, it might have been better for them to have carried it along. But apparently they all decided to make the full charge-off.

. But the main problem is, how can they have paid so much for income taxes when their earnings were apparently so bad? After all, we never heard of a company which had a deficit of \$7-million and had to pay \$10-million of income taxes. The company's report explains it to you in a rather incomplete way. The first important item is that \$7,406,000 of this 1945 tax represents possible tax deficiencies for previous years. Obviously this item has nothing at all to do with the current year's operations. We may hope that there are not really such deficiencies for the past year, but whatever they are they belong to the past years' operations. Also, the depreciation charge of \$16-million included \$5,300,000 applicable to past years, and consequently the 1945 taxes did not get the benefit of that item, because that was carried back to past years in some rather complicated way. The net of the situation in the 1945 operations include \$9-million of amortization and taxes which are applicable to previous years' operations. If these were eliminated, instead of having a loss of \$7-million for the year's operations after interest taxes, they would have had a profit of \$1,800,000. I can follow that explanation up to one point which isn't clear. The taxes that they calculate as belonging to 1945 still amount to \$6,900,000 that they would have to pay. But if their net earnings after taxes were really \$1,800,000, this 1945 tax should have been about \$1,100,000. So there is still a difference of \$5,600,000 not accounted for.

One thing is quite clear now, to get back to the nub of the situation: These items are semi-manipulative, you might say. They have very little to do with the actual operating results of the Denver. Hence if you want to use the 1945 results in an evaluation of the system's earning power, you obviously must give your primary attention to the \$27,700,000 earned before taxes and depreciation, as compared with the \$23,440,000 in 1944.

In 1946, of course, the Denver is not doing well. Very few roads are doing well. But the Denver is managing to earn money now against losses previously, but they are charging no income tax this year whereas last year they charged this enormous amount.

Lecture Number Three

Now there is one other item that came to my attention a few days ago which has a bearing on war accounting and that is a reference to what is known as "Lifo," which means last in, first out. I presume most of you are familiar with that accounting principle. It has had a rather important effect upon the balance-sheet figures of some corporations, but not quite so important on their income accounts.

Lifo is an accounting method, permitted by new income-tax regulations beginning about 1942, under which instead of considering that the first purchased merchandise is sold or used up in manufacture, the corporation is permitted to assume that the last purchased merchandise is sold or used up. As a result, the inventory is kept down during a period of rising prices because it is not necessary to mark up the value of the quantities of inventory owned at the time that the rising prices began. The result of using that method is (a) to reduce inventory values below market values, and in some cases by a very considerable amount; (b) to reduce accordingly the reported profits; and © and most important, perhaps, to reduce the amount of taxes which have to be paid.

What you have, then, in the balance sheets is either an understatement of the true value of the inventory, if you want to consider it that; or a cushion to absorb declines in inventory values without effecting a cash loss if you wish more conservatively to consider Lifo that way. In the case of the Federated Department Stores, their report which appeared a few days ago gives some details on Lifo, which they find necessary to do

because of a tax problem facing them. That company showed that since 1942 they had the benefit of a reduction in inventory and taxable profit of \$3,875,000 by using Lifo instead of using the usual first-in, first-out method. That enabled them to reduce their taxes by \$2,590,000; and it reduced their profits after taxes for the five and a half years by roughly \$1,150,000.

The difficulty that they refer to is the fact that in department stores it is practically impossible to identify the items that are sold in relation to just when they were bought. Consequently the department stores have tried to use something called an "index of retail price changes" to determine what would be the effect of Lifo on their accounting. And they now are in a controversy with the Treasury because the Treasury says that the Lifo section does not permit the use of estimates by means of an index as to what last-in, first-out means, and therefore they must go back to their old method of first-in, first-out.

The significance of Lifo is interesting, when you reflect upon it, because it is very similar to the wartime amortization of plant facilities which we discussed two weeks ago. There, you recall, the companies had the opportunity to write down their fixed assets, which were recently acquired, to zero, and to get the benefit of tax credits, the effect of which, however, was to reduce their earnings somewhat. You have exactly the same effect here in Lifo. You write down your inventory, save a great deal of money in taxes, but reduce your apparent earnings somewhat.

I think that for the analyst the signifay that here is a company that had done a great deal to improve its situation in five years, and the market doesn't reflect that at all. But on the other hand it is not at all clear that it should reflect it, because now in 1946 the company seems to be back pretty much where it was pre-war, with no substantial earnings.

That is what I would call a conventional current analysis of Northern Pacific, but I think it is quite superficial. There is a good deal more to that situation.

When you look a little more closely at Northern Pacific you will find that the main factor affecting this company, that does not affect other companies, is its large interest in an affiliated railroad which is not shown in its income account, except in the form of dividends. Northern Pacific owns 48 1/2 per cent of the Burlington, or C.B. & Q. Now, the Burlington is rather paradoxically bigger and a much better railroad than the Northern Pacific. You have thus a rather unusual situation, in which the chief interest perhaps of the stockholders of the Northern Pacific does not appear except in a very indirect and incomplete way in its own reports.

In addition to that interest in the Burlington the Northern Pacific owns 50 per cent of a rather substantial railroad system called the Spokane-Portland-Seattle, which before the war had no earning power but which during the war had quite substantial earnings. In addition to that, the Northern Pacific has a land department which has been productive of rather substantial income over the years. This does not appear in the income account but the proceeds or profits are credited to surplus directly. When you start taking account of these additional interests of the Northern Pacific you find that the picture is quite different than it appeared in the first analysis. In the period 1936-1940 there would be no substantial change, because the Burlington paid out practically all that it earned in that period. Instead of having a small loss on the stock you would have an equally minor profit of about 12 cents a share.

But when you take the war period 1941-1945, you find that to the \$6.20 average shown by Northern Pacific there is to be added \$3.80 per share in undistributed profits of Burlington; about 86 cents per share representing the earnings of S.P. & S.; and about 60 cents per share representing the land department -- giving you a total of \$11.46, which is pretty nearly twice the figures actually reported. These are average earnings per year for five years. Thus you find that there is what used to be called a "hidden equity" of about \$26 a share additional in those five years, making a total of about \$53 that has gone back into the stockholders' account for Northern Pacific as compared with the pre-war period.

If you look at the Burlington you will see that its own undistributed profits show up in a considerable reduction in funded debt, a reduction of 36 per cent in fixed charges, and a considerable increase in working capital. You would find that the earnings of the Spokane railroad show up in the form of \$20-million additional working capital, of which \$10-million inures to the Northern Pacific.

When you come to the period of the first eight months of 1946, you find that instead of having earnings only 74 cents a share, the earnings, including the Burlington equity are \$2.80 a share for the eight months. The indications are that they will earn about five dollars a share for the full year, including the Burlington equity.

That, of course, is a very different picture from the rather negligible earnings which they reported for the first eight months. You have also some figures that have been put in the record with the I.C.C. in connection with the rate-increase application. These show that if they get a ten per cent further increase, (which is more or less the figure that Wall Street is expecting or hoping for,) they might earn about four dollars per share in 1947 on their own income account and perhaps eight dollars a share, including their equity in the Burlington.

Now, those are very substantial figures in relation to the current market price. They indicate the importance of looking at the railroad on the consolidated basis rather than on the basis of the earnings as they were reported.

An interesting further study of Northern Pacific could be carried on by comparing it with some other road. This would give you some idea of its relative position and its attractiveness. I would suggest therefore that we devote a little time to a comparison between Northern Pacific and Southern Pacific. There is a relationship in names there that would make the comparison a natural one.

You might suggest that the comparison should be made with Great Northern, because Northern Pacific and Great Northern have always been grouped together in general railroad analysis, and you know that each of them owns approximately half of the Burlington. However, the Great Northern has managed to put itself into a stronger capital structure position than Northern Pacific, partly through the conversion of bonds into stock. The Great Northern belongs somewhat more in the investment category. On the other hand, as we shall see, Southern Pacific is about in the same general financial situation as Northern Pacific with respect to stock and bond capitalization structure. That is a fundamental basis of allocating roads to classes for comparison. As you know, Northern Pacific sells now about 19, and Southern Pacific about 42. There you have a ratio of somewhat more than two to one. If we go back to the superficial earnings, you would see that before the war Southern Pacific averaged \$1.27 per share for five years, 1936 to 1940, while Northern Pacific had a very small deficit. In the five years 1941 to 1945 Southern Pacific showed \$12.90, against \$6.20 for Northern Pacific, which is about our ratio of two to one; and in eight months of 1946, Southern Pacific shows \$3.86 against 74 cents for Northern Pacific, which is much better than a two to one ratio.

STUDENT: Does Northern Pacific use its carry-back in the first eight months the way Southern Pacific did?

MR. GRAHAM: That's a point that I shall come to. We have just spoken now about the figures as they appear in the reported earnings picture per share. Now we make two adjustments for that, one of them being the question of taxes which has just been raised. You find when you study the Southern Pacific figures that in 1946 they have had a tax credit of about \$19-million, which is more than the earnings reported for that period. Northern Pacific had a small tax payment of its own and fairly substantial taxes for Burlington; so that they do not use any tax credit but, on the contrary, pay full taxes on their earnings.

If you compare the situation, putting in Northern Pacific's Burlington interest, you would find that while the 1936-1940 figures remain about the same, for the war period Northern Pacific's earnings rise to \$11.46, as compared with \$12.90 for Southern Pacific, -- very nearly the same. For the eight months of 1946, Northern Pacific's earnings before taxes without allowances for income tax debit or credit, would be \$4.60, while those of Southern Pacific would be a deficit of \$1.20.

In a peculiar way, therefore, the situation seems to have been reversed. Whereas before the war Northern Pacific apparently tended toward a deficit and Southern Pacific toward moderate earnings, we now find that under 1946 conditions Southern Pacific seems to be tending toward a deficit and Northern Pacific toward fairly good earnings.

That analysis, of course, calls for much further probing into the situation. You have to ask yourself why it is that you get these diverse developments in the different periods that we are studying. What you find is that Southern Pacific in 1946 has apparently lost control over its expense ratio more seriously than has happened to Northern Pacific and to Burlington. As a matter of fact, the Burlington has been doing a very nice job of maintaining its net earnings even under the unfavorable wage and rate situation which we have had in 1946.

Northern Pacific itself has not done so well, but it has done better than Southern Pacific; and the combination shows up very much better. As you study the figures more carefully, you find that an advantage which Southern Pacific seemed to have developed in its operating ratio during the pre-war and early war years has now seemed to have reversed itself or disappeared; and the advantage is now in the Northern railroads.

If you study the Southern Pacific figures over a period of time, you will see that of course the Southern Pacific derived great advantages out of the war. It increased its surplus and its working capital considerably; it decreased its debt a great deal, and cut its fixed charges by about 20 per cent. That figure is not quite as good as the decrease shown by the Northern Pacific-Burlington combination.

Another factor that should get attention from the security analyst in studying these railroads is the question of rentals and hire of equipment. In the ordinary way in which fixed charges are stated in the manuals, and elsewhere, you would get the impression that the coverage of fixed charges for Southern Pacific is quite a good deal better than that of Northern Pacific -- or was, let us say, up to this year. Actually that is not the case if you consider rentals and hire of equipment, (with payments and receipts), as part of your over-all fixed charge situation.

Those of you who have studied our text on Security Analysis will recall our reference to the "net deductions method" in which you replace fixed charges by a figure representing the difference between the net after taxes and the balance for stock.

On that basis you will find that Northern Pacific has a considerable advantage, because it has regularly received substantial credits from hire of equipment and joint facilities. In 1945 these were \$4,346,000. But Southern Pacific has made very heavy payments for the same purpose; in 1946 they were \$24,600,000.

If you restate your fixed charge coverage by allowing for the equipment and joint facility rental payments and also put in Northern Pacific figures its share of the Burlington, you will find this situation is also true for the eight months of 1946. Southern Pacific's net deductions were \$24,300,000 in eight months, which was about seven and a half per cent of gross, the latter being around \$320-million.

Northern Pacific's net deductions were \$9,180,000 on gross of \$143-million. This is on a pro-rata consolidated basis, which includes 48 1/2 per cent of Burlington. Thus you would find that the ratio is on the order of six and a half per cent of gross. The relationship to net is better for Northern Pacific than for Southern Pacific, because Northern Pacific's operating ratio is less.

These are factors which I am calling to your attention because they do not enter generally into the analytical presentation of a railroad's showing. And you find that when you allow for these factors you get a very considerable difference in the picture than when you started with the figures that were first available.

*** One very good reason why Southern Pacific sells so much higher than Northern Pacific is because it is paying dividends at the rate of four dollars and Northern Pacific is paying dividends at the rate of one dollar.

It is obvious that such a disparity in dividend policies would have a substantial effect on market prices.

A question that we shall have to consider from time to time in the future is how valid is the dividend rate as a determinant of proper market prices. That it actually has a great effect on market price cannot be denied -- certainly in the field of securities that are bought by investors. Two years ago, when we were giving a course here on appraisal of stocks, we had occasion to compare Reading and Pennsylvania. There we found that Reading and Pennsylvania made practically the same showing with regard to earnings and financial strength. But Reading was satisfied to pay a dollar to its stockholders, while Pennsylvania was paying about two dollars and a half. The result was that you had prices averaging \$20 for Pennsylvania in 1945, against \$24 for Reading. Before that time, I think, the ratio of prices was about two to one, although the ratio of earnings was about the same.

I have also had occasion recently to see rather startling evidence of the effect of dividend policy on prices in a number of the insurance companies. If you take two companies like New Amsterdam Casualty Company and the United States Fidelity & Guaranty, you would find that these companies are almost identical in every respect, in the character of their business and their assets, except that one of them has twice the amount of stock and twice the assets and business. The earnings per share are about the same. But United States Fidelity pays two dollars and New Amsterdam Casualty one dollar, and so you have a relationship in price of \$42 for one and \$26 for the other.

There is no doubt, therefore, that the dividend rates of Southern Pacific and Northern Pacific are sufficient to explain the market relationship, even by themselves, without reference to any other questions that the analyst might ask himself.

We must consider later -- but I don't think we shall do it now -- whether the analyst can take advantage of the fact that two companies would be worth, say, approximately the same amount from every standpoint other than dividends, and sell at considerable difference because of dividend policy. The question that would come up is whether you can expect in the normal course of events that the dividend policy will adjust itself to the earnings and that therefore eventually the market price will adjust itself to the earnings and will not be determined by an arbitrary dividend policy. That is a very difficult question to reach a conclusion about, and I prefer to talk about it at some other time.

*** STUDENT: One of the appraisals that I hear is that since Southern Pacific is so largely in the Southwest, Texas, in a territory that is growing much more rapidly than the Northwest territory, that some rail analysts are strong in their preference for Southern Pacific on that basis over Northern Pacific.

MR. GRAHAM: There is an undoubted impression that the future of the Southwest territory is better than that of the Northwest territory. You have some justification for that in the most recent figures of development of gross earnings. I would like to give some figures on that which would show how these companies have developed over the last ten years in relation to volume. In 1937 the gross of Northern Pacific, plus 48 per cent of Burlington, was \$113,500,000 and Southern Pacific was \$225-million. That is almost exactly two to one.

In 1941, Southern Pacific showed a slight increase in the ratio -- \$147.3 for Northern Pacific versus \$297.8 for Southern Pacific. By 1944 Southern Pacific had drawn quite a bit ahead of the Northern Pacific combination. In 1944 it was \$254-million for Northern Pacific and \$597-million for Southern Pacific. And that advantage has persisted up to 1946 for the first eight months.

The question that one would raise about those figures is the extent to which they have reflected the impact of war conditions since 1941, and whether or not they would be expected to continue in the future. Frankly, I don't know what the answer is. Furthermore, I don't know how important such changes with regard to gross earnings may be in the final earning power of the railroads.

One of the anomalous things -- and this is very extraordinary -- that you find in your analysis is the following: In 1937 the net earnings of Northern Pacific after taxes were \$15-million on a gross of \$133,400,000. (That is railway operating income.) Those of Southern Pacific were \$34,100,000 on a gross of \$225-million. In other words, Southern Pacific showed up quite a bit better in net than it did in gross; it had a better than two to one ratio as against Northern Pacific.

In the first eight months of 1946 the net earnings of Northern Pacific before income taxes and depreciation, were \$27,700,000, or pretty nearly 20 per cent of its gross; and those of Southern Pacific were only \$29,500,000, which was just about nine per cent of its gross. Although Southern Pacific showed a very considerable improvement in its gross earnings as against Northern Pacific, its net earnings before taxes, depreciation charges, and interest charges were very much poorer proportionately. The explanation of that, as I said before, is found in the details of its transportation and maintenance expenditures, which apparently have grown very much more rapidly for Southern Pacific than they have for Northern Pacific-Burlington.

The question that was asked about the general future prospects of one territory as compared with another is certainly very relevant to analysis of railroad securities. **Yet I must say that I have found in my own work that you can count very much more dependably upon differences of value which can be established from the earnings and expense picture than you can on those which seem to be inherent in the possibilities of the different territories.**

Lecture Number Four

I find one of the students presents me with a question which I shall be glad to answer for his benefit and for the benefit of the class. He quotes a statement made in "Security Analysis," page 691, which says, "Judging from observations made over a number of years, it would seem that investment in apparently undervalued common stocks can be carried on with a fair degree of over-all success, provided average alertness and good judgment are used in passing on the future prospect question, and provided also that commitments are avoided at the times when the general market is statistically too high."

That is our statement, and his question is: "That, after reading the article in the Financial Chronicle which we distributed, one reaches the conclusion that you consider 185 for the Dow-Jones Average statistically very high. In general, above what Dow-Jones Average price would you consider it high and between what ranges would you consider it normal?"

That certainly is a very direct and leading question, but I would like to start with a correction. If I recall the article of October, 1945, in the Financial Chronicle, in which we discussed the then level of stock prices, it was not our conclusion that the level of one-eight-five was statistically very high. The conclusion, was that it was historically very high. That is quite a difference. We pointed out that in the past the market had not been able to go beyond that level without getting into dangerous territory.

As far as the statistical discussion was concerned, I think we found that 185 or thereabouts would appear to be a normal valuation for the Dow-Jones Average as of last year, and that on a statistical basis there was no particular reason to be afraid of the stock market there. Our point was, though, that historically there was reason to be afraid of it, and we were inclined to advise caution for that reason. As near as we are able to determine a central value for the Dow-Jones industrials, we are inclined to believe that somewhere around the present level or a little bit higher perhaps might be a central level in the future. The figure we gave provisionally in that article was 178 as so-called "appraisal value." For that reason there would be no special cautionary factor in the current general level, working against the purchase of under-valued securities. The only caution we would want to add to that is this: If by any chance you are still going through the usual alternations of bull markets and bear markets, -- which is by no means unlikely -- then there is no particular reason to believe that when the market has receded to about its average value it would necessarily have stopped going down. Experience in former markets indicates that just as they are too high in bull markets,

they get too low in bear markets. If we are going through a similar experience now, the historical analogies would point to lower prices, simply because in bear markets securities sell for less than they are worth, just as they sell for more than they are worth in bull markets. Whether that means that a person should avoid a bargain security because he thinks the general market is going down still further is quite another question; and I think that is largely a personal matter. Our opinion is that for the investor it is better to have his money invested than it is to feel around for the bottom of the securities market. And if you can invest your money under fair conditions, in fact under attractive specific conditions, I think one certainly should do so even if the market should go down further and even if the securities you buy may also go down after you buy them. That is rather a long answer to this question, but it is an interesting one.

I might add another introductory statement: By a coincidence last week I noticed a news item with regard to the Taylorcraft Corporation, which was a company of which we gave a brief and unfavorable analysis at our first meeting. That company, you know, sold some stock on terms which we regarded as rather outrageous last summer. I find now they are in financial difficulties, and that trustees have been appointed. That is a rather extreme example of the value of security analysis. (Laughter.)

Our purpose tonight is to start our discussion of the factor of future earnings in the analysis of securities. In the past two lectures we spoke more or less exclusively about the analysis of the past earnings. Of course, volumes can be written on that question now before us. It is not our purpose to cover it in a comprehensive way, starting from scratch, but rather to assume that you are familiar with the general treatment of the future earnings component which we gave in "Security Analysis", and to subject it to a further scrutiny, particularly with respect to what may have happened in the last few years in that sector.

I would like to start with something that would appeal to at least two members of this class, and that is with a definition of the term "earning power." That term has been used so loosely that I am ready to start a movement for its official abolition in Wall Street. When somebody asserts that a stock has an earning power of so much, I am sure that the person who hears him doesn't know what he means, and there is a good chance that the man who uses it doesn't know what it means.

My suggestion is that we use two phrases: One is "past earning power," and the other is "future earning power." Past earning power is certainly definite enough and it should mean the average earnings over a stated period which would ordinarily be identified in the discussion. But if not so identified it would be some representative period such as five or seven or perhaps ten years in the past. That would be the meaning of "past earning power."

When you are talking about future earning power, you should mean the average expectable earnings over some period in the future. I think most of us ought to think pretty much alike as to the period that we would talk about. My suggestion is that it would be a five-year period, and that when we speak of future earning power of a company, we should have in mind ordinarily the average earnings over the next five years. I say "ordinarily" because you have situations in which a company may be subject to abnormal conditions affecting earning power for some years to come; and there it may be desirable to make a further distinction. We shall talk later about the analysis of a building company stock, in which you might very well make some distinction between the earning power for a boom period, which is ahead perhaps for several years to come, and the earning power for a normal period, if there is such a thing in the building company industry. But apart from some special type of situation such as that, (and a war period such as we have gone through,) I think the use of "future earning power" to mean earnings expected for the next five years would be useful as a general expression.

As far as the use of earning power or earning prospects in Wall Street is concerned, let me point out that in most of the current thinking earning power is not considered along the lines of an average over a period of time of medium duration. It is either considered as the earnings that are being realized just now, or those right around the corner, such as the next twelve months; or else the earnings are considered in terms of the long

and almost endless future. A company with good prospects, for example, is supposed to be a company which will go on and on, more or less indefinitely increasing its earnings; and therefore it is not necessary to be too precise about what earnings you are talking about when you are considering the company's future. Actually that idea of the long-term future of companies with good prospects shows itself, not in the use of any particular earnings, but in the use of the multiplier which is applied to the recent earnings or to the average earnings of the past.

I am reminded of an analysis that we used in this course in 1939, in their very first lecture, which I believe illustrates that pretty well. We put on the board three companies: A, B, and C. Two of them, which we did not name, showed earnings of practically identical amounts for the last five years -- \$3.50 a share in each case. The earnings year by year were closely similar. The only difference was that one stock was selling at 14 and the other was selling at 140. The stock that was selling at 140 was Dow Chemical; the one that was selling at 14 was distillers Seagrams.

Obviously, the difference between 14 and 140 meant that the market believed that the prospects for Dow Chemical were very good and those for Distillers Seagrams were indifferent or worse than that. This judgment showed itself in the use of a multiplier of four in one case and a multiplier of 40 in the other.

I think that represents a very dangerous kind of thinking in Wall Street, and one which the security analyst should get as far away from as he can. For if you are going to project Dow's earnings practically to the year 2000 and determine values that way, then of course you can justify any price that you wish to. In fact, what actually happens is that you take the price first, which happens to be not only the present market but some higher price if you are bullish on the stock, and then you determine a multiplier which will justify that price. That procedure is the exact opposite of what a good security analyst should do.

I think if a person had tried to project the earnings of Dow Chemical for a five-year period and the earnings of Distillers Seagrams for a five-year period, and compared them, he could not have gotten values which would have justified the price differential as great as ten to one in the two companies. It is always an advantage to give examples of this sort that have such a brilliant sequel; because I notice that this year Distillers Seagrams sold as high as 150 as compared with its earlier price of 14, and Dow Chemical sold as high as about 190, against 140 -- which is quite a difference in relative behavior.

We have been trying to point out that this concept of an indefinitely favorable future is dangerous, even if it is true; because even if it is true you can easily overvalue the security, since you make it worth anything you want it to be worth. Beyond this, it is particularly dangerous too, because sometimes your ideas of the future turn out to be wrong. Then you have paid an awful lot for a future that isn't there. Your position then is pretty bad. There will be other examples of that sort which we may take up as we go along.

Let me now get back a little more closely to the work of the security analyst, and ask the question, "What is the relationship of this concept of future earning power to the day-to-day, careful work of the security analyst, and his attitude toward security values?" That relationship has developed gradually over a period of years, and at a somewhat more significant rate in the last few years.

It is interesting to go back in one's thinking to the elements from which we started our ideas of the value of securities, -- say, a generation ago or more than that. When I came down to the Street, the thing everybody started with in valuations was par value. That did not mean, of course, that a stock was worth its par value. It might be worth more or less. But it was considered as being worth a percentage of its par value. So much was this true -- I don't know how many of you are aware of this -- that prior to about 1916 stocks were regularly quoted on the stock value. Westinghouse and Pennsylvania would sell, say, at 150, which meant they were selling at \$75 a share -- because their par value was 50. I suppose we have gotten so far away from par values now that the only people who are interested in them are those who calculate transfer taxes on securities. Because of that tax reason, one-cent par values are regarded as a very smart procedure in Wall Street today.

I can imagine the attitude of the old-fashioned investor were he to buy a stock for \$50 and looked at the certificate and found its par value was one cent. He would probably have fallen in a faint. Well, through many stages in a long period of development from that rather naive attitude toward the central point of value, you have come now to what might seem to be the ultimate stage where the central point of value is the future earnings power, -- something which you cannot read on any certificate. In fact, you cannot read it anywhere.

There is often a question in my mind whether we have really made so much progress in moving on from the physical to the almost metaphysical in this way; but be that as it may, we have. And now it is the law of the land that the values of securities, if they must be determined for the purpose of judging fairness of any kind of transaction, will be based primarily on the capitalization of expected future earnings. That is the burden of the famous Consolidated Rock Products case that you see referred to all the time in SEC proceedings, and in other cases of similar character. When the Supreme Court says it is a fact that the value depends upon future earning power, that does not mean that the test of the value that the Supreme Court has laid down as the law on this subject has therefore become the proper test for us security analysts. I think rather that we have laid down the law to the Supreme Court. That is to say, the Supreme Court has said that the values are now to be determined primarily in relation to future earning power, because it has observed that values have actually been determined by buyers and sellers of securities more and more in relation to such expected earnings.

The Supreme Courts had lagged behind the times for quite a while in that matter, and it just caught up. I think perhaps that it is still lagging behind the times in some other respects.

The concept that investment value is dependent upon expected future earnings is undoubtedly a more persuasive and a more logical one than thinking of value in relation to past earnings only, or in relation to the par value printed on the certificate, or any other stage in between. But I must emphasize to you that this concept does not make the job of the security analyst easier. On the contrary, it makes it a great deal harder, and it places him in a serious dilemma, for now the past earnings, with which he can become very closely familiar and which he can study with a great deal of skill and ingenuity, -- those past earnings unfortunately are not determinative of value. And the element which is determinative of value, the future earnings, is just the thing which he cannot analyze with any real feeling of assurance as to the correctness of his conclusions.

That would be a very sad dilemma indeed for us security analysts if it were not for that principle of continuity that I tried to emphasize in the first lecture. While it is true that it is the expected future earnings and not the past that determines value, it is also true that there tends to be a rough relationship or continuing connection between past earnings and future earnings. In the typical case, therefore, it is worthwhile for the analyst to pay a great deal of attention to the past earnings, as the beginning of his work, and to go on from those past earnings to such adjustments for the future as are indicated by his further study.

You all know, of course, that the dependability of past earnings as a guide to the future is sufficient to make it possible to rely almost exclusively on them in the selection of a high grade investment ??? bond or preferred stock. We have said, in fact, that you cannot properly buy such an investment security on the basis of expected earnings, where these are very different from past earnings -- and where you are relying on new developments, as it were, to make the security sound, when it would not have been sound on the basis of the past.

But you may say, conversely, that if you buy it on the basis of the past and the new developments turn out to be disappointing, you are running the risk of having made an unwise investment. We find from experience, though, that where the past margin of safety that you demand for your security is high enough, in practically every such case the future will measure one. This type of investment will not require any great gifts of prophesy, any great shrewdness with regard to anticipating the future. In fact, it would be a very unfortunate thing if you could not get two and three-quarters per cent on your money without having to be something of a soothsayer as far as the future earnings of corporations is concerned.

When I make that statement, of course I do not mean to lay down the inflexible rule that any company that gives you a sufficiently great margin in its past earnings can be regarded as having sound securities for investment. If the investor has occasion to be fearful of the future of such a company, it is perfectly logical for him to obey his fears and pass on from that enterprise to some other security about which he is not so fearful. But the point I am making -- and I hope you can understand it, -- is that in the selection of high-grade securities you start with a demand for an adequate coverage in past earnings; and in the typical case that is sufficient to justify the selection of the bond. I think I might pause there to see whether any questions have arisen in your mind on that point, before I go on from that rather simple application to its more complicated application to the valuation of common stocks.

In the case of common stocks the technique of security analysis has made rather important progress from the rather hit-and-miss method of taking past earnings as a guide and then saying, "Well, I think the future is pretty good here, so I'll multiply the earnings by a higher than average multiplier." Or in the converse case: "I think the future is not so good, so I'll multiply these past earnings by a lower amount."

It is now becoming approved practice in any really good analysis to work out the future earning power along somewhat independent lines, -- by considering afresh the most important factors on which the earning power will depend. These factors in the ordinary case are not very numerous. They consist, first, of the physical output or volume of business that you expect from the company. Secondly, the price, or unit price, that it will get. Thirdly, its unit cost; and then, fourth, the tax rate. We now have a standard technique by which you go through these various motions and set up these successive figures, -- all of which are estimates, of course. By this operation you arrive at a conclusion as to future earning power. That is regarded, and should be regarded, as a better technique than the simple one of merely taking the past earnings over a period of time.

Consequently, when you undertake a full-scale analysis of a security and want to determine whether it should be bought or not -- I should say, frankly, whether it should be bought or sold -- your proper technique should consist of estimating the future earning power along the lines that I have mentioned, and then applying a multiplier to it which is influenced in part by your subjective ideas as to the security, but which has to be kept within a reasonable range of variation.

It is not, I assure you, admissible security-analysis technique to say, "I don't like this company, so I will multiply the future earnings by four; but I do like the other company so I will multiply the future earnings by 40." You will not get a passing grade on a security-analysis test if you do anything of that kind. But naturally there is room for some variation in your multiplier as applied to these earnings. When you use that multiplier, you arrive at a valuation which can be a guide to you in your attitude toward the stock.

I was going to go on with some other examples of that method, but I find that I have left out a little note that I put on one of my pages headed "The Digression." This was intended to contribute somewhat to your amusement and edification.

You may recall that I have been emphasizing the difficulty of peering into the future and coming through with some good ideas as to what will happen. Let me now indicate to you the position of somebody who really could have looked in the crystal ball and derived a good deal of dependable information about the future. Let us see how well he would have fared. I am assuming that each of you was one of these fortunate investors who really had a crystal ball, and could foretell in 1939 that different groups of stock would expand their business in the percentages that we show on the blackboard here.

Now, we say, suppose you were also told that in September 1946 the general level of industrial prices (as shown by the SEC calculations) would be 29 per cent higher than they were in January 1939. That happens to be true. Consequently the stocks in these groups would vary around a center of a 29 per cent advance. Suppose, then, you were asked back in 1939, "What would be the change in the prices of these securities by 1946?" Here, for example, is Aircraft Manufacturing, which is expanding 31 times in volume, from 1939 to

1944. Here is Aviation Transport, which is expanding two and a half times. I could, for our amusement, ask you to make what you would regard as a reasonable estimate of the change in market prices from January 1939 to September 1946; but instead of going through that rigmarole I shall merely give you the results.

At September 16, 1946, the Aviation Transport securities were up 274 per cent from January 1939 -- which was pretty good, I should say, compared with 240 per cent increase in business. But the aircraft manufacturing companies were down 74 per cent. I do not think you would have expected that if you had known the relative change in sales. Amusement stocks and Tobacco products both benefited just about the same in gross from the war conditions. But the difference was that the Amusement stocks advanced 242 per cent and the Tobacco stocks declined 10 1/2 per cent, -- which is quite a difference.

The Tire and Rubber companies did not do as well as Electric Manufacturing in sales, but in price they went up 85 per cent while the electric machinery equipment went up only two per cent.

Metal and Metal Mining did not do quite as well as paper in sales expansion. But the difference here is also rather surprising, because the Paper and Allied Products stocks increased 107 per cent in value, and the Metal Mining stocks declined six per cent during that period.

You see that the discrepancies in market movement are so great that they should add an extra note of caution in our attitudes toward our future calculations. For even if we knew what was going to happen to a company, in terms of its business and its earning power, we might not be able to make too good a prediction as to what was going to happen to it in the market price, which interests us a good deal. That is just an added reason for being either as cautious as possible in regard to our own decisions on security purchases, or else protecting ourselves as much as we can in our own thinking and in our statements by qualifying comments, whenever we begin to make predictions as to the future.

Now I should like to go on and give you a detailed example of the kind of analysis which is now being made, that centers around an estimate of future earnings and works on from there to a valuation. I have two examples here. One of them relates to the Childs Company. That happens to be rather convenient because here we have our good friend, the Securities and Exchange Commission, sweating through a valuation of the Childs Company which is based primarily upon their estimate of future earnings. They do this because they have to. They are required to find out the comparative values of the preferred and common stocks in their report to the court on the fairness of the proposed reorganization plans. The only way they know of determining the comparative value is by getting the total value of the enterprise and then comparing that with the claim of the preferred stock. And so they go through an elaborate technique in order to value the Childs Preferred and Common shares.

It might be worthwhile to take a little time and see just how they have done it. Perhaps I should make the matter a little clearer to you. The Childs Company, most of you know, has been in trusteeship. The company is now evidently solvent, and can easily take care of its debts. So the problem of reorganization actually turns upon giving the proper amounts of new securities to the old preferred and common stock.

The SEC, in its wisdom, decided that the capitalization of the preferred and common stock should be changed from what it was before. It is thus necessary to determine what proportion of a new common-stock issue, if that is to be the only stock, should go to the preferred and what to the common. The problem before the SEC, then, was to determine what the whole enterprise was worth. If the preferred stock claim was 75 per cent of such value, for example, they would then allot 75 per cent of the stock to the preferred and the balance to the common.

What they did was to start with a projection of the sales of Childs, which they took at \$18-million, somewhat less than the figures for 1945, -- they assuming that business would not be as good in the long-term future as it was under war conditions. They then took a percentage of profit of six per cent before taxes. That was based

upon a study of profit margins both for this company and for other restaurant companies; and I do not believe that analysts would be likely to differ very much with them. So they got a net before taxes of \$1,100,000.

Then they subtracted the expected average tax rates. Here the SEC decided to cut down the current rate of 38 per cent to 35, -- a very valiant gesture of guessing. The main question, in estimating the tax rate, was whether it was likely that the great pressure to eliminate double taxation on corporations would be effective in the future in such a way, perhaps, as to relieve corporations of either all or most of the tax. Their guess, and mine too, was that such was not likely to happen, desirable as it might be.

So the net after tax was estimated at \$715,000. That is the future earning power, and you can see that is a relatively simple calculation. It represents smaller earnings than Childs had during the war period before taxes, but considerably more than in the pre-war period.

QUESTION: How do they estimate the future sales?

MR. GRAHAM: Well, here is sort of a summary of a rather long discussion about the effect of retaining some restaurants, closing others and opening up others. They say, "Considering the record of the 53 units" -- which includes some which would be closed -- "and giving weight to the various factors that affect future sales to the chain, we believe that the management forecast of \$20-million restaurant sales for the average future years is excessive. For such a figure to be achieved, the chain would have to average in good years and bad years sales which would be ten per cent higher than those achieved by the 53 restaurants in 1945, which in turn were higher than in any previous recent year for more than a decade. It is true that in 1946, with the first six months' results known, the management estimated that the sales will exceed \$21,400,000. However, it must be recognized that the company is experiencing extraordinarily high retail sales and Childs' current high sales level cannot be considered to correspond to the level which may reasonably be forecast for a normal year in the future." "We believe however, even giving consideration to normal retail business, that the chain can reasonably be anticipated to average sales of \$18-million, which was the amount realized in 1945 by the 53 restaurants --" The conclusion is a rather interesting point of technique. Rather than take a figure completely out of the air, you go back to the earnings of a past year which you think will correspond to a typical future year and arrive at the figures that way.

QUESTION: Wouldn't the common stock holders have a basis of argument about the sales and therefore throw out the whole business?

MR. GRAHAM: You mean can they argue against that?

QUESTION: Yes. Well, they can say it is higher; it should be 21 million, or whatever it was in 1946.

MR. GRAHAM: Well, your point is perfectly right. The common stock holders can say that, and so could the SEC have said it -- but they didn't. And when you get down to the judicial question on which this matter turns, here is what the courts say on a matter of that kind: They would say that the SEC is competent and impartial; that their guess is probably a better guess than one advanced by an interested party such as a common-stock holder. But if the common stock people could adduce very convincing evidence, -- not merely an insistent argument -- which would show that the estimate is out of line with normal expectancy, then the SEC's figures could be reflected by the court. QUESTION: Did the trustee represent the common stockholder's viewpoint here?

MR. GRAHAM: No, a trustee wouldn't normally represent just the common stock. The SEC assumed Child's Trustee's views were too liberal. In other cases, the Commission has considered the Trustee's estimate as not liberal enough.

QUESTION: Didn't the SEC introduce the price level in their computations somewhere?

MR. GRAHAM: Not in any explicit calculation.

QUESTION: By using the 1945 level they might discount what they consider to be a bulge in food prices right now.

MR. GRAHAM: Perhaps they do refer to the fact, in their analysis of merchandise costs; that there has been a scarcity of supplies, and that the opportunities to purchase food and liquor at bargain prices have disappeared during war years.

QUESTION: Let me ask another question, then: From your observation isn't retail merchandising, whether it is a restaurant chain or anything else, strictly a matter of percentages? In other words, give them a price level, they work both their costs and selling prices up and down accordingly.

MR. GRAHAM: It generally works out that way. This six per cent figure which they give for net before taxes is based pretty much upon average experience in the past. I presume that is the percentage you are referring to. We know, for example, that food in the typical restaurant represents anywhere between one third and 40 per cent of the total sales check. Once a stable price level has been established, that percentage tends to be established again, even if it was set aside for a while because of sudden changes in price level. For Child's merchandise costs have risen from 34.7 per cent in 1938 to 38.5 per cent in 1945.

QUESTION: No question that the prevailing prices that this chain has to deal with in '46 would be higher than in '45? No question in your mind, is there?

MR. GRAHAM: No.

QUESTION: And that automatically would govern in actual volume of sales, wouldn't it?

MR. GRAHAM: It would unless for some reason the customers were driven away from restaurants, which so far I don't think the figures show. But '46, of course, is not regarded necessarily as a typical postwar year by the SEC, and probably correctly so.

These questions are really good questions, not so much as criticisms of what the SEC does, as they are indications of the necessary degree of uncertainty involved in any such procedure. The only thing you can say in favor of it is that something of this kind must be done. The SEC must do it as intelligently as they can; and you as security analysts must also do it intelligently. But don't ever think that because you go through some very careful operations and work things out to two or three decimal places, as I sometimes see it done, that you have got an accurate and precise idea as to what will happen in the future. You just don't have any such thing. It isn't there.

*** QUESTION: I would like to raise the question of working with post-tax margins rather than pre-tax margins to avoid the dilemma of estimating what the tax rate will be, on the theory that competition will drive the post-tax margin down to about what it was.

MR. GRAHAM: There has been a great deal of discussion in academic circles on the incidence of the corporation tax, -- as to whether it is really paid by the consumer or whether it is paid by the prosperous corporation as compared with a non-profitable corporation that couldn't have to pay any tax. That matter is still very controversial, and apparently the SEC prefers to follow the assumption that the margin should be calculated before tax. In practice, it didn't make much difference, since they use practically the current tax.

*** We are really going on further in the Childs' matter, than the mere matter of estimating future earnings; because I think we ought to follow it through to its conclusion by the SEC, and perhaps by ourselves as sitting

in judgment on the SEC.

They next came to the multiplier and they said that their multiplier should be 12 1/2. That is to say, a capitalization rate of eight per cent, which gave them a value of about \$9-million for the company on an earnings basis. I don't think much was said that would illuminate the question of why they selected a multiplier of 12 1/2. They reject the Trustees' multiplier of ten. That is the first thing they do. Then they add one of those precious clauses that you find in the Tax Court almost always, and in the SEC frequently. They say, "Giving consideration to all the factors, including rates of capitalization which have prevailed for other restaurant chains, it is our conclusion that estimated net earnings of \$1,100,000 before income taxes and \$715,000 after income taxes can fairly be capitalized at rates approximately 12 per cent and eight per cent respectively, resulting in a capitalized earnings figure of about \$9-million.

That means that using their best judgment they will multiply the earnings after taxes by 12 1/2. I assure you that the alternative capitalization of earnings before taxes was figured out at a rate to correspond with their capitalization of the earnings after taxes. I think it was put in there, because in the McKesson and Robbins case they were led by the Trustees' calculations there to do some valuation of earnings before taxes -- something that had never been done before, as far as I know. Their capitalization rate, of course, is pretty much an arbitrary matter, and yet I assume that most analysts would not get very far away from their multiplier.

QUESTION: They use a lower times multiplier than the trustees. Is that the effect of that? MR. GRAHAM: No, a higher multiplier. They cut down his earnings somewhat, and they increase his multiplier so I think they end up pretty near the same evaluation.

QUESTION: You said eight times, didn't you?

MR. GRAHAM: No, an eight per cent figure. That eight per cent is 12 1/2 times. The trustee had used a multiplier of ten.

QUESTION: And they were giving arguments against the use of the ten per cent by the trustee?

MR. GRAHAM: Yes, but the matter is too complicated to take up here. The Trustee had used what he called a "segmental method", in which he considered that part of it was equivalent to bonds, another part to preferred stock, another part to common stock, and the SEC argues about it. Incidentally, you should know that the SEC goes at these things very seriously. I mean, their valuation isn't so much of a rule of thumb way as you may think from my description, -- though I have a little mental reservation on that, and believe that you might get pretty much the same results by rule of thumb method. But they certainly don't do it that way. When they start with analysis of estimates of earnings, they have a discussion of about three pages on the management factor. Then they have three pages on the sales, half a page on merchandise cost, half a page on labor costs, then paragraphs on other costs, on building operating profits, on depreciation and rentals, on overhead. Then, after all those discussions, they reach this calculation of six per cent of the sales of \$18-million. Evidently, a great deal of work of the staff went into this. Thus they got a valuation of \$9-million, based upon earning power. Then they went through some motions after that, on some of which I part company very definitely with the SEC. First they figure out some tax savings due to carrybacks and things of that sort, and they say they will get \$1,200,000 from that. Then they say they have to spend \$1,800,000 for rehabilitation of the restaurants, so they subtract that. And therefore they reduce their \$9-million by \$600,000 net and get \$8,400,000. That is their net value by the earnings method.

Then they add excess working capital and unneeded real estate to that figure. From their calculations these amount to \$5,100,000, and so they get a final total of \$13,500,000. They have to deduct from this \$13,500,000, the funded debt of \$3,200,000. So they get a net value for stock of \$10,300,000. They value the preferred stocks' claim at par and back dividends, amounting to \$7,649,000. Thus the balance left for

common would be \$2,656,000.

Consequently they reach the conclusion that, if one class of stock is to be issued, then somewhere between 70 and 75 per cent of the total should be given to the preferred stock and somewhere between twenty-five and thirty per cent should be given to the common. That happens to be an unusually modest type of conclusion for the SEC. In the past they have generally come out with an elaborate calculation and said: "We believe that 72.45 per cent of this company should go to the preferred and the balance of 27.55 per cent to the common." But I think they are getting a little mellow and are realizing that their calculations are pretty much estimates and should be turned into round amounts.

As a practical matter it turned out that the reorganization is now being carried through on close to the SEC's basis, although the original plans which were proposed by the Trustee and by a number of other people for the most part departed very substantially from these proportions. I won't take the time to tell you what the different plans were; but the Trustee now allocates $76 \frac{2}{3}$ per cent of the new stock to the preferred.

Lecture Number Five

As a preliminary perhaps I might answer any questions that are in your mind growing out of the last lecture, which ended rather precipitously. Does anyone have anything on his mind? We were discussing the Childs' valuation by the Securities and Exchange Commission. At that time, you will recall, we had indicated that the SEC had valued the Childs Company primarily on the basis of its future earning power, which was the thing that interested us, but had added a certain amount for excess working capital -- actually \$1.3 million net after paying the bonds. Let me make the point here that a security analyst would not be inclined to add in the excess working capital to the valuation of the property unless he believed that the money was to be returned in some way or other to security holders. As a matter of fact, some part of the excess working capital was to be used to pay off the old debt of Childs, and that portion, of course, represented an addition to the earning-power value of the old company. Thus our own "practical" valuation would tend to be \$9 million rather than the \$10 million found by the SEC.

Since we discussed the matter two weeks ago, the Federal Court has approved the Childs plan, based upon the modified proposals of the trustee; and it has apparently placed the stock equity at \$9.98 million, which is \$300,000 less than the amount that the SEC found.

It may be interesting to look a bit at the prices of the securities, to see what they indicate as of now. The preferred and common together were selling for about \$8.4 million yesterday, preferred at 155 and the common at $7 \frac{1}{8}$. This is less than the valuations that we have been talking about. There is nothing surprising about that, of course; because it is a normal experience to have the securities of a company in trusteeship sell at less than the valuations that an analyst would find for the property on a reorganized basis. It would be expected that the value would normally increase over a period of time -- such as one year or two years, following trusteeship, -- as the enterprise gains its proper position in the public's esteem. That is almost an invariable experience.

*** Here we have a five page discussion of American Radiator, in which a great deal of information is supplied on the industry, -- not only its past, but future calculations, based upon somebody else's estimates for the year 1947; and also some other estimates for the years running between 1946 and 1951, on the demand and supply of new houses.

Then they take up the earning power of American Radiator Company; and for the first time in this group of analyses that we are speaking of they actually endeavor to determine what the value of the company would be, based on assumptions as to earning power and as to multipliers. Their method is as follows: They project sales at the rate of \$10 million; and this, you see, is our now familiar Childs Company method. Then they apply a profit margin, which they expect to be fifteen per cent. Then they say, "Net per stock: \$1.40 per

share.” They do not give you the arithmetic of that, but here it is: Net before taxes would be \$24 million, less taxes at about 40 per cent, brings it down to about 14 million-odd, and that is about \$1.40 on ten million shares of stock. Then they add: “Foreign earnings, estimated 25 cents” -- and that is a very rough estimate. So they get \$1.60 to \$1.70 per share, total. Further, they state that the relatively near future, -- and because these favorable earnings should continue over a considerable period of time, the stock of this company should prove to be relatively attractive even at its present level, the “present level” being about 20, in February, 1946.

That analysis was later used by a stock exchange house, which concluded, without needing quite as much courage, that the stock looks relatively attractive at 15, which was the price on October 23, 1946.

Now before I attempt a criticism, not necessarily unfavorable, of this analysis, I may as well go on to the last one that reached my desk, which is headed “Active Years Ahead for the Building Industry.” It gives a great deal of information on the building industry, and information about the companies in the industry, including American Radiator, which is the first one. There they make a calculation of the earning power of the company in what they call year 194x, which they figure at \$1.75 per share. They use an expected profit margin of 12 per cent. There is a little discrepancy between the 12 per cent and their final result. It can be explained, if you want to go to the trouble, partly because they take into account foreign earnings to a greater extent than did the research company analysis. Now, the interesting thing about this analysis is two-fold: First they get earnings of about \$1.75, which is not so different from the other projection. But they describe that estimate as follows: “A rough guess of potential earning power under optimum conditions over the next few years is shown by the line designated 194x.” In the rest of the circular, while not too specific, they imply that these stocks are attractive, the ones that they have listed, because of the expected earnings in the 194x year. That is particularly true because the price of American Radiator was only 13 1/2 on that date, and the estimated earnings of \$1.75 would make the price of 13 1/2 look quite reasonable if that represented future earning power.

My comment on these analyses -- the last two ones, which are the only ones that seriously attempt a projection of future earnings -- is this: They do not emphasize enough the fact that the earnings they are dealing with are earnings of a boom period; but the technique of analysis should take that carefully into account.

The earnings for the building boom should be evaluated pretty much in the same way as we were accustomed to evaluating war earnings, that is to say, by assuming that they were to last for a limited number of years. The excess earnings during that period should be added to what we would assume to be the normal valuation of the company based upon its average peacetime earnings. Thus, if you want to attempt a serious evaluation of a company like American Radiator, the only proper method is to take what you would assume to be its normal earning power, not its optimum earning power, evaluate that, and then add to it a fair allowance for the fact that it is facing some very good years.

I might say that if you want to be somewhat pessimistic you could criticize even that method; because you might argue that these boom years are simply part of a building cycle period, -- they are not really excess earnings; they are the good part of the normal earnings and will be offset by very low earnings when the building boom subsides. That comment may be justified; but in any event the method that I spoke of before seems to me to be as liberal a method as you could use.

You had a question about that?

QUESTION: What makes you say that in that estimate of \$160 million of sales, those factors were not considered?

MR. GRAHAM: You mean the fact that they were boom period sales?

QUESTION: Possibly they did consider that.

MR. GRAHAM: I can give you a specific reason for that. They say that the earnings are related closely to the residential building totals that will be expected. And over the period 1946-51 they have gone to the trouble of giving you a projection of the amount of buildings needed and the amount that will be supplied. During the years 1947-51 they are expecting a million units of building annually. At the end of that time the deficiency will be completely remedied; and, on the basis of their statistics, demand would be reduced to somewhere around 550,000 buildings a year, that is to say, about half a million new families plus demolition. Following through this calculation to the year 1952, you would find that the expectation of new units would be not more than half of the one on which they had based their \$160 million of sales.

Another reason, of course, is that the sales actually realized in 1939 were only \$80 million, and in 1938 \$68 million. Thus the volume of \$160 million, even allowing for some increase in prices, would obviously be on the high side.

Were there other questions about that? Questions of this kind are very good, because they help clarify the reasoning behind these evaluations.

It seems to me that the method of evaluation, then should be somewhat different for American Radiator than has been used. You ought to start, not with the optimum earnings, but what you would consider to be normal earnings for the company. The company had been earning on the order of about 50 cents a share in the period before the war; and I would assume that if you take earnings of a dollar a share after the war, you would be about as optimistic as you would have any right to be about this company's earnings after the building boom has subsided. I am inclined to think that is over-optimistic, as far as one can see now, for the very reason that when the building boom has subsided you are likely to go into a period of subnormal earnings if the building cycle behaves in the future as it has in the past. But if you accept the one dollar earnings -- and I really want to mark that as liberal, -- I think the multiplier would be somewhere between 12 and 15. That is higher than the company's past record would justify, -- but the American Radiator has some advantages in being a large and strong company, well thought of, and which many years ago was a very large earner. Consequently, I think you would get a valuation of \$12 to \$15 on a normal basis.

To that you would add an allowance for the boomtime earnings, which are 75 cents a share over expected normal. If you multiply this by four you are again pretty liberal; that will give you three dollars extra. The valuation, thus comes to about \$15 to \$18 a share for the stock, giving the company the benefit of certain doubts that I would have in my own mind. This valuation, I think, could properly have been made for American Radiator at any time during the past year, and would have justified caution with regard to a purchase of that stock for investment at the prices of early 1946.

But on that subject let me add that it is perfectly proper to buy stocks for speculation. There is no crime in that. When you buy stocks for speculation it is perfectly proper to take speculative factors into account, which are different from investment factors. The normal expectancy would be that if this company is to earn \$1.75 a share for three or four years, the market will reflect those earnings in full on a speculative basis, without making allowance for the fact that they are temporary.

That hasn't always happened. For example, during the war the market certainly didn't reflect war earnings on the theory that they were permanent earnings. But the market does tend to do so with regard to cyclical earnings; it regards the boomtime earnings as permanent earnings. For that reason it is quite possible that American Radiator could sell, under good general market conditions and during its own boom period, at a price very much above our value of 15 to 18.

We must not forget that American Radiator as recently as 1942 sold at 3 3/4. What we are saying is that American Radiator is a speculative type of security by the nature of its business, as well as by the fact that it

is a common stock. Just as it can sell at four dollars in bad year, it can easily sell at \$30 in a good year, and both prices would be fundamentally justified. Our own valuation represents the type of investment approach which tends pretty much to bring you what you would consider to be a central value for the stock. This interests the investor primarily; but second it may interest the intelligent speculator too. For he could then see how far he is getting away from central value when he is following up the speculative aspects of the situation.

I welcome questions about that, because I think that is very important.

QUESTION: If we are to estimate future earnings for just a period of five years, when you speak of a normal period for this industry, wouldn't your analysis go beyond that five-year period? The boom years might be the next five years. Then if you are striking for a normal level, that would go beyond the next five years; so as a result your earnings in the coming five years would be on a higher level and your normal period lower.

MR. GRAHAM: Yes, you are right in making that point. If my recollection is correct, I did make that point too, in my third lecture. I said that normally the earnings that you are trying to estimate are those of the next five years, -- perhaps five to seven years, -- but that there might be some exceptional cases. And I did have the building industry in mind, in which the next five years would not be regarded as a normal expectancy. The analyst is under a special disadvantage, then, because the normal earnings that you are thinking of lie so much further ahead in the future that your chance of being wrong in calculating what they are going to be is that much greater. But there is no help for it. You cannot properly evaluate the boom earnings of the next few years as normal; so you must jump ahead to the later earnings.

QUESTION: But when the market regards the earnings of a company, if the company went along for five years at a high rate of earnings, then wouldn't the market place a higher valuation on those earnings, considering the length of time the earnings would be at that high level?

MR. GRAHAM: Yes; because the market would tend to multiply the earnings by your standard multiplier of 15 or thereabouts, instead of merely adding them in the way we suggest you do. (I am speaking, now, of the abnormal or excess component of those earnings.) The investor would then be out of step with the market in his attitude toward a stock like American Radiator.

The investor is very often out of step with the market, incidentally, and that would be no new experience for him. But I think it is useful for the investor to have some idea of what would seem to be the reasonable value, even if the current market may not reflect it at all.

*** A thing I would like to warn you against is spending a lot of time on over-detailed analyses of the company's and the industry's position, including counting the last bathtub that has been or will be produced; because you get yourself into the feeling that, since you have studied this thing so long and gathered together so many figures, your estimates are bound to be highly accurate. But they won't be. They are only very rough estimates, and I think I could have given, and probably you could have given me, these estimates in American Radiator in half an hour, without spending perhaps the days, or even weeks, of studying the industry.

*** I want to say finally on this question that an elaborate forecasting technique has been developed in recent years on the amount of dollar business and physical volumes that would be done in various industries at certain levels of employment, or certain levels of gross national product. The Committee for Economic Development has gotten out studies of that kind which gives you estimates of the industry totals under full employment conditions, and the same has been done by the Department of Commerce. Those of you who want to go into that aspect of analysis should start pretty much with these forecasts, and accept them or reflect them as far as your own judgment is concerned. If you accept them, then build your forecast of the individual company's sales in relation to the industry totals which you are starting with. You may make three different estimates, -- as is now done sometimes -- based upon full employment, moderate unemployment, and considerable employment; and make your estimate of sales accordingly. That is the new technique, and I

think you will find it interesting as applied to security analysis.

Lecture Number Six

The first thing that I want to make clear in any attempt to obtain a view as to future earnings, either in general or in particular, is that the analyst is not really trying to look into the crystal ball and come out with the correct answer for the period of time that he is forecasting. What he is really trying to do is to determine how the analyst should act and think -- that is, how far he can go in logical thinking with respect to the always enigmatic future.

I don't believe any of us have the pretension of believing that by being very good analysts, or by going through very elaborate computations, we can be pretty sure of the correctness of our results. The only thing that we can be pretty sure of, perhaps, is that we are acting reasonably and intelligently. And if we are wrong, as we are likely to be, at least we have been intelligently wrong and not unintelligently wrong. (Laughter.)

*** In a study of fourteen companies which I made -- mainly those that appeared in the Dow-Jones Average, either before or after 1914 -- I found that seven of them showed larger earnings in the post-war period than before the war, six of them showed lower average earnings, and one of them was even. That one, incidentally was United States Steel, which had widely fluctuating earnings in the period after the war, but which averaged in those five years the same figure as it did in the preceding three.

Those results were not as satisfactory as they should have been, because in that period we had the very serious depression of 1920 to 1922; and the effect of depressed conditions was to reduce the average earnings well below what they would have been if we had had a level period of national income. You recall that the figure of \$62-billion, which I gave you, was an average national income for the five years. But there were rather wide fluctuations from year to year, and the effect on earnings as a whole was bad. You do not gain as much from periods of unusual prosperity as you lose in periods of depression when you are in business. That is almost an axiom.

*** I am more and more impressed with the possibilities of history's repeating itself on many different counts. You don't get very far in Wall Street with the simple, convenient conclusion that a given level of prices is not too high. It may be that a great deal of water will have to go over the dam before a conclusion of that kind works itself out in terms of satisfactory experience. That is why in this course we have tried to emphasize as much as possible the obtaining of specific insurance against adverse developments by trying to buy securities that are not only not too high but that, on the basis of analysis, appear to be very much too low. If you do that, you always have the right to say to yourself that you are out of the security market, and you are an owner of part of a company on attractive terms. It is a great advantage to be able to put yourself in that psychological frame of mind when the market is not going the way you would like.

*** There are great advantages in dealing with a group valuation, because you are more likely to be nearly accurate, I am sure, when you are considering a number of components together -- in which your errors are likely to cancel out -- than when you are concentrating on an individual component and may go very wide of the mark in that one.

Furthermore, there is nothing to prevent the investor from dealing with his own investment problems on a group basis. There is nothing to prevent the investor from actually buying the Dow-Jones Industrial Average, though I never heard of anybody doing it. It seems to me it would make a great deal of sense if he did.

When we talk about buying bargain issues, for example, the emphasis on group operation becomes even greater, because you then get into what could practically be know as an insurance type of operation. Here you have an edge, apparently, on each individual company. That advantage may conceivably disappear or not be realized in the individual case; but if you are any good at all as an analyst you ought to realize that advantage

in the group. And so I have had a great partiality for group operations and group analysis. I must say, however, that you gentlemen, as functioning security analysts, advisers to the multitude, and so on, are unable to obtain that advantage in all the work you do. For I am sure you are compelled to reach rather definite conclusions about individual companies, and can't hide them in a group result.

Lecture Number Seven

MR. GRAHAM: Good evening. You have all had a month's rest since the last lecture. I hope you had a pleasant vacation during that period and you are now ready to absorb some more punishment.

If you recall as far back as the last lecture, we dealt there mainly with the prospective earning power of the Dow-Jones list considered as a unit, and with its prospective central market value.

You might now ask the question: What about the earnings of the individual components of the Dow-Jones list? How would one go about evaluating them, and what results would you get?

As it happens, that job was done -- at least from the standpoint of expected earnings power -- in an article that appeared in the Analyst Journal in July 1945. It is called "Estimating Earnings of an Active Post-War Year," and it is by Charles J. Collins. There he gives his estimate of the post-war earnings of all the companies in the Dow-Jones unit, together with the sum of these earnings.

His total figure varies from \$15.96 to \$17.58 per unit. You may recall that my rather rough calculation gave a figure of \$13.60, and it may thus appear that my figure is rather definitely lower than Collins'. Actually that may not be true, because Collins identifies his earnings as those of an active post-war year, whereas the earnings that I had used in the last lecture are supposed to represent the average future earning power of the Dow-Jones unit -- which would include some allowance for poor years as well as good ones.

It is interesting to note that Collins' estimates for individual companies show considerable variation from their pre-war earnings, say their 1940 figures. I might read off a few to you to show how different are his expectations for different companies. Here are four that show large expected increases, taking 1940 as against the future years: American Smelting, from \$4.21 to \$9.50; Chrysler, from \$8.69 to \$17.75; Johns Manville, from \$6.34 to \$14.75; Goodyear, from \$3.44 to \$8.60.

Here are four others that show very small increases, if any: (I am using here, the average of his range of figures) American Tel and Tel, from \$10.80 to \$10.50; American Tobacco from \$5.59 to \$5.90; National Distillers, from \$3.28 to \$3.35; and Woolworth, from \$2.48, in 1940, to \$2.62 in the postwar year.

Collins does not give his method of calculation in detail, but he does give you a description which you can follow through fairly well.

He starts from industry sales projections which have been made by the Committee for Economic Development of the Department of Commerce, and he adjusts them to an expected national income of \$112-billion. That happens to be quite a conservative figure, because the national income for the year 1946 was about \$165-billion.

He does not apply the exact percentage increase in each industry to the particular company; but he allows for its better or poorer trend than that of the industry as a whole over the period from 1929 to 1940. He assumes, in other words, that a company which did better than its industry from 1929 to 1940 will do proportionately better in the increase that is to be seen from pre-war; and correspondingly for those that may have done worse.

From the estimated sales he then calculates net before taxes based on pre-war ratios; he takes taxes of 40 per cent; and that gives him his figure, with a small range that he allows for possible adjustments.

You will recall that the profit margin that we used was distinctly lower than the pre-war; but on the other hand we took a considerably higher national income, and we also took a lower expected tax.

These variations in method suggest that there is no single way of dealing with a projection of future earnings and that individual judgment will have to play a considerable part. But the variations in this technique are not likely to be as great as the variations in the market's response to what it thinks are the possibilities of different companies.

I would not criticize the Collins' method, except in one respect which I think it is rather significant to consider. He assumes that the trends shown from 1929 to 1940 will continue in the future, and that seems a natural assumption to make. But I would like to warn you against placing too much reliance on that supposition.

Some years ago we made a rather intensive study on the subject of whether earnings trends did or did not continue. We tried to find out what happened to companies showing an improvement in their earnings from 1926 to 1930, comparing them further with 1936???, and also those that had failed to show improvement in the period. We found that there were at least as many cases of companies failing to maintain their trend as there were of those that did continue their trends. And that is a very vital consideration in all future projections.

As a matter of fact, Collins himself says that, when he accepts the trends, in some cases he finds he gets such large earnings that he felt constrained to reduce them in the interests of conservatism; and I imagine he was probably right.

*** Now I would like to return for a moment to the analyst's view of Wall Street as a whole -- that is, the scope of his own activities in the securities markets and his approach to his function of analyzing securities and drawing conclusions from his analysis.

I suggest that there are two fundamentally different approaches that the analyst may take to securities as a whole.

The first I call the conventional one, and that is based primarily on quality and on prospects.

The second I call, in complimentary fashion, the penetrating one, and that is based upon value.

Let us first attempt a brief description of these different approaches as they relate themselves to actual activities of the analyst.

The conventional approach can be divided into three separate ways of dealing with securities. The first is the identification of "good stocks" -- that is "strong stocks," "strong companies," "well-entrenched companies," or "high quality companies." Those companies presumably can be bought with safety at reasonable prices. That seems like a simple enough activity.

The second is the selection of companies which have better than average long-term prospects of growth in earnings. They are generally called "growth stocks."

The third is an intermediate activity, which involves the selection of companies which are expected to do better business in the near term than the average company. All three of those activities I call conventional.

The second approach divides itself into two sub-classes of action, namely, first, the purchase of securities generally whenever the market is at a low level, as the market level may be judged by analysts. The second is the purchase of special or individual securities at almost any time when their price appears to be well below the appraised or analyzed value.

Let me try to do a little appraising of the appraisers or the analysts themselves, and embark on a brief evaluation of these five lines of action which I have briefly described to you. Of course, I am expressing, basically, a personal opinion, which is derived from experience and observation and a great deal of thought; but it should not be taken as in any sense representing the standard view of the work of the security analyst.

The first division, you recall, was the simple identification of good companies and good stock; and one is inclined to be rather patronizing about a job as easy and elementary as that. My experience leads me to another conclusion. I think that it is the most useful of the three conventional approaches; provided only that a conscientious effort is made to be sure that the "good stock" is not selling above the range of conservative value.

Investors do not make mistakes, or bad mistakes, in buying good stocks at fair prices. They make their serious mistakes by buying poor stocks, particularly the ones that are pushed for various reasons. And sometimes -- in fact, very frequently -- they make mistakes by buying good stocks in the upper reaches of bull markets.

Therefore, the very simple kind of advice which keeps the investor in the paths of righteousness, or rather of rightness, I would say is very worthwhile advice -- saying merely "These are good companies, and their prices are on the whole reasonable." I think also that is the key to the policy of the well-established investment-counsel firms; and it accounts for their ability to survive, in spite of the fact that they are not in a very easy kind of business.

When you move from that simple and yet valuable occupation, namely, telling an investor that General Motors and General Electric are safer things to buy than Barker Brothers at 25 3/4, for example -- when you move from that into the next activity, you are getting into much more difficult ground, although it seems to be much more interesting. And that is the selection of growth stocks, which for a long while was the most popular or rather the best-regarded type of activity by analysts.

The successful purchase of growth stocks requires two rather obvious conditions: First, that their prospect of growth be realized; and, second, that the market has not already pretty well discounted these growth prospects.

These conditions do obtain with regard to some growth stocks, as they are identified by analysts; and highly satisfactory profits are made from that work. But the results vary a great deal with the skill of the selector, and perhaps with "the luck of the draw." It is quite questionable to my mind whether you can establish a technique of a communicable sort -- that a good instructor can pass on to his pupil -- by which you will be enabled to identify those stocks not only which have good prospects of growth but which have not already discounted pretty much those prospects in the market.

Let us put it in this way: I think at bottom success in the identification of growth stocks comes from being smart or shrewd, but I do not consider it a standard quality of good security analysis to be smart or shrewd. Not that I have any objection to that, but it just doesn't seem to me to fit into the general pattern or canon of security analysis to require those rather rare qualities.

I might say rather that a security analyst should be required to be wise, in the sense that he is technically competent, that he is experienced, and that he is prudent. And I don't know that wisdom of that sort is particularly well adapted to the successful selection of growth stocks in a market that is so full of surprises and disappointments in that field as in many others. I have in mind many examples. If you take the chemical companies, which have been the standard example of growth stocks for as long back as I can remember, you will find that for a long period of years their market behavior was quite unsatisfactory as compared with other companies, merely because they had previously had a great deal of popularity at a time when other companies were not so popular. If you take the air transport stocks, the selection of those securities for investment, based upon the idea of growth, seems to me to have been an exceedingly speculative type of

thing; and I don't know how it could have been properly handled under the techniques of well-established security analysis. As you know, there are many, many hazards which exist in that kind of industry, and in many others that have been regarded as having unusual growth prospects.

Now let me pass on to the third activity of the conventional sort, which I think is done most constantly in day-by-day Wall Street organizations -- the trade investigation, which leads one to believe that this industry or this company is going to have unusually good results in the next 12 months, and therefore the stock should be bought.

Permit me to say that I am most skeptical of this Wall Street activity, probably because it is the most popular form of passing the time of the security analyst. I regard it as naive in the extreme. The thought that the security analyst, by determining that a certain business is going to do well next year has thereby found something really useful, judged by any serious standard of utility, and that he can translate his discovery into an unconditional suggestion that the stock be bought, seems to me to be only a parody of true security analysis.

Take a typical case. What reason is there to think that because U.S. Plywood, for example, is going to do better in 1947 than it did in 1946, and National Department Stores will probably do worse in 1947 than it did in 1946 -- what reason is there to believe that U.S. Plywood should be purchased at 34 rather than National Department Stores at 17? There is scarcely any serious relationship between these concepts of next year's operations and the purchase and sale of the securities at the going market price; because the price of 34 for U.S. Plywood might have discounted very good earnings for three years, and the price of National Department Stores might theoretically have discounted poor earnings for three years. And in many cases that is not only theoretically so, but is actually so.

I would suggest, and this is a practical suggestion -- what I said before has been perhaps only a theoretical analysis in your eyes -- that if you want to carry on the conventional lines of activity as analysts, that you impose some fairly obvious but nonetheless rigorous conditions on your own thinking, and perhaps on your own writing and recommending. In that way you can make sure that you are discharging your responsibilities as analysts. If you want to select good stocks -- good, strong, respectable stocks -- for your clients, that's fine, I'm all for it. But determine and specify that the price is within the range of fair value when you make such a recommendation. And when you select growth stocks for yourself and your clients, determine and specify the round amount which the buyer at the current price is already paying for the growth factor, as compared with its reasonable price if the growth prospect were only average. And then determine and state whether, in the analyst's judgment, the growth prospects are such as to warrant the payment of the current price by a prudent investor.

I would like to see statements of that kind made in the security analyses and in circulars. It seems to me that you would then be getting some kind of defensible approach to this process of handing out recommendations.

And finally, in recommending a stock because of good near-term prospects, you should determine and state whether or not, in the analyst's judgment, the market price and its fairly recent market action has already reflected the expectations of the analyst. After you have determined that it hasn't, and that the thing has possibilities that have not been shown in the market action, then it would be at least a reasonable action on your part to recommend the stock because of its near-term prospects.

Have you any questions about this evaluation, perhaps somewhat biased, of the conventional activities of the security analyst?

QUESTION: Do you confine your near-term valuation, your Point Three, to just one year?

MR. GRAHAM: I am thinking more or less of between one and two years. Most people seem satisfied to talk

about the next twelve months in this particular field. Let us spend the next five minutes on the unconventional or penetrating type of security analysis, which emphasizes value.

The first division represents buying into the market as a whole at low levels; and that, of course, is a copybook procedure. Everybody knows that is theoretically the right thing to do. It requires no explanation or defense; though there must be some catch to it, because so few people seem to do it continuously and successfully.

The first question you ask is, of course: "How do you know that the market price is low?" That can be answered pretty well, I think. The analyst identifies low market levels in relation to the past pattern of the market and by simple valuation methods such as those that we have been discussing. And bear in mind that the good analyst doesn't change his concept of what the earnings of the next five years are going to be just because the market happens to be pessimistic at one time, or optimistic at another. His views of average future earnings would change only because he is convinced that there has been some change of a very significant sort in the underlying factors.

Now he can also follow a mechanical system of operating in the market, if he wishes, like the Yale University method that many of you are familiar with. In this you sell a certain percentage of your stocks as they go up, or you convert a certain percentage of your bonds into stocks as they go down, from some median or average level.

I am sure that those policies are good policies, and they stand up in the light of experience. Of course, there is one very serious objection to them and that is that "it is a long time between drinks" in many cases. You have to wait too long for recurrent opportunities. You get tired and restless -- especially if you are an analyst on a payroll, for it is pretty hard to justify drawing your salary just by waiting for recurrent low markets to come around. And so obviously you want to do something else besides that.

The thing that you would naturally be led into, if you are value-minded, would be the purchase of individual securities that are undervalued at all stages of the security market. That can be done successfully, and should be done -- with one proviso, which is that it is not wise to buy undervalued securities when the general market seems very high. That is a particularly difficult point to get across: For superficially it would seem that a high market is just the time to buy the undervalued securities, because their undervaluation seems most apparent then. If you could buy Mandel at 13, let us say, with a working capital so much larger when the general market is very high, it seems a better buy than when the general market is average or low. Peculiarly enough, experience shows that is not true. If the general market is very high and is going to have a serious decline, then your purchase of Mandel at 13 is not going to make you very happy or prosperous for the time being. In all probability the stock will also decline sharply in price in a break. Don't forget that if Mandel or some similar company sells at less than your idea of value, it sells so because it is not popular; and it is not going to get more popular during periods when the market as a whole is declining considerably. Its popularity tends to decrease along with the popularity of stocks generally.

QUESTION: Mr. Graham, isn't there what you might call a negative kind of popularity, such as the variations of Atchison? I mean, in a falling market, while it is perfectly true that an undervalued security will go down, would it go down as fast as some of the blue chips?

MR. GRAHAM: In terms of percentage I would say yes, on the whole. It will go down about as fast, because the undervalued security tends to be a lower-priced security; and the lower-priced securities tend to lose more percentagewise in any important recessions than the higher ones. Thus you have several technical reasons why it does not become really profitable to buy undervalued securities at statistically high levels of the securities market.

If you are pretty sure that the market is too high, it is a better policy to keep your money in cash or

Government bonds than it is to put it in bargain stocks. However, at other times -- and that is most of the time, of course -- the field of undervalued securities is profitable and suitable for analysts' activities. We are going to talk about that at our next lecture.

Lecture Number Eight

It follows that, in dealing with undervalued securities, the analyst is likely to become greatly interested in specific corporate developments, and therefore in proper corporate policies. And from being interested in corporate policies, he may pass over into being critical of wrong policies and actively agitating to bring about correct policies -- all of which he considers to be in the stockholders' interests. For it is true that in a fairly large percentage of cases the undervaluation in the market can be removed by proper action by or in the corporation.

Consequently, by insensible stages of reasoning, the specialist in undervalued securities finds himself turning into that abomination of Wall Street known as a disgruntled stockholder.

I want to say a word about disgruntled stockholders. The trouble with stockholders, in my humble opinion, is that not enough of them are disgruntled. And one of the great troubles with Wall Street is that it cannot distinguish between a mere troublemaker or "strike-suitor" in corporation affairs and a stockholder with a legitimate complaint which deserves attention from his management and from his fellow stockholders.

*** QUESTION: In connection with investment income, isn't it possible that the method in which that is determined might be conservative? In other words, investment income, as I understand it, would probably be income from interest, dividends, and excluding capital appreciation.

MR. GRAHAM: Yes. I am glad you raised the question, because I omitted any reference to the question of capital appreciation or depreciation in insurance company investments.

Speaking about that I would like to go back to the reasons for the popularity of insurance company shares in the 1920's. The analyses that used to be made at that time indicated that the insurance stockholder was a very fortunate person, because he had three different and valuable sources of income. One was the insurance business, which was supposed to be a very good industry, although there was no analysis of how much it contributed in earnings in those days. It was taken for granted that it was a good business for the stockholder.

Then it was said that you got the interest on money, not only your own money, but you got interest and dividends also on a lot of money that the policyholders had left with you in the form of unearned premiums and unpaid losses, and so on. Thus, for every dollar of your own, you had a total of about two dollars working for you, drawing investment income.

The third advantage was that you had extremely capable investment managements putting your money in securities and making a lot of profits for you.

Of course they made profits for you in the 1920's when the market was going up, and of course they lost a great deal of money in the early 1930's when the market was going down. The same thing happened in 1937-38, when they made a lot of money up to March '37, then they lost a great deal in the ensuing decline.

The net of all this history, I am pretty sure, is that today's sophisticated investors are not willing to pay very much for the ability of insurance managements to make capital gains for them over the years. It turns out that we do not have the type of check-ups and careful analysis of insurance company investment results that we have in the case of investment trusts, because the business does not lend itself so easily to that kind of thing. But it can be done. I am going to give you some figures on American Equitable Insurance Company over a 20 year period, to indicate how that company made out of that period of time with its investments as well as with

its underwritings.

But on the whole, just answering the specific question asked, no investor today -- and I don't think any analyst -- is willing to give the insurance business any special credit for ability to make profits on the principal value of its securities. It will make profits in good years and it will lose money in bad years from that department. That may be doing it an injustice; but that I am sure is the general opinion of security analysts at the present time.

*** QUESTION: Would you care to take a minute to differentiate between premiums and underwriting profit? That is a little technical. What is underwriting profit?

MR. GRAHAM: Underwriting profit is the profit earned from the insurance business as such. It consists of the balance left after you pay the losses and the expenses of the underwriting business. It includes, moreover, a certain component known as the increase in the unearned premium reserve, which is a technicality. It is generally accepted that the liabilities shown on the balance sheet for "unearned premium reserves" include, to the extent of 40 per cent ordinarily, an amount that is really the stockholders' equity. When that figure goes up, the insurance profits for the year are increased accordingly, and conversely. Thus you really have two parts to your underwriting results: One, the straight result, and the other the equity in the increase or decrease in the unearned premium reserve.

I do want to say something about the method of calculating liquidating values, or equities, in this business, but I will delay that for a while.

QUESTION: What of the possibilities of increasing the underwriting profits, rather of raising rates in underwriting business? You always get a lull after a war, when the insurance on property has to be marked up after the replacement value advance.

MR. GRAHAM: In answering that question now, I would like to distinguish very sharply between recent results and long-term average results. The recent results of the fire business have been bad. Most companies, I think, showed losses for 1946 -- the figures are not out yet -- and about half of them, perhaps, showed losses for 1945. The results that I have been dealing with have been ten-year average figures, and I think that they pretty fairly represent what you can expect over the years in the insurance business. It may be that the results will be a little better in the next ten years than they were in the last ten years, but I don't believe that an insurance analyst or an investor ought to count particularly upon that. He should count upon their being better in the next five years than they were in the last two or three, which is of course a different matter.

QUESTION: Why do companies like the American Reserve or even the North River stay in business, then?

MR. GRAHAM: The North River Company stays in business, of course, because it has been in existence for 126 years, and has built up a large business, which has increased over the years, which has been satisfactory to the people running the business, to its agents, and to its policyholders. Whether it is now satisfactory to the stockholders I don't think has ever been asked, and I don't think such questions are asked in any of these companies.

I have read a number of reports of fire insurance companies to their stockholders. They consist generally of a one-page balance sheet and a few pages listing the securities owned. The question of how profitable is the business, is just not discussed. I suppose it would be ungentlemanly to raise the point.

QUESTION: Do your figures here show underwriting profit as reported, or is some adjustment made such as the Best adjustments for unearned premiums?

MR. GRAHAM: These include the unearned premium adjustment, which is pretty standard. In fact, the companies themselves, in many cases, indicate what that amounts to in their discussions at their annual

meetings. It is really standard procedure In the casualty business there is still another adjustment, which I will mention later on -- the difference between one kind of reserve and another kind of reserve method.

QUESTION: Well, one of the reasons for stockholders not knowing anything about insurance companies is the fact, that I think, until recently they didn't publish any profit or loss statements. They just gave balance sheets on the statement, just like the bank did.

MR. GRAHAM: Yes. If I were a stockholder in an insurance company, I would like to know whether the business was profitable enough, and I would ask. But apparently the stockholders in the insurance companies don't ask that question, to the extent of requiring that the figures be analyzed or presented in the annual reports.

The casualty companies, interestingly enough, tend to publish rather elaborate reports, with a good deal of information. One reason, perhaps, is that the casualty business has been quite profitable in the last ten years.

QUESTION: Don't you think the stockholders' complacency is caused by the fact that the early investor in insurance companies -- such as continental, or what is called the "Home Group" -- has done very well over the last twenty years with his money. Whether he has been lulled to sleep is another thing, but I think that has been the cause of it.

MR. GRAHAM: I am not in a position to tell you what happened in the last twenty years to every one of these companies. But I do know that in the fire group some companies have done very badly for twenty years; and a company like North River, which I believe is pretty representative, has started off doing very well and is finishing up in a situation which does not permit it to do really well for its stockholders. I don't believe that this analysis would be subject to much change if you took other companies. You might find one or two exceptions, such as the St. Paul Fire and Marine. But they are extraordinarily few.

QUESTION: Is the competition of mutual a factor here?

MR. GRAHAM: I don't know whether that really is a factor. It might be. But the insurance companies endeavor to obtain higher rates when they need them by application to the various insurance boards, and there is always a lag in getting them.

QUESTION: The solicitors for the mutual insistently cite expenses cheaper than the stock company. That is one of their big points. That is to say, in the form of commissions to agents. Net costs to the policy holder.

MR. GRAHAM: I shouldn't be surprised if that were so. There is reason to believe that the scale of commissions paid on fire insurance policies has been too high -- the commissions paid to agents. It doesn't take a great deal of salesmanship in my opinion to sell a fire insurance policy. It does take quite a bit perhaps to sell a life insurance policy. The fire commissions have been pretty large, and I think that in some cases recently the state insurance departments have hesitated to permit premium raises on the ground that the commissions to agents have been too high. At least so I am informed, but I will not state that as a fact.

QUESTION: The casualty men always stress cost to the policyholders.

MR. GRAHAM: In the mutual, too? Well, in the casualty field, in spite of the competitions with the mutual companies, the stock companies have been able to earn a very considerable sum of money for their stockholders. Are there any other questions about that?

QUESTION: To get back to a point that might be elementary. I am not at all familiar with these industries. You have 1927 and 1945 statistics on the board. I can see why there has been a decline in investment income; but even if it is repetitious, will you explain why there has been that sharp decline in underwriting profit, and whether that is a transitory situation or will it continue?

MR. GRAHAM: The decline in the underwriting profit of North River is due to two factors: One is the profit per dollar of insurance written, which went down from about six per cent to four per cent for those two years. It is difficult to say whether that is a permanent thing or not. I am inclined to think that there is a slight tendency for that rate to go down through the years.

The more important fact is that the amount of premiums written by this company, per dollar of stockholders' equity, has been cut in two. Therefore, with the same rate of profit you would only earn half as much on your stock. That is just like saying you now have only 50 cents of sales per dollar of capital, instead of a dollar of sales.

The reason for that is very interesting, and I would like to comment on it a bit. What has happened is that these companies have built up their stockholders' equity in various ways in the period to a much greater extent than they built up their premiums. The result is that from the standpoint of good results for the stockholders, they seem to have much too much capital per dollar of business done in 1945.

Of course, the insurance companies will insist that is not true. They will say that the more capital they have the better the policyholders are, and therefore the better the stockholders are. They will also say that they expect to do very much more business in the future, and therefore they should have the capital available for the expanding business. But the fact remains that in dollars and cents you have the situation that the North River Company had \$25-million of stockholders' capital and did about \$9-million of business in 1945, which is a very small amount of business per dollar of capital. In 1927 they did a somewhat larger amount of business with less than half the amount of capital.

No attention has been paid to that matter by anyone, that is by any stockholder. As far as the management is concerned, the more capital they have, the better off they are. There isn't the slightest doubt about that.

QUESTION: Haven't they got more money to invest in stocks?

MR. GRAHAM: They have more money to invest in stocks, but that is no special advantage to the stockholder because he has more money of his own invested. The question is what about the rate of return, and that has gone down too, of course.

There is a better answer to your question. Because they have more capital, the amount of investment per dollar of capital goes down. The reason is that in addition to investing the stockholders' capital they invest other moneys that come out of the conduct of the business. The more capital there is in relation to the business, the less proportionate excess do they have. That is shown in this figure: In 1927 they had \$1.45 of invested assets per dollar of stockholder's capital, and now they have only \$1.18. So they lost out in that respect too.

Now, I might suggest that somebody should raise the question, "What can the stockholders do to get a decent return on their investment on the North River Insurance Company?" Let us assume it was a matter for the stockholders to decide, which would be a very extraordinary suggestion for anyone to make -- elementary as it sounds in theory. Here is a possible answer: Suppose you re-established the relationship between capital and premiums that existed in 1927, when things were quite satisfactory, by simply returning to the stockholders the excess capital in relation to the business done. If you did that, you would be able to get the earnings of about six per cent on your capital and to pay the four per cent dividend on your capital, which I suggested might be a definition of a reasonable return to the stockholder. That could happen because, when you take out \$15 a share from the present \$31 -- and you have left only \$16 to earn money on for the stockholder -- you are reducing your earnings only by the net investment income on the \$15 withdrawn, which is on the order of, say, 40 cents at the most. Thus you would earn about 85 cents on the remaining investment of \$16 and you would get reasonably close to the six per cent which you need.

That is a method that will not recommend itself to insurance company managements, but which at least has some arithmetical validity as far as the stockholders are concerned.

Are there any other questions about this analysis with regard to the North River Company?

QUESTION: I don't quite understand. What is the reason for the decline in the volume, dollar volume, of premiums underwritten? Is it a question of growth and competition in the industry? Would you not expect the over-all dollar amount of premiums to increase over a period of 20-odd years?

MR. GRAHAM: The situation is this: For the country as a whole net premiums written by fire companies grew in volume from \$966-million in 1927 to \$1,226-million in 1945. That would represent an increase of about one-third.

The North River Company had \$9.1-million in premiums in 1945, and \$10.9-million in 1927. That was a reduction of about 16 per cent. It is pretty clear that the North River Company individually went back in that period of time. Many of the other companies, which increased their premiums, however, increased them by absorbing other companies over the 20-year period. Also a good deal of the insurance written was taken by new fire subsidiaries of casualty companies, and so on. It may well be that the typical company which didn't go through corporate changes, but just stuck to its old setup, might have had a situation not so different from the North River Company, namely, a decline in premiums.

It is important to point out that the rate of premiums per \$1,000 of insurance went down very much from 1927 to 1945. The companies gave more to the policyholder for their money. The result is that their premium income suffered, and does not reflect the true growth in the amount of coverage extended.

QUESTION: Did North River sell additional shares during that 18-year period?

MR. GRAHAM: Yes. I made an error in my previous statement that I want to correct. I said that the North River Company had retained its old position. That was not right. They took over another company, which represents about one-fifth of their total capitalization. That means they added about 25 per cent, presumably, to their business by absorbing another company in that period of time, so they should have shown an increase in their business. Exactly why this company didn't do it, I don't know.

QUESTION: Isn't the North River one of a group of companies?

MR. GRAHAM: Yes, it is operated by the Crum and Forster organization.

QUESTION: They may have stuck the premiums in some of their other companies.

MR. GRAHAM: That might be the reason. That is another interesting question that arises in the treatment of stockholders' interest by insurance company managements. Many of the insurance companies are part of so-called "fleets" or groups of companies, and you find some very surprising things in those fleets. Some of the companies tend to be quite profitable, and others in the same group tend to be unprofitable. When you ask for an explanation, as I have done in one case, you may be a bit surprised at the kind of explanation you get. The thing that surprises me always is that the insurance people never talk in terms of what happens to the stockholder. They always talk in terms of what happens to the business as such. You can find many business reasons why Company A should be profitable and Company B should be unprofitable -- but no reason that will satisfy the stockholder of Company B, in that case.

Lecture Number Nine

Now, we turn to the New Amsterdam Casualty case, which is interesting for a completely different set of reasons, as I pointed out in the previous lecture. Here you have a very large discount in price from break-up

value, but instead of having an unprofitable company, you have one which, over the years, has shown very good results indeed. Instead of having the stockholders suffering from what might be called a certain waste of assets -- in the sense of a business which is carried on for years on a relatively losing basis -- you have exactly the opposite: The stockholder is suffering from an undue desire by management to gather together and retain all the assets possible and to give out as little as they decently can to the stockholders. I think the contrast in the two cases is very extraordinary, and it deserves some careful thinking on your side. For it shows that the stockholders' interests are affected by developments and policies of a very diverse nature, and that a stockholder can suffer from failure to pay out earnings, when they are realized, nearly as much as he suffers from the failure to realize earnings.

Now, that will be vigorously denied by corporate managements, who insist that as long as the money is made and is retained in the treasury the stockholder does not possibly suffer and he can only gain. I think you gentlemen are better qualified than anyone else to be the judge of that very question. Is it true that the outside stockholder invariably benefits from the retention of earnings in the business, as distinct from the payment of a fair return on the value of his equity in the form of dividends? I believe that Wall Street experience shows clearly that the best treatment for stockholders is the payment to them of fair and reasonable dividends in relation to the company's earnings and in relation to the true value of the security, as measured by any ordinary tests based on earning power or assets.

In my view the New Amsterdam Casualty case is a very vivid example of how security holders can suffer through failure to pay adequate dividends. This company, as I remarked two weeks ago, has been paying a one dollar dividend, which is the same amount as paid by the other two companies. Its average earnings have been very much higher. For the five years 1941-45, the earnings are shown to have averaged \$4.33, after taxes, as against which their maximum dividend has been one dollar per annum.

You will recall that the North River Company during that period earned an average of \$1.12, one quarter as much, and paid the same dividend of one dollar. And the American Equitable, which earned an average of nine cents in those five years, also paid one dollar. If the New Amsterdam Company had been paying a dividend commensurate with its earnings and its assets, both, there is no doubt in my mind but that the stockholders would have benefitted in two major ways: First, they would have received an adequate return on their money, which is a thing of very great moment in the case of the average stockholder, and secondly they would have enjoyed a better market price for their stock.

It turns out that we have an extraordinarily pat comparative example here in the form of another casualty company, called the U.S. Fidelity and Guaranty. This pursues an almost identical line of business, and has almost identical earnings and almost identical assets, per share, as has New Amsterdam. But it happens to pay two dollars a share in dividends instead of one dollar a share, and so it has been selling recently at about 45; whereas New Amsterdam stock has been selling at somewhere around 26 to 28.

The difference in results to the stockholder between paying a reasonable and fair dividend and paying a niggardly dividend is made as manifest as it can be by these contrasting examples.

You may ask: What is the reason advanced by the management for failure to pay a more substantial dividend, when it appears that the price of the stock and the stockholders' dividend return both suffer so much from the present policy?

You will find, if you talk to the management on the subject, that they will give you three reasons for their dividend policy; and if you have done similar missionary work over a period of time, the arguments will sound strangely familiar to you.

The first reason they give you is conservatism -- that is, it is desirable, and in the interest of the stockholders, to be as conservative as possible. It is a good thing to be conservative, of course. The real question at issue is,

can a company be too conservative? Would the stockholders be better off, for example, if they received no dividend at all, rather than one dollar -- which would be carrying the conservatism to its complete extreme? I believe that experience shows that conservatism of this kind can be carried to the point of seriously harming the stockholders' interest.

The second reason that you will get from the company -- and you will get it from every other company in the same position -- is that theirs is a very special business and it has special hazards; and it is necessary to be much more careful in conducting this business than in conducting the average business or any other one that you might mention. In this particular case they would point out also that the results for the year 1946 have been unsatisfactory, and that the current situation is by no means good.

Since every business is a special business, it seems to me that the argument more or less answers itself. You would have to conclude that there would be no principles by which the stockholders can determine suitable treatment for themselves, if it is to be assumed that each business is so different from every other that no general principles can be applied to it.

With regard to the statement that the 1946 results have been poor, it happens that if you analyze them in the usual fashion you would find that even in a bad year like 1946 the New Amsterdam Casualty Company appeared to earn on the order of two dollars and a half a share. Therefore it could well have afforded a larger dividend than one dollar, even if you took the one-year results alone, which it is by no means the proper standard to follow. Dividend policy should be based upon average earnings in the past and upon expected average earnings in the future.

It will be pointed out that some companies have been having difficulties in the insurance business in the last two years, and for that reason it is very desirable that conservatism be followed. We all know there have been some very unprofitable insurance concerns, and some have been profitable. To say that stockholders of profitable businesses cannot get reasonable dividends because there are some unprofitable or some possibly shaky companies in the field, I would call rather irrelevant.

The third argument -- and this is especially interesting, I believe, because it comes down to the essence of stockholders' procedures and rights -- is that the stockholders do not understand the problems of the business as well as the management of a company. Therefore it is little short of impertinence for the stockholders to suggest that they know better than the management what is the proper policy to follow in their interest.

Of course, the trouble with that argument is that it proves too much. It would mean that regardless of what issue was raised, the stockholders should never express themselves, and should never dare to have an opinion contrary to the management's. I think you would all agree that the principle of stockholders' control over managements would be completely vitiated if you assume that managements always knew what was the best thing to do and always acted in the stockholders' interest on every point.

I want to say, with regard to the New Amsterdam Company -- since in this course we have been mentioning names right along, for the sake of vividness -- two things: First, I should have started by saying that my investment company has an interest in the New Amsterdam Casualty Company, and I have had a dispute with the management as to proper dividend policy. I want to say that, because you may believe that this presentation has been biased -- and you are perfectly free to form that conclusion if you wish. You should be warned of the possibility of bias. My belief, of course, is that the statements made fairly represent the issues in the case.

The second point I want to make very emphatically is that the New Amsterdam Casualty Company is extremely well managed by very capable people of the highest character, and that the issue that arises here is not one of self-interest on the part of the management, or lack of ability, but solely the question of dividend policy, and its impact on the stockholders' interest.

The solution of this problem of the stockholders' interest in the New Amsterdam case, and many others, is not easy to predict. As I see it, after a good deal of thought, analysis and argument on the subject, you need in these cases a long process of stockholders education, so that they will come to think for themselves and act for themselves.

Whether that will ever be realized I don't know; but I am very hopeful that people in Wall Street might play a part in giving stockholders sound and impartial guidance in regard to the holdings that they have, as well as to the securities which they might think of buying or selling.

Lecture Number Ten

MR. GRAHAM: Ladies and gentlemen, this is the last of our series of lectures. I hope that you will have found it as enjoyable and stimulating to listen to them as I have found it in preparing them.

The final talk is going to be something of departure, for it will address itself to speculation -- speculation in relation to security analysis.

Speculation, I imagine, is a theme almost as popular as love; but in both cases most of the comments made are rather trite and not particularly helpful. (Laughter.)

In discussing speculation in the context of this lecture it will be my effort to bring out some of the less obvious aspects of this important element in finance and in your own work.

There are three main points that I would like to make in this hour. The first is that speculative elements are of some importance in nearly all the work of the security analyst, and of considerable importance in part of his work; and that the over-all weight and significance of speculation has been growing over the past thirty years.

The second point is that there is a real difference between intelligent and unintelligent speculation, and that the methods of security analysis may often be of value in distinguishing between the two kinds of speculation.

My third point is that, despite the two foregoing statements, I believe that the present attitude of security analysts toward speculation is in the main unsound and unwholesome. The basic reason therefore is that our emphasis tends to be placed on the rewards of successful speculation rather than on our capacity to speculate successfully.

There is a great need, consequently, for a careful self-examining critique of the security analyst as speculator, and that means in turn a self-critique by the so-called typical investor, acting as speculator.

First, what do we mean by speculation? There is a chapter in our book on Security Analysis which is devoted to the distinctions between investment and speculation. I don't wish to repeat that material beyond recalling to you our concluding definition, which reads as follows:

“An investment operation is one which, on thorough analysis, promises safety of principal and a satisfactory return. Operations not meeting these requirements are speculative.”

That is a very brief reference to speculation. We could amplify it a bit by saying that in speculative operations a successful result cannot be predicated on the processes of security analysis. That doesn't mean that speculation can't be successful, but it simply means you can't be a successful speculator in individual cases merely by following our methods of security analysis.

Speculative operations are all concerned with changes in price. In some cases the emphasis is on price changes alone, and in other cases the emphasis is on changes in value which are expected to give rise to changes in price. I think that is a rather important classification of speculative operations. It is easy to give

examples.

If at the beginning of 1946 a person bought U.S. Steel at around 80, chiefly because he believed that in the latter part of bull markets the steel stocks tend to have a substantial move, that would clearly be a speculative operation grounded primarily on an opinion as to price changes, and without any particular reference to value.

On the other hand, a person who bought Standard Gas and Electric, four dollars preferred, sometime in 1945, at a low price, -- say at four dollars a share -- because he thought the plan which provided for its extinction was likely to be changed, was speculating undoubtedly. But there his motive was related to an analysis of value -- or rather to an expected change of value -- which, as it happened, was realized spectacularly in the case of the Standard Gas and Electric Preferred issue.

I think it is clear to you that in a converse sense nearly all security operations which are based essentially on expected changes, whether they are of price or of value, must be regarded as speculative, and distinguished from investment.

In our chapter on speculation and investment we discussed the concept of the speculative component in a price. You remember we pointed out that a security might sell at a price which reflected in part its investment value and in part an element which should be called speculative.

The example we gave back in 1939-1940, with considerable trepidation, was that of General Electric. We intentionally picked out the highest-grade investment issue we could find to illustrate the element of speculation existing in it. Of the price of \$38, which it averaged in 1939, we said the analyst might conclude that about \$25 a share represented the investment component and as much as \$13 a share represented the speculative component. Hence in this very high-grade issue about one-third of the average price in a more or less average market represents a speculative appraisal. That example, which showed how considerable was the speculative component in investment securities, I think is pretty typical of security value developments since World War I. I believe it justifies and explains the first point that I wish to make, namely, that speculative elements have become more and more important in the work of the analyst. I think only people who have been in Wall Street for a great many years can appreciate the change in the status of investment common stocks that took place in the last generation, and the extent to which speculative considerations have obtruded themselves in all common stocks.

When I came down to the Street in 1914, an investment issue was not regarded as speculative, and it wasn't speculative. Its price was based primarily upon an established dividend. It fluctuated relatively little in ordinary years. And even in years of considerable market and business changes the price of investment issues did not go through very wide fluctuations. It was quite possible for the investor, if he wished, to disregard price changes completely, considering only the soundness and dependability of his dividend return, and let it go at that -- perhaps every now and then subjecting his issue to a prudent scrutiny.

That fact is illustrated on the blackboard by taking the rather extreme case of the Consolidated Gas Company, now Consolidated Edison Company, during the years of the first postwar boom and depression -- namely, 1919-1923. These vicissitudes really affected the company quite severely; for you will notice that its earnings suffered wide fluctuations, and got down in 1920 to only \$1.40 a share for the \$100 par value stock. Yet during that period it maintained its established dividend of seven dollars and its price fluctuation was comparatively small for a major market swing -- that is, it covered a range of 106 down to 71.

If we go back to the years 1936-1938, which in the textbooks is now referred to as a mere "recession" that lasted for a year, we find that Consolidated Edison Company, with no changes in earnings to speak of, had extraordinarily wide changes in price. During the year 1937 alone, it declined from about 50 to 21, and the following year went down to 17. During that period it actually raised its dividend, and its earnings were very stable. (See comparative data in the following table.)

The much wider fluctuations in investment common stocks that have come about since World War I have made it practically impossible for buyers of common stocks to disregard price changes. It would be extremely unwise -- and hypocritical -- for anybody to buy a list of common stocks and say that he was interested only in his dividend return and cared nothing at all about price changes.

The problem is not whether price changes should be disregarded -- because clearly they should not be -- but rather in what way can the investor and the security analyst deal intelligently with the price changes which take place.

I would like to go back for a moment to our statement that in the case of General Electric a considerable portion of the price in 1939 reflected a speculative component. That arises from the fact that investors have been willing to pay so much for so-called quality, and so much for so-called future prospects, on the average, that they have themselves introduced serious speculative elements into common stock valuations. These elements are bound to create fluctuations in their own attitude, because quality and prospects are psychological factors. The dividend, of course, is not a psychological factor; it is more or less of a fixed datum. Matters of the former kind -- I am speaking now of prospects and quality -- are subject to wide changes in the psychological attitude of the people who buy and sell stocks. Thus we find that General Electric will vary over a price range almost as wide as that of any secondary stock belonging in more or less the same price class.

Going ahead from 1939 to 1946, we find that General Electric declined from 44 1/2 down to 21 1/2 and came back again to 52 in 1946, and has since declined to 33, or thereabouts. These are wide fluctuations. I think they justify my statement that a very considerable part of the price of General Electric must be regarded as speculative and perhaps temporary.

I think also you might say that the pure investment valuation of \$25 for General Electric could be said to be justified by the sequel, since there were opportunities both in 1941 and 1942 to buy the stock at those levels. It is also true that the price movement of General Electric was not as favorable between 1939 and 1946 as that of other stocks, and I think that reflects the rather over-emphasized speculative element that appeared in General Electric before World War II.

Speculative components may enter into bonds and preferred stocks as well as into common stocks. But a high-grade bond, almost by definition, has practically no speculative component. In fact, if you thought it had a large speculative component, you would not buy it for investment nor would you call it high grade. But there is one important factor to be borne in mind here. A rise in interest rates may cause a substantial decline in the price of a very good bond. But even in that event a high-grade bond may be valued on its amortized basis throughout the period that it runs, and the price fluctuations could therefore be ignored by a conventional treatment of value. As most of you know, that is exactly what is done in the insurance company valuation methods which we were discussing recently. High-grade bonds are valued from year to year on an amortized basis, without reference to price fluctuations.

It may be a pleasant thing for the security analyst to get away from the speculative components that are found chiefly in common stocks and which are so troublesome, and to concentrate on the more responsive and more controllable elements in bond analysis. Wall Street, I believe, has improved very greatly its technique of bond analysis since 1929. But it is one of the ironies of life that just when you have got something really under control it is no longer as important as it used to be. I think we must all admit that bond analysis plays a very much smaller part in the work of the analyst and in the activities of the investor than it used to. The reason is perfectly obvious: The greater portion of bond investments now consist of U.S. government bonds, which do not require or lend themselves to a formal bond analysis.

While it is true that for the minor portion of corporate bonds that remain you can go through all the motions of careful bond analysis, even that is likely to be somewhat frustrating. For I am sure that a really competent

bond analyst is almost certain to come up with the conclusion in nearly every case that the typical buyer would be better off with a Government bond than with a well-entrenched corporate security. The purchase of these corporate securities in the present market is a kind of pro forma affair by the large institutions who, for semi-political reasons, desire to have corporate bonds in their portfolios as well as Government bonds. The result is that the wide field of bond analysis, which used to be so important to and so rewarding to the bond investor, must now, I think, be written down pretty far in terms of practical interest.

So much, then, for my first point: That willy-nilly we security analysts find that more and more significance attaches to speculative elements in the securities that we are turning our attention to.

On the second point, which relates to the analyst's role in distinguishing intelligent from unintelligent speculation, I would like to treat that matter chiefly by some examples. I have picked out four low-price securities, which I think would illustrate the different kinds of results which an analyst may get from dealing with primarily speculative securities. These are, on the one hand, Allegheny Corp. Common, which sold at the end of the month at five, and Graham-Paige Common, which sold at five; and, on the other hand, General Shareholdings, which sold at four, and Electric Bond and Share six dollars Preferred "Stubs", which could be bought yesterday at the equivalent of three.

When we first look at these securities, they all seem pretty much the same -- namely, four speculative issues, which they certainly are. But a deeper examination by a security analyst would reveal a quite different picture in the two pairs of cases.

In the case of General Shareholdings we have the following: This is the common stock of an investment company, which has \$21.5-million of total assets, with senior claims of \$12-million, and a balance of about \$9.5-million for the common. The common is selling for \$6,400,000 in the market. That means that in General Shareholdings you have both a market discount from the apparent present value of the stock and an opportunity to participate in a highly leveraged situation. For if you pay \$6.4-million of the gross asset value; and consequently every ten per cent of increase in total asset value would mean a 30 per cent increase in the book value of the common.

Furthermore, you are practically immune from any danger of serious corporate trouble; because the greater portion of the senior securities -- in fact, five-sixths of it -- is represented by a preferred stock on which dividends do not have to be paid and on which there is no maturity date.

Consequently, in the General Shareholdings case, you have that typically attractive speculative combination of (a) a low-price "ticket of entry" into a fairly large situation; and (b) instead of paying more than the mathematical value of your ticket, you are paying less; and © if you assume that wide fluctuations are likely to occur in both directions over the years, you stand to gain more than you can lose from these fluctuations.

So much for General Shareholdings, viewed analytically.

By contrast, if you go to Allegheny Corporation at five, although it seems at first to be a somewhat similar situation -- namely an interest in an investment company portfolio -- you find the mathematical picture completely different. At the end of 1945 the company had about \$85-million of assets, and against it there were \$125-million claims in the form of bonds and preferred stocks, including unpaid dividends. Thus the common stock was about \$40-million "under water." Yet at five you would be paying \$22-million for your right to participate in any improved value for the \$85-million of assets, -- after the prior claims were satisfied.

The security analyst would say that there is plenty of leverage in that situation, of course; but you are paying so much for it, and you are so far removed from an actual realizable profit, that it would be an unintelligent speculation.

The fact of the matter is you would need a 70 per cent increase in the value of the Allegheny portfolio merely to be even with the market price of the common as far as asset value coverage is concerned. In the case of General Shareholdings, if you had a 70 per cent increase in the value of its portfolio, you would have an asset value of about \$15 a share for the common, as against a market price of around four.

Thus, from the analytical standpoint, while Allegheny and General Shareholdings represent approximately the same general picture, there is a very wide quantitative disparity between the two. One turns out to be an intelligent and the other an unintelligent speculation.

Passing now to Graham-Paige at five dollars, we find another type of situation. Here the public is paying about \$24-million for a common stock which represents about \$8-million of asset value, most of which is in Kaiser-Fraser stock. This you can buy if you want in the open market, instead of having to pay three times as much for it. The rest of the price represents an interest in \$3-million of assets in the farm equipment business -- which may prove profitable, as any business may be profitable. The only weakness to that is that there is no record of profitable operations here, and you are paying a great many millions of dollars merely for some possibilities. That, in turn, would be regarded as an unintelligent speculation by the security analyst.

Let us move on now to the Electric Bond and Share Stubs, which I shall describe briefly. They represent what you would have left if you had bought Electric Bond and Share Preferred at \$73 yesterday and had then received \$70 a share that is now to be distributed. What remains is an interest in a possible ten dollar payment, your claim to which is to be adjudicated by the SEC and the courts. That ten dollars represents the premium above par to which Electric Bond and Share Preferred would be entitled if it were called for redemption. The question to be decided is whether the call price, the par value, or some figure in between should govern in this case.

It should be obvious, I think, that that is a speculative situation. You may get ten dollars a share out of it for your three dollars, and you may get nothing at all, or you may get something in between. But it is not a speculative operation that eludes the techniques of the security analyst. He has means of examining into the merits of the case and forming an opinion based upon his skill, his experience, and the analogies which he can find in other public utility dissolutions.

If we were to assume that the Electric Bond and Share Stubs have a 50-50 chance of getting the ten dollar premium, then he would conclude that at three dollars a share they are an intelligent speculation. For the mathematics indicates that, in several such operations, you would make more than you would lose in the aggregate. These examples lead us, therefore, to what I would call a mathematical or statistical formulation of the relationship between intelligent speculation investment. The two, actually, are rather closely allied.

Intelligent speculation presupposes at least that the mathematical possibilities are not against the speculation, basing the measurement of these odds on experience and the careful weighing of relevant facts.

This would apply for example, to the purchase of common stocks at anywhere within the range of value that we find by our appraisal method. If you go back for a moment to our appraisal of American Radiator, you may recall that in our fifth lecture we went through a lot of calculations and came out with the conclusion that American Radiator was apparently worth between \$15 and \$18 a share. If we assume that that job was well done, we could draw these conclusions. The investment value of American Radiator is about \$15; between 15 and 18 you would be embarking on what might be called an intelligent speculation, because it would be justified by your appraisal of the speculative factors in the case. If you went beyond the top range of \$18 you would be going over into the field of unintelligent speculation.

If the probabilities, as measure by our mathematical test, are definitely in favor of the speculation, then we can transform these separate intelligent speculations into investment by the simple device of diversification. That, I think, is a clue to the most successful and rewarding treatment of speculation in Wall Street. The idea,

in fine, is simply to get the odds on your side by processes of skillful, experienced calculation.

Going back to our Electric Bond and Share example, if we really are skillful in our evaluation of the possibilities here, and reach this conclusion of a 50-50 possibility, then we could consider Electric Bond and Share Stubs as part of an investment operation consisting of, say, ten such ventures of a diversified character. For in ten such operations you would get \$50 back for an investment of \$30, if you have average luck. That is, you would get ten dollars each on five of them and you would get nothing on another five, and your aggregate return would be \$50.

Very little has been done in Wall Street to work out these arithmetical aspects of intelligent speculation based on favorable odds. In fact, the very language may be strange to most of you. Yet it oughtn't to be. If we are allowed to commit some misdemeanor by making some mild comparisons between Wall Street and horse-racing, the thought might occur to some of us that the intelligent operator in Wall Street would try to follow the technique of the bookmaker rather than the technique of the man who bets on the horses. Further, if we assume that a very considerable amount of Wall Street activity must inevitably have elements of chance in it, then the sound idea would be to measure these chances as accurately as you can, and play the game in the direction of having the odds on your side.

Therefore, quite seriously, I would recommend to this group, and to any other, that the mathematical odds of speculation in various types of Wall Street operations would provide a full and perhaps a profitable field of research for students.

Let us return for a moment to Allegheny Common and Graham-Paige Common, which we characterized as unintelligent speculation from the analyst's viewpoint. Is not this a dangerous kind of statement for us to make? Last year Graham-Paige sold as high as 16, and Allegheny as high as eight and one quarter, against the current figure of five. It must be at least conceivable that their purchase today might turn-out very well, either because (a) the abilities of Mr. Young or Mr. Fraser will create real value where none or little now exists, or (b) the stocks will have a good speculative "move," regardless of value.

Both of these possibilities exist, and the analyst cannot afford to ignore them. Yet he may stick to his guns in characterizing both stocks as unintelligent speculations, because his experience teaches him that this type of speculation does not work out well on the average. One reason is that the people who buy this kind of stock at five are more likely to buy more at ten than to sell it. Consequently, they usually show losses in the end, even though there may have been a chance in the interim to sell out to even less intelligent buyers. Thus, in the end, the criterion of both intelligent and unintelligent speculation rests on the results of diversified experience.

When I come to my third point I am going to indicate how very different are the ordinary and customary attitudes toward speculative risk in Wall Street than those we have been discussing. But I think I ought to pause here for a minute, since I finished my second point, and see if there are some questions to be asked on this exposition.

QUESTION: By diversification, as in the case of Electric Bond and Share Stubs -- you wouldn't concentrate on ten situations similar in the way of redemption of preferred. You would want to diversify with Electric Bond and Share stocks and General Shareholdings, and some others; entirely different situations?

MR. GRAHAM: Yes, the approach is not based on the character of the operation, but only on the mathematical odds which you have been able to determine to your own satisfaction. It doesn't make any difference what you are buying, whether a bond or a stock or in what field, if you are reasonably well satisfied that the odds are in your favor. They are all of equal attractiveness, and they all belong equally in your diversification. You make a further sound point, and that is that you are not really diversifying if you went into ten Electric Bond and Share situations -- all substantially the same. You would not really be diversifying, because that is practically the same thing as buying ten shares of Electric Bond and Share

instead of buying one share of each; since the same factors would apply to all of them. That point is well taken. For real diversification; you must be sure that the factors that make for success or failure differ in one case from another.

*** QUESTION: As for that 50-50 chance, why didn't you come up with sixty-forty -- in Bond and Share? I don't see how you can be so mathematically precise.

MR. GRAHAM: Of course you are right in saying that, and I am glad you raised the point. This is not something that admits of a Euclidean demonstration. But you can reach the conclusion that the chances are considerably better than seven to three, let us say -- which are the odds that are involved in your purchase -- without being exactly sure whether they are 50-50 or sixty-forty. Broadly speaking, you simply say you think the chances are at least even in your favor, and you let it go at that. But that is enough for the purpose. You don't have to be any more accurate for practical action.

(Now, bear in mind I am not trying to imply here that the figure given is necessarily my conclusion as to what the odds in the Bond and Share are. Any of you are perfectly competent to study that situation and draw a conclusion based upon what has taken place in other utility redemptions. I am only using the Stubs for purposes of illustration. I should point out that the market does not seem to be very intelligent in paying the same price for the five dollar Preferred Stubs as for the six dollar Preferred Stubs.)

The final subject that I have is the current attitude of security analysts toward speculation. It seems to me that Wall Street analysts show an extraordinary combination of sophistication and naiveté in their attitude toward speculation. They recognize, and properly so, that speculation is an important part of their environment. We all know that if we follow the speculative crowd we are going to lose money in the long run. Yet, somehow or other, we find ourselves very often doing just that. It is extraordinary how frequently security analysts and the crowd are doing the same thing. In fact, I must say I can't remember any case in which they weren't. (Laughter.)

It reminds me of the story you all know of the oil man who went to Heaven and asked St. Peter to let him in. St. Peter said, "Sorry, the oil men's area here is all filled up, as you can see by looking through the gate." The man said, "That's too bad, but do you mind if I just say four words to them?" And St. Peter said, "Sure." So the man shouts good and loud, "Oil discovered in hell!" Whereupon all the oil men begin trooping out of Heaven and making a beeline for the nether regions. Then St. Peter said, "That was an awfully good stunt. Now there's plenty of room, come right in." The oil man scratches his head and says, "I think I'll go with the rest of the boys. There may be some truth in that rumor after all." (Laughter.)

I think that is the way we behave, very often, in the movements of the stock market. We know from experience that we are going to end up badly, but somehow "there may be some truth in the rumor," so we go along with the boys.

For some reason or other, all security analysts in Wall Street are supposed to have an opinion on the future of the market. Many of our best analytical brains are constantly engaged in the effort to forecast the movement of prices. I don't want to fight our the battle over again here, as to whether their activity is sound or not. But I would like to make one observation on this subject.

The trouble with market forecasting is not that it is done by unintelligent and unskillful people. Quite to the contrary, the trouble is that it is done by so many really expert people that their efforts constantly neutralize each other, and end up almost exactly in zero.

The market already reflects, almost at every time, everything that the experts can reliably say about its future. Everything in addition which they say is therefore unreliable, and it tends to be right just about half the time. If people analyzing the market would engage in the proper kind of self-criticism, I am sure they would realize

that they are chasing a will-o'-the-wisp.

Reading recently the biography of Balzac, I recalled that novel of his called, *The Search for the Absolute*, which some of you may have read. In it a very intelligent doctor spends all his time looking for something which would be wonderful if he found it, but which he never finds. The reward for being consistently right on the market is enormous, of course, and that is why we are all tempted. But I think you must agree with me that there is no sound basis for believing that anyone can be constantly right in forecasting the stock market. In my view it is a great logical and practical mistake for security analysts to waste their time on this pursuit.

Market forecasting, of course, is essentially the same as market "timing." On that subject let me say that the only principle of timing that has ever worked well consistently is to buy common stocks at such times as they are cheap by analysis, and to sell them at such times as they are dear, or at least no longer cheap, by analysis.

That sounds like timing; but when you consider it you will see that it is not really timing at all but rather the purchase and sale of securities by the method of valuation. Essentially, it requires no opinion as to the future of the market; because if you buy securities cheap enough, your position is sound, even if the market should continue to go down. And if you sell the securities at a fairly high price you have done the smart thing, even if the market should continue to go up.

Therefore, at the conclusion of this course, I hope you will permit me to make as strong a plea as I can to you security analysts to divorce yourselves from stock market analysis. Don't try to combine the two -- security analysis and market analysis -- plausible as this effort appears to many of us; because the end-product of that combination is almost certain to be contradiction and confusion.

On the other hand, I should greatly welcome an effort by security analysts to deal intelligently with speculative operations. To my mind the prerequisite here is for the quantitative approach, which is based on the calculation of the probabilities in each case, and a conclusion that the odds are strongly in favor of the operation's success. It is not necessary that this calculation be completely dependable in each instance, and certainly not mathematically precise, but only that it be made with a fair degree of knowledge and skill. The law of averages will take care of minor errors and of the many individual disappointments which are inherent in speculation by its very definition.

It is a great mistake to believe that a speculation has been unwise if you lose money at it. That sounds like an obvious conclusion, but actually it is not true at all. A speculation is unwise only if it is made on insufficient study and by poor judgment. I recall to those of you who are bridge players the emphasis that the bridge experts place on playing a hand right rather than on playing it successfully. Because, as you know, if you play it right you are going to make money and if you play it wrong you lose money -- in the long run.

There is a beautiful little story, that I suppose most of you have heard, about the man who was the weaker bridge player of the husband-and-wife team. It seems he bid a grand slam, and at the end he said very triumphantly to his wife, "I saw you making faces at me all the time, but you notice I not only bid this grand slam but I made it. What can you say about that?" And his wife replied very dourly, "If you had played it right you would have lost it." (Laughter.)

There is a great deal of that in Wall Street, particularly in the field of speculation, when you are trying to do it by careful calculation. In some cases the thing will work out badly. But that is simply part of the game. If it was bound to work out rightly, it wouldn't be a speculation at all, and there wouldn't be the opportunities of profit that inhere in sound speculation. It seems to me that is axiomatic.

*** I know something of the practical problems that confront the security analyst who wants to act logically all the time, and who wants to confine himself only to that area of financial work in which he can say with confidence that his work and his conclusions are reasonably dependable. The analysts all complain to me that

they can't do that because they are expected by their customers and their employers to do something else, to give them off-the-cuff speculative judgments and market opinions. One of these days I am sure the security analysts will divide themselves completely from the market analysts.

It would be very nice to have a two-year trial period in which the market analysts would keep track of what they have accomplished through the period and security analysts would keep track of what they have accomplished. I think it would be rather easy to tell in advance who would turn in the better score. That is really the pay-off. I think that eventually the employers and the customer will come to the conclusion that it is better to let the security analysts be security analysts -- which they know how to do -- and not other kinds of things, particularly market analysts, which they don't know how to do and they will never know how to do.

I would like to make some final observations, relating to a long period of time, as to what has happened to the conduct of business in Wall Street.

If you can throw your mind, as I can, as far back as 1914, you would be struck by some extraordinary differences in Wall Street then and today. In a great number of things, the improvement has been tremendous. The ethics of Wall Street are very much better. The sources of information are much greater, and the information itself is much more dependable. There have been many advances in the art of security analysis. In all those respects we are very far ahead of the past.

In one important respect we have made practically no progress at all, and that is in human nature. Regardless of all the apparatus and all the improvements in techniques, people still want to make money very fast. They still want to be on the right side of the market. And what is most important and most dangerous, we all want to get more out of Wall Street than we deserve for the work we put in.

There is one final area in which I think there has been a very definite retrogression in Wall Street thinking. That is in the distinctions between investment and speculation, which I spoke about at the beginning of this lecture. I am sure that back in 1914 the typical person had a much clearer idea of what he meant by investing his money, and what he meant by speculating with his money. He had no exaggerated ideas of what an investment operation should bring him, and nearly all the people who speculated knew approximately what kind of risks they were taking.