California Law Review

Volume 12 | Issue 4 Article 2

May 1924

Defects in Mr Justice Brandeis' Theory of Prudent Investment as a Rate Base

Hillyer Blake Brown

Link to publisher version (DOI)
https://doi.org/10.15779/Z38GN6J

The Defects in Mr. Justice Brandeis' Theory of Prudent Investment as a Rate Base

THERE have recently been many attacks on "Cost of Reproduction" as a factor in rate making, but the attack that is of the most compelling interest is contained in the concurring opinion delivered by Mr. Justice Brandeis in Southwestern Bell Telephone Company v. Public Service Commission of Missouri.[1] If the Supreme Court ever changes the present law on the subject, the change will probably be largely due to his influence. That there is at least some possibility that the court will reverse itself may be surmised from the fact that Mr. Justice Holmes has already done so. In the case of San Diego Land and Town Company v. Jasper,[2] he said, "It is no longer open to dispute that under the Constitution 'what the company is entitled to demand, ... is a fair return on the reasonable value of the property at the time it is being used for the public.' " And in the principal case, he concurred in the following entirely opposite statement, to wit, "The thing devoted by the investor to the public use is not specific property, tangible and intangible, but capital embarked in the enterprise. . . . . The Constitution does not guarantee to the utility the opportunity to earn a return on the value of all items of property used by the utility, or any of them."[3]

And he also broke away from an established principle when he concurred with another departure of Mr. Justice Brandeis, which was stated as follows, "That part of the rule of *Smyth v. Ames* which fixes the rate of return deemed fair, at the percentage customarily paid on similar investments at the time of the rate hearing, also exposes the investor and the public to danger of serious injustice,"[4] with the conclusion that there should be adopted "the amount of the capital charge as the measure of the rate of return."[5] Dividends on stock and interest on bonds are treated alike by him.

---

1 (1923) 262 U. S. 276, 67 L. Ed. 619, 43 Sup. Ct. Rep. 544.
2 (1902) 189 U. S. 439, 442, 47 L. Ed. 892, 23 Sup. Ct. Rep. 571.
3 262 U. S. 276, 290.
4 262 U. S. 276, 304.
5 262 U. S. 276, 306.

I.

The defects I hope to demonstrate will first be discussed in connection with an example used by him to bring out one of his points. He says, ". . . if a plant had been built at times of low costs, at $1,000,000 and the capital had been raised to the extent of $750,000 by an issue at par of 5 per cent 30-year bonds and to the extent of $250,000 by stock at par, and ten years later the price level was 75 per cent higher and the interest rates 8 per cent, it would be a fantastic result to hold that a rate was confiscatory, unless it yielded 8 per cent on the then reproduction cost of $1,750,000. For that would yield an income of $140,000, which would give the bondholders $37,500; and to the holders of the $250,000 stock $102,500, a return of 41 per cent per annum."[6]

If a case involving these figures were before a Public Utilities Commission composed of so-called "progressives," it might and probably would fix rates that would limit the return to the stockholders to $12,500. And Mr. Justice Brandeis would not consider that these rates improperly deprived the stockholders of their property as $12,500 is equal to a return of 5 per cent (the rate of return that was reasonable when the company was started) on $250,000 (the amount of cash originally put into the company by the stockholders). There is a vast difference between $12,500 and $102,500 but I hope to show that the former is at least as fantastic if not more so than the latter. For the sake of convenience, the time of low interest rates and prices when the company in the example was formed will be referred to as 1910 and the time of high interest rates and prices will be referred to as 1920.

In 1910 the stockholders started the company with $250,000 in money. This money, however, represented a certain purchasing power in clothes, houses, food or in anything else which they might purchase with it. And it is on this money that they should have the opportunity to earn a fair return. For the present I am not quarreling with the statement that it is on the capital prudently invested that the stockholders are entitled to earn a return, but I am quarreling with the idea that money can be used as a measure of that capital over any period of time. It is only necessary to glance at the index of commodity prices published by the Department of Labor to see this failing of money. Everyone is familiar with the

---

[6] 262 U. S. 276, 305.

large fluctuations that obtained in war-time but even the comparatively small fluctuations prior to the war were sufficiently large to destroy the sanctity of money as a measure of value. For example, from 76 (1913 prices equal 100) in 1892, the index dropped to 69 in two years and to 66 in two years more; from 69 in 1898 it rose abruptly to 80 in the same short period of two years; and from 85 in 1905 it rose to 94 again in two years.

A man who bought stock in a utility started in 1897, which brought him 6 per cent would discover, if prudent investment was used as the rate base and if money was used as the measure of prudent investment over the entire period, that in less than ten years he was really only getting 4.27 per cent per annum on the money he put into the company because that money was worth about 30 per cent more than 1907 money. In short, when a stockholder has invested money of a certain quality, he ought to get his return in money of the same quality so that if the money we have to give him is poorer, we ought to give him more of it, and if it is better, we are foolish to give him as much.

Whether the rate of return should vary from that originally allowed presents a somewhat similar problem. It comes down to this question, "Have we any obligation to fix rates that are high enough to give the company an opportunity to earn enough to keep its stock at par,[7] assuming it was issued at par?" It seems to me that we have. If a man bought stock when a reasonable return on his investment was 4 per cent and then conditions changed so that a reasonable return on such stocks was 6 per cent, and we did not allow him the additional 2 per cent, his stock would drop from 100 to below 70. He will then have sustained a loss in the value of his capital of over 30 per cent.

Mr. Justice Brandeis seeks to make the stock of public utilities more of an investment and less of a speculation for, "In speculative enterprises the capital cost of money is always high."[8] Will not the stock be far less speculative if the purchaser knows that he can always sell for approximately the same price for which he bought and that his capital won't be subject to wide fluctuations with every change of interest rates? Mr. Justice Brandeis reasons that the stocks will be less of a speculation if we say to the investor at the time the company is started, "The prevailing rate of return on

[7] By "par" is here meant the real rather than the money cost to the investor.

[8] 262 U. S. 276, 307.

investments of this character is now 6 per cent. You will not have to worry about interest rates going up or down; we will give you the opportunity to earn 6 per cent no matter what happens to them." But if we say this we are overlooking the fact that to an investor the preservation of his principal is far more important than his income. We are in effect asking him to invest in interest and speculate in principal whereas if we adjust his return with the rise and fall in interest rates, he is speculating in interest and investing in principal. The speculation in interest is undesirable but it is the least undesirable of the two alternatives as it is so comparatively small. That this "speculation in principal" under constant interest rates is fact and not idle theory is substantiated by the course of the Liberty Bond market.[9] The return on these bonds represents practically pure interest in that it contains no allowance for risk and lack of marketability. Despite their tax exempt features, they sold so low in 1920 as to be on practically a 6 per cent basis; that is to say, if they were purchased in 1920 the 4¼ per cent interest plus the increase in value up to par at maturity apportioned partly to each year would bring a return of practically 6 per cent per annum on the purchase price. The bonds of the Third Liberty Loan sold to yield 6½ per cent and those of the Victory Loan to yield over 6.60 per cent. Since there was no question of their safety, the drop in their market value was the result of an increase in the prevailing interest rates. Stock issued at par yielding 4¼ per cent would drop to 70 if the prevailing return on similar securities rose to 6 per cent. And this 30 per cent drop in value would result from the change in interest rates alone.

Now to return to the original example of the company starting in business in 1910 with a capital of $1,000,000 as cited above. Under Mr. Justice Brandeis' theory, a man who put $100 into the company for which he received one share of stock, would not be improperly deprived of his property if rates were fixed that gave the company an opportunity to earn $5 a share, equal to $12,500 on its entire stock capitalization. Out of this $5 a share, the company in most states would have to pay the present federal income tax of 12½ per cent or 62½c a share leaving $4.37½ available for dividends. A conservatively managed company would not pay out this entire amount and moreover the public would be the first to

[9] In connection with the importance to the investor of a principal having a stable value, the many demands that the government keep these bonds at par will be recalled.

suffer if it did as every time the smallest extension of service was desired, more stock or bonds would have to be sold to raise the necessary capital. For the sake of simplicity, however, the most favorable conditions possible will be assumed, i.e., that the company is operating in a state that allows the federal income tax to be deducted as an expense and that it was in a position to pay its entire earnings in dividends so that our investor who bought one share would receive $5 a year. In 1920 with rates on similar investments approximating 8 per cent his stock would sell for 62½ at the most and might well sell lower. He sells for 62½ and what does he get? He gets 62½ dollars that are worth only 58 per cent of the dollars that he put in since the price level has risen 75 per cent, or in other words out of an original investment of $100 he gets only $35.71 making a loss of 64.29 per cent of his capital, a result that he might well be entitled to call fantastic. And this result is not something that just might happen: it is a result that follows from Mr. Justice Brandeis' theory under the conditions most favorable to his theory just as surely as night follows day.

How then are we going to preserve the investor's property from any so thoroughgoing a loss in value? What is the lowest return we can give him without reducing the value of his investment? We must fix rates that will give the company the opportunity to earn $14 a share, $8 being the current rate of return and $6 more to compensate for the 75 per cent rise in prices. The stock could then sell as high as 175 so that our original investor could sell his one share and get just as much value, just as much purchasing power in clothes, food, houses, etc., as he put in in 1910. He would then be, as he should be, in the same position as another investor who invested $175 of cheap money in 1920 (the same as $100 of 1910 money) and received the current return of 8 per cent or $14.

If it be asked why we should increase the money income of an investor in public utility stock upon a rise in prices and decrease it upon a fall in prices when we leave everyone else to shift for himself, the answer is that everyone else has had the opportunity to put his money into something that will participate in a general rise or fall in the price level. If, by controlling rates, we are going to control the natural play of economic forces which if left alone would cause a rise or fall in the price of public utility stocks with the rise or fall of the general price level,[10] we must not so use our control as to subject the investors to hardships not shared by everyone else.

The Interstate Commerce Commission is now engaged in making a valuation of the railroads for rate making purposes. The value found is that of 1914. It would be interesting to know what certain members of that body and others who do not favor a change in the value or rate base to correspond with the rise in the general price level would do if our currency had depreciated to the same extent as that of some of the European countries. Unless the rate base was changed, a $100 share of a public utility, under conditions similar to those in France for example, would be worth somewhere around $30, and under conditions similar to those in Germany, would be worth a good deal less than one cent.

If it be said that high interest rates are caused by high prices and that the very reason for their existence is to compensate for high prices and therefore if we adjust the stockholder's return for the former we need not do so for the latter, the answer is that in the first place high prices are not the cause of high interest rates and in the second place that the one does not in fact compensate the investor for the other. On the question of causation, the opinion of the economists is stated by Professor F. W. Taussig as follows, "Both rising interest and prices are in large degree due to a common cause,—the general fever of activity."[11] On the question of compensation, we have seen that adjustment for both factors is necessary in that although an adjustment for interest will keep stock at par, the price of the stock must be increased proportionately to prevent loss through increased prices.

If it be said that the theory set forth above will make every investor a stock market addict in that his public utility stock will vary widely in price, the obvious answer is that although it will

---

[10] Theoretically, if the price of everything, commodities, land, service, labor, etc., was suddenly doubled, the price of all stocks would double, as they represent in reality nothing but a part ownership of something which, according to our premise, has doubled in price. And despite the fact that stock prices are influenced by many diverse factors, that changes in them and changes in commodity prices are in *fact* coincident phenomena, can readily be seen from the charts of commodity prices and industrial stock averages published in the bulletins of the U. S. Department of Labor and the Harvard University Bureau of Economic Research. For example, both industrial stock averages and commodity prices were low in 1903 and 1904, both rose in 1905 to a high in 1906 and 1907, both fell in 1907 to a low in the latter part of 1907 and 1908, both rose in 1909, both fell in 1910 and 1911, both rose in 1912, and then both gradually fell off until the latter part of 1914 and the first part of 1915 when the enormous rise in both due to the war commenced.

[11] 1 Principles of Economics (2d ed.) 309.

vary in money price, it will not vary in real value at all. Only consider the feeling of safety and security that an investor will have if we provide a place where he can put his money, the purchasing power he has earned, where it will not literally melt. His only source of worry will be the efficiency of the management of the company in which he has invested because rates will be fixed that will enable only a reasonably efficient management to earn the proper return. And he won't have the disagreeable experience that so many had who put good money into savings banks or high grade bonds where they thought it would be absolutely safe and discovered when they tried to use it in 1920 that a good half of it had vanished due to the violent fluctuations in the cost of living and interest rates.

In the $12,500 versus $102,500 argument then, our position is that $35,000 or $14 a share is the least we can give the stockholders. Anything less than $35,000 results in depriving them of their property. As we have seen, the return of $12,500 deprives them of 65 per cent of it. There will be some and may be many who think that this rather bitter pill for the investors is coated with enough due process of law to make it constitutional. However, those who do, will, I hope, agree that a rule that might result in a return of only $12,500 in the example cited makes public utility stocks a speculation, exposes the investor to danger of great hardship unnecessarily, and exposes the public to the hardship of having to run its own utilities through failure to interest enough private capital.

Whether we should allow the stockholders the difference between $35,000 and $102,500 is a question which can best be determined by a consideration of the source of this additional profit. This $67,500 arose in the following two ways:

First. In 1910 the company borrowed $750,000 which due to the 75 per cent rise in prices was the equivalent of $1,312,500 in 1920. But unfortunately for the bondholders, the liability of the company to them remained at $750,000 no matter how much the value of dollars declined. The bondholders in effect hoped that prices would not change and were evidently willing to gamble that they would go down and not up. The difference between $1,312,500 and $750,000 is $562,500. The current rate of return, 8 per cent, of $562,500 is $45,000.

Second. The remaining $22,500 of the $67,500 is 3 per cent of $750,000, the amount of the bonded indebtedness; 3 per cent being the difference between 8 per cent, the current rate of return, and

5 per cent, the rate the bondholders bound themselves in advance to accept.

The $67,500 came then from a contract made by the company with the approval of the Public Service Commission, which turned out to be profitable. Borrowers of money always have and always will profit from a rise in prices and always have and always will lose from a fall in prices. And there is a like profit and loss in the rise and fall of interest rates. No rational decision can be made as to whether the company should have this profit or whether the public should receive it in lower rates until we realize that it is a real and not an illusory profit. The bondholders have most certainly suffered a real and in this case a large loss and somebody is going to gain through their loss.

It would seem reasonable to say that the company made the contract, not the public, and therefore if it should turn out to be profitable the company should have the benefit of it. There can be no doubt that the company should have the benefit of it if the company is to stand the loss that would arise if interest rates and prices should go below what they were at the time the money was borrowed. Mr. Justice Brandeis argues that, "Money required to establish in 1920 many necessary plants has cost the utility 10 per cent on 30-year bonds. These long-time securities, issued to raise needed capital, will in 1930 and thereafter continue to bear the extra high rates of interest, which it was necessary to offer in 1920 in order to secure the required capital. The prevailing rate for such investments may in 1930 be only . . . . 6 per cent. . . . A rule which limits the guaranteed rate of return on utility investments to that which may prevail at the time of the rate hearing, may fall far short of the capital charge then resting upon the company",[12] so that the company would not be able to stand the loss but would be forced into bankruptcy even though the stockholders sacrificed their entire return. In practice, however, no such difficulty would be encountered, as the company could redeem the bonds and refund the debt at a lower rate of interest. A company that would issue long-term non-callable bonds at such a high rate of interest ought to stand the attendant loss.

If we shift to the public the benefits and burdens of contracts with lenders, we are in effect saying that the public is the real contracting party. There is a good deal to be said for this view, e.g., it

---

[12] 262 U. S. 276, 305.

might be argued that utilities are often forced to make extensions by the Public Service Commission so that their return should not be affected by the outcome of a contract they were forced to make in order to raise the required capital, that utilities can only issue bonds with the approval of the Commission, and that the starting of a public utility should be governed only by the public need and not by the judgment of its promoters on whether prices and interest rates are low.

However, it does not seem to me that it matters so much which view prevails as that we realize that if we do not give the company the benefit of contracts it makes with lenders that turn out favorably, we are inevitably forced into the position of saying that the public is the real contracting party so that the Public Service Commission must be the manager of all utility financing and the public must stand the loss from unfavorable contracts made with lenders.

II.

If we could adopt prudent investment as the rate base without our action having any other effect on public utility law, we might go ahead and do so comparatively light-heartedly. But our action would have a result which I think is unavoidable and which has such far-reaching consequences that we ought to devote considerable thought to its desirability before proceeding.

As the federal Constitution prevents us from taking public utility property from its owner without just compensation, so does it prevent us from regulating the use of such property in such a way as to have the same effect. In other words it guarantees to the owner the opportunity of earning a fair return on his property. But Mr. Justice Brandeis says, "The thing devoted by the investor to the public use is not specific property, ... but capital embarked in the enterprise."[18] He surely does not mean to say that the wires of a telephone company, the tracks of a railroad, are not devoted to a public use. They are the parts of a public utility that are most apparently so devoted, and that being so, if the company owns them, it, under the Constitution, is entitled to the opportunity to earn a fair return on them. So that the only way we can avoid giving the company a return on the specific property and can avoid the conclusion that, "If the property . . . . has increased in value since it

[18] 262 U. S. 276, 290.

was acquired, the company is entitled to the benefit of such increase",[14] is to decide that the company is *not* the *real owner* of the property,—to decide that the company owned the money it put into the plant and devoted that money to the public use when it applied it to the development of public utility properties, thus obtaining a sort of license to operate them; and that the public must under the Constitution pay the company for its services in connection with these properties an amount sufficient to yield a fair return on the money devoted by the company to the public use. In an early California case this proposition was stated as follows—". . . it is not the water or the distributing works which the company may be said to own, and the value of which is to be ascertained. They were acquired and contributed for the use of the public; the public may be said to be the real owner, and the company only the agent of the public to administer their use."[15] For the money which the company has expended for the public benefit, it is to receive a reasonable and no more than a reasonable reward.

If we take as our premise that the public is the owner of the property, we must conclude that the company is only entitled to a return on the money used to buy the property; and vice versa we can not use prudent investment as a rate base and avoid the necessary implication that the company does not own the property.

Mr. Justice Brandeis says, "The constitution does not guarantee to the utility the opportunity to earn a return on the value of all items of property used by the utility, or any of them,"[16] which is naturally true if the company is not the real owner of the property but which seems to me absolutely untrue if the company is the real owner. He does not appear to have given the question of who is the real owner much consideration—probably because he does not think the adoption of prudent investment as the rate base has any such result as is herein claimed—but to have more or less assumed that the company is the owner. He says, "The owner is at liberty in the absence of controlling statutory provision, to withdraw his property

---

[14] Willcox v. Consolidated Gas Co. (1909) 212 U. S. 19, 52, 53 L. Ed. 382, 29 Sup. Ct. Rep. 192.

[15] San Diego Water Co. v. San Diego (1898) 118 Cal. 556, 570, 50 Pac. 633. This language was approved in In re North Coast Water Co. (1913) 3 Cal. R. R. Com. Dec. 962, and in other decisions of the Railroad Commission, but has been repudiated by the California Supreme Court, Pac. Tel. & Tel. Co. v. Eshelman (1913) 166 Cal. 640, 655, 137 Pac. 1119.

[16] 262 U. S. 276, 290.

from the public service, and if he does so, may obtain for it exchange value."[17]

It is true that the Supreme Court has consistently held that the company owns the property it operates as opposed to the pronouncement quoted from the early California case. And this holding has been affirmed in the face of the fact that public utilities have the power of eminent domain and that most of them are controlled in the following six major ways beside many minor ways: (1) as to rates, (2) and consequently as to price ohtainable on a sale to someone else willing to carry on the service, (3) as to whom such a sale may be made, (4) as to the manner in which the property is to be used (schedules, safety devices, and regulations for the convenience of the public), (5) as to what part of the public the utility has undertaken to serve (e.g., extensions by gas and electric companies to meet the demands of new customers) and (6) in that the state may at any time take over the operation of the property.

Our inquiry being, "Who is the real owner of the property?", what then are the attributes of ownership remaining in the company? It has the bare legal title but "ownership . . . . implies something more than a bare legal title";[18] its right to possession is extremely limited and surrounded by all manner of regulations and moreover little as it is it may be taken away by the state at any time. The only real attributes of ownership left that are of value are (1) the right to withdraw the property from public service and (2) the right to receive an increased return on the property so long as it is left in the public service if an "increase in its value" can be shown. It is not clear to me whether Mr. Justice Brandeis intended the statement that "The owner is at liberty, in the absence of controlling statutory provision, to withdraw his property from the public service"[19] as an argument for his position that the company is the owner. That is why I did not include "withdrawal from public service" in the list of ways in which utilities are controlled, but it should be in that list. There are such "controlling statutory provisions" in practically every state in the Union and the Federal Government exercises just such control over all the railroads engaged in interstate commerce.[20] So

[17] 262 U. S. 276, 290.
[18] Hyde v. Shine (1905) 199 U. S. 62, 82, 50 L. Ed. 90, 25 Sup. Ct. Rep. 760.
[19] 262 U. S. 276, 290.
[20] See Transportation Act, Feb. 28, 1920, ch. 91, sec. 402, par. 18; 41 U. S. Stats. at L. 456, 477; Fed. Stat. Ann. (1920 Supp.) 72, 98.

that if we establish prudent investment as the rate base and thus take from the company the only remaining attribute of ownership that is of any moment, to wit, the right to benefit from an "increase in value" of the property, there is nothing left of the ownership by the company but a vacuum and we must again reach the conclusion that the public is the real owner of the property.

My reason for putting the phrase "increase in value" in quotation marks is that I do not want to accept any responsibility for it. As has been well pointed out,[21] the statement quoted from Willcox v. Consolidated Gas Company,[22] has, if we look at the words alone, little or no meaning. Briefly, the argument is as follows: Value means selling price which is dependent on earning power which is dependent on rates so that the value of public utility property is at any particular time the capitalization of the earning power under the rates in force at that particular time. If we base rates on value, we encounter the well known vicious circle and there would never be any justification for changing rates since at any particular time no matter how much the value of the property had changed, the rates then in force would be yielding a fair return on that value. This argument, however, avoids the real problem which the court made an effort to solve even though it chose its words unfortunately. This real problem will appear from the following illustration.

A gas and electric company constructs a plant for $1,000,000 in a thriving small town, having first obtained a certificate of public convenience and necessity from the Public Service Commission. We will assume that it is the policy of the commission to allow a return of 8 per cent and since $1,000,000 would be the rate base under any known rule, the company would earn $80,000 for the first year or so. The population of the town then dwindles away and business enterprises diminish to such an extent that surrounding real estate similar in all respects to that on which the plant is located falls in value 50 per cent. To make matters worse, new machines for the generation of power have been invented that can be constructed at a greatly reduced cost with the net result that a plant that would render identical service could be constructed for $600,000. It is true that

[21] See Robert L. Hale, The "Physical Value" in Rate Cases, 30 Yale Law Journal, 710; and Donald Richberg, A Permanent Basis for Rate Regulation, 31 Yale Law Journal, 263.

[22] Supra, n. 14.

the value of the utility will not decrease if rates are maintained by the Commission at a level sufficiently high to yield a net income of $80,000. But if it were not for the Commission, the value would soon decrease as it would not be long before the company would be undersold by a new company. The new company would only require an income of $48,000 to give it 8 per cent on its investment so that the town is paying $32,000 a year more than the service is reasonably worth, $32,000 a year more than it would have to pay if it should construct its own gas and electric plant. $32,000 a year capitalized at 8 per cent means a capital loss of $400,000.

Who is to stand this loss? If this case should come before the judges that decided Willcox v. Consolidated Gas Company,[23] they should not say that the property has decreased in value, since it most evidently has not if earnings are maintained at $80,000 a year, but they should say that if we do not decrease rates the town will suffer a large loss as it will be paying the company a return on antiquated expensive machinery and on land priced twice as high as the rest of the land similarly situated. They should then choose the only reasonable way of deciding whether the town is to stand this loss or whether the company is to stand it through a reduction in rates, that is, they should decide who is the real owner of the land and machinery in question.

What is contended for is recognition of the importance of this question of ownership. If we answer it after a careful consideration of all the issues involved, many of the most perplexing public utility problems are automatically answered for us and unless we answer it, we can not form a logical consistent policy that will form the basis for solving new problems as they arise.

A very good example of what appears to me an inconsistency arising from a failure to ask and answer it can be seen in the opinion of Mr. Justice Brandeis. To the statement that the federal Constition guarantees to the utility the opportunity to earn a fair return on the capital prudently invested, he adds in a note, "Except that rates may in no event be prohibitive, exorbitant or unduly burdensome to the public."[24] This statement is not only inconsistent and wholly unfair to the investors but it is destructive of the great advantages of definiteness and stability that are inherent in prudent investment

[23] Supra, n. 14.
[24] 262 U. S. 276, 290, note 2.

as a rate base. In as much as the doctrine of prudent investment as the rate base prevents investors from making any profit over and above a reasonable return, it is unfair to inflict upon them the chance of a loss other than one caused by inefficiency in operation. If rates may be lowered on a showing that they are unduly burdensome, will not the representatives of the public try to prove that fact in every rate hearing and thus inject into those hearings the speculative element that Mr. Justice Brandeis has been trying to remove? And how are we going to tell if a rate is unduly burdensome? How can a rate be so if it only yields a fair return on a prudent investment that the Public Service Commission has said was required by the convenience and necessity of the public? The only way left open in which to prove an undue burden is to show that the rates are higher than rates in comparable cities or higher than necessary to yield a reasonable return on the amount for which a plant could be constructed under conditions prevailing at the time of the hearing. And here we are right back, in either case, to cost of reproduction which Mr. Justice Brandeis is so desirous of avoiding. Only now if cost of reproduction is greater than the original prudent investment we say that rates are not to be increased, and if cost of reproduction is less than original prudent investment we say that rates must be lowered because they are unduly burdensome. Aside from the fact that such a result is unfair and would make rate hearings speculative, it would defeat its own ends, for the construction of our public utilities is by no means finished, and future investors would refuse to put in their money unless they had a guarantee of higher returns to compensate them for the speculation in losses without any speculation in profits.

III.

In closing this paper, I will bravely and very briefly set forth what seems to me a just, permanent, and not over complicated basis for rate regulation; and will give most attention to railroad rates as they present the most difficult problems.

I shall start with five working formulae:

First. The only fair and definite way of determining prudent investment is to find actual cost and then to deduct only those items and reduce only those amounts that are obviously reckless as opposed to prudent. And even the most ardent advocates of the theory, Senator La Follette and his followers, do not claim this is possible due to the totally inadequate records of our older carriers. They propose, however, to discover what the railroads should have cost under the prices prevailing at the dates of construction thereby assuming that they know something about the difficulties of construction when the industry was in its infancy and substituting their judgment for that of some of the most able men the country has ever produced, a proceeding which can only lead to an unjust and inaccurate result.

Second. Even if it could be justly and accurately determined, to talk about the prudent investment of our pioneer railroads, especially those built west of the Alleghenies, is nonsense, for the reason that prudence had nothing to do with their construction. They were an exceedingly courageous speculation in which their founders risked and often lost large sums and should accordingly reap the usual rewards of a success in such an enterprise. Our country owes a very large part of its development to the men who went into the wilderness to build roads. It is no time for us to garner the profits and let the losses lie where they fell by giving a 5.75 per cent return on what we think the cost of the successful ones should have been and saying that a 5.75 per cent return on the cost of the unsuccessful ones is "unduly burdensome."

Third. In the early days the railroads were owned in every sense of the word by the companies operating them.

Fourth. Under our present system of control for all practical purposes the public is the real owner.[25]

Fifth. The thing to be avoided at all costs is government operation and management. The thing to be preserved at all costs is the incentive of profit from good management.

To proceed then to the problem of fixing a rate base which should for economy's sake be calculated as of June 30, 1914, the date of the valuations now being made by the Interstate Commerce Commission. With the cardinal principle in mind that the railroad companies were doing the speculating and not the public, the cost of reproduction of all the useful property no matter how acquired should first be ascertained, separating land from the other property, a task already undertaken by the Interstate Commerce Commission. The results undoubtedly involve a good deal of guess work, but surely not as

---

[25] This view is essentially that held by the National Association of Railway Commissioners and the Big Four railway brotherhoods. See Aaron Hardy Ulm, The Railways Valuation Muddle, 3 Barron's, No. 49, p. 5.

much as, for example, the determination of what the cost should have been sixty years ago.

But what it cost to build a railroad or would cost to reproduce it are not measures of how wisely and well it was conceived or how successful it has been. The real tests are the character and the density of the population served and the way it is served, all three of which can be combined in one measure—the density of traffic which is the number of passengers carried one mile divided by the total mileage of the road and the number of tons of freight carried one mile divided by the total mileage. We must then find the average density of traffic for say two years prior to 1915 for each carrier, which figures are readily available; put them in order with the carrier having the greatest traffic density at the top and the carrier having the smallest at the botom; pick out the average; calculate what per cent of the average are the figures for each of the other roads; and apply this per cent to the cost of reproduction of each road exclusive of land. Land is excluded as its "value" as found necessarily includes the character and density of the population. The rate base as of June 30, 1914, should accordingly be the "value" given to the land added to a per cent of the cost of reproduction of the rest of the road, that per cent being the ratio of its traffic density to the average traffic density of all roads. In determining this per cent it will probably be fairer to divide the roads into classes according to the territory they serve or according to the type of freight they carry. Or it might be fairer to determine the per cent in an altogether different way, e.g., we could apply identical rates to the traffic carried by all the roads; find what the ratio of net earnings under these identical rates would be to cost of reproduction for each road; pick out the average road; and our per cent for any particular road would be the ratio of its per cent income to cost of reproduction to that of the average road.

The exact method of arriving at this per cent should be decided by railroad men and accountants who might well take the average of several methods, but in any case the method should be known. The present practice of the Interstate Commerce Commission of giving each railroad a value without disclosing how it is arrived at satisfies no one. It is too reminiscent of the process employed by a jury in finding the damages in a breach of promise suit. Probably each commissioner has a definite process of his own but they do not all agree and with a changing personnel there will be marked variations in the general level of values found. The only way to obviate this difficulty is to prescribe the method by law after a thorough investigation by experts.

What I have attempted to accomplish by this plan of finding a rate base is, in reality, to establish an improved method of finding the much-abused "fair value." It has been said that "fair value" is a pleasant sounding but utterly meaningless phrase. It is certainly not to be found in any of the standard works on ecomonics but I think what the Supreme Court meant by it and what the Court was rightly trying to protect is value in the economic sense minus that part attributable to the fact of monopoly. A monopoly, which gives the ability to charge what the public will pay, is, after all, the thing rate regulation is designed to offset. This can be seen from the fact that where there is no monopoly we never think of regulation. The business of distributing food is just as important to the public, is just as much affected with a public use as the business of distributing water yet we do not think of regulating the grocery business as there is much competition in it.

This method of finding a rate base is founded on the following ideas: first, that although the usual channels of finding value are closed, it is nevertheless possible to determine whether one road is more valuable than another; second, that after we have determined the relative value of all the roads we can find the specific value of any particular road by taking the relation of its value to that of the average and applying this relation to a base figure which should be cost of reproduction for the reasons set forth above. The results would not be absolutely accurate by any means but they would be a good deal more so than the so-called values now being found by the Interstate Commerce Commission. There would be no such extraordinary results as, for example, the finding of a single sum value of $23,000,000 for the Atlanta, Birmingham, and Atlantic. As stated by Commissioner Potter in his dissenting opinion, "Probably no one would assert that the property of the A. B. & A. is worth anything like $10,000,000," and again, "Having little excuse for existence, it is actually worth no more, whatever its original cost or reproduction worth may be."[26]

The rate base found as of June 30, 1914,[27] would be the figure

---

[26] Supra, n. 25.

[27] There is no particular sanctity about this date. As stated above, it is only chosen for convenience.

at which the public took over the railroads so to speak and consequently it would not change thereafter for any change in their value. We would in effect be saying to the railroad companies, "We could have developed and managed our railroads but we did not and in fact we encouraged you to do so at the risk of your sustaining great losses. By June 30, 1914, most of the development work was completed and we think it would be to our best interest to regulate further expansion and to take what opportunity for profit and what risk of loss there is left. We will accordingly fix rate bases which will reflect your success or lack of success up to that date, allowing your roads approximately the value they would have had under competitive conditions."[28]

In line with the principles stated in the first part of this paper, this 1914 rate base would be changed periodically to correspond with changes in the price level and the rate of return would be changed periodically to correspond with changes in interest rates. The rate of return might be definitely settled, so as to remove one more opportunity for the exercise of judgment as opposed to the determination of facts, at a certain per cent above the average current yield on Liberty Bonds.

There is next the problem of what is to be done when a carrier earns more and what is to be done when it earns less than the reasonable return fixed. If our findings of fair value were accurate, no such problem would arise for at least a short period after the date of the findings, but in any case changing conditions and shifting populations would soon result in many changes in earnings. Since we have decided that the public took over the roads as of June 30, 1914; that accordingly it was their fair value as of that date upon which the public must continue to pay a reasonable return; it follows that if a road does not earn such a return the public must make up the difference and if a road earns more, the public may take it away.

But if the earnings are absolutely fixed, the incentive of profit from good management will be removed. This difficulty can be met by establishing ½ to ¾ of 1 per cent more than the current Liberty Bond yield as the guaranteed return[29] and then fixing rates to yield 1 to 1½ per cent more than the guaranteed return on the combined

---

[28] For an interesting argument in support of the principle that "fair value" is the thing we must protect, see Leslie Craven, Railroad Valuation: A Statement of the Problem, 9 American Bar Association Journal, 681.

[29] The carriers are at present earning approximately 1 per cent more than the current Liberty Bond yield on their tentative valuation.

rate bases in each of the groups established under the provisions of the Transportation Act. The guaranteed return would be low because guaranteed by the Federal Government. The ½ of 1 per cent more than the Liberty Bond yield would be the allowance for risk from dishonest or grossly inefficient management and there should be added another small fraction of a per cent to cover the difference in taxability as Liberty Bonds do not quite represent true interest due to their tax exemption features. Any road that earned more than the fixed return would be required to pay one half the excess to the government to be applied toward making up the difference between earnings and the guaranteed return on the roads whose earnings did not come up to the latter. The other one half of the excess should be handled in approximately the same way as it is under the Transportation Act, that is to say, it should be retained by the carrier and put in a reserve fund which could only be drawn upon in bad years for the purpose of bringing up its return to the guarantee, with the proviso that the fund need not be maintained in an amount over 5 per cent of the road's rate base but that the excess could be used for "any lawful purpose."

Hillyer Blake Brown

San Francisco, California.