

Michigan Business Studies

VOLUME V

NUMBER 1

FINANCIAL POLICIES OF PUBLIC UTILITY HOLDING COMPANIES

BY

MERWIN H. WATERMAN



Gokhale Institute of Politics
and Economics, Poona 4.

UNIVERSITY OF MICHIGAN
SCHOOL OF BUSINESS ADMINISTRATION
BUREAU OF BUSINESS RESEARCH
ANN ARBOR

1932

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Continued on Third Cover

ERRATA

Page 61--Last three sentences should read:

"It is true that there are enormous amounts of American Telephone and Telegraph Company securities outstanding, but relatively there was not as great a proportion of parent financing in that company's capitalization as was evident in the Associated Gas and Electric Company set-up. Table 4 shows the American Telephone and Telegraph Company's financial structure as of December 31, 1929. From these data it is evident that the telephone subsidiaries were furnishing more than one-third of the capital necessary to finance the system's assets, while Associated Gas and Electric showed 25 per cent subsidiary financing on the same date."

Page 106--Paragraph numbered "1" should read:

"1. For the Washington Water Power Company it gave 553,903 shares of \$6 preferred stock which called for annual dividends of \$3,319,428."

Page 107--Paragraph numbered "3" should read:

"3. In the acquisition of control of these two properties, annual semi-fixed charges totaling \$8,180,488 were contracted for."

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AUTHOR'S NOTE

A recent financial editorial takes occasion to remark that "at a time when public utility holding companies have few friends, it may be worth while, in passing, to mention that the well-set-up corporation of this character is by no means the financial ogre that so many critics are now trying to make it out to be." It was more or less in such a spirit that the study resulting in this monograph was undertaken, the object being to determine, as definitely as possible, the requisites of a well-managed public utility holding company. It is believed that mismanagement has been more responsible for the faults found with holding companies than has the form of organization *per se*. If this be true, demonstrated mistakes and successes of the past should point the way to improved management in the future and thus give rise to fewer objections to holding company ownership and control of public utilities.

To many persons are due thanks for efforts and encouragement given freely in the process of this holding company study. Executives in the utility industry were, in most cases, unexpectedly kind in the matter of furnishing information; without their assistance any merits the study may have could not have been attained. Professor I. Leo Sharfman of the Economics Department of the University of Michigan was a constant advisor to the writer, and this occasion is taken to acknowledge the assistance which he gave. Acknowledgment is also given to Tresse Musil, Secretary of the Bureau of Business Research, for her painstaking work on the original manuscript, and to all other members of the Bureau staff who assisted in the routine work of analysis and publication for their helpful co-operation.

MERWIN H. WATERMAN

Ann Arbor, Michigan
August 1, 1932

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FINANCIAL POLICIES OF PUBLIC UTILITY HOLDING COMPANIES

SUMMARY AND CONCLUSIONS

Public utility holding companies of the size and form so common in the industry today cannot justify their existence by size alone, nor by the economies of operation and management alleged for the holding company form of organization. Profits of expansion of holding company groups will no longer be self-generated, because many factors that were, in the past, favorable to the organization and profitable development of holding companies in the public utility field have disappeared or have been minimized by the extent of the expansion activities themselves. Therefore, it is concluded that the very large public utility holding company systems must, in the future, be managed under modified policies which recognize the economic limitations of holding company control and which provide financial direction that is reasonably adapted to the characteristics of the industry and to the financial needs of this form of organization.

While this study takes cognizance of the social aspects of the position of the holding company in the utility industry, its chief emphasis is devoted to a discussion of the management policies of holding companies and the profitableness of those policies to the holding companies themselves. Many practices and procedures which might be considered undesirable in their social effects are apparently unprofitable and unreasonable from the standpoint of sound management. It would seem, therefore, that there should be a dual incentive for holding company managements to put their houses in order; the first arising from the desire to avoid any extension of public control which might result from evil effects of mismanagement, and the second growing from the sensible attitude of those who wish to manage profitably and build well financially.

The following paragraphs contain a summary of the writer's conclusions with respect to the various operating and

financial policies which are analyzed and discussed in the course of this study of five large public utility holding companies. It should be borne in mind that these conclusions are the result of an examination of only five public utility holding companies, and while these companies are both large and important, their actions do not represent the performance of 100 per cent of the utility industry. In effect, the conclusions are more in the form of suggestions which seem reasonable in light of the experiences of the companies studied and which are based on deductions as indicated in the course of these writings. Many of the suggestions are worthy of further study to determine more specifically the extent of their possible application, but it is hoped that, in the meantime, they may prove enlightening as suggestions alone.

1. Industrial and geographical diversification of properties under the control of a single holding company adds so little to the effectiveness of operation and profitableness of a public utility group that size for the sake of diversification alone is not justified. The fact that the earnings of the utility industry are relatively more stable than those of other industries is, in itself, an indication of the uselessness of diversification. If business conditions become so unfavorable as to affect seriously the earnings of utilities, they will probably be so universally unfavorable that diversification will be of no assistance in support of the earning capacity of a group.

2. The economies of large-scale production and large-scale management which have been alleged for the holding company form of organization are decidedly limited. It is true that large utility properties may be more efficiently and profitably managed than small ones, but it is not necessary that a holding company assemble utility assets in billion-dollar amounts in order to realize fully all of the possible advantages of size. While one cannot state definitely where the limit falls or beyond what size further advantages cease to accrue, it is apparent that holding companies offer smaller and smaller differential advantages in efficiency and cost as their size increases, until, finally, size alone is the result.

In view of the fact that large holding companies have so little to offer the public or the management in the form of increased service efficiency or operating economy, their continued existence and profitable operation depend on proper financial management and on the care taken to prevent misuse of the power of concentrated capital which they possess. In the subsequent paragraphs are presented those conclusions arising from the study of holding company financial policies which it is believed represent sound financial practice from a profit standpoint and also legitimate procedure from a social standpoint.

3. Parent company financing and the issuance of parent company securities are best regarded as supplements to and not substitutes for subsidiary financing and subsidiary security issues. The extensive use of subsidiary securities is limited to holding company systems which comprise self-sufficient groups of properties, but it is desirable because subsidiary financing is cheaper, is a more dependable source of capital, and is in every way more in keeping with the financial needs of the industry. The only justifiable occasions for the issuance of parent company securities, or securities of subsidiary holding companies, are those which arise from the need of providing financial reservoirs for the temporary use of operating subsidiaries and for parent company investment in its subsidiary holdings.

4. The practice of financing public utility holding company systems with borrowed funds, often referred to as the practice of "trading on the equity," is a satisfactory method of financing. The relative stability of utility earnings provides a sound basis for borrowings, but a reasonable margin of safety between normal earnings and fixed interest charges should be maintained, because of the business risks inherent in the industry. The existence of a large proportion of relatively fixed operating expenses in a public utility enterprise tends to accentuate any fluctuations of gross revenues in terms of operating profits, and therefore caution should be exercised when incurring financial risk represented by bond issues. In the recent economic disorders, those holding company systems with large

portions of their capital represented by borrowed funds suffered severely. Admitting the profitableness of financing with borrowed funds, one should recognize the possibility that profits and even rights to future profits may be eliminated if too large a share of capital is furnished on a margin.

5. The use of non-voting preferred or other limited-return stocks offers many of the advantages of debt financing without involving the dangers of the latter arising from the legal rights of creditors. Financing with preferred stocks permits the accrual of residual profits to common stockholders, just as the limited cost of borrowed funds tends to increase stockholders' profits, but preferred stockholders cannot demand return on their investment under threat of receivership or foreclosure. Neither is there any need to provide for maturity of preferred stocks as there is in the case of bonds, because the former are, in every respect, ownership securities. It is true that profits from the use of preferred stocks may not be so great as from the use of bonds, because the typical preferred stock dividend rate is higher than the typical bond interest rate, but at least the same principle of "trading on the equity" can be applied without an equal degree of risk.

6. After considering the various methods used by holding companies in effecting the acquisition of new subsidiaries, it has been concluded that the exchange of common stock for the equity securities of new companies is preferable to the purchase of these equities for cash or to their acquisition by exchange of bonds or preferred stocks. Common stock exchange avoids the necessity of raising capital which is usually involved in cash purchase, and, at the same time, avoids the incurring of fixed or semi-fixed charges which accompanies the exchange of bonds or preferred stocks. Also, the use of common stocks protects the purchasing company from the costs of increasing market prices because any increase in the price of the stock of the company to be acquired will tend to be offset by a similar increase in the price of the purchasing company's stock. However, the cheapness and facility with which common stock can be used are undesirable if they lead to the creation of a parent company

capitalization so large that there can be little hope of paying a reasonable return on all securities issued.

In the treatment of security-holders of newly acquired subsidiaries there is every reason to eliminate all minority interests which possess voting or residual-income securities. Such procedure serves not only to simplify the financial structure of the system and to assure the parent company full control of all residual income of subsidiaries, but also to eliminate any chance of legal complications arising from the rights of minority stockholders. In the light of a previous conclusion that parent company securities are not good substitutes for subsidiary securities, there can be no excuse for attempting to retire subsidiary bonds and non-voting preferred stocks by call or by offering parent company securities in exchange.

7. The bonds used in the financing of operating subsidiaries are usually most satisfactory when secured by open-end mortgages. As long as the utility industry is expanding by the process of capital expenditures for new construction, improvements, and betterments, it is reasonable to provide a portion of the capital by borrowing. If original bond indentures are left open, it will not be necessary to use junior-lien securities, which find less favor in the investment market, nor to indulge in complexities of lien or corporate organization designed to avoid the higher costs of junior-lien capital. It is concluded, therefore, that, whenever possible, mortgage bond indentures should be drawn to permit the limited issuance of additional bonds of equal lien.

8. By confining their financing to a few simple, straightforward capital issues, parent companies facilitate a definite interpretation of the investment qualities of their capital contracts and thereby increase the attractiveness of their investment offerings. Simplicity of parent company financial structures makes clear the status of each class of security, and each class has certain peculiar characteristics that should be observed. Debenture bonds provide the most satisfactory means of parent company borrowing, there being little or no advantage to the typical utility holding company in the sale of collateral trust

issues. Preferred stocks are useful for establishing any special ownership relations with investors that may be desired, but, in general, the use of a large variety of classified stocks adds unnecessarily to the confusion and complexity of financial structures. Parent company common stocks represent the residual equity in a holding company system and are to be recognized as the most risky security in the entire consolidated financial structure. No amount of special contractual features can eliminate that risk which is inherent in such equity securities. Voting rights may be given either to common stock or to both common and preferred stocks, but the use of special voting issues which separate control from investment is in contradiction to any reasonable conception of simplicity and equity in holding company financing.

9. The public utility industry is as well adapted as any other to the use of long-term security contracts, and it is generally considered to be committed to a policy of permanent debt. As long as there is no occasion for liquidation of earning assets there is no reasonable occasion for debt retirement, either by maturity or by periodic sinking-fund payments. Therefore, all utility bonds, whether of parent or subsidiary companies, may be as long term as the market will absorb at reasonable interest rates. Long-term capital contracts are most consistent with the capital needs of the industry, and the insertion of the callable feature in these contracts will give the desired degree of flexibility to financial structures and insure the management against long-time unprofitable commitments. Long-term bond issues without provisions for serial or sinking-fund retirement will lighten the utilities' burden of raising capital for refunding, which may be a serious one when need for refunding capital is coincident with need for expansion capital.

10. The use of convertible bonds is quite inconsistent with the capital needs of the utility industry and is in violation of the principle of simplicity implied in conclusion 8. If borrowing is justified and is profitable to the utility in the first instance, it becomes increasingly so as the earning power of the system develops and the risk is correspondingly diminished. Further-

more, bond conversion is always expensive from the management standpoint, because it involves the substitution of securities paying a higher return to the security-holder than the bonds contracted to pay. The only time when an investor will exercise his option to convert a bond into stock is when the issuing company is most prosperous and hence in the most favorable position to profit from the practice of trading on the equity. Uncertainty, not flexibility, is added to the financial structure by using convertible bond contracts which permit the exchange of bonds for stock at the option of the investor.

The use of bonds convertible into stock at the option of the issuing corporation is indefensible from any standpoint. It detracts from the investment quality of the security, and the exercise of such an option would do great damage to the issuing company's credit. Such action would constitute a cancellation of debts and a substitution of non-interest-bearing ownership securities for those with a legal and prior claim on earnings and assets.

11. The sale of subsidiary company securities to customers appears to be a satisfactory method of raising capital, but one not to be depended upon beyond its real potentialities. Customers may be an uncertain source of capital, and if all the costs are considered, they may not be so cheap a source of funds as has been thought. The proposition that this form of security distribution tends to create customer good-will should be considered together with the possibility that the good-will of customers might be changed to "ill will" in exaggerated form if a utility management were forced by necessity to forego dividend payments.

12. Sale of securities to stockholders under a plan of privileged subscription has proved a satisfactory means of securing capital funds, but, if the capital needs of a company can be fulfilled by the reinvestment of earnings, this latter method seems preferable. The payment of stock dividends seems to satisfy the stockholders, and to the corporation reinvestment so recognized is a simpler, cheaper, and more satisfactory means

of securing capital than is the payment of cash dividends accompanied by periodic offerings of additional stock.

13. During a period of expansion public utility holding companies can advantageously reinvest a large portion of their earnings in their own systems. As a holding company expands, its equity investment must increase in order that proper balance may be maintained in the financial structure, and reinvested earnings provide a simple and cheap means of accomplishing this end. Their reinvestment protects the credit of the system and tends to build up value reserves against possible losses that might prove disastrous. Moreover, as the equity thus provided increases, it provides a base on which further borrowings may be negotiated.

It appears that this reinvestment will be most effectively used if the earnings are left in the subsidiary organizations. To pay earnings out to the parent company necessitates their conversion into liquid form, and, once in the coffers of the parent company, the liquid assets represent a temptation to acquire more subsidiaries or to increase cash dividends. In other words, payment to the parent company for reinvestment is likely to result in a holding company system composed of a large number of loosely connected and not too strong subsidiaries, whereas reinvestment in the operating companies is likely to result in subsidiaries that are more nearly self-sustaining and also more efficient from both the financial and operating standpoints. However, in so far as earnings are legitimately reinvested by the parent company, the payment of stock dividends recognizing the permanence of such reinvestment is reasonable.

CHAPTER I

INTRODUCTION

This study was actuated by the writer's interest in both finance and public utilities and by the fact that public utility holding companies have been and are the subject of much controversial discussion. The public utility industry has been subjected to many investigations, both political and academic, but most of such analyses have dealt with the social and economic aspects of utility companies and their holding company relationships. While the importance of the social and economic problems raised by the holding company form of organization as applied to the utility industry is recognized in this study, the problems of business management involving the financing of public utility holding company groups and other managerial policies closely connected with financing will receive the most emphasis.

One would think that if public utility holding companies were properly financed and soundly managed from a long-run profit standpoint, they would be free of some of the evils which are alleged to be inherent in this form of organization. The profit incentive is still effective in our economic order, and if those persons in control of utility affairs can be convinced in profit terms that their best interests are more or less common with the public interest, it is possible that some of the practices and policies of holding company management which seem to call for regulation may be eliminated. By implication this study calls attention to certain policies and practices that may be un-social in effect, but the chief purpose of this analysis is to point out those policies and practices which are unprofitable and which, therefore, ought to be corrected by management without pressure of public regulation. Management may not be able to eliminate completely the problems which seem to demand public control, but proper management may lessen the

seriousness of some of those problems and make public control of certain phases of holding company operation unnecessary. Any effective move to mitigate the need for governmental control would seem to be a reasonable method of self-defense for those concerns in the industry which complain about the stagnating effect of government interference and the blight put upon managerial initiative by public regulation. The management of public utility holding companies on the basis of sound financial and profit principles should tend to perpetuate the holding company form of organization, not only by lending greater assurance of financial success but also by overcoming such reasonable objections to the form as may originate in mismanagement.

The procedure used in this study to analyze and test the practices and policies of public utility holding companies was determined upon after a survey of the information available in the field. It was decided that, rather than to present a purely statistical analysis of a large number of companies, it would be preferable to give detailed attention to a few companies whose situations and policies were sufficiently diverse to afford examples of most of the practices and procedures current in the industry. It was also decided that, in order to obtain the desired degree of homogeneity, the study should be limited to those companies whose chief holdings were in gas and electric operating companies within the United States, and, in view of the particular interest in financial problems, that it should include only those companies which had expanded considerably and had maintained their corporate existence throughout the period to be studied. Availability of comparable data limited somewhat this process of elimination.

Eventually five holding companies were found whose financial and operating policies differed, whose properties were chiefly, although not entirely, confined to the gas and electric business in the United States, and about which there was sufficient information to permit analysis. The companies thus chosen to serve as a basis for this study were: (1) American Power and Light Company, (2) Associated Gas and Electric

Company, (3) The North American Company, (4) Standard Gas and Electric Company, and (5) The United Light and Power Company. While these companies are not the largest utilities in the United States, they are among the largest of the holding company groups, and taken together they represent a satisfactory sample of the utility industry in the gas and electric fields.

The years 1925 to 1929, inclusive, were chosen as temporal limits of the study, because during those five years a great expansion movement took place in the industry; market conditions were favorable, and, under the influence of general industrial prosperity, millions of dollars' worth of utility properties were concentrated under holding company control. At no other time are the financial policies of the companies more in the foreground than during periods of expansion, when new capital must be raised and financial structures readjusted.¹ It was felt that an examination of the financial procedures of the companies for five years not only would assure that conclusions would be uninfluenced by what were, in effect, merely temporary commitments, but also would provide positive information about long-run policies. In the case of two companies examined, comparable data were available for only four years, but pains were taken to see that the results were not distorted by this lack of information.

The procedure followed in the study and analysis of these companies involved the examination of the history, policies, and practices of each company in considerable detail. These facts having been ascertained, the next step took the form of a cross-section analysis of those policies and practices relating particularly to the various phases of holding company management and financing. The purpose of this manner of comparison was to afford opportunities to discuss several policies followed by the respective companies and to test their reasonableness and applicability. The method of reasoning applied in judging the soundness of holding company policies was chiefly deductive,

¹Emphasis on this phase of management reoccurs at times of financial reorganization, but such occasions should not be classed as normal.

because the complexity of the problems and the unsettled status of the industry defied adequate statistical analysis. It was inevitable that, by this process, some conclusions would be reached with respect to the relative soundness of the individual companies under observation. However, it must be emphasized that such was not the main purpose; rather it was desired that this study should develop certain ideas which would serve as a universal guide to the proper application of various management and financial policies of public utility holding companies.

The details of the analysis and comparison of the five large holding companies and their policies are contained in the following pages with the writer's conclusions stated in a form as definite as the circumstances permit. A comparison of the physical property characteristics of the several holding companies is presented in Chapter 2 together with a consideration of the corporate relationships and the nature and degree of parent company management which accompanies these relationships. From the analysis of these physical set-ups, there will evolve certain conclusions regarding their economic usefulness and efficiency from the standpoint of holding company profit. Such considerations are essential to an intelligent test of financial policies, because management policies have a definite effect on holding company profits.

In Chapters 3 to 7 the various financial policies and procedures of the several companies are critically examined, and the most significant points of this study are developed. This detailed study explains the writer's reasons for his beliefs with respect to the methods of financing which are most reasonable in view of the problems confronting public utility holding companies. Specifically, there is consideration of the several holding company financial structures, the many means used to raise new capital, the respective dividend- and earning-distribution policies, and the various methods used in financing the acquisitions of new companies. The conclusions are presented in terms of the relative soundness of parent and subsidiary financing, a comparison of stock and bond financing, mortgage versus debenture bond financing, the uses of privileged subscriptions

and stock dividends, the possibilities of customer ownership, and alternative methods of security distribution.

Unless otherwise indicated, all references to holding companies throughout this study pertain to entire holding company groups or systems rather than to the parent companies alone. Inasmuch as the approach of this analysis is one which views the groups and their problems as a whole, this connotation seems justified. It is recognized that the ratio analyses, used throughout the study in an attempt to characterize the several holding company groups and their financial policies, have inherent weaknesses because of the fact that these ratios are based mainly on figures from consolidated financial statements. However, in no instance are such ratios used to test the specific status or solvency of a particular holding company, because consolidated financial ratios take no cognizance of priority of legal claims or the existence of separate corporate entities. The chief use made of the financial ratios in this study is that of demonstrating what the companies were doing and what were their relative positions with respect to certain policies and practices, a use which comes within the limited scope of sound application of such ratios.

CHAPTER 2

HOLDING COMPANY OPERATING POLICIES

Three purposes will be served by a comparison of the properties and a discussion of the operating policies of the five holding companies that are being used as laboratory material for this study. First, such a presentation will provide a background enabling the reader to picture in his mind the physical characteristics of the several systems, their similarities and their differences. Secondly, this comparison will give an idea of the relationships and lines of authority within each system. Finally, the analysis will provide a basis for critical comparison of the several system organizations from the standpoint of the relative economic efficiency of each form. This last point has been much emphasized by holding company interests in their arguments for the continuance of the holding company form.

PROPERTIES AND ORGANIZATION

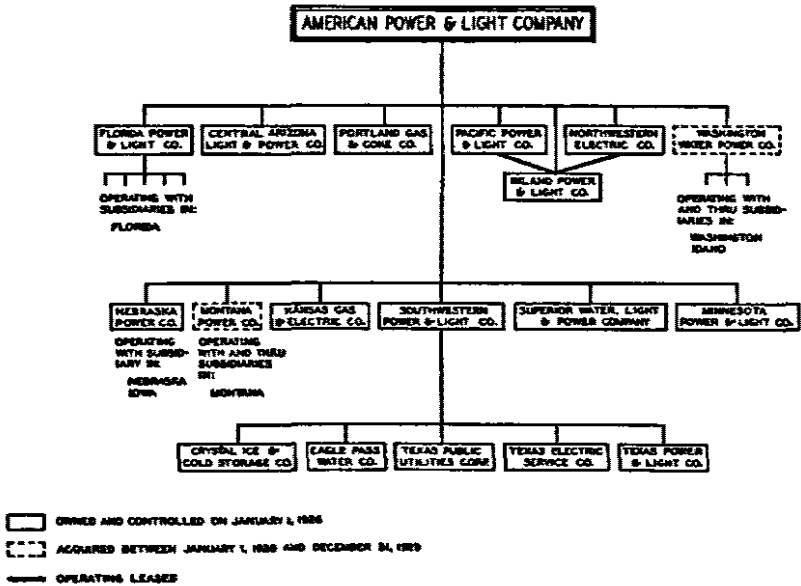
Charts 1 to 5 are presented to convey impressions regarding the geographic location of properties and the nature of the corporate relations existent in each holding company system, and the extent of the expansion which took place during the years 1925 to 1929. While the charts do not indicate in every instance the precise location of the operating properties, the extent of geographic diversification may be noted from the corporate names of subsidiary companies, which often correspond with the districts served by the respective operating units.¹

Certain facts stand out after an examination of these charts. The widest geographical diversification was achieved by the Standard Gas and Electric Company (Chart 4), whose system included properties in all regions of the United States except

¹Further facts and historical data regarding each of the five companies may be found summarized in Appendix A.

the extreme south and northeast portions. At the other extreme was the North American Company (Chart 3) with only five operating groups; namely, those in California, Ohio, the District of Columbia, Wisconsin-Michigan, and Missouri-Illinois-Iowa.¹ The Associated Gas and Electric Company, although

CHART 1—CORPORATE ORGANIZATION OF THE AMERICAN POWER AND LIGHT COMPANY*
(January, 1926, and December, 1929)

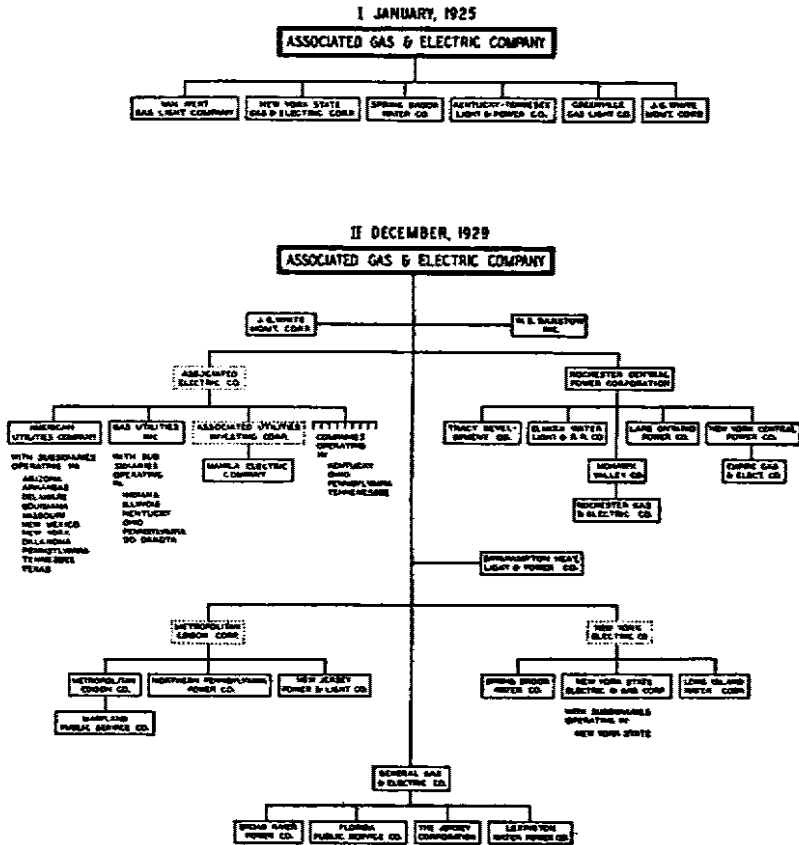


*Source: Appendix C.

its property distribution (shown in Chart 2) was confined to the eastern half of the United States, possessed two features not common to the other systems; namely, considerable holdings outside the United States and a large number of units absolutely isolated as far as possibilities of interconnection or group operation were concerned. The United Light and Power Company set-up (Chart 5) had somewhat the same characteristics, although they were not so pronounced. This chart shows several

¹Reduced to four in 1930 by sale of California properties.

CHART 2—CORPORATE ORGANIZATION OF THE ASSOCIATED GAS AND ELECTRIC COMPANY*
(January, 1925, and December, 1929)



NOTE: COMPANIES OUTLINED WITH DOTTED LINES WERE NEWLY CREATED SUB-HOLDING COMPANIES

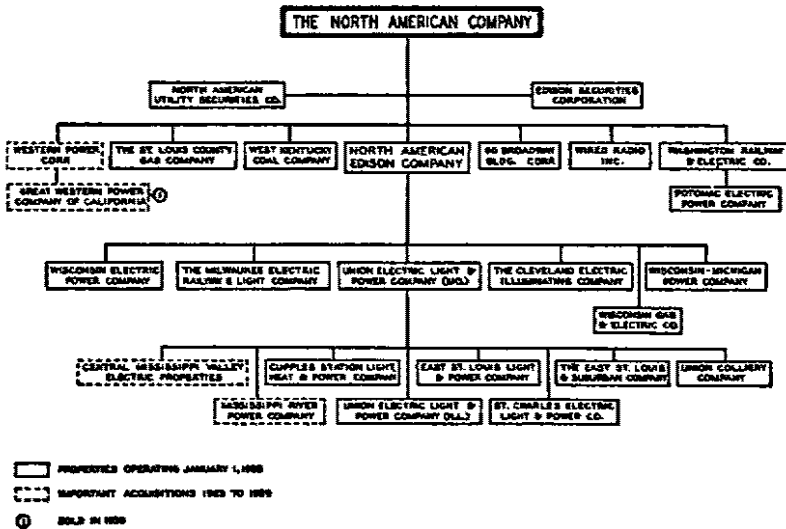
*Source: Appendix C.

isolated properties, including one in Canada; but in general the United company's activities were carried on by groups located in the central states. The American Power and Light Company achieved diversification, but practically all of its properties were grouped or capable of being grouped, although its

fields of operation were in no instance in highly concentrated population areas suitable for the most intensive development.

When considering the degree of industrial diversification, the reader should recall that one of the criteria for choosing the companies to be studied was that their chief holdings should be in gas and electric properties. However, that criterion did

CHART 3—CORPORATE ORGANIZATION OF THE NORTH AMERICAN COMPANY*
(January, 1925, and December, 1929)

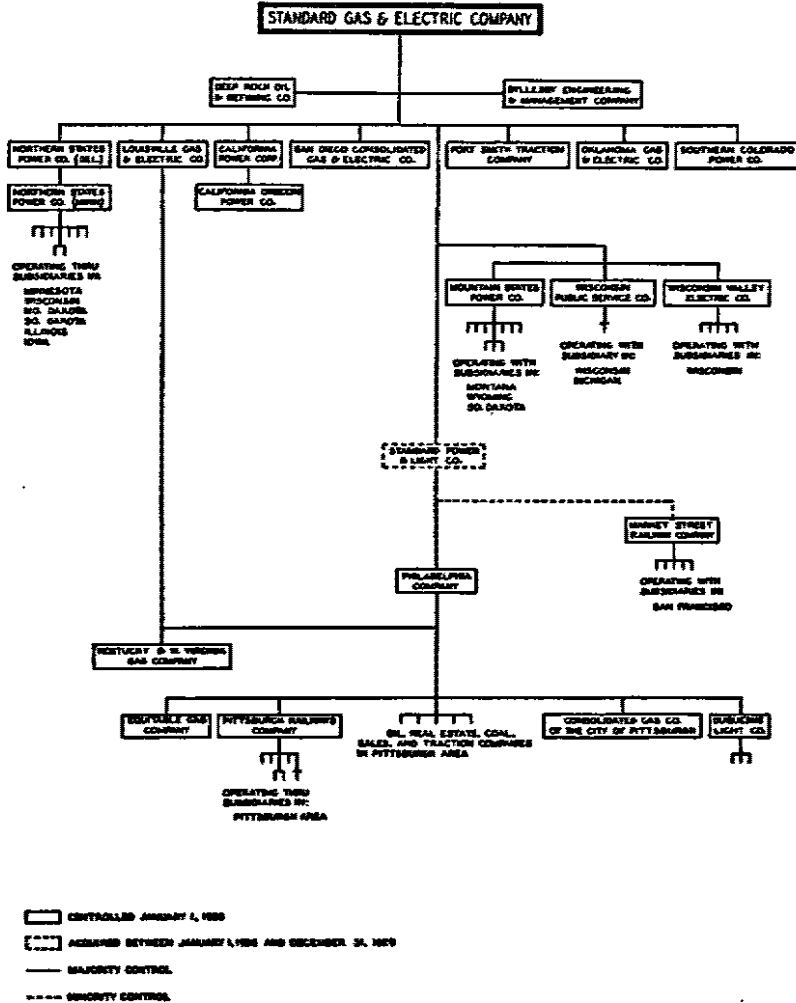


*Source: Appendix C.

not eliminate those companies rendering street railway service, although such service was in most cases a minor source of revenue.¹ Furthermore, most of the companies rendered other services such as ice, water, and "miscellaneous." This fact indicates some differences in policy with respect to the kind of public utility business the companies saw fit to enter, and is a

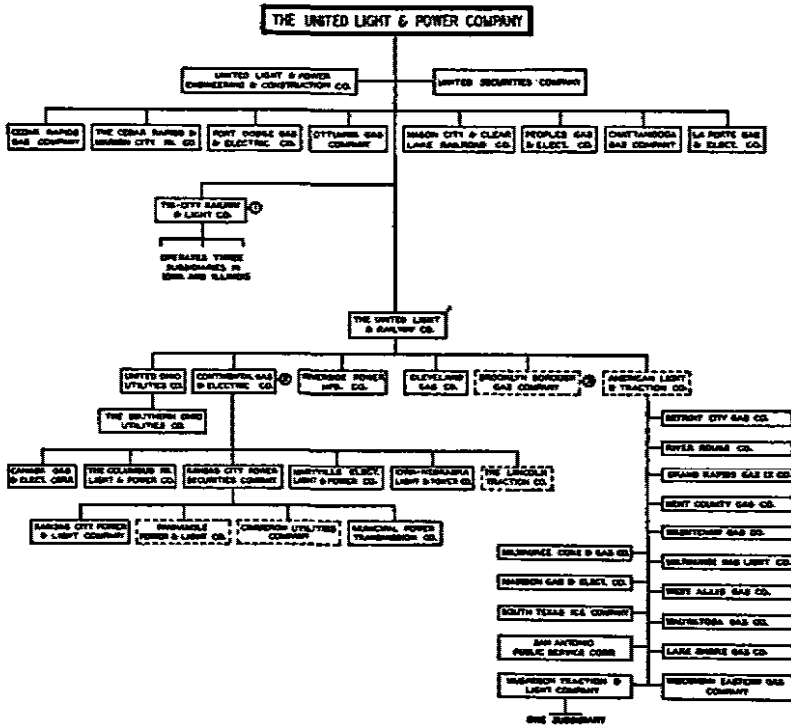
¹The North American Company derived approximately 14 per cent of its total revenue from electric railways in 1929, the Standard Gas and Electric Company approximately 20 per cent of its public utility revenue.

CHART 4—CORPORATE ORGANIZATION OF THE STANDARD GAS AND ELECTRIC COMPANY*
(January, 1926, and December, 1929)



*Source: Appendix C.

CHART 5—CORPORATE ORGANIZATION OF THE UNITED LIGHT AND POWER COMPANY*
(January, 1925, and December, 1929)



- ☐ COMPANIES CONTROLLED ON DECEMBER 31, 1929
- ⋯ COMPANIES ACQUIRED BETWEEN JANUARY 1, 1925 AND DECEMBER 31, 1929
- ① THESE SUBURBAN RAILROADS TRANSFERRED TO DIRECT CONTROL BY UNITED LIGHT POWER CO. IN 1926
- ② ACQUIRED IN SEPTEMBER 1924
- ③ SOLD DURING 1928

*Source: Appendix C.

reflection of the fact that no large utility system is restricted solely to the operation of gas and electric properties.¹

The expansion programs carried on during the years 1925 to 1929 by all five companies were characterized by features of diversification.² While the Associated Gas and Electric Company added some homogeneous groups to its holdings and made some progress in grouping isolated properties, much of its activity was confined to acquiring small properties here and there in the eastern part of the United States, and its longest reach extended to the Philippine Islands in 1925. The American Power and Light Company's expansion activities served to lessen the number of scattered units, and its acquisitions were in general in proximity to existing properties. The North American Company made two important moves that increased both its geographical and industrial diversification when it acquired properties on the Pacific Coast in 1925 and in Washington, D. C., in 1928. Entirely new areas of operation were entered by the Standard Gas and Electric Company when it acquired the Standard Power and Light Company with its miscellaneous properties in the Pittsburgh and San Francisco regions. The United Light and Power Company made only two acquisitions during the five years,³ but these two were in themselves large systems of wide geographical diversification.

HOLDING COMPANY PRODUCTION ECONOMIES

From the above survey of the properties and the expansion activities, it is evident that all the company managements pursued policies that involved inclusion in their systems various service producers, variously located. One's first reaction to such a policy is that it was a contravention of practice in other lines

¹The Standard Gas and Electric Company was the only company studied which had a large non-utility subsidiary; namely, the Shaffer Oil and Refining Company. The North American Company owned and operated some coal mines, but these were a feature of integrated combination.

²Dotted line inclosures in Charts 1 to 5 indicate major corporate acquisitions during period under observation.

³The Continental Gas and Electric Company and the American Light and Traction Company.

of industry and was in direct violation of one of the principles of modern business procedure; namely, the principle of specialization as applied to large-scale methods of production. Those companies whose subsidiaries offered services including gas, electric, water, railway, ice, and "miscellaneous" were distributing their efforts over a wide variety of technical, production, and sales problems. In fact, about the only characteristic common to all such services was that they may have been classified as "public utility services"; but some were outside this class, particularly those involving coal-mining, ice-manufacturing, the refining and distribution of petroleum products, and the sale of real estate.

Geographical as well as industrial diversification may be looked upon as a hindrance to the application of principles of specialization. An extreme example of a not uncommon situation may serve to make these points clear: We may ask, "What possible production advantages or economies can be derived from holding company ownership of an electric utility in the Philippines; a gas utility in Van Wert, Ohio; an ice company in Orlando, Florida; and a water company in Paris, Tennessee?" The answer to such a question is obvious, and suggests that actual production economies are limited to those holding company properties which are relatively proximate and which render similar services.

It is a demonstrated and a universally accepted fact that there are economies in the large-scale production and distribution of gas and electricity, but it should be emphasized that those economies are the result of concentrated large-scale production and distribution. In other words, there could be no advantage to the production of gas or the generation of electricity at one point in a holding company system — say in the Pittsburgh area of the Standard Gas and Electric Company system — and the distribution of those products to properties in Oklahoma, Minnesota, Montana, and California. Technical developments make it physically possible to perform such tasks, but the investment cost and low efficiency of such wide-spread distribution is ruinously expensive. The so-called "super-

power" developments of recent years may be justified, but seldom on the basis of cheaper electricity to far-flung outposts. In the words of Mr. Alex Dow, President of the Detroit Edison Company, "The cheapest way to transmit energy for long distances is in a coal car," and this proposition will undoubtedly be true for some time to come.

In the gas utility field there are possibilities of long-distance, high-pressure transmission of gas as demonstrated in the case of the recently constructed thousand-mile line from the Texas Panhandle to Chicago. Here again, however, the necessary investment of \$50,000 per mile,¹ together with gas losses and high transmission costs, places a very definite limit on the profitableness of such projects. To date there are no available facts regarding the earnings of such pipe lines, but there are in the minds of utility operators many doubts of their financial success. Not only are there these physical and financial limitations on "extensive-scale" gas and electric utility operations, but also there is neither the excuse nor the incentive for such projects that there is, for instance, in the case of the telephone utilities. In this field the American Telephone and Telegraph Company, as a parent corporation, has a legitimate, economic reason from the production standpoint for its ownership of subsidiaries the country over. In view of the nature of its communication service, there is a definite increase of efficiency and economy in a nation-wide interconnected system.

In view of these considerations, the conclusion is that there can be no case for diversified holdings from the standpoint of production economies. Only within reasonable limits of physical interconnection can any of the advantages of large-scale production be realized. Furthermore, any production economies arising from common ownership of different types of service properties in a single community can be only incidental ones, such as those arising from savings in accounting, billing, collecting, and dealing with customers.² In other words, produc-

¹Estimate furnished by Mr. R. H. Lawlor, gas engineer. See also *Fortune*, August, 1931, for story of the "Gas Balloon."

²This is aside from the obvious economies from rendering "by-product services" such as sale of coke, steam heat, etc.

tion economies do not provide a financial excuse for the type of development found in the activities of the companies studied, in so far as increased geographical and industrial diversification are concerned. The analysis turns, therefore, to an examination of holding company activities in the line of large-scale management to see what possible advantages might accrue from this source.

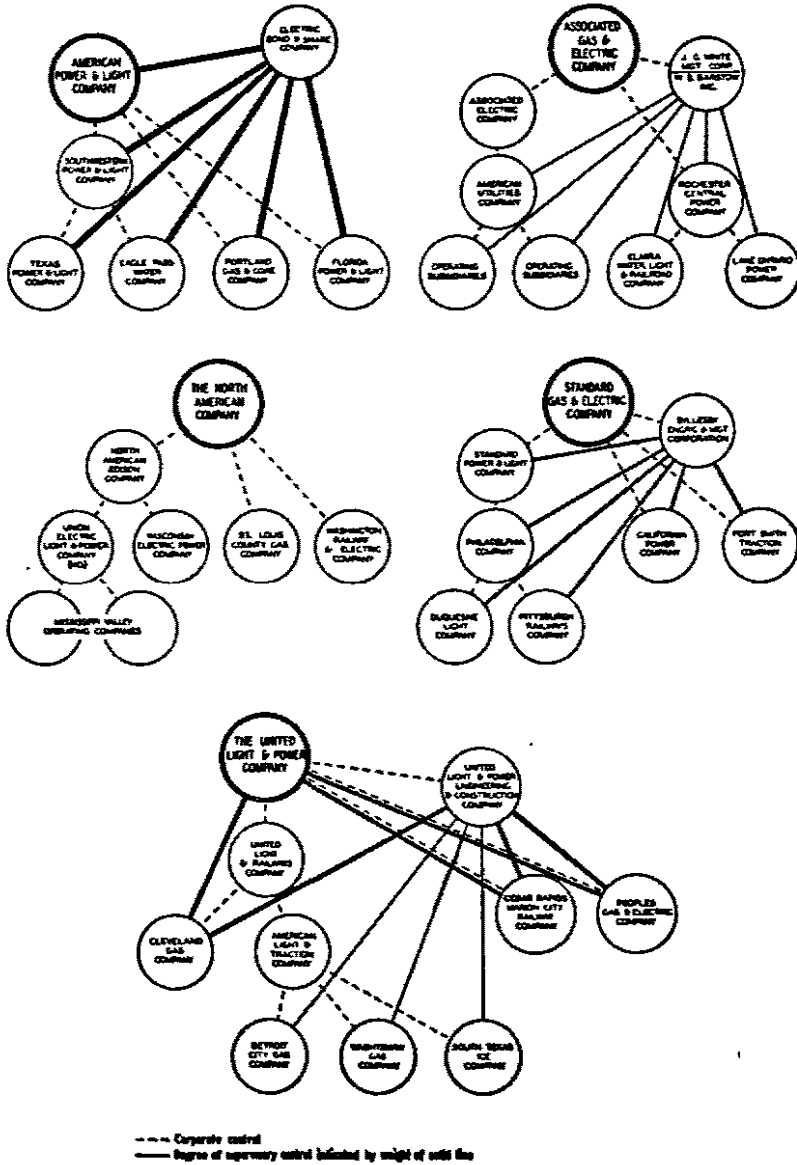
HOLDING COMPANY MANAGEMENT ECONOMIES

Large-scale management is distinguished from large-scale production in this discussion in the orthodox way. Large-scale production is taken to mean the physical operation of plant and equipment under conditions which create efficiency by means of the interconnection of producing units or the abandonment of inefficient units in favor of larger and more efficient ones. Management connotes the application of executive and directive faculties to operation, construction, financing, and other business functions. Hence, large-scale management may be defined for the purposes of this study as "the centralization of managerial and executive functions to make the advantages of specialization in management available to a large number of operating units regardless of size or location." As a matter of fact, it is in the field of management that the utility interests make the strongest claims for holding company economies. It will be the next purpose of this analysis to examine briefly the alleged advantages of large-scale management, to determine just how far these advantages were applicable to the five organizations which are being studied here, and to consider the effects of expansion on the effectiveness of large-scale management.

To facilitate this analysis, Chart 6 is presented which shows diagrammatically the management set-ups of each of the five companies. These diagrams are simplified by the elimination of details in order to emphasize the characteristics of the management relationships in each case. Not all of the subsidiaries of the respective companies are included; only enough of them to show the typical situation existing in each organization.

The summary of management conditions as presented in Chart 6 indicates that in all but one of the five companies there

CHART 6—DIAGRAMS OF HOLDING COMPANY MANAGEMENT RELATIONSHIPS*



*Source: Appendix C.

existed the machinery for detailed management of subsidiaries by the parent company organization. The exception, the North American Company, followed the policy of independent operation of subsidiaries, although this did not mean absolute independence, because the existence of corporate control and interlocking directorates assured that the general policies outlined by parent company executives would be followed. The American Power and Light Company transferred practically all the burdens of management to the Electric Bond and Share Company by means of management and service contracts. Both the Associated Gas and Electric Company and the Standard Gas and Electric Company had their own subsidiary organizations which rendered management services to their respective subsidiaries; while the United Light and Power Company, by means of contracts between its operating subsidiaries and its engineering and construction subsidiary and between the subsidiaries and the parent company, effectively dictated and carried out the details of subsidiary management. Thus in four out of the five companies under observation is found what can, without question, be called "large-scale management."

While there can be no question of the existence of large-scale management, there are questions regarding its effectiveness and the continued profitableness of applying this method of management to public utility holding companies like those under consideration. Absolute answers to such questions cannot be given, but it may be that merely raising and studying these questions will lead to some conclusions of significance with respect to the advantages of holding companies measured in terms of management. The contents of the contract used by the Electric Bond and Share Company in establishing its managerial position with the American Power and Light Company and its subsidiaries¹ will furnish a fairly inclusive and typical list of the types of management services usually rendered by

¹United States Federal Trade Commission, *Utility Corporations* (Washington: United States Government Printing Office, 1930), Senate Document 92 (70th Congress, 1st Session), Parts 23 and 24, Exhibit 4591.

holding companies or their management affiliates, and will provide the basis for the following analysis.

Operating services. It is customary for parent companies to supervise the operating activities of their subsidiaries by devoting the services of specialists to each phase of operating activity throughout the system. This service may be limited to periodic inspection and the giving of advice, although sometimes members of the holding or management company staff are permanently assigned to specific subsidiaries with executive powers and authority to manage. Whatever the means of effecting this service, its object and the often-voiced argument in its favor is that the operation of the subsidiaries is more efficient by virtue of the highly trained and specialized managerial ability which is thus made available to all operating companies. There is undoubted truth in such arguments and much that is praiseworthy in the objective. However, the writer questions whether such advantages tend to increase proportionately and indefinitely with the increase in the scope of the parent companies' holdings, particularly when expansion leads to a billion-dollar business operating in a dozen states and rendering six different types of utility service.

The Detroit Edison Company has the reputation of being one of the most efficiently operated utility properties in the country, and it has been able to achieve results under its own management which entitle it to this reputation. The conclusion is that this company has been able to profit by the advantages of large-scale production and large-scale management without parental supervision and control. If it be argued that size is what determines the effectiveness of large-scale management, the fact should not be overlooked that the Detroit Edison Company on December 31, 1929, had only about one-half the amount of "book assets"¹ possessed by the smallest holding

¹The concept "book assets" is used throughout this study to indicate the relative sizes of the several holding companies, and to serve as a standard base to which various forms of capitalization may be referred for comparative purposes. This concept has no particular significance, as such, except that it does represent the consolidated book value of the assets of the groups studied. In each case the amount of "book assets" was determined by subtracting from the total consolidated assets all non-asset items such as treasury securities, deferred

company group here studied and less than one-third the amount controlled by the largest.¹ The uselessness of detailed operating supervision is further demonstrated by the success of the North American Company, the one company here considered whose policy did not include this characteristic.

It is not evident exactly how the consolidation of street railways, electric companies, gas companies, ice companies, and water companies under the management of the same parent company can add to the efficiency of the family operations. The problems of operation and management in these fields are as diverse technically as the family is heterogeneous.

Purchasing activities. Savings accruing from quantity purchases comprise another much-talked-of advantage of holding company affiliation. There is a goodly measure of truth in the statement that quantity purchases, particularly when planned to fit the seasonal and cyclical low-cost periods of producers, will result in worth-while reductions in the costs of materials and supplies. But again there is the question of how large a company or group needs to be in order to obtain the utmost profit from this source. Undoubtedly there are limits below which prices will not go even under the influence of the quantity pressure that can be exerted by group purchasing. Of course, there are problems of checking and controlling the quality of materials purchased which are more readily solved by the large purchaser than by the small one without facilities, but such technical service ought to be available to concerns with less than \$500,000,000 book assets. Attention is called to the fact that detailed management control is not a prerequisite of any economies of purchasing that may accrue to the group demand of a holding company system. The North American Company, for instance, with its minimum of managerial control, negotiated "National Users Agreements" which gave subsidiaries the

charges, and all depreciation or retirement reserves. Thus, in so far as the accounting records may be accepted, the amount of "book assets" represents the net book value of all real assets controlled by the several holding companies including operating properties, investments, and miscellaneous assets.

¹Detroit Edison Company book assets, December 31, 1929, \$278,536,523.

benefits of quantity discounts, but left the details of purchasing to the managements of the operating units.¹

Engineering services. The holding companies allege that they can make the technical services of engineers available to subsidiaries at a much lower cost, considering their quality, than could be obtained elsewhere. In this respect it should be borne in mind that there are independent engineering and construction companies of good repute available to undertake tasks of any complexity and to give advice and estimates on engineering projects. The question of relative cost may be a debatable one, but that of the availability of service is not. The basis of the holding company arguments for their low-cost efficiency is, of course, the fact that they can afford to hire and employ continuously the highest-grade engineering talent by virtue of the extent of their operations. Comparing the position of large holding company groups with the independently operated Detroit Edison Company, one is inclined to question whether the latter does not enjoy as efficient engineering service as, for instance, its neighbor, the Detroit City Gas Company, which is owned and controlled by the United Light and Power Company through the American Light and Traction Company.

Construction services. The same things are usually said about economy in construction that are included in the arguments for holding company purchasing and engineering service. Also the same replies may be made: There are limits on the quantity purchasing economies which can be effected in the purchase of construction materials, and there are possibilities of contracting with independent concerns for construction work. In fact, it was the definite policy of the North American Company to let contracts for construction projects that were beyond the scope of the staff of each subsidiary's operating engineers.

Public relations services. In dealing with the public, both in its organized capacity as the government and in its unorganized capacity as the customer, a holding company can undoubtedly guide the management of operating units more successfully

¹It should not be inferred in any case that the holding companies purchase all materials and supplies for their constituents; usually they purchase only items of large moment in utility operation and construction.

than the subsidiaries can guide themselves. Problems of business policy, or "business politics," are necessarily involved, and satisfactory management in such respects may demand unusual training and personality. The degree of efficiency exercised in handling such problems defies measurement, but there should be greater opportunity of securing the necessary abilities and making them available to operating companies through a large parent organization. Also, the advantage of having nation-wide holdings should enable a parent company management to cast off any narrow provincialism that might tend to influence the executive of a purely local utility.

With respect to the problems of public relations, all utilities are similar, be they gas, electric, railway, or telephone companies; they are all public utilities or businesses endowed with a "public interest." There is, in the set-up of the typical public utility holding company, the machinery for attacking this very important problem and for settling the relationship between the service companies and the public.

It should be noted that in the above discussion the statements have referred only to possibilities and not to actualities. In the history of holding companies, the power to deal with and influence the public has thus far been generally misused or ignored. This "misuse" of power has been and continues to be the subject of enough investigations so that nothing further need be said here, except to point out the possibility that some of the so-called "misuse" may well have been the result of "mismanagement" rather than of conscious application of power to unsocial ends. In other words, holding companies, in an attempt to protect their immediate interests before regulatory commissions and courts, have often enough followed such short-sighted, mistaken policies that they have lost golden opportunities to work toward a reasonable and permanent settlement of their public relationships which would permit them to proceed without the continuous threat of increased regulation, government ownership, and confiscation.¹

¹It will be interesting to watch some utilities withdraw their plea for rate bases determined by "cost of reproduction," as and if the price level continues low.

The fact cannot be ignored that the massed wealth under holding company control represents power to affect public relations. Misuses of this power are left for others to investigate and weigh; this study merely takes occasion to point out that parent companies could do more for themselves by initiating far-sighted policies with respect to their public dealings than they can hope ever to do by purchasing in quantities, by hiring first-rate engineers, or by supervising the technique of gas production. What holding companies have done has undoubtedly been of some benefit to the subsidiary organizations and has reflected profit to the parent companies, but their efforts so far have been short of the possibilities.

Fiscal agency services. It is argued that a parent company can render valuable service to its subsidiaries by acting as their financial agent in the country's financial centers. Yes, it can do so; but any trust company in New York City can be hired to act as transfer agent and to act as paying agent in connection with security contracts. Thousands of corporations, large and small, find it possible and profitable to secure the technical and legal services needed to handle financial transactions when those services are required. Any corporation large enough to issue securities is large enough to secure the needed services without having a prearranged contract for them. A service can be rendered, but it is difficult to conceive of much differential advantage accruing from holding company performance of that service as compared with trust company performance.

Financial services. Much that is pertinent to the subject of financial services will be discussed in later chapters, but the most commonly alleged advantages to be derived from parent company control of system finances may be mentioned here. First, such parent company control is supposed to lend strength of diversification to the utility system and thus enhance its credit. Certainly the companies examined in this study show every evidence of diversification, both geographical and industrial. Second, the existence of the holding company form makes possible the substitution of large parent company issues for small operating company issues, a procedure designed to reduce

the costs of capital. Numerous examples of these large issues will be examined in connection with later discussions. Third, holding company connections are presumed to make possible the raising of capital for extensions and improvements of service that would not be possible under a system of isolated unit operation, and it is true that holding companies have raised capital and spent it freely in the extension of service. Fourth, and seldom mentioned except by those antagonistic to holding companies, control of financial affairs enables a parent company to arrange a financial structure so that control of large systems may be effected with a relatively small investment. As many studies have proved, millions of dollars' worth of operating properties are controlled by relatively small investments in parent company voting securities.¹ There is nothing wrong with such control, *per se*; it is merely a source of power that may be misused, and when misuse is a proven fact, it results in a problem of extreme social significance.

This study, however, is not immediately concerned with the social problem; it is concerned with the problems of business management measured in profits and values. Hence, this analysis will attempt to test the validity of holding company allegations and to determine the extent to which the holding company can claim the credit for facilitating the raising of capital at reduced costs. Are the existing holding company set-ups, typified by the diverse forms herein described, necessary and essential to the achievement of these admittedly important financial services? The answer is undoubtedly "yes" with respect to the fourth of the above-mentioned points — the possibility of using the holding company form of organization to facilitate control of large amounts of capital with relatively small investments. The practice of pyramiding,² so often

¹K. Field, *The Public Utility Holding Corporation* (unpublished thesis, University of Illinois); H. S. Raushenbush and Harry W. Laidler, *Power Control* (New York: New Republic, Inc., 1928); United States Federal Trade Commission reports on utility corporations; and unpublished papers of students of public utility management in the School of Business Administration, University of Michigan.

²"Pyramiding" refers to the practice followed by parent companies of establishing intermediate holding corporations for holding securities of operating

referred to and exemplified in the companies here considered, is a practical means of reducing the amount of investment necessary to control a large public utility system.

Aside from the investment-reducing qualities of holding company organization, the advantages of existing forms of holding companies may be questioned for reasons similar to those advanced in face of the other alleged advantages of holding companies. It is true that large corporations are able to raise capital more readily and more cheaply and thus give more extensions and improvements of service than small companies can, but it is not necessary to create a billion-dollar corporation to achieve those advantages. In so far as parent company securities are to be substituted for those of operating units, the element of diversification achieved by holding companies tends to increase the attractiveness of utility investments, and larger issues are made possible, but it is doubted whether such substitution has endless advantages. In the year 1931, the Detroit Edison Company issued \$35,000,000 of 4½ per cent refunding mortgage bonds which were sold to the public at par. This suggests the possibility that operating units can be made to stand on their own feet financially, and that increased size is not in all cases essential to the securing of adequate capital at reasonable rates.

Reviewing the discussions of large-scale production and management, it is felt that limitations should be placed on the advantages which are mentioned in the standard arguments of the holding company interests. These advantages should not be thrown out of consideration in their entirety, because it is true that they do exist in some degree. There is serious question, however, whether holding company interests can reasonably expect that these same arguments of self-justification can be applied forever as the size and scope of their controlled properties increase.

Any economies of large-scale production must be limited to contiguous properties, and, for the most part, to properties

or other holding companies to make possible the issue of non-voting securities and thus diminish the control investment. For example see Raushenbush and Laidler, *op. cit.*, chap. 3.

rendering the same type of utility service. The advantages of large-scale management and control of a group of operating companies are restricted by human capacities and by the limited possibility of organizing executive ability in the holding company to render better service than that obtained by sizable units operated by their own staffs. Reference has been made to the efficient management of the Detroit Edison Company under the direction of Mr. Alex Dow, with perhaps the implication that any operating unit the size of his company could be self-sufficient in matters of production and management. Such might be the reasonable implication, if there was a thoroughly capable executive for every \$200,000,000 investment in the utility industry, and providing such investments were concentrated in limited areas like those served by the Detroit company. Even admitting that there is some scarcity of high-grade executive ability in the utility industry, it is difficult to believe that there are only a dozen or so executives who can do justice to the solution of the industry's management problems, and hence that it is desirable to have only a few large holding companies in the country.

PROFITS OF PARENT COMPANY OPERATIONS

Most pertinent to this inquiry into the financial policies of holding companies is the question of the profitableness of parent company management activities. So far in this chapter there has been little discussion except that concerning the efficiency of various practices as measured in physical or general economic terms. Now there is occasion for a consideration of the value of such activities to the holding company in terms of dollars and cents. The determinants of holding company profit from managerial activities will be the cost of performing the management services and the revenues arising from the services rendered.

The revenues which accrue to the benefit of a holding company as a result of its management activities may come from two sources: fees collected for services, and greater dividend returns resulting from increased operating company profits. This latter possibility results from the nature of the parent-

subsidiary relationship which is typically one of holding company ownership of equity stock in subsidiaries.¹ With this assumption, any decrease in operating expenses might be expected to result in an increase in the distributable income accruing to the subsidiary common stockholder — namely, the parent company — because the return to other investors is usually fixed or limited by bond and preferred stock contracts. The two sources of holding company revenue, fees and dividend increases, are not mutually exclusive, for a parent company may charge a fee for its services and still effect savings in operating expense which will tend to increase the profits of operating units; but of the two, the fee is the more definite and certain, because it is paid by the operating company as one of its expense items, having priority even over the payment of interest and dividends.

Of course there can be a profit from the rendering of holding company services only when the fees or dividend increases resulting from management activities exceed the cost of rendering the service. That there are such expenses to the holding company may be readily imagined. Mr. Erickson of the Byllesby Engineering and Management Corporation, which serves the Standard Gas and Electric Company and subsidiaries, reported in 1929 that the staff of the management company comprised "considerably over four hundred employees."² The Commonwealth and Southern Corporation, owning extensive properties east of the Mississippi, had hundreds on the staff of its engineering department in New York City; Jackson, Michigan; and Birmingham, Alabama; from which points the engineering and supervisory services emanated. In recognition of the expense involved in such an organization, the recent retrenchment program of the Commonwealth and Southern company resulted in the elimination of its management subsidiary and the release of most of its employees. Thus, in face of the expense of maintaining elaborate management and engineering

¹Holding companies do own other than common stocks in their subsidiaries; i.e., bonds, notes, preferred stocks, etc.; but the characteristic relationship is one of a common stockholder in the controlled corporation.

²Letter to the author.

organizations large enough to render specialized services under conditions which necessitate travel and communication with far-flung properties, it is evident that revenues must be forthcoming in considerable sums to justify the service from a profit standpoint.

In view of the necessity for management income to balance management outgo, more detailed consideration will now be given to the possibilities of and limitations on the revenue that can be expected as the result of management services rendered by parent companies and management subsidiaries. First, recall the basis on which operating utilities are permitted to earn under the existing system of rate and profit regulation. "A fair return on the fair value of property used by it for the convenience of the public" is the rule established by the Supreme Court in the case of *Smyth v. Ames* in 1898.¹ Although this decision referred to rates charged by Kansas railroad companies, it has been the rule in rate regulation for utilities of all types, including water companies, gas companies, electric companies, and street and interurban railways. This rule has survived many storms and batterings which have affected the interpretation and application of its "fair value" and "fair return" concepts, but it still holds that the earnings of public utilities are limited. The limit may vary according to court and commission interpretations of the rule, and it is recognized that the rate of return may be permitted to vary with the efficiency of operation,² but it is still a fact that a "penny saved" is not necessarily a "penny earned" from the utility stockholders' viewpoint.

In the previous discussion of the alleged operating economies of holding company management, considerable doubt was expressed regarding the existence of such economies in unlimited degree. Let us for a moment assume that substantial savings are possible and that considerable increases in efficiency may be effected by holding company management. Such increases in operating efficiency would reduce costs and increase

¹169 U.S. 466 (1898).

²H. C. Spurr, *Guiding Principles of Public Service Regulation* (Rochester: Public Utilities Reports, Inc., 1926), III, 97-124.

the profits of operation, but under regulation these profits could not exceed a "fair return." If they tended to do so, the machinery of regulation would eventually effect a rate reduction and eliminate the profit increase. If extensive purchasing economies were effected by holding company quantity purchasing, the result would also tend to be reflected in reduced operating costs; or, if the material were applied to construction, a lower rate base figure would result. Any engineering or construction economies brought about by parent company supervision and service would have the same tendency to reduce value, and this reduced value in turn would prevent the enjoyment of the savings by the common stockholders — the parent company. Thus there would be an ever-present tendency for all operating economies to accrue to the benefit of the consumer in the form of lower rates, rather than to the holding company in the form of higher common stock dividends or increased equity values.

This should not be taken to mean that the parent company is deprived of all incentives for efficient operation. As pointed out above, commissions will recognize increases in efficiency by permitting some increase in the rate of return allowed. The reasonableness of rates is tested in practice not only by study of the costs of rendering service, but also by comparison of a given company's rates and service with those of other concerns. Such comparison may permit the management to enjoy some increment of the increased profits.¹ Further, there is a well-known inertia in the regulatory machinery which might, for a period of time, permit the full enjoyment of increased profits until these profits attracted the attention of customers, politicians, or the regulatory commissions. Also to be considered is the fact that rate reductions may redound to the long-run advantage of the holding company by creating customer goodwill and confidence in the management, which would assist in repelling any unjustified attacks on the utility.

The analysis immediately preceding refers solely to operating economies that may be effected by holding company man-

¹Some of the so-called "modern franchises" are designed to permit company and customers to share in profit increases on a contractual basis.

agement, and it is necessary to make a distinction between those and the possible economies of financial management. Financial economies are taken to mean any savings that may be made in the costs of capital, which, by the very nature of utility regulation, accrue to the benefit of the residual owners—the common-stock-holding parent company. The rule which limits earnings takes no cognizance of the method of financing in determining either “fair value”¹ or “fair return.” Thus, if a holding company is able to borrow \$10,000,000 at a 5 per cent effective rate of interest, instead of the 6 per cent effective rate that would be necessary if the operating company credit alone were used, the saving of 1 per cent on \$10,000,000, or \$100,000 per annum, will accrue to the benefit of the parent company by making so much more of the operating profits available for the payment of dividends. Hence, there is every incentive for a parent company to effect financial savings but a lesser incentive to effect operating economies, in so far as the possibility of enhancing holding company revenues through dividend payments is concerned.

The other source of holding company revenue — namely, fees collected for supervisory, engineering, construction, and special services — deserves special consideration because of the uncertain status of this sort of charge. The usual practice, where the fee system is used,² has been to charge a certain percentage of gross revenues for management and supervisory service, a given percentage of construction cost for engineering and construction services, and a percentage of par value of securities issued for financial services. For example, we find that the Byllesby Engineering and Management Company charged its subsidiaries in amounts ranging from nothing to as high as 4½

¹“Capitalization” is one of the factors mentioned in *Smyth v. Ames* as being a determinant of the rate base, but it has never been particularly effective except in cases of weak utilities that appeal for higher rates to enable them to pay interest and maintain credit. It may be noted that the recent appeal of the railroads for higher rates was strongly argued for on this basis.

²The North American Company charges no fees because it renders no service other than acting as New York fiscal agent for its subsidiaries. For this it makes a nominal charge. Some other organizations bill their subsidiaries with the cost of any service rendered, thus eliminating any profit considerations from that source.

per cent of gross revenues for management services, the amount depending on the "circumstances," and averaging about $1\frac{3}{4}$ per cent of gross earnings.¹ The United Light and Power Company charged 2 per cent of gross revenues for management services and various amounts for engineering, construction, and special services² while the Electric Bond and Share Company, by the contracts effective in 1929, introduced a "block rate" of charge for management, construction, and financing service. This block rate was applied to gross revenues of subsidiaries and provided for lower unit charges as gross services increased; starting with 1.6 per cent of the first \$250,000 of monthly gross revenue and decreasing until 0.5 per cent was charged on all revenue in excess of \$5,400,000 per month. As such things go, this scale seems reasonably designed in view of the decreasing unit costs of servicing larger companies. The American Telephone and Telegraph Company has long charged its subsidiaries what it calls a "license fee," which in 1925 was $4\frac{1}{2}$ per cent of subsidiary gross revenues, but which was gradually reduced until in 1929 it was only $1\frac{1}{2}$ per cent of gross revenues.³

The real effect of these fees may be better understood if consideration is given to the amount which the Detroit Edison Company would have had to pay for management services if it had been under management contract with the Electric Bond and Share Company in 1929. The average monthly revenue of the Detroit company was about \$4,500,000 which, at the Electric Bond and Share Company contract rates, would have cost approximately \$40,000 per month, or nearly \$500,000 per year. No wonder, then, that there is some occasion to question the reasonableness of such charges.

It should be noted here that the arrangement for management and other services made by the American Power and Light Company and subsidiaries with the Electric Bond and Share Company did not provide revenue for the parent

¹Letter to the author.

²Evidence in reply brief for plaintiff: *Grand Rapids Trust Company Receiver of Grand Rapids, Grand Haven and Muskegon Railway Company v. The United Light and Power Company*, pp. 144-171.

³*Smith v. Illinois Bell Telephone Company*, 282 U. S. 133, 144, 151 (1930).

American Power and Light Company.¹ Rather, this revenue went directly to the Electric Bond and Share Company, an organization outside the American system, and nothing was added to the revenue of the holding company by means of the fee system used in that organization.

It has been the approved practice of subsidiary companies to charge their management fees to operating expenses along with labor, material, supplies, and other expenses; or, if the charge was for construction, to capitalize the fee as one of the costs of construction. In this way the parent companies were sure of their fees, and, in so far as the charges were allowed as operating expenses or construction costs,² they were covered in the operating companies' rates and did not reduce operating profits. The question of the legality of fees charged by holding companies has been the subject of many commission and court decisions. The utility commissions have tended to look askance at such charges and to force the utilities to justify them as subsidiary operating expenses. The commissions have applied tests of value, tests of alternative costs of service, and tests of actual cost of service as recorded by the parent company to determine the legitimacy of management fees, and have done so with varying degrees of success and with varying results.³ Until recent months the legitimacy of such charges was governed by a ruling of the Supreme Court handed down in 1922 in the case of the *City of Houston v. Southwestern Bell Telephone Company*.⁴ In discussing the relationship between the parent company (American Telephone and Telegraph Company) and the subsidiary (Southwestern Bell Telephone Company), and the charges made for service by the former, Justice Clark said:

"It is true that the company did not introduce proof to show what the profits of the two companies (American Telephone and Telegraph Company and its

¹See Chart 6.

²These charges are often questioned and sometimes reduced by regulatory commissions.

³Warren Wright, "Public Utility Management Fees," *Journal of Land and Public Utility Economics*, VI (November, 1930), 4.

⁴259 U.S. 318 (1922), 42 Supreme Court Reports 486.

subsidiary, Western Electric Company) were, either upon the business done with it or upon their entire business; but it did introduce much evidence tending to show that the charge made and allowed for the services rendered and supplies furnished by them was reasonable and less than the same could be obtained for from other sources."

According to this ruling, only the indefinite criterion of "reasonableness" was set up as a test of the validity of such fees and the right to collect and charge them to the operating expenses of the subsidiaries. Many times this ruling was questioned in subsequent cases, and it was quite firmly established that, unless it could be proved that the services were not worth the amount paid for them, the fees could be collected as operating commitments of the subsidiary units.

The status of the fee system as it existed on January 31, 1930, is well summarized in a decision of a United States District Court in the case of the *Illinois Bell Telephone Company v. Mommyhan*.¹ In discussing the charges for services the court said:

"... It is not incumbent on plaintiff to show the cost of the services to the American company. The test is the nature of the benefits received by plaintiff and whether or not it probably could have secured better terms elsewhere."

The court cited many cases subsequent to the Southwestern Bell case which had been in support of this theory.² As long as this theory continued to hold in the courts, public utility holding companies felt fairly sure that the fee-collection system would provide steady revenues in sizable amounts, because the burden

¹P.U.R. 1930 B 148 (38 F (2d) 77).

²*Missouri ex. rel. Southwestern Bell Telephone Company v. Public Service Commission* (1923) 262 U.S. 276, 67 L ed 981, P.U.R. 1923 C 193, 43 Supreme Court Report 544, 31 A.L.R. 807; *United Fuel and Gas Company v. Railroad Commission* (1929) 278 U.S. 300, 73 L ed 390, P.U.R. 1929 A, 433, 49 Supreme Court Report 150; *Indiana Bell Telephone Company v. Public Service Commission* (1924) 300 Fed 190, P.U.R. 1925 A 363; *Northwestern Bell Company v. Spillman* (1925) 6 F (2d) 663, P.U.R. 1926 A 330.

of proving that the "value" of services rendered was less than the fee charged would be a difficult one for a plaintiff to undertake.

However, the utilities were compelled to discard any feeling of smug satisfaction they may have had with respect to the favorable status of their fee system, when the Illinois Bell case was appealed to the Supreme Court. Out of that court's decision, rendered by Chief Justice Hughes, came a hint of a new order of things.¹ In the course of his opinion Chief Justice Hughes said:

"... we see no reason to doubt that valuable services were rendered by the American company, but there should be specific findings by the statutory court with regard to the cost of these services to the American company and the reasonable amount which should be allocated in this respect to the operating expenses of the intra-state business of the Illinois company . . ."

The case was returned to the lower court for further findings. Until those findings are brought out and passed upon by the Supreme Court, one cannot know the full significance of Justice Hughes's remarks, but there is certainly a strong indication that, in the future, cost is going to play a larger part in the determination of the "reasonableness" of service fees charged by holding companies. If the decision should be to consider only cost, any profits derivable from many management fees would be eliminated. If cost is taken merely as one factor in the determination of reasonableness, there may remain some increment of profit to accrue to the holding companies' benefit.

Perhaps the feeling that cost will be the determining factor in the future is what has led to periodic reductions in the rate of the fees charged by the American Telephone and Telegraph Company² and has influenced the managements of some other utilities³ to abandon the fee system and to substitute a cost basis

¹*Frank L. Smith, et al. v. Illinois Bell Telephone Company* 282 U.S. 133, 144, 151 (1930).

²The elimination of equipment rental charge accounts for at least part of the fee reduction.

³Notably the Commonwealth and Southern Corporation.

for rendering service. The fact that the current Federal Trade Commission investigation of utility corporations is bringing to light more facts about the amount of fees paid to management companies may also be influencing the parent companies to change the basis of their relationships to subsidiaries. To say the least, there is no longer the same assurance that any profits there may have been in management fees will be continuously available.¹

The dubious prospects for parent company profits from management fees leave as possible sources of profits those resulting from production and operating economies and those resulting from financial economies. The limitations and possibilities of profit from operating savings have been considered, and the reasons for expecting profits from financial activities have been discussed. One can see little reason for believing that the expansion of public utility holding company systems adds to the profitableness of those systems, except in so far as increased size may result in increased total profits without increase in the rate of profit.

CONCLUSIONS

In this chapter there has been a discussion of the management relationships between public utility holding companies and their subsidiaries with a view to determining the reasonableness and profitableness of holding company activities. There has been a comparison of the practices of five specific companies with attention called to the procedures of still other concerns. As a result of these considerations, certain conclusions with respect to management policies seem to stand out, and a recapitulation of the conclusions may be in order.

¹Professor M. G. Glaeser describes Wisconsin's new utility-regulation statute as giving the Wisconsin Public Service Commission "powers over holding company operations . . . more far-reaching than any hitherto conferred upon any commission . . ." The statute referred to gives the commission the right to approve all contracts between operating companies and holding companies before they can be put in force and provides further that "no proof [of the reasonableness of contracts] shall be satisfactory . . . unless it includes . . . the relevant cost records and other relevant accounts of the affiliated interest . . ." *Progressive Ventures in Commission Regulation, "The New Measures in Wisconsin," Part I, Public Utilities Fortnightly*, February 4, 1932, p. 152.

It seems reasonable to conclude that the type of holding company represented by the organizations herein considered is neither economically justifiable nor necessary to the profitable operation of utility systems. It is true that they and many like them have grown and prospered, but the fields of their activities have been virgin; consolidations, mergers, and promotions have been profitable perhaps in spite of, rather than because of, the type of holding company organization set up to exploit them. In coming years, when the frontier of new and unexploited regions disappears, will come the real test of holding company efficiency. Competition may never become the effective and destructive force in the utility industry that it was in the early days of the railroads when cut-throat rate policies laid low both strong and weak companies; but social control, for all its slowness, is bound to overtake this monopolistic industry in some way, be it in the form of extended regulation or government ownership, and under these conditions even the fittest may not survive.

In support of the general statement implying that holding companies, in their present form, offer no differential economies, specific weaknesses in their construction have been pointed out which reflect the limitations on the economic possibilities of such combinations and consolidations. Also there has been a consideration of the profitableness of typical holding company management procedures which showed tendencies of reduction, if not elimination, of profits from such activities as the providing of managerial, supervisory, and engineering services to subsidiaries.

The greatest hope for the large holding company groups seems to consist in the fact that such organizations have a peculiar characteristic which does fit them to perform two tasks. This characteristic may be turned either to their benefit or to their ultimate destruction depending on how it is used. The characteristic referred to is the power of massed wealth, which is the most outstanding feature of modern public utility holding companies. If this power is properly used, it may effect permanent and ethical relationships between the purveyors of utility services and the consuming public. Of more immediate interest,

and more to the point of this study, is the fact that this financial power may be used to dictate policies of capital management which will put the finances of this important industry on a sound basis, make legitimate profits for the parent company, and provide a real justification for the existence of holding company systems of the proper sort which will recognize their limitations as well as their possibilities. If the power of massed wealth is misused, however, the destruction of holding companies is inevitable; social pressure will bring it about, through legislation or otherwise. This end is certain in spite of large temporary profits that may arise from misuse of power prior to the mobilization of public opinion against the unsocial activities of holding company organizations.

In view of the writer's belief that the public utility holding company has its greatest possibilities in matters of financial management, the following chapters will be devoted to a criticism of the financial policies and practices of holding companies as they were evidenced in that type of organization during the years 1925 to 1929. If holding companies have builded well financially, and if they continue to do so, it is believed that their existence is assured, not because of the alleged economies of large-scale production and management, but because their position as owners of utility equities will be fundamentally a sound one. If their financing is sound, and providing they do not misuse their power, holding companies should be able to enjoy a long and profitable future.

CHAPTER 3

PARENT COMPANY VERSUS SUBSIDIARY COMPANY FINANCING

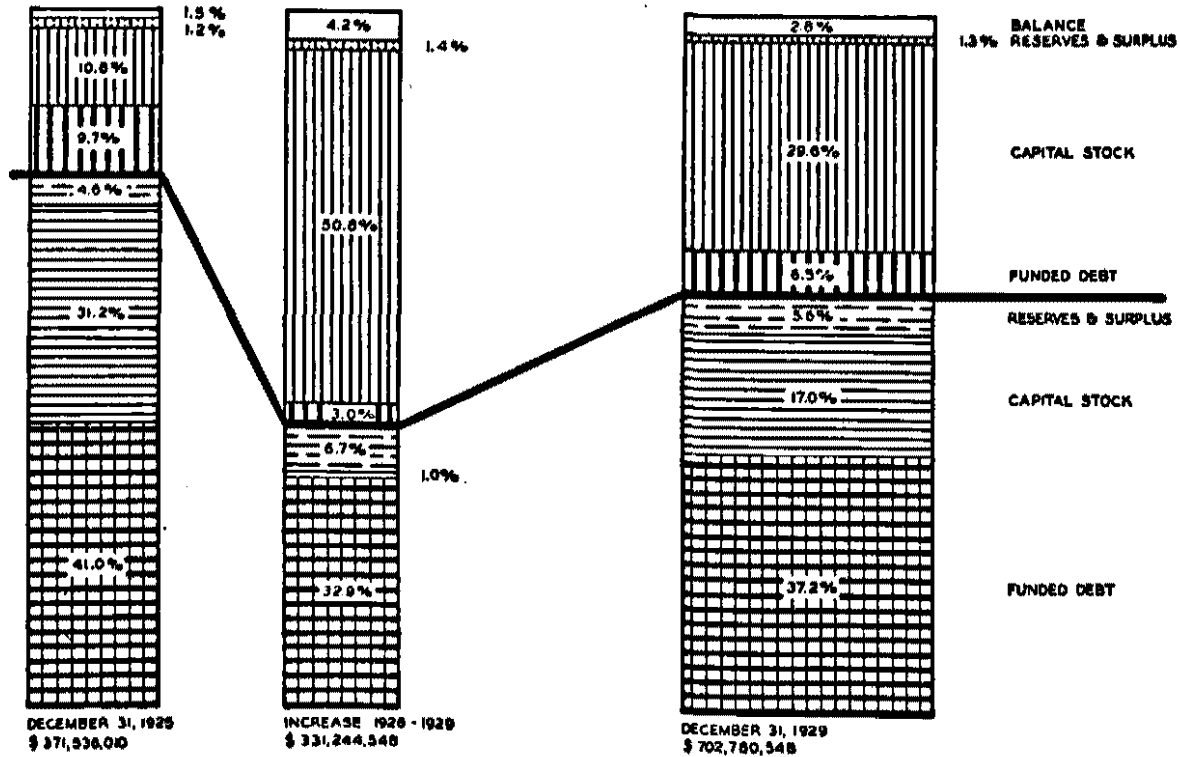
The previous chapter was devoted to considerations of operation and management, and to the location and types of properties consolidated under holding company control. The conclusion from those analyses was that in matters of finance and public relations the position of the holding company showed the most promise. While the various aspects of public relations are not to be ignored, the chief criticism in this and subsequent chapters will be devoted to the financial practices of holding companies. All financial policies will be subjected to the following question: "In view of all conditions, what is good financial policy from the standpoint of holding company management?"

First there will be an analysis of the financial structures of the five holding company systems which are being studied, this to be followed by a consideration of the soundness of the theory on which each structure was based. The reasons, if any, justifying the different types of financial structure will be sought, and particular attention will be paid to the conflicting theories of parent and subsidiary company financing. Certain tests will be applied to the structures and the theories on which they are based to determine which plan or combination represents the best policy and practice in the realm of public utility holding company financial management.

FINANCIAL STRUCTURES

Charts 7 to 11 present composite pictures of the financial structures of the five holding companies on which this study is based. The reason for using this unusual and complex form of graphical presentation is that it is necessary to bring together data which are so detailed as to make a comparison of company performances in tabular form alone inadequate. There are

CHART 7—FINANCIAL STRUCTURE OF THE AMERICAN POWER AND LIGHT COMPANY*
(December 31, 1925 and 1929)



Key: Shading above line—parent company securities and equities.
Shading below line—subsidiary company securities and equities.
Width of bars is proportional to book assets.
Securities and equities shown as percentage of total assets.

*Source: Appendix C.

[46]

three bars representing three phases of each company's size and financial condition. The first bar, in each instance, represents by the width of its base the amount of book assets¹ controlled by the company on the date marking the beginning of this study. The percentages of this base which were represented by various security issues and equities are also shown as an indication of the financial structure. The second bar, in the same way, shows the amount of net increase in book assets during the years under consideration and the changes in financial structure which accompanied the expansion. The third bar represents, in each case, the status of each company on December 31, 1929, with respect to amount of book assets and nature of financial structure.

Perhaps a sample analysis of one company will facilitate the reader's interpretation. For this purpose the American Power and Light Company is chosen. Briefly, the interpretation of the American company's situation would run somewhat as follows:

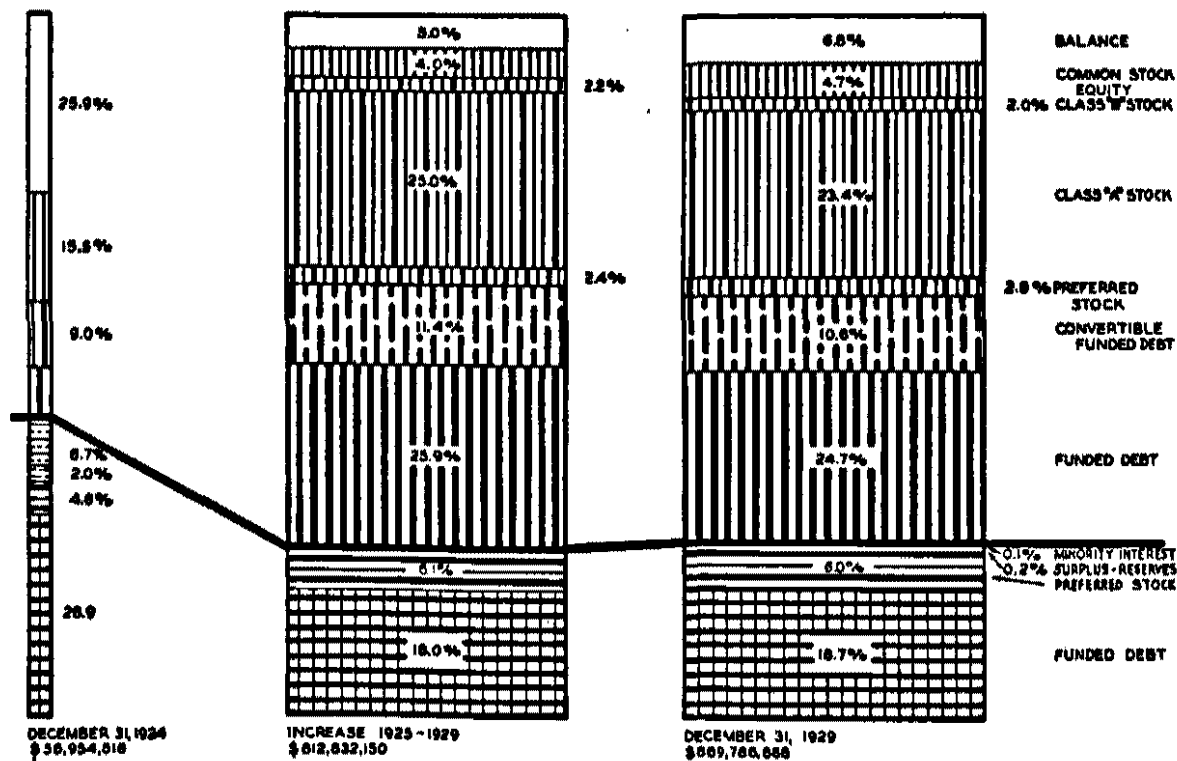
On December 31, 1925, the American Power and Light Company had book assets amounting to \$371,536,010, which were financed, or represented in capital items, 41.0 per cent by subsidiary funded debt, 31.2 per cent by subsidiary capital stock, 4.6 per cent by subsidiary reserves and surplus, 9.7 per cent by parent company funded debt, 10.8 per cent by parent company capital stock, and 1.2 per cent by parent reserves and surplus.

Between December 31, 1925, and December 31, 1929, book assets of the system increased \$331,244,548, and this increase was accompanied by changes in the financial structure which permit the assumption that the \$331,244,548 increase was financed 32.9 per cent by subsidiary funded debt, 1.0 per cent by subsidiary capital stock, 6.7 per cent by subsidiary reserves and surplus, 3.0 per cent by parent company bonds, 50.8

¹See footnote 1, p. 26, for explanation of the "book asset" concept.

CHART 8—FINANCIAL STRUCTURE OF THE ASSOCIATED GAS AND ELECTRIC COMPANY*
(December 31, 1924 and 1929)

[48]



Key: Shading above line—parent company securities and equities.
Shading below line—subsidiary company securities and equities.
Width of bars is proportional to book assets.
Securities and equities shown as percentage of book assets.

*Source: Appendix C.

per cent by parent company capital stock, and 1.4 per cent by holding company reserves and surplus.

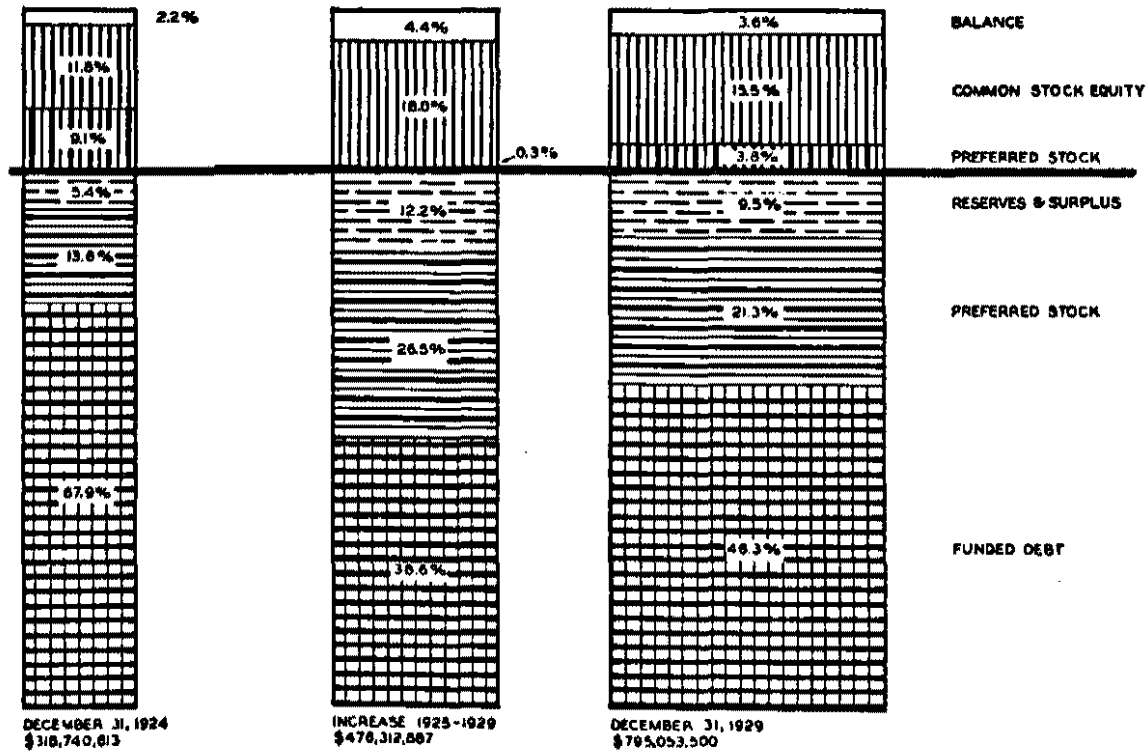
The third figure is a composite of the first two and shows that, on December 31, 1929, the company controlled \$702,780,548 of book assets and that the then-existing financial structure was such that subsidiary funded debt comprised 37.2 per cent of book assets, subsidiary capital stock 17.0 per cent, subsidiary reserves and surplus 5.6 per cent, parent company funded debt 6.5 per cent, parent company capital stock 29.6 per cent, and parent company reserves and surplus 1.3 per cent of book assets.

There was a decrease in the amount of subsidiary company financing in proportion to the size of the property, as indicated by the line separating the securities and equities of parent and subsidiary companies. The difference between 100 per cent of each book asset figure and the sum of the percentages of securities represents the proportion of miscellaneous consolidated payables and accruals.

The size and financial structure of each of the other companies are indicated by similar bars, although the detail varies somewhat with the information that was available. These details are, in each instance, noted alongside the sectors of the third and composite bar.

In effect, these charts offer a summarization of all of the financial changes which took place in each company during the years under observation. They indicate the size of each company at the beginning of the period studied; they measure the net increase in the properties controlled by each company; and they show the relative size of each company on December 31, 1929, all in terms of book assets. Further, the charts define the financial structure of each holding company system and show how each was financed, by expressing the proportion of each type of security or equity involved as a percentage of total book assets. In this latter concept are reflected the results of security sales and retirements, and of earning and reserve

CHART 9—FINANCIAL STRUCTURE OF THE NORTH AMERICAN COMPANY*
(December 31, 1924 and 1929)

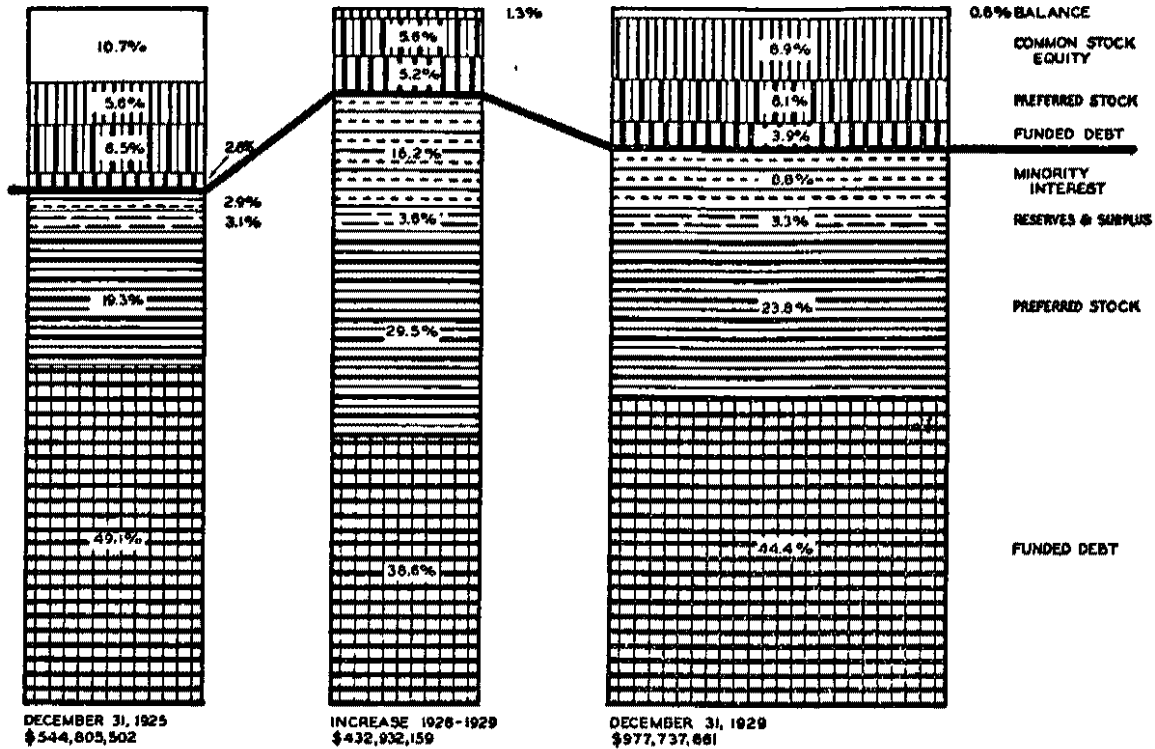


[50]

Key: Shading above line—parent company securities and equities.
Shading below line—subsidiary company securities and equities.
Width of bars is proportional to book assets.
Securities and equities shown as percentage of book assets.

*Source: Appendix C.

CHART 10—FINANCIAL STRUCTURE OF THE STANDARD GAS AND ELECTRIC COMPANY*
(December 31, 1925 and 1929)



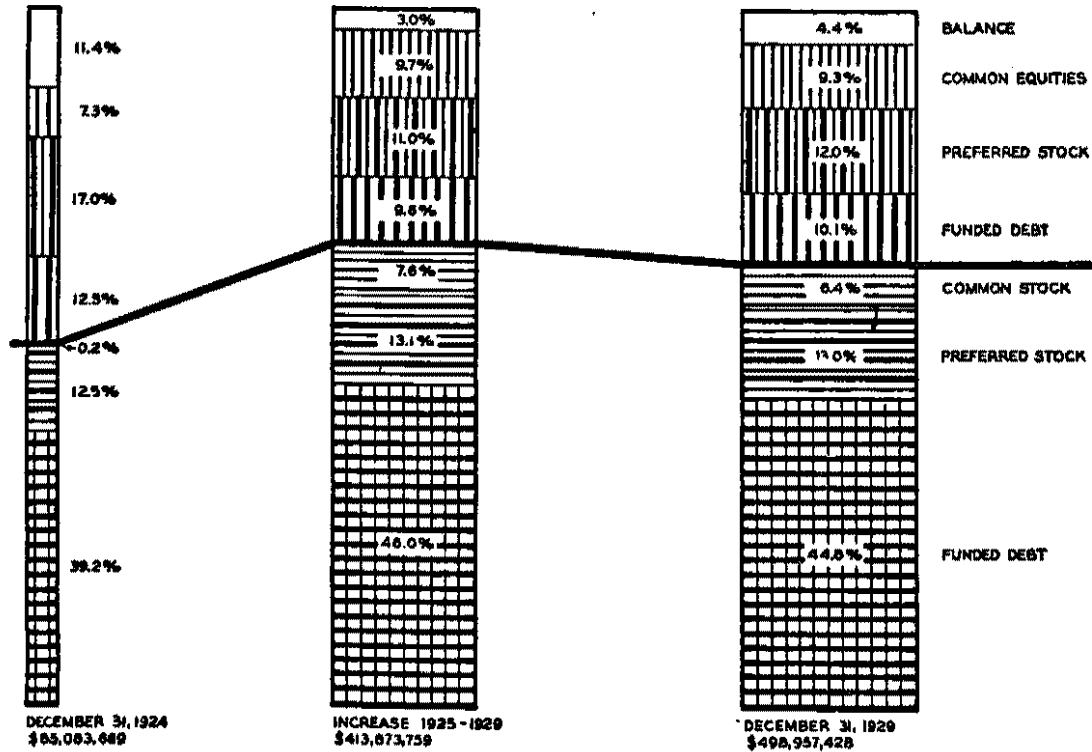
[S1]

HOLDING COMPANY FINANCE

Key: Shading above line—parent company securities and equities.
Shading below line—subsidiary company securities and equities.
Width of bars is proportional to book assets.
Securities and equities shown as percentage of book assets.

*Source: Appendix C.

CHART 11—FINANCIAL STRUCTURE OF THE UNITED LIGHT AND POWER COMPANY*
(December 31, 1924 and 1929)



[52]

Key: Shading above line—parent company securities and equities.
Shading below line—subsidiary company securities and equities.
Width of bars is proportional to book assets.
Securities and equities shown as percentage of book assets.

*Source: Appendix C.

policies which will be treated in detail in later chapters. Such a presentation serves the purpose of affording a bird's-eye view of the entire problem, from which one may work in evolving more detailed concepts of policies and procedures.

COMPARATIVE ADVANTAGES OF PARENT AND SUBSIDIARY FINANCING

Foremost among the problems of general financial policy is that which arises in a consideration of the uses made of parent company and subsidiary financing by the five companies involved in this study. In Table 1 it will be noted that there was some variation in policy with respect to this question at the opening dates of this study.¹ The North American Company, the American Power and Light Company, and the Standard Gas and Electric Company were in about the same relative situation in 1925, each having approximately three-fourths of

TABLE 1—RELATIVE PROPORTIONS OF PARENT AND SUBSIDIARY COMPANY
FINANCING*
(December 31, 1924)

Company	Per Cent of Subsidiary Financing to Book Assets	Per Cent of Parent Financing to Book Assets
North American	76.9	20.9
American Power and Light†	76.8	20.7
Standard Gas and Electric†	74.4	12.1
United Light and Power	51.9	36.7
Associated Gas and Electric	42.2	31.9

*Source: Appendix B.

†December 31, 1925.

its book assets represented by subsidiary financing. The United Light and Power Company and the Associated Gas and Electric Company, on the other hand, seemed to favor parent company financing, each having about one-third of its total book assets represented by parent financing, as compared with

¹"Subsidiary financing" as used in this and subsequent tables refers to the amount of subsidiary securities, surplus, and reserves; whereas "parent financing" includes the total of parent company securities, surplus, and reserves.

only one-fifth for the North American Company and the American Power and Light Company.¹

With this clew to the companies' respective policies, the changes that took place as they expanded and increased the size of their holdings may now be examined. That these increases were significant and represented the need for considerable financing or arrangements to carry the acquisitions, is indicated by the fact that the smallest increase for the period examined was more than \$330,000,000 and the largest more than \$812,000,000.² Table 2 reflects the changes in parent and

TABLE 2—RELATIVE PROPORTIONS OF PARENT AND SUBSIDIARY COMPANY FINANCING ACCOMPANYING FIVE YEARS OF EXPANSION* (1925-1929)

Company	Per Cent of Subsidiary Financing to Book Assets	Per Cent of Parent Financing to Book Assets
Standard Gas and Electric†	88.1	23.7
North American	77.3	18.3
United Light and Power	66.7	30.3
American Power and Light†	40.6	55.2
Associated Gas and Electric	21.4	71.5

*Source: Appendix B.

†Four years, 1926-1929.

subsidiary financing which accompanied expansion by expressing these changes as percentages of the increase in each company's book assets. To note the changes facilitates an accurate conception of the financial pattern which each company selected for itself.

The Standard Gas and Electric Company, with a large proportion of subsidiary financing on December 31, 1925, continued its policy of underlying financing in even more determined fashion, as is evidenced by the fact that its subsidiary issues comprised over 88 per cent of its increase in book assets.

¹The Standard Power and Light Company situation in 1925 was clouded by heavy "miscellaneous payables and accruals" (10.7 per cent of book assets) which were later funded.

²The actual amounts of increases and their relative importance are indicated by the bases of the middle bars in Charts 7 to 11.

The North American Company also followed this path, with better than three-fourths of its new assets being carried by subsidiary securities and equities. The United Light and Power Company pursued the policy indicated by its set-up in 1924; namely, about two-thirds subsidiary and one-third parent company financing. The American Power and Light Company, however, effected an about-face, and, instead of stressing the use of subsidiary financing, used parent company securities in the ratio of 55.2 per cent of increased assets, as compared with only 20.7 per cent of the book assets controlled on December 31, 1925. The management of the Associated Gas and Electric Company so effectively followed out the policy indicated by its position in 1924 that parent financing was used for 71.5 per cent of its increase in book assets, while subsidiary financing was minimized to such an extent that it equaled only 21.4 per cent of the asset increase.

TABLE 3—RELATIVE PROPORTIONS OF PARENT AND SUBSIDIARY COMPANY FINANCING*
(December 31, 1929)

Company	Per Cent of Subsidiary Financing to Book Assets	Per Cent of Parent Financing to Book Assets
Standard Gas and Electric	80.3	18.9
North American	77.1	19.3
United Light and Power	64.2	31.4
American Power and Light	59.8	37.4
Associated Gas and Electric	25.0	66.2

*Source: Appendix B.

Here is evidence of the general financial policies pursued by each of the five companies during the years of expansion, 1925 to 1929. As a result of these policies their respective situations on December 31, 1929, were as indicated in Table 3. Of course, this resultant set-up reflects not only the financing done in connection with the acquisition of new properties, but also the changes that were effected during the same years by renewal, conversion, and exchange. From observation of the facts shown above, the policy of each company with respect to the use of parent and subsidiary financing is quite clear. The

Standard Gas and Electric Company and the North American Company were both committed to the use of large amounts of subsidiary financing; the Associated Gas and Electric Company, at the other extreme, limited its use of subsidiary financing and emphasized strongly the use of parent company issues. The United Light and Power Company and the American Power and Light Company charted a middle course, although this middle course was a new one for the latter company, which had started with a structure not unlike that of the Standard and North American companies. The position of the Associated company on December 31, 1929, outstanding though it was, did not reflect the full extent of that company's policy, because the company had just recently acquired some new subsidiaries¹ with considerable funded debt and preferred stock attached thereto. In fact, the Associated company's position on December 31, 1928, showed subsidiary financing to be only 15.7 per cent and parent financing as much as 75.2 per cent of book assets.² It is interesting to note that these proportions are almost exactly the reverse of those attained by the North American Company on December 31, 1929.

THE "BEST" METHOD OF FINANCING

In view of the diversity of practice evidenced in the examples which have just been considered, it is apparent that there was no universally accepted principle with respect to the relative proportions of financing that should be done by the parent and subsidiary companies. The examples may be taken as quite typical of the different policies followed in the industry, although the Associated Gas and Electric Company policy was probably most extreme. The problem suggested is well worth consideration because alternative solutions lead to radically different financial procedures on the part of the holding company managements.

The management of the Associated Gas and Electric Company was both prophetic and emphatic in support of its

¹Consisting chiefly of Rochester (New York) properties and the American Utilities Company.

²See Appendix A, Table 3, for details.

“revolutionary” action which was designed to reduce subsidiary financing to an absolute minimum. About the most elaborate justification of this plan appeared in the president’s report to stockholders for the year 1927,¹ which was later paraphrased more briefly in investment bankers’ literature as follows:

“The financial policy of the Associated management has been characterized by a radical departure from the practice that had hitherto prevailed among nearly all the large public utility groups. The essence of this policy is the restriction to a minimum of the issue of underlying bonds and preferred stocks of local operating companies and the building up in every possible way of the credit of the Associated company to a point where it could obtain all the money needed for the operating properties through the issuance of its own securities either by loan or by share capital or both. As contrasted with the policy of issuing mortgage bonds or other long term obligations of local operating companies and providing only a small amount of the needed funds through the issuance of parent company securities, the financial plan of the Associated System has . . . distinct advantages.”²

No public utility holding company of any size, not even the Associated Gas and Electric Company, has ever succeeded in carrying such a plan to its extreme conclusion; namely, the complete elimination of all public holdings of subsidiary securities. If such a plan were carried out, it would seem to be a theoretically sound conclusion that the resulting simplification of financial structure and added certainty of earnings to the parent company would firmly establish the financial status of such a holding company. At least the company would be strong in the sense that the elimination of intermediate claims on earnings would make more definite and more certain the

¹Annual Report of the Associated Gas and Electric Company for the year ending December 31, 1927, pp. 11-20.

²*The Associated Gas and Electric System* (Chicago: Harris Trust and Savings Bank, 1929), p. 18.

earnings of the parent company. The carrying out of such a plan would mean that 100 per cent of the operating profits of all subsidiaries would accrue to the benefit of the parent corporation, with no deductions for bond interest, preferred stock dividends, common dividends, or surplus applicable to minority interests on account of public holdings of various subsidiary issues. Under such conditions the earnings of a holding company would not be subjected to the financial risk of accentuated income fluctuations resulting from fixed or semi-fixed charges with a claim on earnings prior to the parent company interests. Such a relationship would amount to approximately the same thing as direct ownership of all the assets in fee, and might suggest the next step, which would eliminate all intermediate corporate entities and thus eliminate the holding company, as such. This procedure would doubtless be impracticable, even though the intention was to do no financing in the name of subsidiaries, because of the legal necessity for maintaining separate corporations in the several states or localities in which operations would be carried on.

As a matter of fact, the Associated Gas and Electric Company had no intention of doing away with its subsidiary financing possibilities, as is evidenced by the following statement of the management: "Because this policy (of parent financing) was new, the management felt that it should not rely on its own judgment as to its soundness and practicability, but should keep in a position where it would be able to resort to the older and customary, *though fundamentally less sound and satisfactory*,¹ plan of financing through underlying operating company securities, if that should become necessary." As subsequent events proved, it was fortunate that such a provision was made. The significance of this provision will be mentioned later.

In spite of the theoretical attractiveness of the new plan of financing advocated by the Associated company, one should be sure that the scheme of using subsidiary financing is really "fundamentally less sound and satisfactory" before it is discarded in favor of the new proposal. Support of subsidiary

¹Italics supplied by the author.

financing may be found in precedents, for that method is in almost universal use by public utility holding companies. In all of the company structures which have been described, except that of the Associated company, at least 50 per cent of book assets were represented by underlying financial instruments. Throughout the field there is the same general tendency, although few other companies reach the extreme situation represented by the Standard Gas and Electric Company set-up.

What the plan of subsidiary financing really presupposes is that operating companies, or groups of them held by an intermediate holding company like the United Light and Railways Company in the United Light and Power Company system, are able to stand on their own feet financially. It seems to the writer that such an assumption is perfectly sound and reasonable when the operating units, or groups of units, are large enough to afford security issues of reasonable size and are profitable enough to make attractive investments of their security offerings. Since, regardless of the method of financing to be used, no holding company will be so philanthropically inclined as to acquire properties without profit possibilities, the question of size alone is pertinent. There is no doubt that small, isolated utility operating units, even when most profitably run, do not have a ready command of new capital, the need for which is characteristic of any unit in the industry. Under such conditions the substitution of parent company securities for those of the operating company would be helpful. But operating companies in large metropolitan areas and groups of small operating units in contiguous regions can be and frequently are of such size that they support marketable issues of securities in their own name.¹ Thus the desirability of parent company securities, as substitutes for subsidiary issues, is confined to those few instances where operating company issues of marketable size are not possible.

¹It is interesting to note in the recent case of the receivership of the Middle West Utilities Company that the prices of bonds of the several Middle West subsidiaries actually increased after the appointment of receivers for the parent company. This seems to confirm what has been suspected in certain other instances; namely, that parent companies may be a drag on their subsidiaries rather than an aid to them financially.

In presenting its arguments for the financial plan of the Associated Gas and Electric Company, the management lists "three distinct advantages" as follows:

1. "It provides a much wider diversification of business and earnings behind the securities of the Associated company.

2. "By substituting Associated company securities for subsidiary company securities, the earnings of the system are more directly applicable to the securities of the Associated company.

3. "Because of the many operating units geographically diversified within a large system of properties, the individual security issues of the Associated company are very large and consequently have wider distribution and greater marketability than those of any individual operating unit operating in a restricted area."¹

The argument that wider diversification of business and earnings is achieved by the use of parent company securities seems pointless, because there are numerous examples of greater diversification than that achieved by the Associated system in such holding company groups as the Standard and North American companies, which achieved even greater diversification of earnings with the aid of subsidiary financing. Furthermore, diversification, as such, is valuable only when it is successful in eliminating or reducing risk, and it is difficult to see how the inclusion of weak income-producers will add to the stability of combined earnings; rather, the effect would be to make the strong carry the weak. Thus the addition of water companies, ice companies, electric railway companies, and natural gas companies contributes little to the strength of a holding company group by virtue of the diversification thereby accomplished. The arguments for geographical diversification likewise lose their force and are inconsistent in the face of the industry's general proclamations with respect to its stability. That earnings are relatively stable is, with a few exceptions,

¹*The Associated Gas and Electric System* (1929), p. 18.

probably as true of a single operating unit of goodly size as it is of a nation-wide group, and this fact becomes nearer and nearer an unexceptional truth as the industrial and social welfare of the entire nation becomes more and more interdependent. The very nature of our industrial organization suggests that the entire United States, if not the whole world, will hereafter enjoy the fruits of prosperity and suffer the pains of depression together; the situation thus becomes one in which world-wide diversification could do little to alleviate the risk element.

The second of the Associated company's "three advantages" has already been admitted to be a theoretically desirable feature, but until there is complete substitution of parent for subsidiary securities, the priority of subsidiary liens and mortgages will continue to make holding company securities dependent upon residual incomes. As was implied previously, the alleged advantage of size is not unlimited, because issues of marketable size are possible in the name of many subsidiary companies.

It has been said that the Associated company manner of parent financing is similar to the method used by the American Telephone and Telegraph Company. Even if this were true, there might be a different justification for such a scheme in view of the nation-wide system of communication maintained by the latter company through its subsidiaries, and the closeness of the operating relationship between them all. As a matter of fact, the American Telephone and Telegraph Company did not provide an extensive substitution of parent for subsidiary financing. It is true that there are enormous amounts of American Telephone and Telegraph Company securities outstanding, but relatively there was no greater proportion of parent financing in that company's capitalization than was evident in the American Power and Light Company set-up. Table 4 shows the American Telephone and Telegraph Company's financial structure as of December 31, 1929. From these data it is evident that the subsidiary companies were furnishing more than one-third of the capital necessary to finance the system's assets.

In addition to the doubtful, or at least limited, advantages of the plan of parent company financing, and in view of the fact that operating securities can be used satisfactorily, are there any positive disadvantages of parent company financing? One disadvantage arises when there is an attempt to shift from the old system of financing to the new and to substitute parent issues for the outstanding issues of the underlying companies. These subsidiary issues must be called or purchased on the market, or else some offer must be made to holders allowing them to effect a voluntary exchange of their underlying securi-

TABLE 4—RELATION OF PARENT AND SUBSIDIARY FINANCING TO BOOK ASSETS OF THE AMERICAN TELEPHONE AND TELEGRAPH COMPANY* (December 31, 1929)

Type of Financing	Per Cent of Book Assets	
Subsidiary funded debt	13.2	
Subsidiary capital stock	5.1	
Subsidiary reserves and surplus	18.2	36.5
Parent funded debt	12.3	
Parent capital stock	33.0	
Parent reserves and surplus	11.5	56.8
Total capitalization considered		93.3
Balance of miscellaneous payables and accruals		6.7
Total book assets (\$4,228,430,008)		100.0

*Source: Appendix B.

ties for parent company securities. Under normal conditions, any of these alternatives will be expensive. If securities are callable, they are usually callable only at a premium. Market purchase of non-callable issues is bound to increase the price as the supply is absorbed. If exchange is attempted, no investor will voluntarily substitute a parent company security for his portion of a good underlying issue unless there is some financial advantage offered in the form of a higher return. Evidence of the increased capital costs involved in changing from subsidiary to parent financing may be found in the exchange offerings of the Associated Gas and Electric Company securities, in nearly all of which the dividend or interest rate offered was higher on an equal par value exchange. Table 5 shows how

the capital costs were increased by security exchanges as described above.

Curious but unauthenticated tales have been heard about practices which undoubtedly grew out of a desire to avoid such expensive substitution. One instance involved action taken by a holding company, shortly after it had acquired a new subsidiary, which threatened default in the payment of interest on the latter's bonds, which were callable at a high premium. Negotiations were finally consummated which resulted in the bondholders' accepting par for their bonds rather than run a risk of loss through foreclosure proceedings. This story is mentioned merely as evidence, of a sort, which shows a recognition of the expense of conversion in an alleged attempt to avoid it by manipulation.

One test which seems to point with disfavor at the use of parent financing is that reflected in market prices. Chart 12 shows the yields of ten bond issues computed from the average monthly prices¹ of those issues for the years 1928 to 1930, inclusive. For each of the five companies under observation one parent company bond issue and one underlying bond issue were chosen, the object being to determine how these respective types of issues reacted during the general economic upset following the year 1929, as compared with their positions in 1928 and 1929. These facts, as shown in Chart 12, are not intended to do more than indicate how these two types of securities performed in the face of adversity, there being no attempt at this point to judge the credit status of individual companies.

It is obvious from the movement of bond yields that the parent company issues, all of them unsecured debentures, were much less stable in price and yield than were the underlying mortgage bonds; the monthly fluctuations of the former were more violent in all cases, regardless of the relative extent to which parent company financing was being used. Furthermore, when the disastrous break in the bond market came in 1931, the debenture issues broke badly and yields increased in all cases, some phenomenally, although there were no defaults or

¹Maturity dates not considered in determining yields.

TABLE 5—CONVERSION SCHEDULE FOR BONDS AND STOCKS OF THE ASSOCIATED GAS AND ELECTRIC COMPANY*
(Effective in August, 1927)

	Principal Outstanding	Basis of Exchange for Shares of \$6.50 Stock	Call Price	Date of Maturity
BONDS:				
Citizens Light, Heat & Power 1st 5s	\$ 1,500,000	10	105	Nov. 1, 1934
Depew & Lanc. L. P. & Cond. 1st 5s	905,600	10	105	Aug. 1, 1954
Erie Lighting 1st mtge. skg. fd. 5s	3,561,000	10	105	Apr. 1, 1967
Indiana Gas Utilities 1st 5s	2,056,000	10	105	July 1, 1946
Kentucky Public Service 1st 5s	946,000	10	102½	Feb. 1, 1941
Lake Shore Gas 1st 5½s	839,000	10¼	105	Nov. 1, 1950
Long Island Water 1st 5½s	2,628,000	10½	105	May 1, 1955
Manila Electric 1st & ref. 5s	103,000	10	105	Sept. 1, 1946
Manila Elec. RR. & Ltg. 1st & coll. 5s	2,700,100	10	105	Mar. 1, 1953
Manila Suburban Ry. 1st 5s	128,000	10	105	Sept. 1, 1946
N.Y. State Gas & Elec. 1st 6s	429,000	10¾	110	Jan. 1, 1952
N.Y. State Gas & Elec. 1st 5½s	4,106,000	10½	107½	Oct. 1, 1962
Penn. P. S. Corp. 1st ref. "C" 6s	6,473,500	11	111¼	May 1, 1947
Penn. P. S. Corp. 1st ref. "D" 5s	3,990,000	10	105	Dec. 1, 1954
Penn. P. S. Co. 1st 5s	2,112,000	10	103	Feb. 1, 1962
Plattsburgh Gas & Elec. 1st 5s	351,000	10	—	Sept. 1, 1939
Richmond Light & RR., 1st 4s	1,359,000	9	105	July 1, 1952
Sioux Falls Gas 1st 6s	588,500	10¼	105	June 1, 1944

Union Gas & Elec. 1st 5s	586,000	10	105	Sept. 1, 1935
24 small issues	2,667,100†	—	—	—
Associated Electric conv. 5½s	62,300,000	11-\$6 stock	105	Apr. 1, 1946
Associated Gas & Electric Convertible 5½s	40,000,000	2-Class A‡ 1-Common	105	Feb. 1, 1977
Convertible "B" 6½s	1,823,400	10-\$7 stock§	105	—
Convertible "C" 6s	1,055,100	10-\$7 stock	105	—
Convertible "A" 6s	2,059,700	10¶	100	—
Convertible "B" 6s	5,000,000	10**	102	—
Convertible "C" 6s	967,000	2¼-Class A†† 10-\$6 stock‡‡	101	—
PREFERRED STOCKS: §§				
Erie Lighting \$2 preference	688,450	1-3	—	—
Indiana Gas Util. 7% cum. pref.	273,300	1-\$7 stock	105	—
Staten Island Edison 6% 1st pref.	3,166,600	1	103	—
Union Gas & Electric 7% cum. pref.	334,400	1-\$7 stock	110	—

*Source: Appendix B.

†Of early maturity, which have been called, or which are in amounts outstanding of less than \$100,000 each.

‡For each \$110 of bonds of \$10,000,000 first presented after Feb. 1, 1928, etc.

§At option of company now and after June 1, 1930, at option of holder.

||After Jan. 1, 1928, at option of both holder and company.

¶After July 1, 1928, at option of holder only.

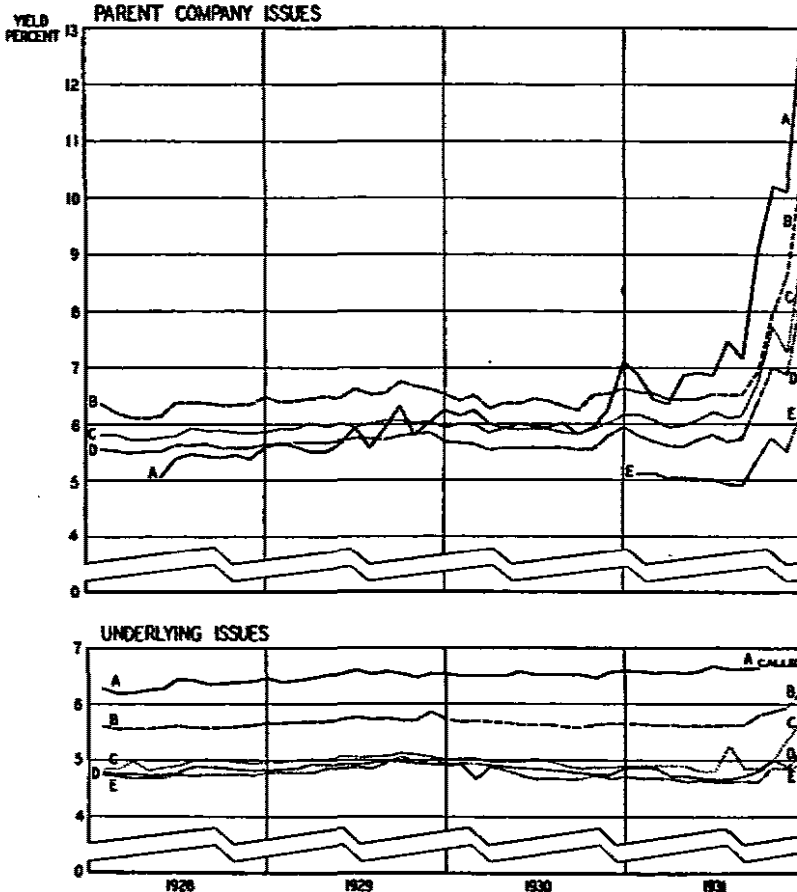
**After Jan. 1, 1928, at option of company and after Jan. 1, 1932, also at option of holder.

††For each \$100 during 1927.

‡‡After March 1, 1930.

§§Par or liquidation value.

CHART 12—EFFECT OF BUSINESS DECLINE ON CREDIT OF PARENT AND
SUBSIDIARY COMPANIES AS REFLECTED IN BOND YIELDS*
(1928-1931)



- Key: A—Associated Gas and Electric Company issues: Parent debentures, 5 per cent, due 1968; Rochester Gas and Electric Company, 7 per cent Series B, due 1946.
 B—United Light and Power Company issues: Parent debentures, 5½ per cent, due 1974; Detroit City Gas Company, 6 per cent first mortgage, due 1947.
 C—Standard Gas and Electric Company issues: Parent debentures, 6 per cent, due 1951; Louisville Gas and Electric Company, first and refunding, 5 per cent, due 1952.
 D—American Power and Light Company issues: Parent debentures, 6 per cent, due 2016; Minnesota Power and Light Company, first and refunding, 5 per cent, due 1955.
 E—North American Company issues: Parent debentures, 5 per cent, due 1961; Cleveland Electric Illuminating Company, general mortgage, 5 per cent, due 1961.

*Source: Appendix C.

threatened defaults in any instance. On the other hand, the underlying issues, while they suffered with all bonds in 1931, did not lose their position to anything like the same extent as did the parent issues.

The conclusion to be drawn from this experience is that parent company financing is not so dependable as that of underlying companies. Although this conclusion is reached after an examination of only a limited number of the total issues involved in the five systems, and although no consideration is given to the relative amounts of bonds and other securities outstanding in each case, the analysis does afford satisfactory evidence of the market's feeling with respect to parent company financing; this feeling is apparently the same irrespective of the avowed policy of companies with regard to the degree of parent company financing involved. Unsecured parent company credit has not stood the shocks of depression and declining earnings so well as the secured credit of underlying companies.

If parent company credit cannot be maintained in the face of all conditions, then the credit of subsidiaries with mortgageable properties must be resorted to occasionally. A consistent policy of parent company financing cannot be carried out under such conditions without incurring unnecessarily high capital costs. Public utilities have the characteristic of needing large amounts of new capital for purposes of refunding and for financing necessary extensions and additions, and this need exists continuously, almost regardless of business and money-market conditions. Therefore, the utilities cannot wait for a time propitious to the type of financing which an inflexible policy might dictate. The conclusion then seems to be that both types of financing must inevitably be used, with a recognition of the advantages and weaknesses of each; parent company issues should be used when the market is good and when there is need for supplementary financing that cannot profitably be based on operating units, and subsidiary financing should be used when the strength of secured, underlying issues demands or permits.

Such is precisely the story one finds in the financing done by the five companies involved in this study. Table 6 indicates

TABLE 6—SECURITIES ISSUED BY FIVE PUBLIC UTILITY HOLDING COMPANY SYSTEMS DURING 1931*

Company	Type of Issue	Purpose	Amount	Sold to Yield
<i>American Power and Light</i>				
Texas Power and Light (Jan.)	1st mort.	Cap. exp.	\$ 4,000,000	5.07%
Washington Water Power (Feb.)	Pfd. stock	Cap. exp.	1,000,000	6.00
Nebraska Power (April)	1st mort.	Refunding	16,500,000	4.37
Pacific Power and Light (July)	1st mort.	Cap. exp.	3,500,000	5.11
Total			\$25,000,000	
<i>Associated Gas and Electric</i>				
Metropolitan Edison (May)	1st mort.	General	\$ 5,000,000	4.26
New Jersey Power and Light (May)	1st mort.	Refunding, etc.	6,000,000	4.37
Staten Island Edison (June)	Notes	General	7,500,000	3.00
Pennsylvania Electric (July)	Notes	Debt retirement	9,000,000	3.75
Rochester Gas and Electric (July)	Notes	Refunding	10,000,000	3.00
Metropolitan Edison (Sept.)	Mort.	Acquisitions	5,000,000	6.00
Mohawk Valley (Oct.)	Debentures	General	1,000,000	6.00
Total			\$43,500,000	
<i>North American</i>				
Milwaukee Electric Railway Light (Jan.)	1st mort.	Refunding	\$15,000,000	5.00
North American (Jan.)†	Debentures	Funding	25,000,000	5.20
Wisconsin-Michigan Power (June)	1st mort.	Refunding	5,000,000	4.47
Total			\$45,000,000	

Standard Gas and Electric†

Standard Gas and Electric (Jan.)	Conv. notes	Acquisitions	\$10,000,000	6.00
Louisville Gas and Electric (Feb.)	1st mort.	Additions	6,000,000	4.68
Northern States Power (April)	Mort.	Refunding	35,000,000	4.65
Northern States Power (June)	Mort.	Refunding	10,000,000	4.59
Wisconsin Public Service (July)	Notes	Refunding	2,500,000	4.50
Wisconsin Valley Electric (July)	Notes	Refunding	4,000,000	5.00
San Diego Consolidated Gas and Electric (Dec.)	Notes	Refunding	1,500,000	5.54
Total			<u>\$69,000,000</u>	

United Light and Power

[69]

Kansas City Power and Light (Jan.)	1st mort.	Refunding	\$27,000,000	4.33
Iowa-Nebraska Light and Power (Mar.)	1st mort.	Cap. exp.	3,500,000	5.30
Kansas City Power and Light	1st mort.	Additions	3,000,000	4.75
Total			<u>\$33,500,000</u>	

*Source: Appendix B.

†The only parent company issue.

‡At that time a subsidiary of Standard Power and Light Company.

the amounts, nature, and yield basis of the financing done by each company during the year 1931 in the midst of the distressing bond market. The most significant fact to be noted therein is the almost total lack of parent company issues; only the North American Company, which had previously avoided the use of all parent company debt, was able or saw fit to use parent company securities for purposes of raising capital during that year. The Associated Gas and Electric Company reverted to the use of underlying issues with \$43,500,000 of subsidiary securities, \$26,500,000 of which took the form of one-year notes, all due in July and August, 1932. The Standard Gas and Electric Company did the greatest amount of public financing, but its position in 1931 was that of an intermediate holding company and not that of a top holding company.¹ The greatest objection to this practice of reverting to the use of underlying security issues in time of stress would seem to be the effect of such financing on the values of outstanding parent company securities. The equities behind parent company issues would be substantially diluted by the sale of prior-lien securities at precisely the time when market values would need the support of thickened equities.

While emphasis has been placed on the weaknesses of parent company financing, because of the radical nature of the change involved in its use, the limitations on subsidiary financing must not be ignored. Subsidiary financing is unsatisfactory and expensive in connection with small, isolated operating units — perhaps even impossible in certain cases. This is because the issues often cannot be large enough to attract a market, or because the development of the project to be financed promises to be slow and uncertain in spite of potential earning capacity. Under such conditions the credit strength of a holding company is vastly superior, and it can be used to advantage in raising funds for the isolated and weak subsidiary.

Even when operating companies are large enough to afford occasional large issues of underlying securities, the nature of the demand for new capital may make it inadvisable to sell

¹By 1931 the Standard Gas and Electric Company was a subsidiary of its former subsidiary, the Standard Power and Light Corporation.

securities as the capital is needed. At the present stage of development in the industry, particularly in the gas and electric field, there is a constant demand for capital expenditures to improve, extend, and add to the facilities of production and distribution. This demand, while not large enough to call for millions of dollars at one time for use by a single operating company, may exceed the amount available from the company's restricted earnings because of the relatively large investment per dollar of revenue which is characteristic of the industry.¹ Under such conditions it may be advantageous if the parent company can satisfy the needs of its subsidiaries out of its own capital, financed by its own security issues, until such time as the subsidiary can afford a marketable issue of securities at a favorable rate without raising more capital than it can profitably and economically use at the time.

THE ASSOCIATED GAS AND ELECTRIC COMPANY EXPERIMENT

Greatest interest attaches to the Associated Gas and Electric Company financial policies, because that company went furthest in its experimentation with parent company financing. Prior to 1930 the Associated company pointed with pride to its performance in the matter of substitution of parent securities for those of its subsidiaries, and also made considerable point of the decreasing cost of capital which was accompanying its policy. Table 7 shows the progress made by the Associated management, during the years 1925 to 1929, in changing the company's financial structure. It is assumed that a continuation of this policy would have reduced still further the number of subsidiary issues existing at the close of 1929 had not the security market made that procedure almost impossible.

In the annual report to Associated stockholders for 1927 attention was called to the fact that "Associated bonds have, since early 1927, been selling on a rapidly decreasing yield basis. Financing during 1928 was done with 4½ per cent and 5 per cent bonds as against 5½ per cent bonds the year before." Chart 13, reproduced from an investor's letter of the Public

¹Investment ranges from \$4 to \$5 per dollar of annual revenue for gas and electric companies.

Utilities Investing Corporation, shows the above statement to have been true for the average yields based on Associated security prices until the middle of 1927. By 1930, however, the above-named distributor of Associated securities used this

TABLE 7—PROGRESS IN CHANGING THE FINANCIAL PLAN OF THE ASSOCIATED GAS AND ELECTRIC COMPANY*
(1925-1929)

Security	Issues at Dec. 31, 1925	Additions to Dec. 31, 1928	Retirements to Dec. 31, 1928	Issues at Dec. 31, 1928	Additions in 1929	Retirements in 1929	Issues at Dec. 31, 1929	Total Issues Retired 1925-1929
Parent company, funded debt	2	8	4	6	3	—	9	4
Parent company, convertible issues	11	9	10	10	4	3	11	13
Parent company, preferred stocks	4	1	—	5	—	—	5	—
Parent company, A, B, and common	3	—	—	3	—	—	3	—
Total parent company issues	20	18	14	24	7	3	28	17
Underlying, funded debt	67	33	69	31	43	2	72	71
Underlying, preferred stocks	12	9	17	4	21	—	25	17
Underlying, common stocks	14	2	14	2	10	1	11	15
Total underlying issues	93	44	100	37	74	3	108	103

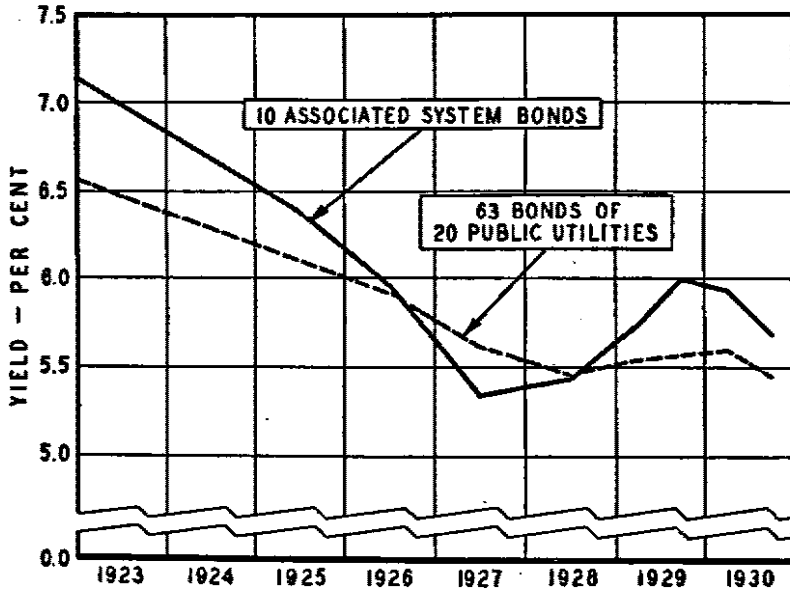
*Source: Appendix B.

chart in a letter dated October 1, 1930, to point to the higher yield of Associated bonds as compared with other utility bonds, and to stress that feature as a selling point. Here is an admission by Associated interests that costs of capital under their plan did not continue to enjoy a favorable differential over other utility company borrowings as measured in market yields.

In Table 6, and in the accompanying discussion, attention is called to the fact that in 1931 the Associated management resorted to one-year notes for new financing. Statements have been observed to the effect that these notes were to be met at maturity by the issue of subsidiary mortgage bonds. Chase Harris Forbes Corporation in a letter dated November 25, 1931, to an inquiring investor stated that, "The funded debt

(of the Associated companies) maturing between June 15 and December 31, 1932, totals \$26,855,000 to take care of which First Mortgage Bonds of subsidiaries legal for savings banks investment in New York, Massachusetts, and Connecticut are reserved in the treasury." These one-year notes arose "principally from the voluntary call for redemption of high-coupon bonds¹ and the substitution therefor of lower rate short term notes, for which low-coupon first mortgage bonds . . . are held in the treasury."²

CHART 13—YIELDS OF ASSOCIATED GAS AND ELECTRIC COMPANY AND OTHER UTILITY BONDS, EXCLUSIVE OF CONVERTIBLE ISSUES* (1923-1930)



*Source: Appendix C.

In these facts is every evidence of at least a temporary abandonment of the policy to reduce the proportion of financing by underlying security issues. Whether the sale of low-coupon bonds in 1932 to meet the maturing notes will result in any

¹Such as Rochester Gas and Electric 7s. See Chart 12.

²*Barren's*, November 23, 1931, p. 28.

real saving depends on the price at which they can be issued in the then-existing market, but it is possible that the maneuver will be costly, if the new issues have to be sold in a high-yield market.¹ This demonstrates the risks that must be taken in the use of short-term financing whether it be for new capital expenditures or for effecting changes in the financial set-up.

It seems reasonable to conclude that the Associated Gas and Electric Company experience proved a failure, or at least resulted in an embarrassing situation demanding temporizing and change, in face of adverse market conditions. This is to be compared with the relative ease with which other holding companies issued bonds and stocks as needed during 1931 by the continued use of subsidiary issues noted in Table 6.²

These recent note issues of the Associated subsidiaries also call attention to a possibility which may at times prove a detriment to a company with a plan of concentration on parent company security issues. The intelligent investor will realize that not only do subsidiary stocks and bonds have priority over and hence reduce the desirability of parent company securities, but subsidiary notes and floating debt have similar priority and may be the source of even greater danger than bonds and stocks, because of the possible embarrassment resulting from early maturities. Further, it is more difficult to keep a close check on the extent of a subsidiary's bank borrowings than it is on its security issues, and hence there may be a feeling that the possibilities of equity dilution through subsidiary borrowings are enhanced when subsidiary credit is kept unused and so readily available for loans.

CONCLUSIONS

The conclusions regarding the general financial policies of public utility holding companies must not be made too definite and dogmatic because the whole holding company idea is too

¹Participating 8 to 10 per cent "baby bonds" (\$10 par) were offered to customers in the amount of \$40,000,000 to facilitate the funding process.

²Of course the factors of management and earning prospects likewise had undoubted effects on the relative ease of 1931 financing, but those factors are difficult to isolate, and it is doubted if they alone would explain the difference.

new, and there has been insufficient time to test the alternative policies that have been in vogue. No feature of the public utility holding company scheme has yet stood the full test of time. However, from the experiences of the few years which have seen the development of alternative methods of financing, certain tendencies are worthy of note. In spite of the apparent theoretical soundness of the type of financing which includes emphasis on the use of parent company securities, that plan has not proved satisfactory in the one instance where it was applied most fully. Perhaps its failure may be ascribed to the fact that it was never carried to its logical conclusion — namely, 100 per cent parent company financing — but certainly it is difficult to discern any differential advantages in its use by the Associated Gas and Electric Company.

The market seems very definitely to prefer securities of underlying operating units, particularly in times of uncertainty, and this favor presumably arises from the specific security offered under the mortgages of operating companies. Whether this feeling on the part of the investor is logical or not, it must be recognized that the investor is the chief source of much-needed capital and his desires must be catered to. Perhaps investors should know that in cases of bond default the foreclosure proceedings growing out of their contractual rights seldom give full protection to their investment, yet it is the writer's belief that much investment education will be necessary before "mortgage bonds" lose the reputation of great security which usually attaches to that type of security contract even though the facts may not, in all cases, justify the reputation. In view of these conditions there is a large balance in favor of financing in the name of subsidiary companies.

The argument that securities issued by parent companies have in the diversification of income sources behind them an advantage not enjoyed by securities of operating units sounds good, but, in effect, lacks substance. There is no virtue in diversification, as such; it adds to the value of securities only when it effectively serves to minimize risk.

However, in spite of the above limitations, practical and theoretical, there are occasions for preferring the use of parent

company financing. Expansion puts great pressure on utility finances, and parent company security issues may provide a supplementary source of funds, such securities being acceptable to the investor when backed by adequate equities and based on proven earning capacities. Also as a means of providing working capital for advances to subsidiaries, parent company issues are logical, and, of course, there must be sufficient parent company financing to provide for the necessary investment in the subsidiary securities which comprise the corporate assets of the parent company.

The fact that the possibilities and limitations of each type of financing were probably reflected in the financial policies of each of the five companies herein studied may serve to strengthen these conclusions. There is a noticeable correlation between the nature of the properties assembled in each group and the general methods of financing used by each — even by the Associated Gas and Electric Company which followed its extreme and peculiar policy. Reference to Chart 2, page 16, representing the corporate set-up and the geographical location of properties of the Associated Gas and Electric Company, will show the existence of a large number of isolated and relatively small operating companies, and the Associated company has been mentioned as having the greatest amount of scattered diversification. This situation was accompanied by the greatest amount of parent financing in the group of five companies, and even a large portion of that classified as subsidiary financing was, in reality, the financing of intermediate holding companies such as the Associated Electric Company and the Rochester Central Power Company. In the American Power and Light Company system the properties were likewise somewhat scattered, and in that case was found the next largest use of parent financing.

At the other extreme were the Standard Gas and Electric Company and the North American Company, both with holdings composed of relatively compact and self-sustaining systems which bore the heaviest burden of financing in the form of subsidiary securities. Even those companies, however, recognized the uses of parent company capital and made use

of intermediate holding companies which served as security issuers for groups of underlying properties.¹ The United Light and Power Company group was financed with a relatively small portion of parent financing, in spite of the considerable number of small and scattered units in its system, but its chief financial strength was exerted by a holding subsidiary, the United Light and Railways Company, and the latter's chief subsidiaries, the Continental Gas and Electric Company and the American Light and Traction Company. In this fashion the scattered units of the United system were brought under the financial wings of large companies short of the parent company itself.²

Thus there are intimations of logic in the uses of the two methods of financing, but this is not proof that each of the companies was fully justified in the extent of its use of the two methods, nor is the correlation between types of properties and types of financing an indication that the general criticisms and suggestions in the previous discussion should be ignored.

¹For the North American Company—notably the North American Edison Company; and for Standard Gas and Electric Company—notably the Standard Power and Light Company.

²From a social standpoint this raises serious question of the need for the United Light and Power Company as an aid to rendering service by these large groups, financially or otherwise.

CHAPTER 4

TRADING ON THE EQUITY

The material in this chapter is very definitely related to that of the preceding one; in fact, the data used are from the same source — namely, Charts 7 to 11. Chapter 3 was devoted to a discussion of financial policies with emphasis on the debatable question of “parent versus subsidiary company financing,” whereas the following analysis will be concerned with facts regarding the consolidated financial structures of public utility holding company systems. It is intended that this discussion should show the extent to which borrowed funds were used to finance the holding company systems, and also the extent to which preferred, classified, and common stock equities were used. The conclusions to be sought will be in terms of the adaptability of the utility business to the methods of financing used by the holding company managements and in terms of the limitations on the practice of trading on the equity.

“Trading on the equity” refers to the practice of borrowing funds to finance a business, thus limiting the amount of owners’ or stockholders’ investment necessary to control it. The owners’ or stockholders’ investment is the “equity” which is traded on, and it represents the residual values in a business over and above the amount of the borrowings.¹ The term “trading on the equity” was originally derived from the legal concept of the “equity of redemption,” which is the mortgagor’s legal right to recover title to his property after fulfillment of the loan agreement for which the property had been pledged. In this sense the term referred only to that valuable right of an owner of mortgaged property, but it will apply here, as in general usage, to the practice of borrowing funds on unsecured promises to pay, such as debenture bonds, as well as to the use of mortgage bonds. For all practical purposes, the risks and

¹Admirably treated from an academic standpoint by Hastings Lyon in *Corporation Finance* (Cambridge: The Riverside Press, 1916), Part I, 50-82.

the profits involved in the use of debenture bonds are about the same in modern finance as if property were actually pledged. As will be noted later, preferred stocks may also be used in a manner which approximates the results of trading on the equity achieved by the use of bonds.

The reason for trading on the equity is obviously the desire of management to secure funds without relinquishing control, and to increase the residual profits accruing to stockholders as a result of the non-profit-sharing nature of bond contracts. When funds are borrowed by means of bond issues, these funds become available to the business without giving the contributors of capital a voice in management, and under the contract the investor in such securities receives only a limited return.¹ Thus, the more money that can be raised by borrowing, the smaller the stockholders' investment needs to be, and as long as the business earns more than the rate of interest paid on the bonds, the greater will be the residual amount available to the stockholders.² Naturally there is every temptation for management to follow that procedure which will reduce its investment and at the same time tend to increase the return on that investment.

As usual, however, the advantages of financial gain are accompanied by their balancing risks and dangers. Trading on the equity involves considerable financial risk in that the bond contracts, upon which the practice of corporate borrowing is based, contain definite promises to pay interest and to repay principal regardless of the earnings of the business, thus creating financial fixed charges which are the source of much embarrassment in times of low profits. Usually these contracts are such that failure to fulfill the promises deprives the stock-

¹Such is the nature of the usual bond contract. Occasionally there are bonds, usually issued at time of reorganization, which give rights of control to bondholders and which pay varying rates of return, and so-called "participating bond" contracts do exist in small numbers.

²These practices are often referred to by financial writers as "applying leverage to operating profits," because they have the effect of increasing the return to the common stockholders; i.e., a \$1,000,000 property earning 8 per cent and one-half financed with 5 per cent bonds will return not 8 per cent but 11 per cent on the stockholders' investment, because \$55,000 will be available to the \$500,000 stock investment.

holder of control, and whenever earnings are equal to or less than the fixed charges there is nothing available for payment to the residual equities represented by the stockholders. In the light of these facts it is evident that the greater the amount of financing done by borrowing, the greater the financial risk incurred by the business. A decline in earnings may eliminate the return to stockholders and, if the decline is serious enough, bring about receivership under the bond contract. If the bonds are secured by mortgages, foreclosure will undoubtedly result.

EXTENT OF EQUITY TRADING BY PUBLIC UTILITY HOLDING COMPANIES

Numerous financial writers and executives have cited principles referring to the financing of public utility operating companies. The usual statement is that borrowing should be limited to the extent that the interest charges will absorb no more than one-half of operating earnings.¹ However, little consideration has been given to this problem in connection with the holding company systems which are so typical of the public utility industry at the present time. In this modern set-up, both subsidiary and holding companies may borrow funds and trade on the equity, and it is this combined situation which commands attention here.

It has been assumed, generally, that the public utility industry is well adapted to the assumption of financial risk through trading on the equity, because the risk of fluctuating profit is minimized by the normally steady revenues arising from the operation of a business which renders a vitally necessary service under conditions of monopoly. An effective reminder that a considerable degree of business risk does exist in this industry is evidenced by the record of performance in 1930 and 1931, which shows that the gross revenues of practically all gas and electric utilities suffered a decline in those two years as compared with 1929. This decline was most serious for those utilities whose business included relatively

¹See A. S. Dewing, *Financial Policy of Corporations* (New York: The Ronald Press Co., 1926), Book II, chap. 6; and Walter E. Lagerquist, *Public Utility Finance* (Chicago: A. W. Shaw Co., 1927), chap. 4.

larger proportions of industrial service,¹ but even the most diversified showed some loss of revenue.²

Another factor, in addition to the variability of revenues, which determines the business risk inherent in an industry is the relative ease with which operating expenses can be reduced to accompany declines in revenue. In this respect the gas and electric utilities are quite similar to the railroads, for a relatively large proportion of their operating expenses are fixed, or, if not fixed, at least very inflexible, being composed largely of charges for maintenance, depreciation, an almost irreducible minimum of labor, and property taxes. This last item is, as a matter of fact, tending to increase rather than decrease. The effect of such conditions in the face of declining revenues is to accentuate the decrease in operating profits available for distribution to corporate investors, because the expenses cannot be reduced as rapidly as production falls off. Exact data for the 1931 operations of many utility companies were not available at the time of this writing, but there is every reason to suppose that the decline in operating profits was greater proportionately than the decline of gross revenues.³

If it is true that the operating characteristics of utilities are similar to those of railroads in the matter of fixed overhead expenses, the experiences of these latter utilities in recent months definitely demonstrates the seriousness of the business risk involved and points to the dangers of superimposing too much financial risk on top of it. A typical picture of the plight of the railroads resulting from their inability to reduce operating expenses is found in Table 8, showing ten months' performance of the New York Central Lines during the years 1929 to 1931. During these years the company's gross revenue

¹The Detroit Edison Company gross revenues: 1929, \$56,558,278; 1930, \$53,706,925; 1931, \$49,232,500.

²Preliminary reports show 1931 worse than 1930 in practically all companies.

³Even if the data were available they could not be considered "exact" and comparable in view of the well-known practice of charging depreciation "with due regard for the amount of earnings available for this purpose each year." Quotation from the Public Service Commission of the State of New York, "Retirement Reserve," *Uniform System of Accounts for Electrical Corporations* (Albany, 1923), Account 251, p. 24.

declined only 35 per cent, whereas net operating income declined as much as 71 per cent. This illustrates the disastrous effect of declining gross revenues in an industry with relatively fixed operating expenses. The existence of fixed capital charges in the face of such conditions has accounted for many of the recent defaults and financial embarrassments of railroad companies. Thus it has been very recently reaffirmed that the gross

TABLE 8—EFFECT OF DECLINE OF GROSS REVENUES ON NET OPERATING INCOME OF THE NEW YORK CENTRAL RAILROAD COMPANY*

	Ten Months Ending October 31		
	1929	1930	1931
Gross revenue	\$500,108,669	\$408,684,369	\$327,436,335
Net operating income	92,109,030	52,293,392	26,515,974

*Source: Appendix B.

revenues of the utility industry can decline, and it is a correlative fact that there are dangers and effective limitations in trading on the equity that ought to be considered even by public utility companies.

With this recognition of the dangers of trading on the equity in the utility industry, the following discussion will turn to an examination of the extent to which this method of financing was used by the five holding companies with which this study is concerned. Table 9 shows the relative proportions of funded debt to book assets of these companies. All of the funded debt of both parent and subsidiary companies is included, because that total represents all of the contracts to pay fixed interest charges which were incurred in financing the respective holding company systems.¹ The companies are arranged in the order of the greatest proportion of funded debt as it existed on December 31, 1929, and the nature of the changes in each case during the years prior to 1929 is also shown.

¹The Associated Gas and Electric Company liked to refer to the interest charges on bonds convertible into stock at the option of the company as being in the category of dividends, but they are not so regarded here. (Further discussion on p. 131.)

From this tabulation it is evident that, on December 31, 1929, the United Light and Power Company was using a greater proportion of borrowed funds than any of the other four companies, and it is likewise apparent that its position in 1929 was about the same as it had been in 1925. The Associated Gas and Electric Company stood a close second to the United company, with 54 per cent of its book assets represented by funded debt—presumably as a result of the Associated company's ambitious policy of issuing parent company bonds.

TABLE 9—RELATION OF TOTAL FUNDED DEBT TO BOOK ASSETS*

Company	Per Cent of Funded Debt to Book Assets		
	December 31, 1924	Asset Increase	December 31, 1929
United Light and Power	51.5†	56.2	54.9
Associated Gas and Electric	36.3	55.3	54.0
Standard Gas and Electric	51.9†	43.8	47.3
North American	57.9	38.6	46.3
American Power and Light	50.7	35.9	43.7

*Source: Appendix B.

†December 31, 1925.

It is known from previous discussions that the Associated subsidiaries had relatively thick equities,¹ but the parent company was heavily indebted.² The remaining three companies were more conservative in their debt issues and traded on a somewhat thicker equity, all three of them having reduced the proportion of funded debt to book assets during the years under observation. In each case, less than 50 per cent of book assets were financed with bonds, and it may be noted, incidentally, that these three companies with the smallest proportions of borrowed funds were among those indulging in the heaviest subsidiary financing.

The variation in the extent of equity trading noted above was a characteristic of the industry. Professor H. G. Guthmann of Northwestern University, writing for the *Chicago Journal*

¹Only 18.7 per cent of book assets were carried by subsidiary funded debt on December 31, 1929. (See Chart 8.)

²Thirty-five and three-tenths per cent of book assets were carried by parent company bonds.

of Commerce, reported that, on December 31, 1929, public utility holding companies were using parent and subsidiary bonds in amounts ranging all the way from 21.9 per cent to 58.1 per cent of their total capitalizations.¹ While the percentage base used in Professor Guthmann's computations was not the same as that used in this study, the results are comparable, because there is little difference between "book assets" and "total capitalization" when the latter includes surplus items. The median percentage of total funded debt for the companies examined by Professor Guthmann was 43.3 on December 31, 1929, and 42.9 for the same companies on December 31, 1930. From this it may be concluded that all five of the companies under consideration were above normal in the amount of funded debt and thus above normal in the extent to which they traded on their equities.

It is impossible to find an absolutely accurate test which will indicate the precise relationship that should exist between a holding company's book assets and its funded debt. The dangers of too much debt have been pointed out, but the problem of the determination of the amount of debt that constitutes a dangerous situation is yet to be considered. Chart 12 was used in the previous chapter² to demonstrate the general instability of all parent company bonds as compared with underlying bonds. In that same chart is reflected another interesting correlation that may be noted with respect to the effects of trading on the equity.

In general the relative prices of various bond issues on an organized security exchange may be taken as expressing the soundest available opinions regarding the relative values of those issues and the credit strength of their respective issuing companies. At least it can be safely assumed that quoted market prices for a company's bonds represent the market's interpretation of the soundness of that company's policies with respect to debt financing and the amount of earnings applicable to the

¹Study of eighteen large holding company systems, December 30, 1931. (All five of the companies considered in this study were included in Professor Guthmann's study.)

²P. 66.

payment of the debt and the interest charges thereon.¹ Reference to Chart 12, showing the yields of representative bond issues of holding companies, indicates that the five parent company issues ranged in order of 1931 yield rates as follows:

- Lowest: North American Company — Deb. 5s, 1961
- Second: American Power and Light Company — Gold Deb. 6s, 2016
- Third: Standard Gas and Electric Company — Deb. 6s, 1951
- Fourth: United Light and Power Company — Gold Deb. 6½s, 1974
- Highest: Associated Gas and Electric Company — Cons. Ref. Deb. 5s, 1968

It is concluded that this order represented the credit strength of each parent company in the eyes of the market, which interpreted the facts to mean that the North American Company had the strongest credit of the five companies and the Associated Gas and Electric Company the weakest credit, with the American, Standard, and United companies between the two extremes. If this situation is compared with that expressed in Table 9, which shows the relation of total system debt to book assets, it will be noted that the United Light and Power Company and the Associated Gas and Electric Company, whose securities bore the highest yields, had the largest proportions of funded debt. Contrarily, the North American Company and the American Power and Light Company, with the least amount of total debt in their systems, enjoyed the most favorable yields of any of the five companies. The bonds of the Standard Gas and Electric Company were of middling proportions, and the yield line of its debenture bonds follows a middle course across the 1931 plotting. Here would seem to be a practical proof of the statement that increasing the relative amount of public utility system debt is bound to increase the costs of borrowed capital. Each additional borrowed dollar

¹Even in the liquidation bond market of late 1931 the relative status of various issues should not have been disturbed, as all issues were affected alike by general market conditions.

costs more than the previous one, because the investor's risk is thereby increased unless ownership equities are increased proportionately.

USE OF PREFERRED AND CLASSIFIED STOCKS

The principle involved in the concept of trading on the equity has been applied in the use of forms of capital contracts other than loan contracts. The same practical results, as far as their effects on the return to common stockholders are concerned, are achieved by the use of any sort of security contract which brings capital into a business under terms that limit the return payable to the investor. In modern corporate finance, there are such contracts in the preferred and oftentimes in the classified common stock issues, which give the investors in those stocks a claim on earnings ahead of the residual owners, and at the same time limit that return to a definite percentage of par value, or a definite number of dollars per share in the case of no-par stock.¹ This sort of arrangement has the same effect as borrowing funds at a fixed rate; namely, anything earned over and above the amount of the limited contractual dividend accrues to the benefit of the common (residual) owners or stockholders. Also these preferred or limited-return contracts usually are featured by lack of voting control, the preferred stockholders usually having a voice in management only if they fail to receive a set number of consecutive dividend payments. This is a further characteristic in common with bond contracts, which give active control of a business only through legal action of foreclosure under the remedial clauses of such contracts.

In view of the extension of this principle of financing, it is logical to refer to the use of limited-return stock issues as "trading on the equity"; although, in such cases, the equity traded on is that of the common stockholders rather than of all stockholders. For bonds, the value of the entire stockholders' equity serves as a protection to the debt, and all net

¹There are occasional "participating" contracts which give preference to a certain amount and permit the return to increase under a definite contractual provision.

operating profits are first applicable to that debt; whereas in the case of preferred stocks, the value of the common stockholders' equity alone measures the protection, and only those earnings remaining after payment of interest are applicable to the preferred stocks. Obviously preferred stocks are distinctly secondary in their security when preceded by bonds, and in recognition of that fact the dividend rate is normally higher than the bond interest rate would be for a given company. Hence, the profit possibilities of trading on preferred stocks for common stock profit are limited. However, from the corporation's standpoint, the risk element may be considered less serious, because failure to pay dividends cannot precipitate receivership or foreclosure.¹ So, while the costs per dollar raised are higher, and while the preferred dividends create income charges in addition to bond interest ahead of the claims of the common stock, the use of such capital contracts does present possibilities of profitable trading on the equity by reducing the investment necessary to control property and by applying further leverage to the earnings.² Inability to pay the dividends would, of course, do harm to the credit of a company, but its property would not be lost.

The extent to which preferred stocks were used in the financing of utility holding company groups is indicated, in general, by Professor Guthmann's findings that, in the eighteen companies which he studied as of December 31, 1929, from 10.6 per cent to 44.5 per cent of the total capitalization of holding company systems was represented by preferred stocks.³ The median appearing in this distribution was 24.5 per cent. In other words, preferred stocks were normally used to the extent of about one-quarter of the capitalization, but there were wide deviations from that normal.⁴

¹Preferred stocks are evidences of ownership, not creditorship, and are so interpreted by the courts; properties cannot be sold or title passed to preferred stockholders for failure to pay dividends.

²See footnote 2, p. 79. If another \$300,000 were raised by the sale of 6 per cent preferred stock, the 8 per cent return on \$1,000,000 of property would net \$37,000 on \$200,000 of common stock or a return of 18.5 per cent.

³*Op. cit.*

⁴It should be recalled that Guthmann's ratios are expressed as percentages of total capitalization; the percentages in this study are of "book assets."

For the companies considered in this study, all limited-dividend stocks are included as preferred, because they all had the effect of permitting residual stockholders to trade on their equity. Table 10 shows the extent to which these instruments of capital raising were used by the systems under observation, the companies being arranged in the order of their use of these stocks. If the data here presented are noted and combined with those in Table 9, a definite picture is secured of the respective companies with regard to their policies of financing with limited-return securities; in other words, a picture of the extent to which they traded on the equity of their common stock. The most outstanding result of the suggested combination of facts is that the Associated Gas and Electric Company is shown as using a very large proportion of limited-return, prior-lien securities.¹ On December 31, 1929, 86.2 per cent of Associated's book assets were financed by bonds and prior-lien stocks.² This represents far and away the thinnest equity traded on by any of the companies. The United Light and Power Company was next in line with 54.9 per cent bonds and 25.0 per cent preferred stocks, or a total of 79.9 per cent of book assets financed by prior-lien and limited-return securities. The Standard Gas and Electric Company stood third with a 77.2 per cent total, and the North American Company fourth with 71.4 per cent. Information is lacking, in detail, regarding the preferred contracts of the American Power and Light Company, but its low (43.7 per cent) bond indebtedness leads to the belief that its use of limited-return securities was less than by the

¹Associated Gas and Electric Company Class A stock may be considered like a second preferred stock, because it was entitled to non-cumulative dividends at the rate of \$2 per share per annum before payment to Class B and common. It was entitled to participate with B to the extent of an additional 50 cents per share and did so participate twice prior to December 31, 1929—once to the extent of 25 cents and once to the extent of 40 cents. Its rights to participate further with common were never effective because no dividend was ever declared on the latter stock.

²Class B stock also had dividend priority over common, but it is not included in the preference securities because it was the voting stock of the system and really represented the residual equity. Common stock never paid dividends, had no vote, except with consent of Class B stock, and in every way represented merely a hope.

Associated company.¹ At least it is a certainty that all of the holding company systems here studied carried better than 70 per cent of the value of their book assets in securities which called for limited prior claims on earnings, with the Associated Gas and Electric Company topping the list with over 86 per cent so financed.

TABLE 10—RELATION OF TOTAL LIMITED-DIVIDEND STOCKS TO BOOK ASSETS*

Company	Per Cent of Limited-Dividend Stocks to Book Assets		
	December 31, 1924	Asset Increase	December 31, 1929
Associated Gas and Electric (preferred and Class A)	13.6	33.5	32.2
Standard Gas and Electric	25.8†	35.1	29.9
North American	22.7	26.8	25.1
United Light and Power	29.6	24.1	25.0
American Power and Light	Information not available‡		

*Source: Appendix B.

†December 31, 1925.

‡Information not available because the American Power and Light Company carried all of its capital stock, both preferred and common, in one account, as did its subsidiaries. There is reason to believe, however, that a relatively large proportion of its capital stock is represented by preferred in view of the fact that, on December 31, 1929, there were 2,704,842 shares of parent and subsidiary preferred outstanding as compared with 2,528,713 shares of parent common. (See Appendix A, Table 1.)

The same thing can be said about the adaptability of the industry to the use of preferred stocks that was said about the use of bonds; namely, that relative stability of revenue makes for sound trading on a thinner equity than would be reasonable in the case of most industrial concerns, but that, even so, there are decided limitations on the practice. As mentioned before, utility revenues do fluctuate to a considerable degree, and the existence of relatively fixed operating expenses magnifies the fluctuations of earnings available to residual stocks—to their benefit or distress depending on whether the movement is upward or downward.

¹See footnote ‡, Table 10.

Evidence of the cumulative effect of bond interest and preferred dividend charges in the face of declining earnings may be noted in Table 11, which gives a two-year comparison of the performance of the United Light and Power Company during the twelve-months periods ending November 30, 1930 and 1931. The dangerous effects of trading on a thin common stock equity are shown in this instance by the fact that a reduction of 7.1 per cent in gross earnings resulted in a 41.8 per cent decline in the amount available to common stockholders. Although operating expenses and maintenance in 1931 were lower than in 1930, other costs of doing business, such as taxes and depreciation, showed actual increases which led to a decline in operating net earnings of 9.8 per cent; in other words, the inflexibility of such costs forced the operating net to go down even more than gross. Prior claims on the net earnings declined very little — in fact, they increased in the case of subsidiary preferred dividends — so that earnings available to the parent company dropped 15.3 per cent. The interest and preferred dividends of the parent company capital contracts likewise remained practically constant in face of the declining income available to them, so that the common stockholders suffered quite seriously, as did the general credit of the company.¹ This company's experience is only a sample of the situation which existed in some degree throughout the entire industry during 1931, but it does show what may be expected under such conditions by companies trading on a thin equity.²

COMMON STOCK EQUITIES

To talk about common stock equities is, of course, to speak of the equity molds in which the rest of the financial structures are cast, because the larger the proportions of prior-lien securities, the smaller the residual equities.³ It is considered that the

¹Note effect as shown in yield of United company bonds in Chart 12.

²On December 31, 1929, the United Light and Power Company had bonds and preferred stocks to the extent of 79.9 per cent of book assets, and there was no radical change in that respect during 1930 and 1931.

³On the basis of computations used in this study, common stock equities do not equal the difference between total book assets and other capitalization, because of small increments of minority interest and miscellaneous payables and accruals which bring the total to 100 per cent of book assets.

TABLE 11—EFFECT OF DECLINING GROSS EARNINGS ON HOLDING COMPANY COMMON STOCK EARNINGS*

United Light and Power Company	Twelve Months Ended November 30		Per Cent Decrease
	1930	1931	
Gross earnings of subsidiary and controlled companies (after eliminating inter-company transfers)	\$95,262,412	\$88,525,545	7.1
Operating expenses	39,109,064	36,169,768	7.3
Maintenance, charged to operation	5,736,480	4,832,600	15.8
Taxes, general and income	7,860,932	7,928,625	0.9†
Depreciation	8,379,556	8,755,778	4.5†
Net earnings of subsidiary and controlled companies	\$34,176,380	\$30,838,773	9.8
Interest on bonds, notes, etc.	11,244,076	10,680,239	5.0
Amortization of bond and stock discount and expense	850,978	815,139	4.2
Dividends on preferred stock	4,203,755	4,393,555	4.5†
Proportion of earnings attributable to minority common stock	4,654,151	3,753,752	19.3
Equity of United Light and Power Company in earnings of subsidiary and controlled companies	\$13,223,420	\$11,196,087	15.3
Other earnings of United Light and Power Company	1,087,614	112,721	89.6
Balance	\$14,311,034	\$11,308,808	21.0
Expenses of United Light and Power Company	162,154	123,104	24.1
Gross income of United Light and Power Company	\$14,148,880	\$11,185,704	20.9
Holding company deductions:			
Interest on funded debt	2,911,393	2,906,839	0.2
Other interest	16,351	4,535	72.3
Amortization of bond discount and expense	205,798	336,056	63.3
Balance available for dividends	\$11,015,338	\$ 7,938,274	27.9
\$6 cumulative convertible 1st preferred dividends	3,558,150	3,600,000	1.2†
Balance available for common stock dividends	\$ 7,457,187	\$ 4,338,274	41.8
Average number of common shares outstanding during periods	3,402,506	3,473,918	—
Earnings average share	\$2.19	\$1.25	42.9

*Source: Appendix B.

†Increase.

common stock equities of a holding company system comprise the parent company residual stocks, parent company reserves¹ and surplus, and the subsidiary reserves² and surplus applicable to parent company holdings. These latter items are included, because, in so far as such surpluses are applicable to the subsidiary common stock owned by the parent company, they belong to and are subject to call by the parent just as is the latter's own surplus. On this basis the common stock equities of the five holding companies are shown in Table 12, arranged

TABLE 12—RELATION OF HOLDING COMPANY RESIDUAL EQUITIES TO BOOK ASSETS OF SYSTEMS*

Company	Per Cent of Residual Equities to Book Assets		
	December 31, 1924	Asset Increase	December 31, 1929
North American	17.2	30.2	25.0
Standard Gas and Electric	8.7†	16.5	12.9
United Light and Power (not including subsidiary reserves and surplus)	7.3	9.7	9.3
Associated Gas and Electric	15.7‡	7.0	6.9
American Power and Light	Information not available§		

*Source: Appendix B.

†December 31, 1925.

‡Only common stock on this date; A and B created during 1925.

§See footnote, Table 10.

in order of the "thickness" of their respective equities on December 31, 1929. As might be expected in view of the foregoing discussion, the North American Company had the thickest equity, and the Associated Gas and Electric Company the thinnest, 25 per cent and 6.9 per cent, respectively.

In each case the equity situation was definitely the result of policies followed during the years just preceding December 31, 1929. The North American Company financed a large part (30.2 per cent) of its increase in assets with equities

¹Other than liability reserves.

²Other than retirement and liability reserves.

composed chiefly of parent company common stock and reinvested subsidiary reserves and surplus.¹ The Associated Gas and Electric Company, on the other hand, did most of its financing with securities of lien prior to its Class B and common stocks. In fact it created Class A, Class B, and common stocks in 1925 and used them to break down the equity situation and to facilitate financing with issues of non-voting stock. The result was a 6.9 per cent residual equity on December 31, 1929. The Standard Gas and Electric Company and the United Light and Power Company were between the two extremes, although neither of them approached the most conservative position of the North American Company.

While these considerations may be mere repetitions of the comparisons of the holding company financial set-ups in general, they are considerations which view the situation from a different angle and serve to emphasize the extent of the safety factor existent in each case. The common stock or residual equities represent the buffer between declining values and financial embarrassment, and, in contrast to the fixed and semi-fixed charge securities,² whose values are upheld by their special preferred position, common stock equities must absorb the first shock of value losses. If they are not large enough to absorb the losses as they occur, the values of prior-lien securities will be diluted, and, eventually, there will be loss of control by the common stockholders and loss of prestige by the company. This does not imply that losses of value by companies with large residual equities will not be felt or reacted to; rather, it means that, as long as debt payments and preferred dividend payments are maintained, the failure to maintain in full the value of the common equity will not be so serious from the standpoint of financial management. A large residual equity is not significant *per se*, but only because it indicates the existence of few debt and prior-lien obligations;

¹See Chart 9 for details.

²Preferred dividends, and dividends on stock such as Associated Gas and Electric Company Class A, obviously are not fixed charges in the sense that bond interest is, but they are prior and specific claims on earnings, failure to meet which would do great harm to the issuing corporation's credit.

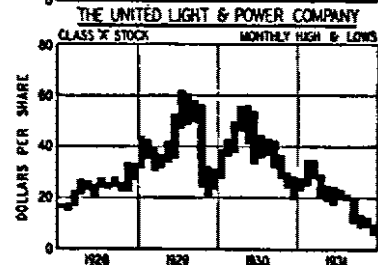
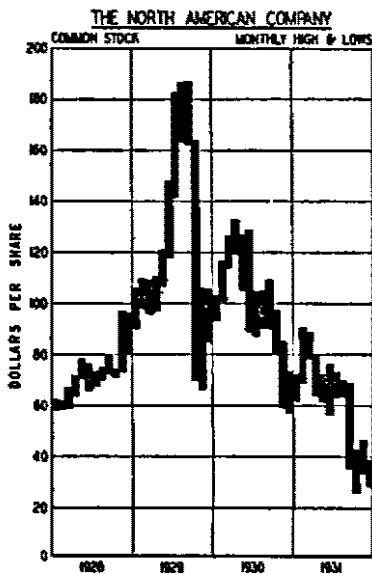
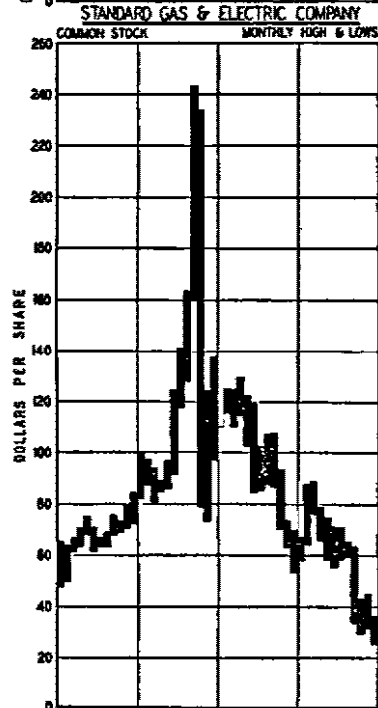
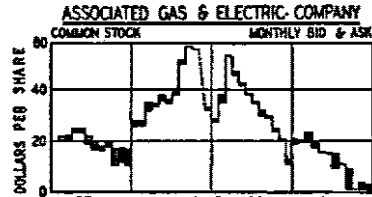
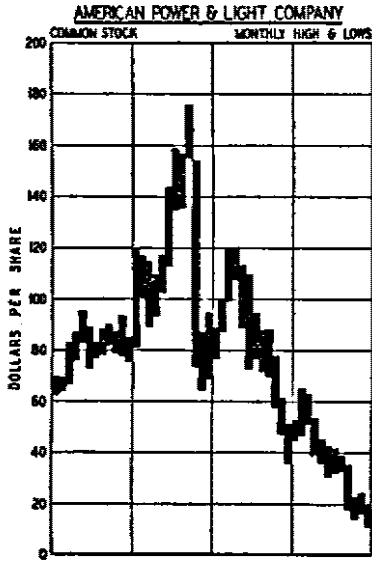
and the fewer such contracts, the easier it is to meet them in time of stress.

Application of the above theory to the specific companies leads to the conclusion that the value of the North American Company properties would have to be reduced 25 per cent before its common stock would be worthless and its credit seriously endangered, whereas a loss in value of Associated Gas and Electric Company properties of only 7 per cent would eliminate the value of this company's Class B and common stocks, and threaten the stability of the company. Of course, this statement is not entirely accurate, because it is based on the assumption that the book asset figures coincide with the market value of the properties, which is improbable. It is true, however, that these same approximate proportions would exist, and thus the North American Company system could stand three times more value loss in proportion to its size than could the Associated Gas and Electric Company system without its existence as a successful operating company being endangered.

Some proof of the fact that residual equities do feel the effects of profit increases and decreases in magnified form may be observed in Chart 14, which shows the fluctuations in the market prices of the common stocks of the five holding companies whose policies have been discussed. In each instance the monthly high and low market quotations have been charted.¹ All of these securities participated in the sensational stock market boom of 1929, so the performance of that year may be discounted as based on no reasonable interpretation of facts. Interesting to note, however, is the manner in which each stock withstood the ravages of 1930 and the general depression of 1931, which brought universal though only moderate declines in revenues. Some idea of the effect of trading on the equity may be obtained from an observation of the wild fluctuations which were typical of the prices of all these securities, which represent only 7 to 25 per cent of the book assets of their

¹Except for the Associated Gas and Electric Company common stock, for which bid and asked prices on the closing day of each month comprise the only obtainable data, Class B not traded.

CHART 14—FLUCTUATION IN MARKET PRICES OF PARENT COMPANY RESIDUAL SECURITIES* (1928-1931)



*Source: Appendix C.

respective companies. Since there were no changes in property values or operating earnings at all comparable to the changes exhibited in these stock prices, it would appear that, even when the over-optimism and the over-pessimism of the market are discounted, there is evidence of the effect of the "leverage" which results from the practice of financing with borrowed and limited-return capital.

A more pertinent test of the market's interpretation of the equity strength of the respective holding companies may be found in Table 13, which depicts the aggregate values of the

TABLE 13—LOSSES IN AGGREGATE RESIDUAL EQUITY VALUES COMPARED WITH EQUITY FINANCING*
(January 1, 1928, to December 31, 1931)

Company	Aggregate Value January 1, 1928	Aggregate Value December 31, 1931	Per Cent Loss in Value	Per Cent of Residual Equities to Book Assets†
North American Standard Gas and Electric	\$270,891,780	\$230,064,120	15.1	25.0
United Light and Power	86,546,983	64,878,210	25.0	12.9
American Power and Light	49,214,402	25,533,334	48.1	9.3
Associated Gas and Electric	122,556,461	45,000,000‡	63.3	—
	27,868,953	3,000,000§	89.2	6.9

*Source: Appendix B.

†From Tables 7 to 11, inclusive, as of December 31, 1929.

‡Approximately 3,000,000 shares at \$15.

§Approximately 1,500,000 shares at \$2.

residual equities on January 1, 1928, and on December 31, 1931. These aggregates were computed by multiplying the number of shares of stock outstanding on each of the above dates by the average of the high and low prices for the months of January, 1928, and December, 1931, respectively. For reference, the data from the third column of Table 12 are included to facilitate comparison between the thickness of the equities and the percentage losses of equity value for the

respective companies over the four-year period. A glance at the two percentage columns shows a perfect inverse correlation between the thickness of the equities and the proportionate loss in equity values. This should provide a definite indication that the thinner the residual equity in a holding company set-up the more likely it is to be lost. The loss of these equity values removed part of the buffer of the prior-lien securities, and increased the possibilities of defaulted interest and passed dividends on prior-lien stock to the detriment of the losing company and its credit.

CONCLUSIONS

This chapter has been devoted to demonstrations and exhibits of the results of financing public utility holding company systems with varying amounts of borrowed funds, and with funds raised under prior-lien and limited-return stock contracts. The object has not been particularly to prove that any one of the five companies studied was better than the others, but rather to point out and emphasize the dangers in the type of financial procedure and management which dictates a policy of trading on a thin equity. Greatest stress has been laid on the results which such practices had on the earnings applicable to the residual equities and on the value of those equities in times of prosperity and depression. Incidentally, the analysis has proved that the common stocks of the North American Company suffered less under the stress of 1930-1931 conditions than did the common stock of any other of the five companies, and that the common stock of the Associated Gas and Electric Company suffered most severely.

It has also been pointed out that the credit of those companies having the greatest amount of funded debt suffered greater harm, as measured in the yield prices of their bonds, than did the credit of those companies with a lesser amount of fixed-charge securities outstanding. Again it developed that of the five companies, the North American Company enjoyed the cheapest credit and the Associated Gas and Electric Company the most expensive, although it was evident, as pointed out in the previous chapter, that no parent company credit was

as cheap or as stable in price as that secured by the property of an underlying operating company.

Another significant consideration contained in the discussion served to demonstrate the extension of the principle of trading on the equity to include capital raising by preferred stock issues.¹ Perhaps it was not strongly enough stressed that this method, while not without financial risk, is nevertheless preferable to the excessive use of funded debt, which involves a legally enforceable promise to pay interest and principal with severe remedies provided in case of default. Preferred stocks have the advantage of no maturity date which demands return of investment,¹ and payment of dividends is at the discretion of the board of directors, not a contractual right of the investor. It is true, of course, that these dividends cannot be passed with absolute impunity, for their omission may mean loss of some voting control by the residual stockholders and will always be harmful to a company's credit, much more so than the failure to meet common dividends. This harmful effect is especially great in case the preferred issues are cumulative, as back payments will tend to be a barrier to recovery and payment of future dividends on common stock — a significant factor in determining a company's credit status.

The commonly accepted idea of the adaptibility of the utility industry to the practice of trading on a thin equity is questioned. This is particularly worthy of consideration in face of the recent experiences which have proved that public utility companies cannot expect to enjoy ever increasing revenues. While the utility industry is probably far from the saturation point, and there will be opportunity for further expansion and increased returns, future development must of necessity take a more cautious turn. The excesses of "pioneer days" have been concluded and must be replaced with earnings that are earned. Recent developments have also served as reminders that public utilities, like their counterparts, the railroads, must recognize that any decreases in revenues will be particularly

¹There are preferred stock contracts which provide for periodic retirement by sinking fund, but they are not normally used in the utility industry.

dangerous in view of the relative inflexibility of their operating expenses, which will cause magnified fluctuations in operating profits.

All in all, there have probably been no new principles or theories developed in this discussion, but there has been definite proof by practical demonstration that the old theory still works and is applicable even in face of the modern complexities of public utility holding company financial procedures; namely, that "to the borrower belongs the risk" — unless the lender be so unwise as to relieve him of it.

CHAPTER 5

METHODS OF EFFECTING ACQUISITIONS

The general policies of public utility holding companies, with respect to the form of their financial structures, has its influence on the methods used in the acquisition of control of new subsidiaries. Managements not in sympathy with a policy of parent company debt obviously would not favor the creation of such debt in the process of acquisition, and, conversely, those not favoring the use of subsidiary financing would act to eliminate it. In the previous discussion of financial plans there was consideration of these factors, but a more detailed examination of actual procedures seems to be in order. The interest in such an analysis lies in discovering the effect of the various methods of acquisition on the capitalization of the holding company group, the cost of the several methods of acquisition, and the effect of each on the security-holders of acquired properties. The analysis will be based on an examination of the facts known about the acquisitive activities of the five holding companies which are serving as the basis for this study. While all possible alternatives are probably not represented in the practices of these companies, sufficient variety is present to provide a critical analysis of the general methods used by the industry.¹

It has just been mentioned that the cost of acquisitions would be a significant fact to know, but it must be admitted at the outset that such facts are seldom if ever available. This is true, not only because the parties to purchases are loath to divulge such information when they have it, but also because frequently the buyers and sellers themselves do not know the cost. This situation is occasioned by the fact that acquisitions effected by security exchange do not involve consideration in a standard medium capable of monetary description. Conse-

¹One method not considered is that involving the creation of a new corporation which merges several others under one head and thereby creates a new holding company group; this method does not come under the head of "expansion," in the sense herein considered.

quently the cost element will have to be ignored, except in so far as it finds indirect expression in its effect on the capitalization of the purchasing holding company.

PURCHASE OF PHYSICAL PROPERTIES

In general, there are two methods of acquiring additional properties in the process of expanding a public utility holding company group. Examples of both of these methods may be found in the practices of the companies involved in this study. One method involves the purchase of physical assets, and the other the acquisition of securities.

All five of the companies examined made some property acquisitions for cash consideration, and a very significant part of the total expansion program of each company was accounted for by such expenditures made in the process of operating company construction activities. Although data regarding capital expenditures of this sort were available for only three of the groups, they were sufficient to indicate the relative importance of this phase of expansion in the typical utility situation. The North American Company, for example, spent \$206,129,637 on new property construction during the five years 1925 to 1929. If this is compared with the total net increase in the North American Company book assets of \$476,312,887, it will be noted that almost half of the company's expansion was internal. Similarly, the Standard Gas and Electric Company spent \$159,711,263 on new construction during the four years ending December 31, 1929, which was about one-third of the total \$432,932,159 net increase in book assets for the same period. During the five years 1925 to 1929, the United Light and Power Company increased its book assets by \$413,873,759, out of which \$86,616,507, or less than one-fifth, was in the form of subsidiary construction expenditures. While information of a similar sort is lacking for the Associated Gas and Electric Company and the American Power and Light Company, there is sufficient evidence to prove that such activities are an important part of utility holding company expansion programs, and that their financial aspects command attention.

Inasmuch as construction activities served to add to the properties of the subsidiaries as such, the problems were those of subsidiary financing, necessitating either the public sale of subsidiary securities or an advance of funds from the parent companies. In all companies except the Associated Gas and Electric Company, it was the custom, as previously described, to issue subsidiary bonds and preferred stocks, thus increasing the capitalization of subsidiaries. The balance of funds was made available from reinvested subsidiary earnings, or by an increase of parent investment in subsidiaries. Any construction activities of the Associated Gas and Electric Company must have been financed almost wholly by advances and investments of the parent company or of subsidiary holding companies, because little or no operating company financing was permitted.

Of similar character, although relatively insignificant in aggregate amounts, were the purchases of assets of operating companies which were effected occasionally by all of the holding companies studied. Such assets were sometimes purchased directly by the subsidiaries. If they were purchased by the parent company, the assets were turned over to some subsidiary for operation. The purchases usually comprised small properties adjacent to an existing operating unit and really amounted to nothing more than an extension by purchase instead of by construction. Thus the financial problems involved in construction and in the purchase of such physical properties for cash consideration did not present any new or very interesting phases, although the total assets added by construction and purchase were considerable, and the routine financing necessitated thereby was correspondingly large.

SECURITY ACQUISITIONS

By far the most popular and most rapid means of expanding public utility holding companies has been the acquisition of a controlling interest in new subsidiaries. With a few exceptions, which will be noted as the discussion proceeds, the acquisition of controlling interest by the companies of this study meant the acquisition of practically 100 per cent of the

voting securities.¹ The method of acquiring this voting control by the several holding companies will be reviewed briefly.

The American Power and Light Company, on the occasion of its two large acquisitions consummated during the years 1926 to 1929, used its preferred stock as a medium of exchange for the common stocks of the Washington Water Power Company and the Montana Power Company. In the former instance the American Power and Light Company paid 2 2/3 shares of \$6 preferred for one of common, and, in the latter, two shares of \$5 preferred for one of common. These purchases involved the issuance of \$55,390,280 of the \$6 stock and \$97,221,400 of the \$5 stock. In return, the parent company received control of the Washington and Montana properties.

The Associated Gas and Electric Company usually purchased a majority of the stock of a prospective subsidiary for cash, and then completed the acquisition by offering securities to the remaining minority stockholders. In its acquisition of the Manila Electric Company, the latter's minority common stockholders were first offered \$50 in Associated Gas and Electric Company debentures for each share of common stock. Later they were offered one share of Associated Gas and Electric Company Class A stock, and still later 1 2/3 shares of Class A. The minority stockholders of the Rochester Central Power Company were offered 5/6 share of Associated Gas and Electric Company Class A stock for each share of Rochester common. Exceptions to this general procedure are noted in the acquisition of the Pennsylvania Electric Corporation, in which instance the common and preferred stocks were purchased for a cash consideration reported to be about \$20,000,000. In the acquisition of control of the American Utilities Company a stock exchange was effected.

The North American Company usually acquired control of its new properties by an exchange of stock; common for common and preferred for preferred. Control of the Western

¹An almost universal practice at the present time with all holding companies that pretend to be other than investment companies; the Electric Bond and Share Company is a notable exception.

Power Corporation was thus secured by the exchange of one share of North American Company \$6 preferred and $\frac{4}{5}$ share of common for each share of Western preferred, and $\frac{1}{4}$ shares of North American common stock for each share of Western common. The Mississippi River Power Company and the Central Mississippi Valley Electric Properties were similarly brought under North American Company control. The chief exception to this company's general policy was in connection with its acquisition of the preferred and common stocks of the Washington (D. C.) Railway and Electric Company. On this occasion shares were purchased on the market for cash until a large majority was owned, and then offers of exchange were made to the minority interests.

As nearly as could be ascertained, the procedure of the Standard Gas and Electric Company was one of security exchange, although most of its acquisitions were cloaked in privacy under the management of the H. M. Byllesby Company, as was the case when its largest acquisition, that of the Standard Power and Light Corporation, was effected. Its offerings to minority interests were chiefly preferred stock for preferred and common stock for common.

The United Light and Power Company followed a policy of cash purchase, and, as its chief acquisitions were of two already large holding company groups (Continental Gas and Electric Company and American Light and Traction Company), there was little opportunity for variety. Purchases of stock were made on the market, and the gradual accumulations from this source were supplemented by block purchases from large investors.

In the procedures typified by the above examples, there are three distinct policies worthy of analysis and criticism: first, that of purchasing subsidiary equity stocks for cash; second, that of exchanging bonds and preferred stocks of the parent company for equity securities of subsidiaries; and, third, that of exchanging parent company common stocks for subsidiary equities. It is impossible to apply accurate tests in a criticism of the amounts paid for subsidiary equities, although there may

often be a suspicion that the amount was excessive, because the subsequent earning capacity of a newly acquired security is the only real test of the judgment of management that will justify or condemn the holding company's purchases. This analysis does not attempt, therefore, to question the amount of the commitment made in any case, but only the form of the commitment as it tended to affect the financial status of the holding company.

EQUITIES ACQUIRED FOR CASH

Cash purchase of stocks of operating companies is, in a sense, the most expensive of the alternative procedures. If the acquisition involves the purchase of securities on the market, the first shares may be picked up at a reasonable market price, but as the process of accumulation goes on, the supply will diminish and the market will become cognizant of the fact that someone is accumulating the stock in question. Under such conditions the price will go to such high levels that the average cost per share is likely to exceed the real value of the securities involved. The experience of the North American Company in its acquisition of the Washington Electric Railway Company effectively demonstrates the truth of this statement. Table 14 shows the earnings, dividends, and high and low prices per share of Washington preferred and common stocks for several years. The unusual increase in prices can be accounted for only by the fact that, during the years 1925 to 1928, the North American Company was continuing its acquisition of stock in a market that became constantly more susceptible to upward fluctuations as the floating supply diminished.

Another objection to the cash method of acquisition, which supplements the difficulty just described, is that such a procedure calls for large cash disbursements and presumably must be accompanied, preceded, or followed by a sale of parent company securities to re-establish the purchaser's cash position.¹ For instance, the United Light and Power Company found it necessary to undertake considerable financing in the name of its Continental subsidiary in 1927 and 1928, at which time the

¹Unless, of course, profits are available in sufficient amounts in liquid form.

stocks of the American Light and Traction Company were being accumulated by that company. The more or less continuous offerings of securities by the Associated Gas and Electric Company accompanying its expansion also indicate the extent of the burden imposed on a holding company's cash account by the acquisition of subsidiary equities for cash.

TABLE 14—COMPARISON OF EARNINGS, DIVIDENDS, AND MARKET PRICES OF PREFERRED AND COMMON STOCKS: WASHINGTON RAILWAY AND ELECTRIC COMPANY* (1920-1929)

Year	Preferred Stock				Common Stock			
	Earned per Share	Dividends Paid per Share	Market Prices		Earned per Share	Dividends Paid per Share	Market Prices	
			High	Low			High	Low
1920	\$ 7.49	\$5.00	56¾	38½	\$ 3.25	—	22½	15¾
1921	12.97	5.00	67¾	50½	10.42	—	40	21½
1922	9.55	5.00	80	63½	5.94	—	68¾	35¾
1923	9.65	5.00	76¾	70¾	6.08	\$ 3.75	72½	61
1924	11.84	5.00	81¾	71¾	8.95	5.00	90	69¾
1925	13.58	5.00	92¾	80	11.22	25.00	250	98¾
1926	15.69	5.00	91¾	88¾	13.97	5.00	230	175¾
1927	18.51	5.00	101¾	90½	17.66	6.00	470	180
1928	20.40	5.00	104	98¾	20.14	7.00	460	180
1929	22.49	5.00	99¾	92	22.87	7.00	880	500

*Source: Appendix B.

EQUITIES ACQUIRED FOR BONDS AND PREFERRED STOCKS

The policy of exchanging semi-fixed charge securities for operating company equities, as typified by the American Power and Light Company's action in acquiring control of the Washington and Montana properties, is to be criticized because of the semi-fixed charges which are incurred in the process. In this instance the exchange of preferred stocks for common stocks meant that the American Power and Light Company incurred annual preferred dividend charges determined as follows:

1. For the Washington Water Power Company it gave 553,903 shares of \$6 preferred stock which called for annual dividends of \$2,765,515.

2. For the Montana Power Company it gave 972,214 shares of \$5 preferred stock which called for annual dividends of \$4,861,070.
3. In the acquisition of control of these two properties, annual semi-fixed charges totaling \$7,626,585 were contracted for.

This was in face of the fact that in the year previous to acquisition these two companies together earned only \$5,493,488 on the common stock acquired by the American company.¹ While the acquisitions were effected without any immediate strain on the company's cash account, the dangers of such procedures are evident. Not only were preferred dividends contracted for in excess of the earnings available for the stocks acquired, but those dividends were prior liens on the American company's corporate income and were based on residual returns from the operating subsidiaries. A holding company must surely have faith in its ability to increase and maintain the earnings on its new subsidiaries' common stocks before it contracts semi-fixed charges based upon them.

Even worse than this transaction of the American company — worse in theory, at least — was one instance of Associated Gas and Electric Company practice. The Associated company offered bonds in exchange for common stocks of the Manila Electric Company at the rate of \$50 of 6½ per cent debentures for each share of stock, thus promising to pay \$3.25 per year on a stock that had been earning only \$3.80 to \$4.00² during the years just preceding acquisition. The exchange showed a possibility of profit to the Associated company, it is true; but the margin of safety was a thin one on which to incur fixed interest charges.

These examples are mentioned, not because they themselves would lead a holding company to destruction, but rather to demonstrate the dangers of such procedures and to

¹In 1927 the Washington Water Power Company earned \$2,223,246 on its common stock and the Montana Power Company earned \$3,270,242 on its common.

²The Manila Electric Company earned \$4.01 per share of common stock in 1924, \$3.79 in 1922 and 1923.

emphasize the point that, if such exchanges are made, they should be the exception and not the general policy. If a large enough amount of bonds and preferred stocks should be issued in exchange for residual equities in operating companies, embarrassment or actual financial distress would be sure to follow, unless luck or exceptional management intervened.

EQUITIES ACQUIRED FOR COMMON STOCKS

The use of common stock of the parent company as a medium of exchange in purchasing control of new subsidiaries has much in its favor, although there are limits that should be considered even when such residual, non-fixed charge securities are used. Of the companies examined for the purposes of this study, the North American Company was the most consistent proponent of this system of security exchange, using common stock to acquire the common equities of the Western Power Corporation, the Mississippi River Power Company, the Central Mississippi Valley Electric Properties, and the minority interest of the Washington Railway and Electric Company. In these acquisitions the North American Company gave for each share of common stock of the acquired companies, respectively, 1 1/4, 1 2/3, 1 2/3, and 5 shares of North American Company common stock. The result was that the North American Company effected its major acquisitions without incurring any fixed charges, and without having to accumulate or raise large sums of cash. An increase in the capitalization of approximately 500,000 shares of common stock¹ was about the only resulting change in the financial set-up of the parent company, and this stock, being entirely a residual equity, did not demand a return in the same sense that bonds or preferred stocks would have demanded payment under threat of receivership or badly damaged credit.

A further advantage arising from the use of common stocks as a medium of exchange lies in the fact that high prices of

¹Approximately 294,000 shares paid for Western Power Corporation equity; approximately 186,665 shares paid for Mississippi River Power Company equity; approximately 12,000 shares paid for Central Mississippi Valley Electric Properties. Unknown amount used to attract Washington Railway and Electric Company minority interest.

securities to be acquired which result from the "inflation" of market prices will tend to be compensated for by high market prices of the exchange medium, which is affected by the same general market conditions. For example, when the North American Company offered five shares of its common stock for each share of the Washington company's common in 1929, it looked as if, in view of the market price of the former stock, the North American Company was offering about \$740 per share for these equity securities.¹ Any reasonable interpretation of the situation makes it clear that the acquisition did not cost the company any such amount.² The high market price of its stock enabled the North American Company to make a five-share offer to meet the high market price of Washington company stock, which was influenced both by general market conditions and by the North American Company's previous buying activities, without serious effect on the parent company's capitalization. In any case the inflation of the market value of stocks, tending to affect all alike, will equalize the bargaining power of the buyer and seller; whereas an attempt to pay cash or exchange bonds or preferred stocks under such conditions would be abnormally expensive, because the bargaining power of dollars and fixed-income bearing securities would be at their lowest ebb.

In the advantages of common stock exchange lie the dangers of the use of this medium of acquisition. At first glance it appears that the only cost to a purchasing company of issuing common stock in the acquisition of new subsidiaries is the cost of printing the stock certificates, because no promises are made or contracts entered into which demand payment. This is true enough, and as a result there may be a temptation to offer any number of shares to get control of a property which seems desirable. In the heat of competitive bidding that often takes place when more than one holding company is seeking to purchase a given property, the lack of a cash dollar limitation

¹The median of daily average prices of the North American Company common stock for the period June 29 to July 3, 1929, was \$148 per share.

²The North American Company earned \$5.03 per share on the average number of common shares outstanding during 1929.

may lead to the issuance of an almost unlimited number of shares to finance the purchase. Failure to observe the limits of reasonableness in this respect, while it may not result in maladjustment of the holding company financial structure, can lead to serious overcapitalization. The number of common shares so issued in the spirit of optimism may effect the creation of a capitalization composed largely of water, and the number of common shares outstanding may become so great that the earnings of the group will not permit the earning or payment of reasonable returns thereon. Obviously, as soon as this fact is proved, the value of the common shares will suffer a serious decline, and the stockholders will suffer accordingly from the dilution of share value resulting from overcapitalization. The holding company itself will find, under such conditions, that its credit will be harmfully affected, and its general reputation will be that of a highly speculative company whose expansion has outrun the limits of financial reason.

TREATMENT OF SUBSIDIARY SECURITY-HOLDERS

While the treatment accorded by holding companies to the security-holders of their subsidiaries is to some extent reflected in their general financial policies, there is reason to examine the methods of effecting changes and noting the influence of those changes on the parent companies' position. The most general policy followed by all of the companies studied, and one with which the writer is fully in accord, was that of elimination of all minority interest, which necessarily involved the acquisition of practically all of the subsidiary voting securities by the holding company. The North American Company's offering to the minority holders of the Washington Railway and Electric Company, mentioned in the previous section, is an example of the method used by that company. Also to be noted is that company's offering of preferred and common stocks for the preferred stock of the Western Power Corporation because the latter security had voting privileges.¹ The North American Company also made it a point to buy some of

¹Offered: one share of 6 per cent preferred and 4/5 share of common stock of the North American Company for each share of Western Power Corporation 7 per cent preferred.

the voting preferred shares of its Washington subsidiary. The Associated Gas and Electric Company offered bonds and Class A stock to attract exchange by minority holders, and the Standard Gas and Electric Company offered stocks in exchange for outstanding subsidiary common issues. That this policy was not universal, however, is evidenced by the fact that the United Light and Power Company permitted a large minority interest in the American Light and Traction Company to remain outstanding,¹ and also by the fact that the Standard company continued to hold only minority control of the Market Street Railways in San Francisco.

The elimination of minority interests is desirable for several reasons, from the standpoint of holding company management. Perhaps most significant is the fact that such action permits the flow of 100 per cent of subsidiary residual income to the parent company, or at least gives the parent company full control of the flow. The existence of a minority interest necessitates the disbursement of funds outside the group whenever dividends are declared on subsidiary common stocks. Furthermore, it is desirable to eliminate minority stockholders in order to avoid any complications or hindrances of management that may result from the unsettled relationship between majority and minority stockholders. It has been ruled in court that if the holders of a majority of the stock of a corporation combine "to elect directors and to dictate their acts and the acts of the corporation for the purpose of carrying out a predetermined plan" they stand in the shoes of the corporation and are "actual, if not technical trustees for the holders of the minority of the stock."² A parent company, being a majority stockholder, must therefore assume the responsibilities of trusteeship to the minority holders of subsidiary stocks, and it is not hard to imagine that the latter's "rights" might seriously interfere with plans designed to benefit the holding company group as a whole.³

¹Common stock of the American Light and Traction Company is still listed and traded in on the New York Stock Exchange.

²*Jones v. Missouri Edison Electric Company*, 144 Fed. 165.

³Continuous reinvestment of subsidiary earnings might strengthen and benefit the holding company group but cause objections on the part of minority stockholders seeking cash dividends.

Thus the desirability of cleaning up the income situation and avoiding the observance of rights of minority interests make it good policy to eliminate subsidiary voting and residual-income stocks. This should be done as cheaply as possible, preferably by security exchange, but a particular situation may well justify cash purchase of outstanding shares at a fairly high price if conditions demand.¹

In most of the cases studied the bondholders and preferred (non-voting) stockholders of newly acquired subsidiaries were left unaffected by the change of ownership and control. This policy was observed by all of those companies whose theory of financial structures included the use of subsidiary financing. Following its acquisition of the Standard Power and Light Company, the Standard Gas and Electric Company did make some exchange offers to the former company's subsidiaries to assist in the accumulation of the securities necessary to effect a winding-up of some of those corporations, but, with the exception of the Associated Gas and Electric Company's activities, this was the only considerable move to eliminate public holdings of other than voting stocks.

The Associated Gas and Electric Company, in accordance with its theory of exclusive parent company financing, made strenuous efforts to eliminate all subsidiary bonds and preferred stocks as well as voting securities. This it did by offering parent company stocks and bonds in exchange, and by calling the subsidiary issues at a premium. The chief objection to such a scheme, aside from any general criticism of exclusive parent company financing that might be made, lies in the fact that the only way to effect such a change is to offer a security that is of sufficiently greater value to be attractive to the subsidiary investors. Such an exchange will be expensive to the holding company, because it must, as the Associated Gas and Electric Company exchange did,² offer an increased return to the security-holder. Equally true is the fact that calling securities

¹In 1931 the New York Central Railroad offered \$1,550 per share for some two hundred shares of common stock of the Michigan Central then outstanding.

²It should be recalled that most exchange options involved an increase in the capital cost to the Associated Gas and Electric Company.

at a premium tends to increase capital cost, and, unless these exchanges provide considerable savings from some other source,¹ the result will be a net loss to the parent company.

CONCLUSIONS

After a survey of the various methods of acquiring new subsidiaries, it is concluded that cash acquisitions of stock are likely to be expensive, particularly if the stock must be accumulated in a rising market, and that, furthermore, such procedure presents the problem of raising cash, the seriousness of which depends on the credit of the company and on general market conditions.

As a general policy, the creation of funded debt, whether by sale or exchange, in the process of acquiring common stock equities is dangerous and poor management, and the issuance of preferred stocks for similar purposes is equally poor management, although not so risky as the use of bonds.

While there may be times and occasions when it will be necessary to pay cash or give bonds or prior-lien stocks for desirable and valuable equities, the use of common stocks is advocated as the most reasonable and most practical method of acquisition. It is the one which is least likely to warp the financial structure of the holding company group. Even though the use of parent company stocks is favored over cash or fixed-income securities, those residual securities must be used with discretion to avoid overcapitalization.

In connection with the treatment to be accorded the security-holders of newly acquired subsidiaries, it appears that security exchange activities designed to eliminate minority interests are justified and wholly desirable. However, the elimination of subsidiary bonds and non-voting preferred stocks is to be seriously questioned, not only on theoretical grounds, but also because it is an expensive procedure.

¹Not evidenced in Associated Gas and Electric Company case.

CHAPTER 6

SECURITY CONTRACTS AND SECURITY DISTRIBUTION

In previous chapters the policies of public utility holding companies have been viewed as a whole, although with particular emphasis on problems of financial management. The discussion has been confined to such broad subjects as the holding company's position in operation and management, the use of parent company financing as contrasted to subsidiary financing, the desirability of trading on the equity, and the methods of effecting acquisitions. Little has been said about the specific practices that were used in carrying out the policies outlined. In this and the succeeding chapter, attention will be paid to certain practices of holding company managements which, either because of their peculiarity or their general use, are considered to be worthy of analysis and discussion. Of course, most of these points to be discussed have their reflections in the more general policies which have been described and criticized in the preceding chapters, but, even so, there are aspects of these financial practices the full significance of which can be realized only by detailed analysis.

The problems to be considered in this chapter are: (1) the reasonableness and applicability of the bond contracts used by utility managements in borrowing long-term funds, (2) the uses of preferred stocks in connection with the so-called "customer ownership" campaigns, (3) the alternative practices of paying stock dividends and issuing privileged subscriptions as means of increasing equity capital contributions, and (4) the nature of holding company investment banking connections.

BOND CONTRACTS OF OPERATING SUBSIDIARIES

There is a genus in the family of corporate securities normally referred to as "bonds," and the debt represented thereby is customarily called "funded debt." However, within

this genus there are so many species and within each species so many different kinds, that the designation of "bonds" is almost meaningless from a financial standpoint. A bond may be a conditional¹ or an unconditional promise to pay interest and principal, or it may be only a promise to pay interest with no maturity date for the principal,² and so on in various combinations. The differences within the species are so numerous as to defy more detailed classification; yet they are of such financial significance as to demand attention. These variations are accomplished and accounted for by the fact that bonds are loan contracts between borrowing corporations and lending investors, and the range of possible contractual provisions is limited only by human ingenuity, gullibility, and the law. Statutes and the equity courts have set up certain protective barriers for those who would be too gullible,³ but short of those limits, the parties to a loan contract may make almost any sort of agreement for which there is some consideration. In view of the limitless range of possibilities in drawing such loan contracts, it should be interesting to observe some of those in existence and perhaps to suggest certain preferences or possible improvements.

Most common in public utility financing are the contracts creating mortgage bonds; i.e., bonds in which the promises to pay are secured by a pledge of property on which the bondholders have a lien until their claims are satisfied. During the years 1925 to 1929 the North American Company subsidiaries issued more than \$124,000,000 in such bonds. The United Light and Power Company issued over \$36,000,000 and the Associated Gas and Electric Company only about \$7,000,000 in five years. The Standard Gas and Electric Company issued over \$138,000,000, and the American Power and Light Company nearly \$100,000,000 in four years.

These amounts indicate the enormous sums of capital that were raised by the use of such security contracts for new

¹As in "income bonds" which promise to pay interest if earned.

²As in the case of "perpetuities," most common in Europe.

³I.e., the usury laws for the protection of borrowers, and "blue-sky" laws for the protection of investors.

financing, refunding, and general corporate purposes. The issues of the Associated Gas and Electric Company were the smallest in aggregate amount, as might be expected in view of that company's policy of minimizing the use of subsidiary securities of any kind. In fact, there were no such issues by the Associated company during 1928 and 1929, although it is interesting to note that in 1930 and 1931, when it was found necessary to revert to subsidiary financing, mortgage bonds were again used. It is evident that, when loans were obtained by and in the name of operating subsidiaries, mortgage bonds were almost universally used.

The only exceptions noted in the cases studied were in the instances of an issue of \$3,000,000 of debenture bonds of the Mississippi River Power Company (a subsidiary of the North American Company) in 1927, an issue of \$1,500,000 of debentures by the Oklahoma Gas and Electric Company in 1926, and one by the California Oregon Power Company of \$4,000,000 of debentures in 1927 (both subsidiaries of Standard Gas and Electric Company). In the case of the North American Company's subsidiary, it was evident that the deviation was due to restrictions in an underlying bond contract which forbade the issuance of further bonds under an existing first mortgage, but in the case of the two Standard subsidiaries there was no apparent reason for the change. The debenture bonds referred to were of the "unsecured species" — i.e., they were unconditional promises to pay, but, instead of pledging specific property in support of those promises, they put the debenture bondholders in the same position as any general creditor or noteholder. A debenture bondholder has a legally enforceable claim, but does not have the right of foreclosing on specific property to protect his claim in case of default; he must take action on a judgment which will rest subsequent to any mortgage liens that have been placed on the property prior to default. Particularly if such prior liens exist, debenture bonds are distinctly inferior securities from the investor's standpoint.

The infrequent use of this type of loan contract by operating subsidiaries demonstrates the preference for the secured type,

and this preference is entirely reasonable. If mortgageable properties are available, the investment attraction of a secured loan is bound to make borrowing on such a basis much cheaper. The use of unsecured loans is seldom advisable except when the only other alternative is the use of subsequent-lien bonds on inferior security.¹ Such junior-lien bonds are those for which an already mortgaged property is pledged as security, and junior-lien bondholders are, in reality, second or subsequent mortgagees. The value of such a pledge is often so dubious that none at all is about as satisfactory.

The fact having been established that there is a preference for the use of secured bonds for the financing of operating subsidiaries, there are some further characteristics of such mortgage loans to be considered. Observation of contracts shows a variation in maturity dates which indicates that loan contracts were entered into for various periods of time. Among the various operating company mortgage bonds were found those involving from ten- to forty-year maturities, although the average term of the issues was about twenty-five years. No company showed any consistent or noticeable deviation from that average. This suggests that the issuing companies adapted their loan contracts to market conditions, and when the bond market was relatively strong, as in 1927,² most of the thirty- and forty-year bonds were issued.

If there is any industry where long-term debt is justified, it is probably the utility industry, in which, as far as can be ascertained, there is assurance of continued earning capacity, and a long average life is in prospect for operating assets. Thus, if a favorable rate of interest can be contracted for, it is perfectly reasonable to issue bonds of long term, even longer than forty years, if the market will absorb them at a favorable price. From the standpoint of management it would be more satisfactory to issue one-hundred-year bonds than it would be to set the maturity date at forty years hence, and it would be

¹All issues having maturities of five years or less were ruled out for consideration here because they were regarded as instruments of temporary financing not indicative of the companies' long-term debt policy.

²The Dow-Jones average of bond prices reached its peak late in 1927.

just as easy to forecast financial needs and conditions for one hundred years as it would be for forty. It is a well-established precept that the industry will always be financed to some extent with borrowed capital, and hence a maturity date means only a need for refunding in the eyes of the management. However, as long as the market expresses a preference for medium long-term bonds over very long-term ones, through its willingness to pay reasonably higher prices for the former type, the management is justified in issuing securities of moderate term.

There certainly can be no forceful argument of practical bearing that forty-year bonds, or even twenty-year bonds, make the financial structure of a public utility more flexible than one-hundred-year bonds, because any demands for flexibility are just as likely to be effective within twenty years as within one hundred. Furthermore, it is assumed that all bond issues of maturity in excess of five years will be made callable; i.e., that the loan contract will contain a clause permitting the management to cancel the contract and its accompanying obligations by prepayment of the debt. Such a provision will guarantee a greater degree of flexibility to the financial structure of a corporation than will a short maturity, because it leaves the option of debt retirement in the hands of the management, and thus the debt need be retired only if such a procedure should prove profitable to the issuing company. Maturity dates, on the other hand, may prove embarrassing, particularly if they happen to coincide with an off year in the industry or with a time when market conditions are not favorable to cheap refunding.¹ In other words, as long as an operating utility company is protected against the possible unprofitableness of long-term capital contracts by the option to call and retire the debt, the fewer and farther between the definite due dates of its bonds, the more secure its financial status.

The subject of secured loans involves many legal and financial questions. One of the most significant, from the standpoint of financial management, is the question of the "openness" of the mortgage used in the bond contract. As has been

¹The Insull disasters of 1932 are ample evidence of the embarrassments of unfortunate maturity dates.

pointed out, the public utility industry is an expanding one, and that expansion is typically expensive. At the present stage of the industry's development there is an almost constant demand for capital to finance extensions and improvements, and as long as debt financing is an admittedly sound procedure, every means should be taken to make borrowed capital available as cheaply as possible. Secured loans have proved the most popular mediums for operating company borrowings, and those with prior liens have the greatest security and, in general, facilitate raising capital at the lowest cost. As a result of this combination of circumstances, it seems reasonable to conclude that open mortgages should be used whenever possible, because contracts of that sort permit the issuance and sale of additional first mortgage securities subsequent to the original authorization.

In contrast, the typical closed mortgage contract prohibits the issuance of more than a limited amount of bonds of equal security. The result is that a utility management seeking to borrow funds for expansion of existing properties, or for the improvement thereof, is limited to the sale of second mortgage bonds, or it must resort to some subterfuge in title or procedure to make the issue appear other than it is. Regardless of basic security, "second mortgage bonds" will not be so attractive to the investor nor so cheap for the corporation as first-lien bonds.

Evidence of the faith held in the magic of the word "first" is found in the effort of corporate managements to include it in the titles of their bond issues almost regardless of the real lien characteristics of those issues.¹ If, however, bond indentures are drawn with open mortgages, additional first mortgage bonds can be issued which would share the prior lien of past issues and in turn might share it with subsequent issues. Of course such a procedure should not be permitted without limitations designed to protect the security of bondholders. This could be arranged, however, by drawing the mortgage with an after-acquired-property clause and limiting subsequent issues to a given percentage of cost of properties added, and/or by placing a limit on the interest charges that could be incurred

¹Obviously as subject to misuse and deceit as it is useful in combating illogical prejudice against subsequent liens on valuable properties.

in terms of a definite percentage of available earnings. The after-acquired-property clause would bring all new properties under the mortgage as additional security for the increased loan, and the other limitations would assure that part of the additions would be financed by ownership equities and that earnings would be maintained in reasonable proportion to interest charges. The possibilities here described are quite commonly made use of in current practice, are recommended by investment bankers,¹ and are ideally suited to the public utility situation.

Another feature of the usual operating utility bond contract, which may be criticized in view of the nature of utility capital needs, is that which makes provision for retirement prior to maturity. Many loan contracts contain clauses known as retirement or sinking-fund provisions which require the issuing corporation either to buy and to retire a certain proportion of the bonds each year, or to set aside funds of a contracted amount each year to be available for payment of the bonds at maturity. Perhaps the most exaggerated case of this sort in recent years appeared in a 1931 issue of 6 per cent mortgage bonds by the Kansas City Power and Light Company.² In this instance the company issued \$7,500,000 of first and refunding 6 per cent mortgage bonds Series C under an open mortgage, and in the contract the company agreed to "a monthly sinking fund arrangement effective Mar. 1, 1932, whereby the company will provide on the first day of every month sufficient cash to purchase or redeem \$42,000 principal amount of these \$7,500,000 series C 6% bonds."³ While the monthly redemption feature of this contract is unusual, the principle involved is not, because it is quite customary for some such provision to be made. From the standpoint of financial management, such procedures are entirely inconsistent with the capital needs of the business. If the Kansas City Power and Light Company

¹W. E. Lagerquist, *op. cit.*, quoting Chester Corey, Vice-President, Harris Trust and Savings Bank, Chicago, Illinois.

²A subsidiary of the North American Power and Light Company, 50 per cent control of which is owned by the North American Company and 50 per cent by the Middle West Utilities Company (Insull).

³Reported in *Barron's*, February 1, 1932, p. 8.

needs \$7,500,000 on February 1, what reason is there to believe that it will need \$42,000 less on March 1, and \$42,000 less each month thereafter?

It has been pointed out that the utility industry is one of limited profits and hence one which cannot accumulate large reserves, and also that the business is one with continuous needs for new and additional capital investment. Thus, large sinking-fund requirements will often result in the need to "borrow from Peter to pay Paul," while at the same time, a company may be attempting to raise new capital to satisfy the needs of physical expansion. The argument of flexibility arising from periodic debt retirement cannot be advanced, because, while such schemes do retire one debt and make room for a new and different loan contract, there is nothing flexible about such arrangements as are described above. The Kansas City Power and Light Company agreed to provide \$42,000 each month, even if it had to borrow at the bank or sell 8 per cent bonds to do so. There is no flexibility provided for financial management in such definite contracts.¹

Presumably there is a market reason for the inclusion of such provisions in bond issues, but that does not necessarily mean that the market's reason is a sound one. No doubt the Kansas issue was designed to "beat" the February, 1931, bond market, which was extremely chary of all bond issues, by providing an element of assured liquidity and market support which would encourage the sale of the bonds. Repurchase of bonds does support the market, but only at the expense of a drain on the capital of the issuing corporation, and public utilities, in general, are not in a position to encourage decreases in their capital investment.

Perhaps the problem is one of investor education, for certainly there is no logic in the universal use of such retirement schemes. The investor might be made to realize that, as

¹Another type of sinking-fund provision, not so apt to prove embarrassing to the issuing company, is that which calls for a given percentage of earnings to be devoted to debt retirement, so that if earnings are low, the obligation is reduced. But this scheme is as illogical as the fixed sinking fund, because increases in earnings, which demand heavier debt payments, usually accompany expansion, and this necessitates an increase in investment, not a decrease.

long as a corporation is able to redeem its debt, the bondholder can well afford to forego retirement; whereas, if retirement would cause embarrassment by its drain on capital, the sinking-fund provisions would work a hardship on the corporation and on all bondholders except the particular ones whose bonds happened to be called for retirement. The situation is such that when the debtor can pay, the creditor should be willing to lend, and when the debtor cannot pay, the creditor is not benefited by any contractual promise of payment. In view of the inconsistency of such retirement provisions, their elimination is certainly worthy of consideration, if it can be accomplished without spoiling the market for a company's bonds. In consideration of these facts, there is occasion for intelligent propaganda to acquaint the investors with the real character of the financial needs of public utility operating companies.

BOND CONTRACTS OF PARENT COMPANIES

When a policy of issuing bonds is followed by a parent holding company, the most recent general practice has been to use unsecured debentures. In fact, in the five companies chosen for analysis, there were only two instances of use of secured parent company obligations. These were a \$14,000,000 issue of the Associated Gas and Electric Company secured by collateral which was put out in 1925, and two collateral issues of the United Light and Power Company amounting to less than \$2,500,000. A further use made of unsecured bonds is found in the financing of intermediate holding companies; and again, during the years under observation, there was no instance of other than such unsecured borrowing.¹ The extent of the use of this form of financing indicates its importance, as noted in Table 15. The hundreds of millions of dollars' worth of unsecured bonds used by these companies in the four or five years indicates the popularity that was achieved by such issues during the expansion period.

Perhaps there was a time when it was true that debenture bonds were issued by only two classes of utility corporations:

¹Reference is still being made only to "long-term" financing—i.e., bonds with more than five years to run.

those very well established and with unquestioned credit, and those unable to issue more mortgage or secured bonds and hence in a very weak credit position.¹ More recently, however, debenture bonds have been issued by strong, weak, and indifferently secure utility companies. All of them made use of this type of contract during the years 1925 to 1929, when the security markets were growing and accepting many new ideas as to capital contracts. It is interesting to note this change from the use of collaterally secured issues in financing holding

TABLE 15—EXTENT OF PARENT AND INTERMEDIATE HOLDING COMPANY DEBENTURE BOND ISSUES* (1925-1929)

Company	Issued by Parent Companies	Issued by Intermediate Holding Companies	Total
American Power and Light (four years)	\$ 10,000,000	-----	\$ 10,000,000
Associated Gas and Electric (five years)	394,720,473	\$ 75,405,000	470,125,473
North American (five years)	-----	48,000,000	48,000,000
Standard Gas and Electric (four years)	25,000,000	24,000,000	49,000,000
United Light and Power (five years)	12,500,000	87,922,970	100,422,970
Total	\$442,220,473	\$235,327,970	\$677,548,443

*Source: Appendix B.

company operations, which was a particularly popular method of raising capital during the years 1906 to 1920.² The reason for this change is a logical one. Collateral trust bonds, being secured by a pledge of stocks and/or other securities of subsidiary companies, can be only as good as the equities represented by the collateral. If the collateral is good, it will earn and pay enough to support the parent company securities adequately; if the collateral is poor, it will not earn and hence will be equally valueless to the bondholder and to the holding

¹Dewing, *op. cit.*, pp. 162-3.

²*Ibid.*, pp. 127-9.

corporation. This conclusion is particularly pertinent in view of current holding company procedure, which involves parent company ownership of equity securities almost exclusively. When a holding company's assets comprise chiefly common stocks of its subsidiaries, the pledge of that type of security under a collateral trust agreement adds little or nothing to the strength of the parent bond issue. Debenture bonds under such conditions are as good as secured bonds, because the strength of both lies in the same source; namely, the value of the subsidiary equities owned by the parent. If the subsidiary equities lose value, the collateral trust bondholder's right to a "scrap of paper" is meaningless, and his position no better than if he had been a debenture-holder.

It might be thought that collateral trust issues in a financial set-up like that of the Associated Gas and Electric Company would be more significant, because of the attempt made in that case to eliminate underlying bonds and preferred stocks and thus to give greater security to the subsidiary equities held by the parent company. But it should be noted that in the Associated Gas and Electric Company plan there was provision for re-creation of subsidiary debt.¹ Under such conditions the security under a collateral trust issue could readily be diluted to a mere residual equity with all the accompanying risks. Thus it seems that unsecured debenture bonds are best adapted to those utility organizations that are accustomed to use parent company debt. The security is fundamentally as good as that of collateral trust issues, and, furthermore, the elimination of a specific pledge leaves the management free to shift its properties, consisting of subsidiary equities, without let or hindrance. This flexibility, in the hands of intelligent management, should prove beneficial to all concerned.

CONVERTIBLE SECURITY CONTRACTS

Another relatively new trend in corporate security contracts is found in the convertible feature which permits a security-holder to change his status by exchanging one type of security

¹Discussed on p. 71.

for another. The usual provision is that bondholders may exchange their bonds for stocks, thus assuming the position of owners instead of creditors of the corporation. While this type of security is not new in the sense of having been recently invented, yet its popularity is recent, and although this peculiar type of bond contract has found its greatest use in industrial financing, the utility industry has also found occasion to include it in the financial set-up of both parent and subsidiary companies.

The Associated Gas and Electric Company performance provides the most outstanding example of versatility in the matter of offering convertible bonds.¹ Table 16 shows, in summarized form, the features of the convertible bond contracts created by the Associated Gas and Electric Company during the years 1925 to 1929. The detail in this table is presented, not to facilitate an analysis of the significance of each contract, but rather to offer a sample of the complexity resulting when a utility management applies its ingenuity to the creation of such convertible bond contracts. Containing as it does an example of almost every illogical feature of this type of contract, Table 16 will serve as a basis for the discussion to follow.

The sale of convertible bonds has been described as a device for "selling stock for more than it was worth, and then using the proceeds to establish its worth."² Some of the advantages claimed for convertible bonds are that profitable operation of a business will tend to eliminate debt by making conversion profitable, and that the corporation is enabled to secure its capital at a lower rate. The first claim may be admitted as a possibility, because it may so happen that a company can sell bonds when it cannot sell stock, and use the capital so profitably that ownership in the company becomes preferable to the limited-return creditor relationship represented by bonds. This argument, as one in favor of the use of convertible bonds, is weakened when applied to public utilities, which are known to be committed to a policy of permanent debt. As a public utility

¹The convertible debenture bonds of the American Telephone and Telegraph Company comprise one of the largest issues of this type in the utility industry.

²Dewing, *op. cit.*, p. 219.

TABLE 16—CONVERTIBLE BOND CONTRACTS CREATED BY THE ASSOCIATED GAS AND ELECTRIC COMPANY*
(1925-1929)

Title of Issue	Interest Rate	Conversion Ratio per \$1,000	At the Option of	Time Limit
1. Convertible debentures	5½%	Class A and common stocks†	Owner	—
2. Convertible debentures	4½	20 shares Class A	Owner	Unlimited
3. Convertible debentures	4½	17½ shares Class A	Owner	3/1/30 to 3/1/32
4. Convertible investment certificates	5½	(a) \$1,000—5% convertible debenture bonds	Owner	Unlimited
		(b) 15 shares Eastern Utilities Investment corporation stock	Owner	Unlimited
		(c) 10 shares \$5.50 preferred stock	Owner or Company	After 11/15/33
5. Convertible debentures	6½	10 shares \$7 preferred stock	Owner	After 6/1/30
			Owner or Company	After 11/1/35
6. Convertible debenture certificates, B	6	10 shares \$6.50 preferred stock	Owner	After 11/1/32
			Owner or Company	After 1/1/28
7. Convertible debenture certificates, C	6	(a) 25 shares Class A stock 20 shares Class A stock (b) 10 shares \$6 preferred stock	Owner	1927 and 1928
			Owner	1929 to 1932
			Owner	3/1/30
			Owner or Company	12/1/27
8. Convertible debenture certificates, D	6	12½ shares A and 13 1/3 shares common 10 shares A and 10 shares common 10 shares \$6 preferred stock	Owner	1928 and 1929
			Owner	1930
			Company	After 7/1/28

9.	Convertible debenture certificates, E and F	6	12½ shares A and 13 1/3 shares common	Owner	1928 and 1929	
			10 shares A and 10 shares common	Owner	1930	
			10 shares \$6 preferred stock	Company	After 1/1/29	
10.	Convertible debentures, A	6	17½ shares Class A stock	Owner	1930	
			16 2/3 shares Class A stock	Owner	1931 and 1932	
			Shares A stock depending on market	Company	Unlimited	
			10 shares \$6 preferred stock	Company	Unlimited	
11.	Convertible debentures, B	6	12½ shares Class A stock	Owner	1930	
			10 shares Class A stock	Owner	1931 and 1932	
			Shares A stock depending on market	Company	Unlimited	
			10 shares \$6 preferred stock	Company	Unlimited	
[127]	12.	Interest-bearing allotment certificates	\$80	(a) 50 shares A common of General Gas and Electric Co., and 5 shares \$5 preferred stock, and 50 rights to buy common of Associated and General companies	Owner	After 7/1/30
				(b) \$1,200—5% convertible debentures	Owner	—
				(c) \$1,200—5% convertible debentures, and scrip or rights to buy preferred or common	Owner	—

*Source: Appendix B.

†Conversion ratio depended on amount presented; first bonds presented received more favorable ratio than later ones.

company expands and grows more profitable, the elimination of debt and fixed charges is the least of its worries; in fact, such is exactly the occasion for profitable trading on the equity and realizing extra stockholder return therefrom.

That the possibility of conversion makes the financial structure of a utility system more flexible is admitted, but there is no particular advantage in uncontrolled flexibility. Uncertainty would seem to be the chief characteristic of outstanding bonds convertible into stock, because the management must always stand ready to increase the amount of stock outstanding, and to relinquish a portion of control, if the stock into which the bond is to be converted has voting rights.¹

The potential and actual disadvantages of convertible bond contracts as applied in public utility financing offset any possible advantages that might accrue from their use. From the standpoint of the issuing company, conversion of bonds into stocks is expensive. Obviously the only condition under which a bondholder will voluntarily convert his holdings into stock is when the value of the stock to be received exceeds the value of the bonds to be converted, and that condition will exist only when a company's dividend payments and earnings are high enough so the stock will yield more than bonds. In other words, conversion for profit will occur only when the issuing company is prosperous and is paying good profits to its stockholders either in dividends or appreciation. Under such conditions the management and the old stockholders will be compelled to share their residual profits with an added number of investors who, as bondholders, had been paid a fixed but limited return.

For a more specific example of the expensiveness of conversion, reference should again be made to the data in Table 16. It will be noted that, in almost every instance where the conversion option offered by the Associated Gas and Electric Company was into other than Class A stock, the contractual expense of capital to the Associated company was increased. For instance, there is noted the fact that \$1,000 worth of 6 per cent bonds were convertible into ten shares of \$6.50 preferred

¹The Associated Gas and Electric Company avoided this possibility by permitting no conversions into Class B stock, the only issue with voting power.

stock. This offer contracted to increase the annual cost of \$1,000 capital from \$60 to \$65, not considering the discount at which these respective securities might have been sold. The 4½ per cent convertible debentures described in item 2 would be converted into Class A stock only when each share of Class A was worth more than one-twentieth of the value of a \$1,000 bond. If such were the case, it would undoubtedly mean that the A stock was paying, or showed prospects of paying, more than \$2.25 per share, and hence the cost of capital would be more than the \$45 per annum paid on the bonds.¹ Again, a most illogical feature of this conversion lies in the fact that it will take place at precisely the time when a utility company can most safely and satisfactorily trade on its equity.

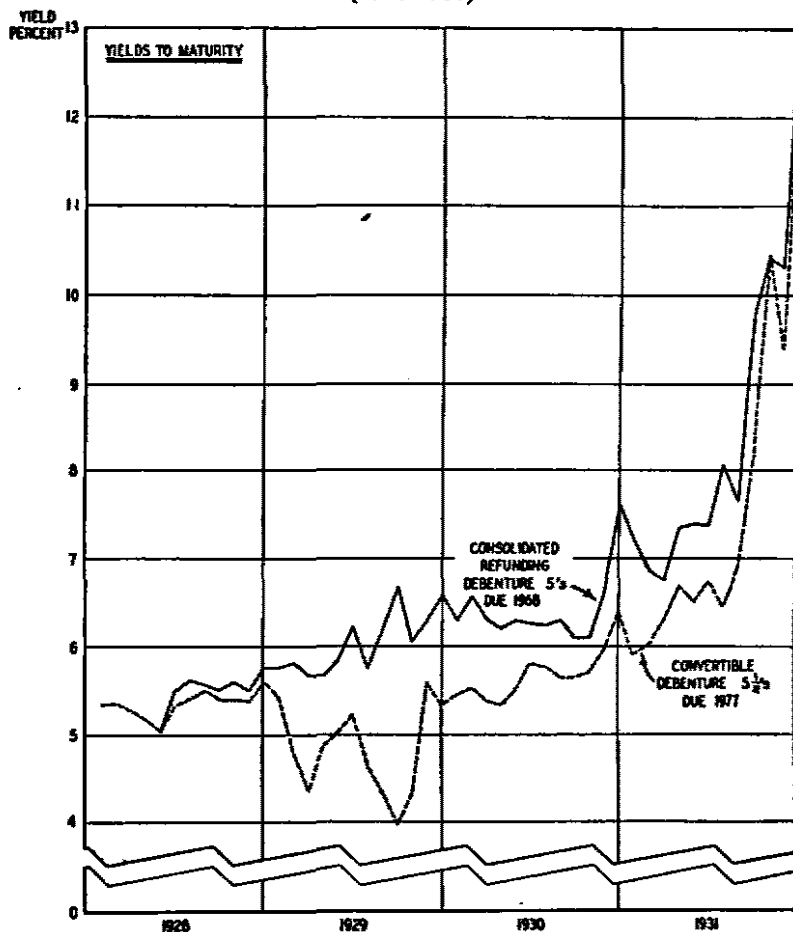
The conversion feature has been advocated as an aid to capital raising, on the ground that it enables the issuing company to secure a higher price for its bonds than it otherwise would; i.e., the investor is willing to pay something extra for the addition of the speculative feature of the issue embodied in the option to participate in future earnings as a stockholder. If this statement is true, a corporation might well be tempted to take advantage of the fact, particularly if the differential saving proved to be considerable.

Perhaps the investment market is not so illogical as Professor Dewing implied when he said that investors were accustomed to pay something for this feature although it was of negligible value to them.² In the experience of the Associated Gas and Electric Company debenture issues there was no appreciable advantage enjoyed by the convertible issues over the non-convertible debentures. Chart 15 shows the fluctuations in the yields of two Associated company debenture issues and proves that the company paid no more for capital by issuing non-convertible debenture bonds than the market was giving for convertible issues at the same instant. The straight debenture 5s were sold in 1928 to yield almost precisely the same rate as previously issued convertible 5½s were then selling to

¹Associated Gas and Electric Company Class A stock paid \$2.25 in 1928 and \$2.40 in 1929. Price range during 1928: 47 to 52½; 1929: 35½ to 72½.

²Dewing, *op. cit.*, pp. 231-2.

CHART 15—COMPARISON OF YIELDS ON CONVERTIBLE AND NON-CONVERTIBLE BONDS OF THE ASSOCIATED GAS AND ELECTRIC COMPANY* (1928-1931)



*Source: Appendix C.

yield.¹ Furthermore, the continued close relationship between the yield rates of these two issues at all times, except when, as in 1929, the conversion privilege had value in action, gives further evidence to the effect that the investor is not blinded to real value considerations by the inclusion of conversion features. Between May, 1928, and December, 1931, when the yield rate on the convertible bonds was 5 per cent or above and indicated little influence of actual or immediately potential conversion value, the average difference between the yield rates was 0.66 per cent. Other instances have been found in which convertible bonds did sell at higher prices than the market for existing debts of similar lien, but the difference in cost was seldom as much as half of one per cent except when conversion was immediately profitable. In the latter cases, of course, the sales were not of bonds but of stocks and they were made at stock prices. Under such conditions it appears that a public utility company has little if anything to gain by the creation of capital contracts which permit conversion of bonds into stocks at the option of the security-holder. Considering the uncertainty, the expense, and the loss of equity trading advantages, one is forced to conclude that convertible bonds are not entirely acceptable instruments for public utility financing.

Securities convertible at the option of the issuing company are peculiar to the Associated company set-up and may be rather summarily disposed of. In Table 16 are noted certain debt securities which were convertible into stock at the option of the Associated Gas and Electric Company; for example, item 10 describes the Series A debentures which might have been converted into preferred or Class A stock at the option of the management. Presumably the only excuse for including or contemplating the use of such a privilege would be to avoid the payment of fixed interest charges in case of financial embarrassment, but it is inconceivable that a company would ever dare to make use of such an option.² To include in a debt

¹A rate of 5.04 per cent for straight debentures, 5.05 per cent for convertibles.

²In May, 1932, however, the Associated Gas and Electric Company did exercise its option by calling its various convertible certificates for conversion. While the provisions do not call for any other privilege than the conversion

contract the option to retire that debt by call, and presumably on the payment of a premium, may be acceptable to investors and the market generally, because the par value of the debt plus the call premium would be paid to the investor in cash. To subject bonds to call with payment made in stock would be the height of folly. It is true that a degree of flexibility is added to the financial set-up by such a provision, but its utilization would entail irreparable damage to the credit of the issuing corporation. A moratorium or cancellation of international debts may be spoken of in polite society with some assurance that a degree of favor will be expressed by some one, but it is very doubtful whether the possibility of cancellation of business and corporate debts would meet with the same reception. Such conversion provisions propose just such a cancellation, and only the damage of fulfillment would be greater than the damage of anticipation to a company's credit reputation.

One other feature of the Associated Gas and Electric Company conversion system is worthy of consideration, because of the confusion it adds to the investment quality of the company's securities. Item 4 of Table 16 calls attention to the possibility that convertible investment certificate holders might convert their debt instruments into shares of the Eastern Utilities Investment Corporation, an affiliate of the Associated Gas and Electric Company, and item 12 refers to the so-called "allotment certificates" which were good in exchange for shares in the General Gas and Electric Company stocks. No good word can be found for such provisions. They have reason for their existence only in the speculative appeal that might be involved, but it is doubtful whether such an appeal could have influence on an investor of even average intelligence. Furthermore, encouragement of the shift in security holdings possible under these contracts is far from consistent with any ideal of simplification of financial structure which every utility management ought to have in mind. Both options described above would

into specific stock issues, the company offered the alternative, in lieu of stock, of a newly authorized issue of convertible obligations due in the year 2002.

tend to increase minority interests in subsidiary and affiliated companies, a procedure which the Associated Gas and Electric Company had definitely committed itself against.¹ It will be a long time before the investment market can partake of the multiplicity of capital contracts represented in the Associated company structure without feeling the qualms of financial indigestion resulting from such an uncertain diet.

A gentleman of the legal profession, after examining a prospectus describing a new and complicated security contract, remarked to the sponsoring investment banker: "This seems to be a naïve statement to use in distributing X Company's securities." The reply of the banker was: "X Company has a naïve group of security-holders." This would seem a pertinent remark based on the general presumption that only naïve investors can be expected to buy the securities of a company that offers capital contracts of such complexity and indefiniteness as those just described.

If there is any industry that lends itself to definite capital contracts, it is the utility industry with its relatively stable and assured earning capacity. Any management not capitalizing on that fact is either losing an opportunity of considerable selling value, or is attempting so to confuse the issue that sound investment analyses are rendered impossible, thus providing a cover for doubtful practices.² Any possible legitimate advantages claimed for conversion, and its special application in the way of flexibility and elimination of debt, may be secured in a more definite and understandable fashion by the inclusion of callable features in bond contracts, and by the direct sale of stock when the market is in a receptive mood for equity securities.

SALE OF SECURITIES TO CUSTOMERS

This study does not attempt to provide a detailed analysis of the possibilities and limitations of the sale of securities to

¹Elimination of subsidiary securities was the motto of the Associated Gas and Electric Company management.

²Evidence that the market interpretation of the Associated Gas and Electric Company situation sees either mismanagement or malmanagement is evidenced in the 1931 yield rates on Associated Gas and Electric Company securities. See Chart 12.

utility customers as a special means of raising capital. Rather, it merely provides some suggestions about this more or less popular method of security distribution. Of the five companies involved in this study, the Standard Gas and Electric Company made the most extensive use of "customer ownership campaigns" to put its securities in the hands of its customers. The Standard company reported the raising of about \$70,000,000 as a result of its sale of subsidiary preferred stocks to customers during the four years 1926 to 1929. The management of the North American Company also encouraged the sale of subsidiary preferred stocks to the customers of the respective companies, but, in line with the general policies of the system, no concentrated effort was made to force such a policy on the subsidiary companies. Under the guidance of the Electric Bond and Share Company, the subsidiaries of the American Power and Light Company also instituted campaigns for the sale of preferred stocks to customers, but there seemed to be no determined effort to raise large amounts of capital by this method. The policy of the United Light and Power Company management seemed to show a varying attitude with respect to such security distributions, but preferred stocks appear to have been sold by this means when there was a market advantage in so doing.

There was one characteristic common to all of the cases described above; namely, that the customer ownership projected was that of subsidiaries and not of the parent companies.¹ It was also true that the "ownership" was chiefly non-voting, being effected through the sale of preferred stock instead of common. Obviously, such a theory would not and did not fit into the Associated Gas and Electric Company scheme of financing, and accordingly this company's sponsorship of the customer ownership idea took the form of the sale of parent company securities, chiefly debenture bonds of indefinite maturity and non-voting preferred stocks. Thus all of the companies used their customers as a source of non-voting capital to some

¹In the United Light and Power system, shares of the subsidiary holding company, United Light and Railway, were sold to customers.

extent, and, in fact, that practice was typical of the whole industry and was one of the peculiarities of financial procedure worthy of mention.¹

The possibilities of this method of raising capital have been recognized by the National Electric Light Association to the extent that it has a standing "Customer Ownership Committee" engaged in studying the procedures of various companies, reporting on the nature and extent of customer ownership activities, and making occasional recommendations or criticisms of current practice. The place of customer ownership in the utility financial scheme is well summarized by Ralph E. Heilman in his article "Customer Ownership of Public Utilities."² From this and other sources it is evident that the policy is a generally accepted one, and that it has certain potential advantages which may be summarized as:

1. That of providing a new and additional source of equity capital which can be raised in the form of non-management contributions
2. That of providing a means of financing at a minimum cost
3. That of creating customer good-will.

The first proposition must be admitted to be true, although its significance is in question, because, as a source of capital, public utility customers represent a more or less unknown quantity. Recent months have put this source to a real test, and if the utilities are able to report continued success in the sale of preferred stock to customers in amounts sufficient to meet the needs for equity capital during the months of depression, one's faith in customers as a dependable source of funds should be strengthened.

Reference to customer ownership campaigns as a cheap means of raising capital contains an implication that is open to some question. The normal cost of distributing preferred shares through investment channels is reported to run from

¹This policy may be contrasted to that of the American Telephone and Telegraph Company which involved the sale of parent company common (voting) stock to employees and customers.

²*Journal of Land and Public Utility Economics*, I (January, 1925), 1-17.

six to eight points or more,¹ whereas the cost of company distribution to customers is nearer five points.² From personal experience the writer questions the cost accounting system that would result in a figure of five dollars per share, particularly when otherwise employed members of a utility company personnel are participating as salesmen. It is true that actual commissions, prizes, campaign dinners, and bonuses can be allocated to the "security expense" account, but there is little possibility of accounting for the lost time and inefficiencies resulting from employee participation in such campaigns. There are undoubtedly many working hours which utility employees lose from their regular work because of such campaigns, and this loss should be considered in any logical comparison of costs of alternative methods of capital raising. Not to be ignored in counting expenses is the fact that sales to customers are normally in small units and require a vast amount of clerical work in recording and transferring and in the payment of dividends.³ This latter expense is particularly significant when, as is often the case, dividend checks are mailed monthly in accordance with the feature of frequent dividend payments added for sales appeal.⁴ It is not to be implied that such costs of customer ownership, even if exceeding the cost of alternative methods of distribution, might not be justified, but the point is that such a method of raising capital ought not to be accepted as a "cheaper" one without full consideration of all of the costs involved.

Customer good-will is a fetish much catered to by the public utilities, and perhaps justly so in view of political implications in the utilities' tenure of existence. If the sale of securities to customers could be counted on to assure a continuance of that

¹*Ibid.*, 13.

²One hundred and eighty-five companies using the plan reported to the National Electric Light Association an average selling cost of \$4.60 per share.

³Instances are known where a considerable volume of "over-the-counter" sales continued after campaigns had closed; obviously "cheap" distribution that is worthy of encouragement.

⁴A monthly dividend of 50 cents on one share of 6 per cent preferred stock might well cost 20 cents in postage, paper, and time used in preparation, distribution, and accounting.

good-will, it would be cheap at any price, but logically there is no reason to expect a preferred stockholder in an operating utility to prefer high company earnings to a lower gas or electric rate. Both to the advantage and possible disadvantage of the utility is the fact that utility customers are not, as a class, trained investors. Most of them have a minimum of understanding of investment principles and have purchased a utility's stock on the strength of home-town sales talks. Under these conditions the consumer will be favorably inclined toward the company only as long as his dividends are regularly received. Imagine the reaction, if sound financial policy should dictate the passing of preferred dividends, when the stockholders of the company are its immediate neighbors. Much has been said about the moral obligation of a utility to pay preferred dividends when it has sold stock to investment-unwise customers, but equally effective would be the practical necessity of continuing payments in defense against the ill will which would undoubtedly replace any good-will that had existed in the days of plenty. Absentee stockholders of the more experienced class of investors can cause trouble enough in times of financial embarrassment, but their procedures may be expected to be orderly and business-like. The activities of large numbers of disappointed customer-owners could well be feared, because of their uncertainty, and because of the effect which the investors would have not only as stockholders but as customers and voters.¹

The sale of securities to customers undoubtedly has its legitimate part to play in public utility financing, because it does help to satisfy the large and continuous capital needs of the industry, but possible limitations on such security distribution and the possibilities of boomerang effects should not be overlooked. Perhaps least fitted to the situation as outlined is the plan under which the Associated Gas and Electric Company sold definitely speculative securities of the parent organization to subsidiary company customers. While there has been no failure to pay either interest or preferred dividends, one may

¹One can imagine the fuel that would be added to the "public ownership" blaze if the utilities should "break faith" with their customer-owners.

wonder about the feelings of customer-owners in face of present-day market prices of Associated company bonds and preferred stocks.

SALE OF SECURITIES BY PRIVILEGED SUBSCRIPTIONS

Before the subject of capital contracts and instruments for raising capital is concluded, it will be well to consider the sale of additional securities to old stockholders as a source of new and additional capital funds. The problem suggested here involves three aspects, two of which are decidedly of financial interest and significance, and the third of which is more a legal consideration.

Usually the rights of stockholders with respect to their participation in new stock issues by a corporation are defined by statute or by the terms of the corporate charter,¹ but in the absence of such provisions, the right to subscribe *pro rata* to new security issues has been held a preëemptive right inherent in the stockholders' relation to the corporation. It has always been understood that the stock of a company can be exchanged for property without a violation of this right, and also that it is possible for old stockholders to waive their preëemptive rights, and that such a waiver will hold to subsequent purchasers on notice,² effective notice consisting of a statement of the waiver printed on the stock certificates.³ Inasmuch as many modern corporations have taken advantage of this waiver possibility,⁴ any offering of stock to old stockholders may be considered a privilege granted by the corporation rather than a right inherent in the stockholder's contract. Thus may be dismissed any considerations of legal pressure that might account for privileged subscriptions, making their use purely a matter of financial expediency.

¹Arthur W. Machen, Jr., *Modern Law of Corporations* (Boston: Little, Brown, and Co., 1908), I, 499.

²*Stokes v. Continental Trust Company*, 186 N.Y. 285; 78 N.E. 1090.

³Machen, *op. cit.*, 505.

⁴From a common stock certificate of Commonwealth and Southern Corporation is taken the following: "No stockholder shall be entitled as a matter of right to subscribe for, purchase or receive any shares of the stock or any rights or options of the Corporation . . ."

The two financial aspects of the problem arise from a consideration of the possible use of privileged subscriptions as a means of raising capital and from a comparison of this method with the payment of stock dividends, which is advocated in some instances as a more satisfactory means of achieving the same result. Consequently, the following discussion will take the form of a comparison of these two methods of raising capital, in an attempt to determine the relative advantages of each plan.

An examination of the policies of the five companies involved in this study shows that all of them made use of stock dividends: the North American Company never paid dividends in any other form, the American Power and Light Company paid both cash and regular stock dividends, the Standard Gas and Electric Company paid stock dividends only occasionally, the United Light and Power Company discontinued such payments after a trial, while the Associated Gas and Electric Company added further to the confusion in its financial policies by paying stock and cash dividends and optional stock or cash dividends on all classes of stock including preferred. Of the five companies, only three raised capital by offering privileged subscriptions to stockholders.¹ The United Light and Power Company used this method once in 1925, the Standard Gas and Electric Company raised some \$26,000,000 by offering both preferred and common, and the Associated Gas and Electric Company offered all kinds of securities to all classes of security-holders.

For another comparative example, attention is called to the American Telephone and Telegraph Company, which used privileged subscriptions periodically to the exclusion of stock dividends. Two extreme policies and their possibilities are demonstrated in Table 17 which records the experiences of the American Telephone and Telegraph Company and the North American Company. In the case of the American Telephone and Telegraph Company over \$800,000,000 was paid out in cash during eight years and over \$900,000,000 was raised by

¹The North American Company offered rights to buy stock late in 1929, but withdrew the rights following the crash in stock prices.

offering the stockholders the right to buy additional shares during that same period. On the other hand, the North American Company reinvested \$30,420,898 of stockholders' capital, as was evidenced by the capitalization of surplus and the payment of stock dividends. Both plans had the effect of increasing capitalization and providing funds for expansion,

TABLE 17—CASH DIVIDENDS AND PRIVILEGED SUBSCRIPTIONS OF THE AMERICAN TELEPHONE AND TELEGRAPH COMPANY COMPARED WITH STOCK DIVIDENDS OF THE NORTH AMERICAN COMPANY* (1922-1930)

American Telephone and Telegraph Company					
Year	Cash Dividends Paid	Date of Subscription Offer	Per Cent of Holdings Offered†	Capital Raised	North American Company Stock Dividends
1922	\$ 52,971,252	Aug. 24	20	\$118,915,200	Cash
1923	63,274,388				Cash and stock‡
1924	70,918,227	May 20	20	151,157,500	\$ 2,815,727
1925	81,044,426				3,223,819
1926	84,496,346	May 19	16½	154,127,500	3,932,525
1927	97,379,934				4,341,772
1928	103,821,440	May 16	16½	185,863,000	4,806,549
1929	116,378,771				5,353,019
1930	139,238,073	May 23	16½	335,000,000	5,947,487
Total	\$809,522,857			\$945,063,200‡	\$30,420,898

*Source: Appendix B.

†Always offered at par (\$100).

‡Slightly overstated, as less than 1 per cent was not subscribed for over the eight-year period.

§Stock dividend policy begun in October, 1923; 2½ per cent quarterly.

but the American Telephone and Telegraph Company paid out the cash and then recalled it by selling stock at an attractive price,¹ while the North American Company never distributed a penny in cash to its common stockholders.

In view of the apparent similarity in effect of these two plans the question arises of which is the more reasonable and

¹The "rights" had market values ranging from 2½ to 22½ on occasion of the various offerings.

satisfactory. The management of the American Telephone and Telegraph Company has this to say for its policy:

"It is the policy of the company to pay only reasonable cash dividends,¹ and for part of the new capital needed, to offer from time to time new stock to its stockholders on favorable terms, for it believes this method of financing will provide the money needed for the business cheaply and with more certainty in good times and bad than any other."²

As a matter of fact, if the American Telephone and Telegraph Company had paid 9 per cent stock dividends in quarterly installments during the nine years covered in Table 17, it would have capitalized earnings to the extent of \$722,655,256;³ or an annual dividend of 10.78 per cent, payable quarterly, would have increased capital by the same amount that was realized from subscriptions; namely, \$945,063,200. This suggests that the American Telephone and Telegraph Company might have provided as much capital under a 10 per cent stock dividend policy as by means of privileged subscriptions following cash dividend disbursements.

The North American Company management had this to say for its stock dividend policy:

"There are several variations in practice in paying stock dividends, but I refer only to those declared regularly in the place of cash dividends. Dividends upon the common stock of the North American Company since 1923 have been paid entirely in common stock.

"Stock dividends have been found advantageous in the following important respects:

"Providing an automatic method of financing, reasonable in cost, without burden to the stockholder, to

¹Nine per cent per annum, payable quarterly, 1921 to date.

²Annual Report to Stockholders, 1928.

³Computations are based on the assumption that 1922 dividends were 9 per cent of capital stock, then \$588,569,467 at 9 per cent annually, compounded quarterly for nine years equals \$1,311,224,723, which would have increased capital stock by \$722,655,256.

meet the needs of expansion — particularly necessary in the public utility business.

“Giving a satisfactory return to the stockholder — maintaining his proportionate interest in case he retains his dividend stock, or, in case he sells, safeguarding an equity valuable in a growing and stronger concern.

“Enabling the stockholder to choose between cash and investment, the former by immediately and easily cashing his stock dividend, with no loss save abandonment of potential profit; the latter by keeping his stock dividend and retaining his proportionate interest with potential profit. The second course is identical with the principle of wise investment — the immediate reinvestment of dividends and interest. This the stockholder can do without the payment of funds in addition to dividends, which so often is necessary in exercising rights to subscribe to stock, a system long in vogue among companies paying cash dividends.

“Summarized, the stock dividend is the short cut to increased value of investment holdings without imposing upon the stockholder an additional financial outlay. He has complete protection and automatic reinvestment — or cash available if he wants it.”¹

On the whole the writer agrees with the arguments in favor of stock dividends, because of the fact that they may be used to make new capital available for a business whenever the reinvestment of earnings satisfies and is in accord with the capital needs of the corporation. When, as in the case of the North American Company, adequate provision is made for facilitating liquidation and receipt of cash by the stockholder, if he wants it, those who have no interest in control or maintenance of proportionate equity may be satisfied. When periodic “rights” are issued to raise new capital, the stockholder must sell them to realize cash or use them and invest more

¹From an article by Frank L. Dame, President of the North American Company, published in the *Wall Street Journal*, March 3, 1928, and reprinted in “Dividends Put to Work,” second edition, revised May, 1929, by the North American Company.

funds to maintain his proportionate equity. Failure to do either means inevitable loss of the value of the right. To the recipient of a stock dividend, however, failure to act does not mean loss, as his stock equity is automatically protected.

There is not much point to the argument that payment of stock dividends avoids the payment of income taxes, because corporate dividends are not taxable as income except in the surtax brackets. In the case of a wealthy stockholder, of course, the receipt and reinvestment of cash dividends might be the occasion for a tax levy, whereas the stock dividend would facilitate the creation of an estate without subjecting the holder to periodic levies. If stock dividends are sold, however, they are taxable as capital gains, although not for the full sale value, but for the profit from the sale computed by determining the difference between the average share cost of the stock sold, including the dividend, and the sale price per share.¹ As a matter of fact, the sale of stock rights is subject to taxation on a similar basis,² so there can be little choice between the two methods as far as the investor's taxable income is concerned.

The success achieved by the North American Company in its policy is an indication that the stockholders were satisfied therewith. Likewise, the American Telephone and Telegraph Company stockholders have expressed their approval of the latter's policy in market terms. So the choice might be determined by the relative ease of administration and the certainty of securing funds under the two plans. There is a risk involved in the use of privileged subscriptions unless the sale is underwritten by a competent investment house, because changes in the market may result in a failure to raise the capital if the market price goes below the subscription price; whereas there is no risk involved in the stock dividend method because the

¹I.e., if a holder bought 100 shares at 200 and received and sold a 10 per cent dividend (10 shares) at 225, the taxable income would be not \$2,250, but $\$2,250 - \$20,000/11$, or \$431.82, which would be subject to both normal and surtax rates.

²Treasury Department, United States Internal Revenue, *Regulations 74* (Washington: United States Government Printing Office, 1928), Art. 58, pp. 13 ff. See, also, *Accountants' Handbook*, ed. W. A. Paton (New York: Ronald Press Co., 1932), p. 332.

funds never leave the coffers of the corporation. With the latter plan in use, there is no need for advertising, underwriting, supporting the market, or incurring any of the expenses typical of any security distribution, the only necessary act being the preparation and mailing of new stock certificates.¹

The point should be emphasized, however, that the periodic stock dividend policy, typified by the practice of the North American Company, is adaptable only when the capital needs of a company are such as to call for a steadily increasing capital investment within the earning capacity or dividend-paying capacity of the company. When a company is expanding there is a need not only for additional borrowed funds, but also for an increasing stock equity, and the stock dividend policy would seem to be ideally adaptable. It assures permanent investment of ownership capital, satisfies the stockholders who wish to reinvest and likewise those who are desirous of cash income. Such a policy undertaken by a public utility holding company would, as it did in the case of the North American Company, guarantee an increase in equity capitalization representing increased assets, which, in turn, would provide security for new borrowings or preferred stock sales.²

The in-between policies followed by the other companies show that both methods of capital raising were used in varying degrees. The American Power and Light Company sided with the North American Company in paying stock dividends to the exclusion of the use of privileged subscriptions, although cash as well as stock dividends were distributed to its common stockholders. The United Light and Power Company was the only one that gave up this plan of capitalizing at least a portion of its earnings, although the Standard Gas and Electric Company did not make regular distributions, preferring to emphasize the use of rights to attract new capital. The Associated Gas and Electric Company paid both stock and cash dividends, and, in some cases, gave the holders the option of cash or stock. As

¹Provision can be made by the issuing company to let fractional shares remain unissued and accumulate until a full share is available.

²Recall that the North American Company was in a position to issue debenture bonds in 1931 at a 5.11 per cent yield rate.

long as the market value of the stock was in excess of the cash offer, it was taken, because all of the dividend-paying stocks in public hands were non-voting.

From these variations in policy it is concluded that both stock dividends and privileged subscriptions are legitimate means of increasing stockholders' investments, but that the simpler and more definite policy of reinvestment of earnings accompanied by stock dividends is the better one. A combination of regular cash dividends and periodic privileged subscriptions, which is designed to raise capital within the limits of reinvested earning possibilities, would seem to represent wasted effort and to involve some degree of uncertainty in the satisfaction of capital needs.

INVESTMENT BANKING AFFILIATIONS

All public utility holding company groups have a need for investment banking service to facilitate the sale of their securities. This is not only a need existent in times of expansion when new capital is being raised, but it is a continuous need that results equally from the necessity for refunding, and from the need for selling securities in the process of adjusting the form of capitalization. The investment banker's function is a specialized one involving the carrying and distribution of securities. In the performance of this function it might be said that the banker "sells capital short" to the corporation in view of the latter's need for a definite amount of cash at a definite time. There is no question that such a financial service is essential to any business that needs more capital than is available within the management's circle of friends and acquaintances.

In an examination of the security offerings of the utility groups with which this study is concerned, there is evidence in every case that the services of investment bankers were used. The Associated Gas and Electric Company had as the chief sponsor of its securities the Harris Forbes Company (now Chase Harris Forbes Corporation). The North American Company accepted bids for its securities from anyone and sold to the house making the most satisfactory bid, Dillon, Read and Company, Spencer, Trask and Company, and Harris Forbes

Company being its most frequent distributors. The United Light and Power Company likewise took its securities to the open market, although Bonbright and Company was the one most often chosen to furnish the capital.

Compared with these companies which encouraged general bidding, the American Power and Light Company turned the job of security distribution over to the Electric Bond and Share Company under its service contract. The latter company made arrangements for underwriting, usually with one or more of the following firms: Bonbright and Company, White, Weld and Company, National City Company, Harris Forbes Company, E. H. Rollins and Sons, and Lee Higginson and Company. For such service rendered by the Electric Bond and Share Company, the American Power and Light Company paid a fee ranging from one-fourth of one per cent to one per cent of the par value of the securities for which negotiations were made. There was a corporate relationship between the Standard Gas and Electric Company and its investment agent, the H. M. Byllesby Company. In fact, the latter company held a controlling interest in the former, and thus there was assurance that the H. M. Byllesby Company would participate in the issues of the Standard company and its subsidiaries.

The only point to be made in this regard concerns the necessity for definite corporate connections between holding companies and financial groups. The conclusion is demonstrated in the success which the Associated, North American, and United companies had in securing such firms as Dillon, Read and Company, Harris Forbes Company, and Bonbright and Company to sponsor and distribute their securities. If companies without direct affiliations with bankers can get service from such organizations, there seems to be little or no excuse for the financial activities of the Electric Bond and Share Company in connection with the American Power and Light Company issues, or the existence of the Byllesby relationship to the Standard company. It is true there is probably profit to the financial groups in such a relationship, which assures preferential treatment to them in matters of profitable security distributions, but to the holding company there can be no

differential advantages over those available in the competitive market. Particularly unnecessary would seem the payment of a fee for the "negotiation of sale" such as the American Power and Light Company was accustomed to pay the Electric Bond and Share Company, when the services of the same investment-houses were afforded other companies without the aid of a fee-charging intermediary.

CONCLUSIONS

After a consideration of the diverse policies of the holding company groups with respect to the manner in which they raised capital for their respective enterprises, the most outstanding and emphatic conclusion takes the form of an appeal for greater simplicity and straightforwardness in capital contracts and greater recognition of the nature of the earning characteristics and capital needs of the industry. The underlying earning assets of the public utility industry represent investments which, in view of the service rendered and the regulated semi-monopolistic conditions of operation, are fairly assured of a return — not a non-fluctuating return, but one which is less subject to the vicissitudes of business risk than most investments. Furthermore, at the present stage in the development of the industry, there is a constant need for increasing investment which, together with capital already committed, has prospects of long and profitable use.

The security contracts of subsidiary operating companies should be made in recognition of these factors, so that additional securities can be issued without resorting to junior liens when the security and earnings would otherwise justify additional senior issues. In other words, mortgage indentures should, whenever possible, be "open" to permit the sale of further bonds secured by a blanket mortgage, and preferred stock contracts should permit the sale of more preferred stock of the same lien status. The utilities owe it to themselves to take full advantage of the economic soundness of their properties and the assured earning capacity of their companies. It is recognized that the issuance of securities under open indentures may increase the cost of original capital somewhat, but even so, it

seems desirable under most circumstances to make provision for adequate future financing by this means. This the utility companies should be able to do without having to resort to subterfuge and the issuance of securities under misleading and confusing contracts. The same general statements apply to the capital contracts of holding companies. It should be recognized that in spite of all possible diversification, holding companies, even the Associated Gas and Electric Company, are "trading on the equity," and holding company earnings will therefore fluctuate and create a financial risk in the operation of the parent organization. The assets of most parent companies are only equities, and contracts pledging them as security will merely hinder administration without adding to the real value of securities. The parent company must stand on its own credit as an equity owner and manager, and its position at the top of a group of utility properties can be no excuse for using complicated and confusing contracts.

In the long run, it is believed that, almost regardless of the thinness of the holding company equity, those managements will be most successful in attracting capital which most clearly represent their companies' capital position. In so doing, they will be able to offer capital contracts that will appeal to the investor, because those contracts will clearly indicate that the buyer of such securities will be in one of three positions; namely, that of a creditor if he buys bonds, a preferred stockholder if he buys that type of stock, or a common stockholder with a vote and rights to residual profits if he buys common stock. It is therefore concluded that the use of as few types of parent company security issues as possible is most reasonable, because, under such conditions, there will be a minimum of doubt and confusion in the determination of the relative status and claims of each class of investors. Such procedure will eliminate the possibility of the nightmare which the owner of an Associated Gas and Electric "allotment certificate" must experience, wondering whether he should become a creditor of the Associated Gas and Electric Company with the "right" to spend more money for a share of ownership, or whether he should become two different kinds of an owner in the General Gas and Electric Company with five shares of preferred

ownership of Associated Gas and Electric Company thrown in.¹

It is inconceivable that thoughtful investors will, in normal times, continue to put their capital in a business under a cloud of contractual uncertainties. Furthermore, it is difficult to believe that the management of a utility can successfully plan its future unless the company's capital commitments are definite, yet flexible. There should not be the error of mistaking complexity and uncertainty for flexibility. Definite callable features in contracts will do more to lend flexibility to a financial structure than a dozen conversion possibilities.

In connection with all loan contracts, both parent and subsidiary, utility managements will do well to recognize and broadcast the fact that the utility industry is founded on a public need so basic that short-term bond issues are inconsistent with the purpose of the loans. Installment debt retirement by sinking-fund provisions is also, as a general rule, illogical and not adaptable to the large and growing capital needs of the industry. Thus, every encouragement should be given to the issuing of long-term bonds, if borrowings are in place at all, and efforts should be made to minimize the significance of maturity dates.

Both customers and stockholders of public utility companies are sources of capital worthy of consideration by the management. However, it should be recognized that each of these groups has both financial and psychological limitations as investors. They are to be used, but not misused, and the costs of raising capital from these sources are items to be compared critically. The easiest way to get money from stockholders is not to give them the earnings on their investment, but to encourage reinvestment by payment of stock dividends.

For the services of investment bankers it is recommended that competition rather than affiliation should rule. The legitimate profits from security distribution are sufficient to assure that any utility group worthy of assistance will get it at the market rate. There is no advantage to be gained by retaining specific organizations or by having an investment affiliate, as long as the utility group is large enough and sound enough to offer good securities for sale.

¹See Table 16, p. 126.

CHAPTER 7

ADMINISTRATION OF INCOME

Aside from the major problems of financial and related operating policies classified and discussed in the chapters preceding, there are problems of income administration that are worthy of consideration. This final chapter will, therefore, be devoted to an analysis of these problems as observed in the management of the five holding companies which form the nucleus for this study. It will be noted as the discussion proceeds that the question of income administration is very definitely related to other policies that have been mentioned in previous chapters, but there are peculiarities that made it inadvisable to include the discussion of income administration under the head of its related policies, because of the confusion of issue that would have resulted. Furthermore, the questions involved seemed to deserve emphasis that could be achieved only by separate consideration.

HOLDING COMPANY ACCRUED INCOME

To a considerable extent any corporation's policies of income administration and distribution are predetermined by the capital contracts and financial structure of the company, and this is particularly true in the case of the typical holding company system, in which capital contracts of both parent and subsidiary companies are in existence. So, in part at least, it will be found that the distribution of income of the five holding company groups reflects the policies of each with respect to the nature of their financial set-ups.

Table 18¹ shows the effect of subsidiary capital contracts on income distribution by indicating the percentages of subsidiary

¹In this and the three subsequent tables there are minor inconsistencies in the basic figures resulting from different forms of income statements, but in all cases the amounts involved are relatively small and do not invalidate the comparisons.

operating income remaining after payment of subsidiary interest and preferred stock dividends, and after allocation of income to the minority holdings of common stock.¹ These percentages, therefore, represent the proportion of operating profits accruing to each parent company as residual owner of its subsidiary companies, for each year as indicated and for the four- or five-year average. Obviously the companies with the largest amounts of subsidiary financing had the smallest percentages of income available to the holding company. Comparison with

TABLE 18—PERCENTAGE OF OPERATING INCOME ACCRUED TO PARENT COMPANIES* (1925-1929)

Company	1925	1926	1927	1928	1929	Weighted Average
Associated Gas and Electric†	57.7%	53.7%	63.2%	79.0%	74.4%	69.2%
American Power and Light†	—	48.4	43.7	44.7	49.1	46.6
North American‡	43.3	41.4	42.0	47.5	50.5	45.5
United Light and Power‡	43.6	38.9	42.0	35.7	37.9	39.0
Standard Gas and Electric§	—	20.7	15.6	15.4	15.8	16.8

*Source: Appendix B.

†All extra operating income and expense of both parent and subsidiaries included before determining "operating income" figure.

‡Parent company expenses out before "operating income."

§"Operating income" includes profits of Shaffer Oil and Refining Company, a non-utility subsidiary.

Tables 1 to 3, which show the relative proportions of parent and subsidiary financing, prove this to be the case. The Standard Gas and Electric Company had the largest percentage of book assets represented by subsidiary issues; the Associated Gas and Electric Company had the smallest. The Associated Gas and Electric Company had the largest percentage of operating income accruing to the parent company, while the Standard Gas and Electric Company had the smallest.²

¹The United Light and Power Company had the largest minority interest outstanding as a result of the fact that it had only majority control of the American Light and Traction Company.

²The United Light and Power Company stands fourth in income accruing to its benefit but stands third in amount of subsidiary financing, the difference resulting from a considerable minority interest.

These ratios, drawn from the income statements in Appendix A, do not reflect a usual accounting concept, because they are not based on realized income of the parent company, but they do show important facts. They represent the percentage of operating income which really belonged to the parent companies and was thus under parental control. In other words, these ratios represent that proportion of income which was available for distribution by the subsidiary companies to the parent companies as common stockholders, and was therefore subject to the latter's administration. They are really significant, because they determine the proportions of operating income which holding companies can look to for the payment of parent company expenses, interest, and dividends.¹

From the facts evidenced in Table 18, therefore, it may be expected that, on the average, the Associated Gas and Electric Company can count on 60 to 70 per cent of subsidiary operating income for parent company uses; the American Power and Light Company 40 to 50 per cent; the North American Company 40 to 50 per cent; the United Light and Power Company 35 to 40 per cent; and the Standard Gas and Electric Company only 15 to 20 per cent. Also to be considered is the fact that the smaller the proportion of income accruing to the parent company, the more it is going to fluctuate, because the amounts paid out by subsidiaries are in the nature of fixed interest or semi-fixed preferred dividend charges, and any increase or decrease in operating income will tend to be magnified in the balance accruing to the holding company.²

REINVESTMENT OF EARNINGS

It is this accrual from subsidiary companies, plus any added income from fees, trading profits, and interest and dividends on subsidiary senior securities, that provides the total administrable income of a holding company. From this total amount

¹In view of the significance of such balances, the writer believes they might well be given greater prominence in consolidated income statements. They are determinable from the usual income statement only by further calculation, if at all.

²Note experience of the United Light and Power Company in 1930-1931 as shown in Table 11.

the holding company may arrange to pay its own expenses, meet its contractual obligations, and pay its dividends.

The distribution on parent company account will, to some degree, be determined by its contractual obligations resulting from the form of its financial structure. Bond interest and preferred stock dividends will be disbursed in predetermined amounts affected by the extent to which the parent company is trading on its equity, but cash disbursements to common stockholders will be in variable amounts depending on the management's policy of declaration.

The balance remaining after these contractual and declared distributions will represent the earnings left in the business. Where or how it is left in the business cannot be directly determined, but somewhere, in either parent company or subsidiary reserves or surplus, will be that portion of the total income of the holding company group which has not been disbursed in cash form,¹ or used to absorb losses and adjustments. Thus the amount remaining for reinvestment in the business is determined, first, by the policy of the management with respect to the incurring of fixed or semi-fixed charges on bonds and preferred stocks respectively, and, second, by its policy regarding cash disbursements to residual stockholders.

Table 19 is designed to reflect the reinvestment policies of the picked group of holding companies used in this study. The data contained therein reveal the effects of both the fixed-capital contracts and the cash dividend disbursements,² and show that portion of total income accruing to the respective companies which was permitted to remain in the business each year. The weighted average shows the portion of the four- or five-year accruals which were reinvested.

Outstanding in this picture is the performance of the North

¹It is not customary for subsidiaries to pay dividends in stock or otherwise make distributions in other than cash form.

²Except that, in the case of the Associated Gas and Electric Company, the policy of paying dividends on preferred, Class A, Class B, and common stocks in either stock or cash at the option of the holder and without recording the results necessitated the assumption noted in footnote†, Table 19, which is based on an impression gained in conversation with an employee of the company's accounting department. No facts are available in financial statements.

American Company, which company, during the five years 1925 to 1929, reinvested 88.6 per cent of the earnings which accrued to its benefit, or \$94,379,629 out of total accruals of \$106,505,245. This, of course, was partly the result of the fact that the company had no bonds and only a small amount of preferred stocks outstanding, but it was chiefly the result of the fact that the company paid no cash dividends to its common stockholders. This performance should be considered together with the fact that to the North American Company, as the parent corporation, there had accrued from its subsidiaries about 45 per cent of their total operating income.¹

TABLE 19—PERCENTAGE OF PARENT COMPANY ACCRUED INCOME REINVESTED*
(1925-1929)

Company	1925	1926	1927	1928	1929	Weighted Average
North American†	85.0%	88.5%	89.1%	88.5%	90.1%	88.6%
American Power and Light‡	—	51.8	52.7	42.7	42.3	46.3
Associated Gas and Electric‡§	45.0	38.9	29.0	24.8	44.4	37.5
United Light and Power†	38.9	11.3	34.0	34.4	45.1	34.7
Standard Gas and Electric	—	44.1	30.2	28.0	30.7	33.2

*Source: Appendix B.

†Parent company expenses out before "operating income."

‡All extra operating income and expense of both parent and subsidiaries included before determining "operating income" figure.

§Assuming no cash paid in dividends on Classes A and B and common stock, and assuming all preferred dividends paid in cash.

||"Operating income" includes profits of Shaffer Oil and Refining Company, a non-utility subsidiary.

No other companies in the group were nearly so conservative in their distribution policies. The American Power and Light Company distributed all but 46.3 per cent of its accrued income during the four years 1926 to 1929, although only \$7,611,829 of a total distribution of \$35,344,956² was in

¹See Table 18.

²See Appendix A, Table 1.

the form of cash dividends to common stockholders. The largest disbursements were necessitated by the fact that the parent company had large amounts of debt and preferred stocks outstanding.¹ Although the Standard Gas and Electric Company was the lowest of the five companies in the percentage of income accruing to it, the company nevertheless disbursed about two-thirds of its accrued balance, leaving only \$20,845,592 in the business out of a total of \$62,821,486² which accrued during the four years 1926 to 1929. In this case, moreover, about \$17,000,000 of the \$42,000,000 disbursed were cash dividends on common stock. The United Light and Power Company was also fairly liberal in its disbursements, paying, during the five years indicated, about 15 per cent of its accruals in common dividends, and about 50 per cent on account of its parent bonds and preferred stocks, and leaving only 34.7 per cent of its accrued income in the business.

These examples show the widely varying practices of holding company managements, both with respect to disbursements on contract and disbursements to residual owners. The dangers of contractual obligations in face of fluctuating earnings have been discussed, and there is every reason to believe that, for safety's sake, there should be a conservative policy of common stock dividends when fixed charges are large. Such a policy should be followed in order to provide reserves of value that will protect the companies so involved from dangers of default and poor credit. The liberal cash dividend policies of the Standard and United companies, in spite of the fact that the fixed commitments of the two companies were approximately 58 per cent and 50 per cent of their respective accruals during prosperous years, would seem to be quite the reverse of conservatism. The reorganization of the Standard Gas and Electric Company in 1930 prevents introduction of evidence pertaining to the results of 1930-1931 losses. In the case of the United Light and Power Company, the market interpreted the dangers in terms of \$5 and \$6 prices on United common

¹See Chart 1 for financial structure.

²See Appendix A, Table 7.

stock,¹ which, with the exception of the common stock of the Associated Gas and Electric Company, was the lowest-priced stock in the group of five companies.

Aside from the dangers of too liberal disbursements of holding-company accrued earnings, there are certain positive advantages of reinvestment particularly applicable to public utility holding companies in their present status. In the first place, holding companies are new forms of organization, or at least they represent new and only recently extended applications of an old form,² and until they have proved their capabilities by weathering storms³ and demonstrating their effectiveness, conservatism in profit distribution is much to be desired. Furthermore, there have been characteristics of holding company expansion which have tended to their overcapitalization,⁴ and, therefore, every cent of earnings reinvested assists in absorbing the water injected into the capitalization from other sources. As long as a holding company continues to expand, the reinvestment of earnings is a more or less painless method of effecting the increase in equity capital which must, to some extent, accompany the increase in size.

The North American Company, by its policy of reinvestment, provided itself with \$94,379,629⁵ of new capital during the five years 1925 to 1929, all of which was available for equity financing in support of its expansion program. If earnings are not reinvested during expansion, one of two things must happen: either the equity will grow proportionately thinner as the company expands, or it will be necessary to raise new capital by the public sale of equity securities. The Standard Gas and Electric Company turned to its common stockholders three times in four years for additional equity

¹Table 14 shows a loss in aggregate value of common stocks of 48.1 per cent from January 1, 1928, to December 31, 1931.

²Public utility holding companies as they exist today were unheard of twenty years ago, or even ten years ago if size is considered.

³Many are doubtless passing the test of the 1930-1932 depression successfully, although the receiverships for Middle West Utilities Company, American Commonwealths Power Corporation, and Tri-Utilities Corporation point to large holding company failures.

⁴Discussed previously, p. 94.

⁵Income statement, Appendix A, Table 6.

capital, twice selling common stock and once preferred. The common stock offerings brought approximately \$18,000,000, an amount just about equal to the company's cash disbursements to common stockholders during those years.

The conclusion seems reasonable, therefore, that extreme conservatism in income disbursements should guide the management when a holding company is expanding, particularly in view of the fact that holding company groupings are still somewhat experimental and by nature of their existence contain elements of risk and profits not present in the operating properties alone.

The objection is often raised against the policy of reinvesting earnings that stockholders expect and deserve a distribution of profits. Without admitting that investors in the common stocks of public utility holding companies should expect or do deserve anything in the equitable sense, let us consider their position. It should not be assumed that, just because cash is not distributed, the stockholder does not benefit from his investment. In fact, it is entirely possible that the benefits of earning-reinvestment by the company, which is in effect a compulsory reinvestment on the part of the stockholder, may exceed the benefits of disbursement.

In a recent comparative study of high- and low-yield common stocks, it has been demonstrated that the appreciation of market value of the low-yield stocks more than compensated for the loss of dividends, and that, in twelve out of the sixteen groups of stocks examined, a capitalization of dividends and appreciation (or depreciation) in market values showed a greater net gain to the holder of low-yield securities.¹ If stocks with lower dividend rates are more profitable than those with high rates, undoubtedly one factor affecting the gain is the reinvestment of earnings which accompanies low dividend payments by profitable companies, and thus increases the safety and possibility of future profit on the investment. It may be that a stockholder in an expanding public utility holding company should prefer to have business profits reinvested and to take his gain in the form of appreciation in the value of his stock.

¹Unpublished study, Bureau of Business Research, University of Michigan.

STOCK DIVIDENDS AS CAPITALIZATION OF EARNINGS

Of course the objection may be raised that the small stockholder who purchases stock for the periodic cash income which he will derive therefrom is not to be satisfied with a security which shows its profits only in appreciation. The small holder cannot do as a large holder can; namely, sell a fraction of his holdings as their value increases, thus receiving cash while permitting the value of his original investment to remain intact. The answer to this objection would seem to have been discovered by the North American Company in its periodic stock dividend policy. Stock dividends provide a means of recognizing the permanence of the reinvestment of the earnings so capitalized, and at the same time tend to satisfy the stockholders who desire a return in liquid form. It is true that in realizing cash on his dividend stock the investor must sell a portion of his control, if the stock has voting privileges,¹ but it is doubtful whether the majority of investors in holding company common stocks have any interest in control. If they have, such interest is likely to be accompanied by sufficient personal wealth so that they will not need to liquidate their investment. The North American Company made provision to facilitate liquidation of dividend stocks by executing orders of sale which the stockholders might file with the company, under which orders the dividend stock was sold on the market and the proceeds were sent to the investor.

As far as is known, the North American Company is the only utility holding company that has followed a consistent policy of paying only stock dividends on its common stock. It paid its 2½ per cent per quarter in this form beginning in 1923. The effect of this policy in relation to reinvested earnings is indicated in Table 20. Earnings left in the business accrued more rapidly than they were capitalized; but, during the five years, 22.9 per cent of the earnings left in the North American

¹The Associated Gas and Electric Company paid dividends in non-voting Class A stock.

²See Appendix A, Table 6.

Company system were capitalized, and the permanent investment of \$21,657,684² was thereby recognized.

The American Power and Light Company also paid dividends in common stock, both regular and extra, but not to the exclusion of cash dividends. In so doing, it capitalized 28.5 per cent of the earnings left in the business during the five years, or \$8,656,659.¹ The Standard and United companies did not often indulge in stock dividends, as might be expected in view of their liberal cash dividend policies, but rather left their reinvestments, such as they were, to be represented by reserves and surplus.

TABLE 20—PERCENTAGE OF REINVESTED EARNINGS CAPITALIZED BY PAYMENT OF STOCK DIVIDENDS* (1925-1929)

Company	1925	1926	1927	1928	1929	Weighted Average
American Power and Light†	—	10.6%	10.5%	42.8%	41.9%	28.5%
North American‡	28.0%	25.0	24.9	21.3	19.8	22.9
United Light and Power‡	22.5	37.2	—	—	—	6.3
Standard Gas and Electric§	—	13.5	6.7	—	—	5.8
Associated Gas and Electric†	Unknown because stock dividends were optional					

*Source: Appendix B.

†All extra operating income and expense of both parent and subsidiaries included before determining "operating income" figure.

‡Parent company expenses out before "operating income."

§"Operating income" includes profits of Shafer Oil and Refining Company, a non-utility subsidiary.

The Associated Gas and Electric Company paid stock dividends on every class of parent company stock, excluding the common, which never was honored with payments of any kind, but there is no record of the amount of earnings so capitalized. The investors in Class A stock were given the option of taking one-twentieth of a share of Class A per dollar of dividends, so, whenever the market price of the Class A stock was in excess of \$20, it may be assumed that stock was taken in preference to

²See Appendix A, Table 2.

cash. Dividends on the \$7 preferred stock were paid in cash or Class A stock, the stock being offered at varying prices.

In general, it seems that stock dividend payments by public utility holding companies are reasonable as long as the companies are expanding profitably. Only if this qualified condition is existent, however, can the increased capitalization which results be justified. If expansion is not taking place, the only other possible excuse would be the need for substituting stock equity for debts or prior claims. The qualification of profitability is inserted as a warning to the effect that expansion for expansion's sake alone is not good business. When a utility holding company finances expansion partly by the reinvestment of earnings, the corporate surplus is invested in the securities of those operating subsidiaries which are the life-blood of the group, and obviously this surplus will never be available for cash distribution except on occasion of sale and liquidation. The investment must be as permanent as the holding company itself, and there is reason for recognizing this permanence by removing an equitable amount from surplus and transferring it to the capital stock account. Such practice accomplishes precisely the same effect as does the American Telephone and Telegraph Company's plan of cash dividend payments followed by sale of additional stock; namely, capitalization of new acquisitions.

Before leaving the discussion of stock dividends, it may be well to refer to the action of the United Light and Power Company in 1926 in splitting its common stock, both Classes A and B, five for one, and to emphasize the fact that this action was nothing like the payment of a stock dividend. Neither the occasion nor the effect of such a procedure is the same. The only point of similarity lies in the fact that both split-ups and stock dividends tend to decrease the per share price of stock by virtue of the increase in the number of shares effected, and beyond that there is nothing in common. Presumably the sole purpose of a split-up is to reduce the share price of stock, because neither the surplus nor capital stock accounts of a company are affected thereby. There is no recognition of reinvestment by such an act, because the full amount of surplus remains available for dividend payments, whereas the payment

of stock dividends removes the amount of capitalized earnings from legal and economic availability for future dividends. The only excuse for a stock split-up would seem to be that it tends to make a high-priced stock more digestible for investors by cutting it into smaller pieces.

HOLDING COMPANY CORPORATE INCOME

So far, all consideration has been directed to the administration of income as accrued to the benefit of the parent company. This is really a most significant concept, because the parent company, as sole common stockholder of its subsidiaries, controls the disposition of that accrual and could, through its boards of directors, declare the full amount payable to the parent company in common stock dividends. The varying policies of holding companies with respect to the amount of accrued income which is turned into realized corporate income by transfer from subsidiaries to parent companies is indicated in Table 21. Corporate income in these cases included some amounts other than those paid in the form of dividends from subsidiaries, such as service fees, profits from security transactions, return on investments in other than subsidiary holdings, and similar items, but for the most part, the ratio of corporate income to accrued income indicates the extent of withdrawals from subsidiary exchequers. It is apparent from Table 21 that the Associated Gas and Electric Company so managed its accrued income that, as a parent corporation, it had available as realized income an amount quite consistently in the neighborhood of 90 per cent of its accruals from subsidiaries. The Standard Gas and Electric Company and the American Power and Light Company also averaged consistently over 75 per cent of accruals in the form of corporate income, while the North American Company corporate income was limited to about 60 per cent of its subsidiary residual profits. The facts regarding the practices of the United Light and Power Company are unknown, because corporate income statements are not available.¹

¹Evidence that pertinent facts are concealed by failure to publish adequate statements of account.

Offhand it might be said that it makes no difference whether earnings are left in subsidiary accounts or transferred to the parent company. It should be recognized, however, that a transfer of income to a parent company necessitates liquidation of subsidiary earnings, and that the transfer takes the form of cash, thus lessening the possibility of subsidiary reinvestment.

TABLE 21—PERCENTAGE OF PARENT COMPANY ACCRUED INCOME
CONVERTED INTO CORPORATE INCOME*
(1925-1929)

Company	1925	1926	1927	1928	1929	Weighted Average
Associated Gas and Electric†	81.1%	93.3%	91.7%	99.2%	89.0%	91.4%
Standard Gas and Electric‡	—	70.9	84.6	84.3	83.2	80.8
American Power and Light†	—	75.1	77.4	77.2	76.8	76.7
North American§	63.3	52.2	55.5	63.3	66.0	60.8
United Light and Power§	Unknown because no corporate income statement was available.					

*Source: Appendix B.

†All extra operating income and expense of both parent and subsidiaries included before determined "operating income" figure.

‡"Operating income" includes profits of Shafer Oil and Refining Company, a non-utility subsidiary.

§Parent company expenses out before "operating income."

The two extremes in the above table are reflections of the different management theories represented. The North American Company proceeded on a theory of subsidiary independence, which called for the creation of subsidiary reserves and surplus, just as if the operating companies were unrelated. The Associated Gas and Electric Company, on the other hand, followed the theory of parent company dominance and treated its subsidiaries as dependent parts of the holding company group. Thus, any criticism of these diverse policies will be, in a sense, a criticism of the respective theories of management.

The chief danger which lies in the policy typified by the performance of the Associated Gas and Electric Company is that of temptation — temptation in the form of liquid assets

in the holding company treasury useful only for distribution or expansion. If these liquid assets are distributed, a minimum of reserves are available to protect the system against value losses. If they are used for expansion, the temptation will be to expand by purchasing new and additional companies rather than by investing more in the stock of existing subsidiaries. The policy of such external expansion, to the neglect of what might be called internal development, may well result in a holding company group composed of a large number of operating properties none of which are self-sufficient, and all of which lack the stability which comes from reinvestment and the creation of value reserves.

A holding company that refrains from drawing a large portion of its accrued profits out of its subsidiary treasuries makes those earnings available for the expansion of the subsidiaries themselves. While it is true that subsidiary expansion may be as ill advised and unprofitable as expansion of parent company holdings, yet the danger is not so great, because the field of possible expansion is more limited, and the management is less likely to run wild. The funds available from earnings which are left in the subsidiaries will most likely be used for internal development, such as extensions, additions, and betterments which will increase the strength and earning capacity of the existing operating companies. These alternative policies affecting holding company corporate income would tend to develop, on the one hand, a small group of strong, independent operating companies, and, on the other hand, a larger group of weaker and less stable earning units.

CONCLUSIONS

Strong criticism of the policy typified by the procedure of the Associated Gas and Electric Company is justified because it discourages the creation of value reserves, provides little for internal development of the holding company system, and encourages expansion from the coffers of the parent company which is likely to mean continuous acquisitions of new subsidiaries. The conservative extreme typified by the North American Company policy encourages the strengthening of existing

properties, builds up protective equities in the form of both subsidiary and parent company reserves, and minimizes the need for raising new capital from security sales. This conservative procedure has much in its favor in view of the status of public utility holding companies, and it is believed that, in the long run, it will prove most profitable to all concerned.

The payment of stock dividends is recognized as a sound and satisfactory practice, which satisfies stockholders demanding a cash return and at the same time justifiably capitalizes reinvested earnings. Such payment must, however, be limited to the occasions when earnings are actually reinvested and is not to be used as a capitalization of hopes and expectations in an attempt to deceive the stockholders.

The conversion of large amounts of holding company accrued income into liquid form as parent company corporate income tends to encourage cash distributions or extensive acquisitions of new subsidiaries. While there is nothing inherently wrong with either tendency, yet, if carried too far, they will result in weak organizations with thin, unstable equities.

With the above discussion of income administration policies this study of public utility holding companies is concluded. In summary it can truthfully be said that "There is some good in the worst of them and some bad in the best of them." It is apparent that errors in financial management have been made and that optimism has overbalanced judgment in many instances; only the test of further time will indicate how serious the errors have been. In the writer's opinion, however, this study points to certain policies which should tend to strengthen the position of holding companies in the public utility industry if applied within reason, and it also calls attention to certain facts the full significance of which has not been universally recognized in the organization and financial management of utility holding companies.

APPENDIX A
COMPANY DESCRIPTIONS AND STATISTICAL DATA

American Power and Light Company

The American Power and Light Company was incorporated as a holding company in September, 1909, having been organized by the Electric Bond and Share Company. The company began its existence holding the equities of three Kansas utilities and one Oregon utility, and, as time went on, properties were added in the Kansas and Oregon regions, and new properties were acquired in Texas, Minnesota, Arizona, and Florida. This development was carried on under the direction of Sidney Z. Mitchell and the Electric Bond and Share Company in an attempt to create large operating units and to secure a degree of geographical diversification consistent with the company's policies. In the process of this growth, the American Power and Light Company, through its subsidiaries, came to render utility services including electric, gas, water, heating, ice, and electric railway service. Less than four years after its organization in March, 1913, the company began to pay dividends on its common stock and did so consistently thereafter. Tables 1 and 2, following, provide comparative data regarding size, financial structure, and earnings for the period considered in this study.

Associated Gas and Electric Company

It is necessary to emphasize the fact that the analytical and historical material in this study deals only with the Associated Gas and Electric Company and its subsidiaries, and is not concerned with the so-called Associated Gas and Electric System. Throughout the published information referring to the Associated company, there is constant confusion, if not misrepresentation, about the facts regarding the "Company" and the facts about the "System." The Associated Gas and Electric System includes both controlled subsidiaries and "affiliated"

companies, these affiliates being either companies in which the Associated Gas and Electric Company owns some stock interest¹ or those whose controlling stocks are held by individuals controlling and managing the Associated Gas and Electric Company.² Every attempt has been made to segregate the facts, so that the picture presented will be that of the Associated Gas and Electric Company only, and, unless otherwise stated, all references to the Associated company pertain solely to the parent company and the subsidiaries which it controls directly.

The following historical note, contained in the foreword of the Associated Gas and Electric Company's annual report for the year 1927, describes the early development of the properties which comprised the company's holdings at the time of its reorganization and incorporation in 1908:

"The Associated Gas and Electric System had its inception with the establishment of the Ithaca Gas Light Company in Ithaca, New York, in 1852. This was an isolated company for over fifty years, when its owners became interested in and secured control of several other electric and gas properties in the south central part of New York State. The group of properties thus united in a common ownership came to be known as 'The Associated Gas and Electric Companies,' and these properties formed the nucleus around which the Associated Gas and Electric System has grown. The original Associated Companies are still part of the Associated System. In 1906 the owners of these properties organized the Associated Gas and Electric Company under the laws of New York State. The Associated Companies were thus among the earliest public utility companies in the country to adopt centralized management."

While the company developed somewhat in the years immediately subsequent to its organization, its real expansion began

¹I.e., General Gas and Electric Company prior to 1929, at which time the Associated Gas and Electric Company secured majority control.

²I.e., New England Gas and Electric Associated, Eastern Utilities Investing Corporation, Railway and Bus Associates, etc.

in 1922, and by January 1, 1925, it had operating subsidiaries in New York, Ohio, Kentucky, and Tennessee. Tables 3 and 4 present comparative data regarding size, financial structure, and earnings for the five years 1925 to 1929.

North American Company

The North American Company began its corporate existence on June 14, 1890, when it was organized to acquire the properties and assets of the Oregon and Transcontinental Company. The latter company had been a pioneer holding company, and one whose chief interests had been in steam railways. Between 1890 and 1924, the North American Company added to and changed its holdings so that on January 1, 1925, it owned and controlled subsidiaries rendering utility services in three sections of the north central part of the United States. One group of properties served St. Louis, Missouri, and vicinity; a second served Cleveland, Ohio, and vicinity; and a third group operated in Wisconsin, serving Milwaukee, Racine, and points on the western shore of Lake Michigan into the upper peninsula of Michigan. The operations of these subsidiaries included classes of business with relative revenues as follows: 65.19 per cent from electric and heating, 17.84 per cent from electric railway, 4.12 per cent from gas, and 12.85 per cent from coal and miscellaneous.¹ Tables 5 and 6 present the data regarding size, financial structure, and earnings for the years 1925 to 1929.

Standard Gas and Electric Company

The Standard Gas and Electric Company was incorporated as a holding company in 1910, thus being one of the newer parent organizations in the public utility field. It was organized by the late H. M. Byllesby and associates, and the properties under Standard control came to be known as the "Byllesby Group." Under the control of the H. M. Byllesby Company, investment bankers, and under the management of the Byllesby Engineering and Management Corporation, the

¹North American Company, *Thirty-fifth Annual Report, 1924.*

Standard Gas and Electric Company had become a holding company of considerable size by January 1, 1926. The properties on that date were quite diversified, but were, except for certain Wisconsin subsidiaries, quite generally scattered over the region from Kentucky and Tennessee to the Pacific Ocean. The company's holdings included chiefly gas and electric properties, although some ice and electric railway properties were controlled as well as one large and complete oil-producing and distributing organization, the Shaffer Oil and Refining Company. Tables 7 and 8 present comparative data regarding size, financial structure, and earnings for the years 1926 to 1929.

United Light and Power Company

The United Light and Power Company, being incorporated in 1923, was the youngest of the holding company groups examined for the purposes of this study. However, its 1923 incorporation was only a technical move, as the organization of this new company was effected to take over the holdings of an older and well-established company known as the United Light and Railways Company (Maine). For many years the latter company had owned and managed, with the assistance of the J. S. White Management Company, a large number of gas, electric, and electric railway properties scattered throughout the central states. Prior to 1924 the expansion of the United company and its corporate predecessor had been gradual, and nothing more startling than the change in corporate name had occurred. Late in 1924 the United Light and Power Company acquired control of the Continental Gas and Electric Company, and although this acquisition took place about one month prior to the official opening date for this study, it was considered as having become effective on January 1, 1925. Tables 9 and 10 present the data regarding size, financial structure, and earnings for the years 1925 to 1929.

TABLE 1—FINANCIAL STRUCTURE: AMERICAN POWER AND LIGHT COMPANY*
(1926-1929)

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Type of Financing	December 31, 1925		Increase 1926 to 1929		December 31, 1929	
	Amount	Per Cent of Book Assets	Amount	Per Cent of Book Assets	Amount	Per Cent of Book Assets
Subsidiary mortgage bonds.....	\$139,186,900	37.4	\$ 95,288,900	28.7	\$234,475,800	33.3
Subsidiary debenture bonds.....	13,500,000	3.6	13,900,000	4.2	27,400,000	3.9
Subsidiary capital stock.....	116,002,487‡	31.2	3,314,112	1.0	119,316,599	17.0
Subsidiary reserves.....	2,649,954	0.7	2,475,449	0.7	5,125,403	0.7
Subsidiary surplus.....	14,563,619	3.9	20,009,472	6.0	34,573,091¶	4.9
Parent debenture bonds.....	35,922,100	9.7	9,888,200	3.0	45,810,300	6.5
Parent capital stock.....	40,008,689§	10.8	168,552,469	50.8	208,561,158**	29.6
Parent reserves.....	636,534	0.2	299,127	-0.1	337,407	0.1
Parent surplus.....	3,678,230	1.0	5,051,842	1.5	8,730,072¶	1.2
Balance†.....	5,387,497	1.5	13,062,231	4.2	18,450,728	2.8
Total book assets.....	\$371,536,010	100.0	\$331,244,548	100.0	\$702,780,558	100.0

*Source: "Public Utility Securities," *Moody's Manual of Investments*, and annual reports to stockholders.

†Miscellaneous liabilities and accruals.

‡Preferred stock (\$100 par), 558,349 shares; no-par common, 15,058 shares.

§No-par preferred, 235,775 shares; no-par common, 1,647,511 shares.

||Preferred stock (\$100 par), 532,505 shares; no-par preferred, 401,075 shares; no-par common, 101,570 shares.

¶Earned surplus is \$32,725,357.

**Preferred stock (\$6), 792,894 shares; \$5 preferred, 978,368 shares; no-par common, 2,529,713 shares.

TABLE 2—STATEMENT OF INCOME DISTRIBUTION: AMERICAN POWER AND LIGHT COMPANY*
(1926--1929)

Distribution of Income	1926	1927	1928	1929	Four-Year Total
Subsidiary earnings†	\$26,012,656	\$28,325,841	\$39,624,434	\$43,640,772	\$137,603,703
Interest on subsidiary debt	9,323,979	10,849,066	16,298,826	16,139,403	52,611,274
Dividends on subsidiary preferred stocks	3,966,427	4,607,953	5,371,628	5,885,557	19,831,565
Minority interest	128,793	155,366	226,867	178,919	689,945
Balance accrued to parent	\$12,593,457	\$12,713,456	\$17,727,113	\$21,436,893	\$64,470,919
Parent other income	‡	784,064	887,527	1,001,781	2,673,372
Total accrued to parent	\$12,593,457	\$13,497,520	\$18,614,640	\$22,438,674	\$67,144,291
Parent expenses and taxes	364,433	349,332	370,124	293,383	1,377,272
Parent distributable income	\$12,229,024	\$13,148,188	\$18,244,516	\$22,145,291	\$65,767,019
Interest on parent debt	2,796,020	2,991,118	2,821,196	2,873,807	11,482,141
Balance to parent stockholders	\$ 9,433,004	\$10,157,070	\$15,423,320	\$19,271,484	\$54,284,878
Dividends on parent preferred stock	1,436,407	1,430,879	5,699,962	7,683,738	16,250,986
Balance to parent common stockholders	\$ 7,996,597	\$ 8,726,191	\$ 9,723,358	\$11,587,746	\$38,033,892
Cash dividends on parent common stock	1,664,352	1,792,060	1,930,090	2,225,327	7,611,829
Balance left in the business	\$ 6,332,245	\$ 6,934,131	\$ 7,793,268	\$ 9,362,419	\$30,422,063
Regular stock dividends on parent common stock	668,526	726,348	879,271	1,112,901	3,387,046
Extra stock dividends on parent common stock			2,459,561	2,810,052	5,269,613
Balance uncapitalized	\$ 5,663,719	\$ 6,207,783	\$ 4,454,436	\$ 5,439,466	\$21,765,404

*Source: "Public Utility Securities," *Moody's Manual of Investments*, and New York Stock Exchange Listing Application Number A9383.

†Gross operating and other revenues minus all expenses including taxes and depreciation.

‡Included in "subsidiary earnings."

TABLE 3—FINANCIAL STRUCTURE: ASSOCIATED GAS AND ELECTRIC COMPANY*
(1925—1929)

Type of Financing	December 31, 1924		December 31, 1925		December 31, 1926		December 31, 1927	
	Amount	Per Cent of Book Assets	Amount	Per Cent of Book Assets	Amount	Per Cent of Book Assets	Amount	Per Cent of Book Assets
Subsidiary funded debt _____	\$16,452,900	28.9	\$ 70,862,150	35.9	\$109,768,600	45.6	\$ 99,852,500	33.3
Subsidiary preferred stocks _____	2,608,500	4.6	15,875,420	8.1	6,415,200	2.7	4,504,970	1.5
Subsidiary reserves _____	1,145,267	2.0	1,836,944	0.9	1,205,665	0.5	1,486,097	0.5
Subsidiary minority interest _____	3,797,782	6.7	6,303,081	3.2	8,207	0.0	42,424	0.0
Parent funded debt _____	4,000,000	7.0	14,172,700	7.2	8,527,600	3.5	43,936,500	14.6
Parent funded debt (convertible) _____	230,600	0.4	26,519,158	13.4	16,407,900	6.8	17,396,168	5.8
Parent preferred stock _____	5,151,450	9.0	14,116,550	7.2	42,974,060	17.8	56,653,350	19.0
Parent Class A stock _____	—	—	9,551,010	4.8	11,788,805	4.9	17,500,000	5.8
Parent Class B stock _____	—	—	10,500,000	5.3	10,500,000	4.3	10,500,000	3.5
Parent common stock and surplus _____	8,658,783	15.2	508,402	0.3	13,933,070	5.8	15,311,641	5.1
Parent reserves _____	167,659	0.3	1,468,366	0.7	1,370,480	0.6	1,512,041	0.5
Balance† _____	14,741,575	25.9	25,567,889	13.0	17,982,323	7.5	31,303,959	10.4
Total book assets _____	\$56,954,516	100.0	\$197,281,670	100.0	\$240,881,910	100.0	\$299,999,650	100.0

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TABLE 3—Continued

Type of Financing	December 31, 1928		December 31, 1929		Net Change Five Years 1925-1929	
	Amount	Per Cent of Book Assets	Amount	Per Cent of Book Assets	Amount	Per Cent of Book Assets
Subsidiary funded debt	\$ 44,635,050	15.1	\$162,388,989	18.7	\$145,936,089	18.0
Subsidiary preferred stocks	145,015	0.1	52,151,139	6.0	49,542,639	6.1
Subsidiary reserves	1,523,228	0.5	1,249,103	0.2	103,836	0.0
Subsidiary minority interest	3,400	0.0	921,776	0.1	-2,876,006	-0.4
Parent funded debt	106,869,541	36.0	214,644,422	24.7	210,644,422	25.9
Parent funded debt (convertible)	16,332,548	5.5	92,582,359	10.6	92,351,759	11.4
Parent preferred stocks	39,373,539	13.3	24,778,297	2.8	19,626,847	2.4
Parent Class A stock	36,622,845	12.3	203,607,985	23.4	203,607,985	25.0
Parent Class B stock	10,500,000	3.5	17,500,000	2.0	17,500,000	2.2
Parent common stock and surplus	13,710,219	4.6	40,158,039	4.6	31,499,256	3.9
Parent reserves	7,761	0.0	788,077	0.1	620,418	0.1
Balance†	27,055,493	9.1	59,016,480	6.8	44,274,905	5.4
Total book assets	\$296,778,639	100.0	\$869,786,666	100.0	\$812,832,150	100.0

*Source: "Public Utility Securities," *Moody's Manual of Investments*, annual reports to stockholders, and correspondence.

†Miscellaneous liabilities and accruals.

TABLE 4—STATEMENT OF INCOME DISTRIBUTION: ASSOCIATED GAS AND ELECTRIC COMPANY*
(1925-1929)

Distribution of Income	1925	1926	1927	1928	1929	Five-Year Total
Consolidated earnings†	\$7,334,650	\$12,134,117	\$15,333,355	\$16,171,139	\$39,869,879	\$90,843,140
Subsidiary capital charges‡	3,101,883	5,615,965	5,650,613	3,389,809	10,207,317	27,965,587
Balance accrued to parent	\$4,232,767	\$ 6,518,152	\$ 9,682,742	\$12,781,330	\$29,662,562	\$62,877,553
Interest on parent debt§	1,477,247	2,318,507	3,424,089	6,095,896	13,478,617	26,794,356
Balance accrued to parent stockholders	\$2,755,520	\$ 4,199,645	\$ 6,258,653	\$ 6,685,434	\$16,183,945	\$36,083,197
Dividends on parent preferred stock	852,996	1,662,154	3,453,507	3,512,637	3,007,107	12,488,401
Balance to parent residual stockholders	\$1,902,524	\$ 2,537,491	\$ 2,805,146	\$ 3,172,797	\$13,176,838	\$23,594,796
Dividends on parent A stock (priority)	456,496	607,760	975,714	1,473,119	7,224,029	10,737,118
Dividends on parent A stock (participating)	66,248	—	125,000	265,568	2,327,275	2,784,091
Dividends on parent B stock (priority)	523,758	594,955	600,000	600,000	666,667	2,985,380
Dividends on parent B stock (participating)	—	—	—	—	200,000	200,000
Dividends on parent common stock	190,000	—	—	—	—	190,000
Balance uncanceled	\$ 666,022	\$ 1,334,776	\$ 1,104,432	\$ 834,110	\$ 2,758,867	\$ 6,698,207

*Source: "Public Utility Securities," *Moody's Manual of Investments*, and annual reports to stockholders.

†Including net earnings from parent company activities.

‡Including bond discount for years 1925 and 1926 only.

§Excluding bond discount; all charged to surplus.

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TABLE 5—FINANCIAL STRUCTURE: NORTH AMERICAN COMPANY*
(1925-1929)

Type of Financing	December 31, 1924		Increase 1925 to 1929		December 31, 1929	
	Amount	Per Cent of Book Assets	Amount	Per Cent of Book Assets	Amount	Per Cent of Book Assets
Subsidiary funded debt.....	\$184,464,217	57.9	\$183,644,191	38.6	\$368,108,408	46.3
Subsidiary preferred stocks.....	43,421,252	13.6	126,162,033	26.5	169,583,285	21.3
Subsidiary reserves	1,519,396	0.4	13,451,475	2.8	14,970,871	1.9
Subsidiary earned surplus.....	15,795,532	5.0	44,704,286	9.4	60,499,818	7.6
Parent preferred stock.....	29,085,750	9.1	1,248,150	0.3	30,333,900	3.8
Parent common stock.....	29,226,509‡	9.2	26,811,881‡	5.6	56,038,390‡	7.0
Parent undivided profits.....	7,021,610	2.2	28,866,029	6.1	35,887,639	4.5
Parent reserves	1,161,477	0.4	-874,002	-0.2	287,475	0.1
Parent capital surplus.....	-----	-----	31,084,077	6.5	31,084,077	3.9
Balance†	7,044,870	2.2	21,214,767	4.4	28,259,637	3.6
Total book assets.....	\$318,740,613	100.0	\$476,312,887	100.0	\$795,053,500	100.0

*Source: "Public Utility Securities," *Moody's Manual of Investments*, annual reports to stockholders, and correspon-

†Miscellaneous liabilities and accruals, and minority interests.

‡Number of shares outstanding: December 31, 1924 — 2,922,651 — \$10 par.

December 31, 1929 — 5,603,839 — No-par (\$10 stated value).

Increase 2,681,188

TABLE 6—STATEMENT OF INCOME DISTRIBUTION: NORTH AMERICAN COMPANY*
(1925-1929)

HOLDING COMPANY FINANCE

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Distribution of Income	1925	1926	1927	1928	1929	Five-Year Total
Consolidated earnings†	\$32,821,450	\$44,210,149	\$47,978,422	\$55,072,216	\$60,991,866	\$241,074,103
Interest on subsidiary debt	12,727,134	16,180,898	17,468,594	17,141,448	17,367,261	80,885,335
Dividends on subsidiary preferred stocks	4,624,595	8,355,435	8,966,740	9,961,983	10,463,963	42,372,716
Minority interest‡	1,266,130	1,369,363	1,401,795	1,807,179	2,360,813	8,205,280
Total accrued to parent	\$14,203,591	\$18,304,453	\$20,141,293	\$26,161,606	\$30,799,829	\$109,610,772
Parent expenses and taxes	632,684	507,213	579,426	656,692	729,512	3,105,527
Parent net accruals	\$13,570,907	\$17,797,240	\$19,561,867	\$25,504,914	\$30,070,317	\$106,505,245
Interest on parent debt§	274,796	233,732	307,218	1,102,161	1,263,493	3,181,400
Balance to parent stockholders	\$13,296,111	\$17,563,508	\$19,254,649	\$24,402,753	\$28,806,824	\$103,323,845
Dividends on parent preferred stock	1,763,620	1,820,108	1,820,022	1,820,032	1,820,034	9,043,816
Balance left in the business	\$11,532,491	\$15,743,000	\$17,434,627	\$22,582,721	\$27,086,790	\$ 94,280,029
Stock dividends on parent common stock	3,223,819	3,932,525	4,341,772	4,806,549	5,353,019	21,657,684
Balance uncanceled	\$ 8,308,672	\$11,810,875	\$13,092,855	\$17,776,172	\$21,633,771	\$ 72,622,345

*Source: "Public Utility Securities," *Moody's Manual of Investments*, annual reports to stockholders, and correspondence.

†Including profit from investments in non-subidiaries and revenues from parent company activities.

‡Dividends and proportion of undivided profits.

§All short-term debt.

||No cash dividends paid on common stock.

TABLE 7—FINANCIAL STRUCTURE: STANDARD GAS AND ELECTRIC COMPANY*
(1926-1929)

Type of Financing	December 31, 1925		Increase 1926 to 1929		December 31, 1929	
	Amount	Per Cent of Book Assets	Amount	Per Cent of Book Assets	Amount	Per Cent of Book Assets
Subsidiary debt	\$267,592,358	49.1	\$166,984,914	38.6	\$434,577,272	44.4
Subsidiary preferred stocks	104,855,630	19.3	127,869,080	29.5	232,724,710	23.8
Subsidiary reserves	7,305,922	1.3	11,240,683	2.6	18,546,605	1.9
Subsidiary surplus	9,804,475‡	1.8	4,241,295	1.0	14,045,770	1.4
Minority interest	15,623,956	2.9	70,172,731	16.2	85,796,687	8.8
Parent debt	15,000,000	2.8	22,683,730	5.2	37,683,730	3.9
Parent preferred stock	35,500,000	6.5	24,349,457	5.6	59,849,457	6.1
Parent common stock	21,971,764§	4.0	46,837,958	10.8	68,809,722¶	7.0
Parent reserves	100,086	0.0	1,404,459	0.3	1,504,545	0.2
Parent surplus	8,843,019	1.6	7,588,182	1.8	16,431,201	1.7
Balance†	58,208,292	10.7	-50,440,330	-11.6	7,767,962	0.8
Total book assets	\$544,805,502 	100.0	\$432,932,159	100.0	\$977,737,661	100.0

*Source: "Public Utility Securities," *Moody's Manual of Investments*, and annual reports to stockholders.

†Includes miscellaneous current liabilities, accruals, etc.

‡Unknown amount applicable to minority interest.

§No-par stock, 765,635 shares.

¶Includes St. Paul Gas and Light Company and California-Oregon Power Company acquired in 1926.

||No-par stock, 1,562,607 shares.

TABLE 8—STATEMENT OF INCOME DISTRIBUTION: STANDARD GAS AND ELECTRIC COMPANY*
(1926-1929)

Distribution of Income	1926	1927	1928	1929	Four-Year Total
Subsidiary earnings†	\$52,441,354	\$50,863,878	\$55,726,582	\$59,383,277	\$218,415,091
Subsidiary interest	21,997,041	21,285,414	22,544,749	23,005,876	88,833,080
Subsidiary rental payments‡	2,535,928	2,495,105	2,514,728	2,468,297	10,014,058
Subsidiary miscellaneous charges	371,297	504,809	2,088,982	1,289,920	4,255,008
Subsidiary preferred dividends	11,563,108	12,478,451	13,120,774	13,849,006	51,011,339
Minority interest	5,106,375	6,152,275	6,872,744	9,389,720	27,521,114
Balance accrued to parent	\$10,867,605	\$ 7,947,824	\$ 8,584,605	\$ 9,380,458	\$ 36,780,492
Other income§	4,450,172	7,524,136	7,153,196	7,607,865	26,735,369
Total accruals to parent	\$15,317,777	\$15,471,960	\$15,737,801	\$16,988,323	\$ 63,515,861
Parent expenses and taxes	120,294	243,123	142,237	188,721	694,375
Net accruals to parent	\$15,197,483	\$15,228,837	\$15,595,564	\$16,799,602	\$ 62,821,486
Parent interest	2,319,004	2,605,998	2,441,306	2,411,767	9,778,075
Balance to parent stockholders	\$12,878,479	\$12,622,839	\$13,154,258	\$14,387,835	\$53,043,411
Parent preferred dividends	3,180,018	3,629,858	3,825,562	4,089,781	14,725,219
Balance to parent common stockholders	\$ 9,698,461	\$ 8,992,981	\$ 9,328,696	\$10,298,054	\$38,318,192
Parent cash dividends on common stock	2,993,669	4,386,561	4,959,747	5,132,623	17,472,600
Balance left in the business	\$ 6,704,792	\$ 4,606,420	\$ 4,368,949	\$ 5,165,431	\$ 20,845,592
Parent stock dividends on common stock	905,450	309,700			1,215,150
Balance uncanceled	\$ 5,799,342	\$ 4,296,720	\$ 4,368,949	\$ 5,165,431	\$19,630,442

*Source: "Public Utility Securities," *Moody's Manual of Investments*, and annual reports to stockholders.

†Includes profits of Shaffer Oil and Refining Company.

‡Rent of leased properties.

§Including fees, trading profits, return on investments, etc.

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TABLE 9—FINANCIAL STRUCTURE: UNITED LIGHT AND POWER COMPANY*
(1925-1929)

Type of Financing	December 31, 1924		Increase 1925 to 1929		December 31, 1929	
	Amount	Per Cent of Book Assets	Amount	Per Cent of Book Assets	Amount	Per Cent of Book Assets
Subsidiary bonds	\$ 33,340,300	39.2	\$190,319,397	46.0	\$223,659,697	44.8
Subsidiary preferred stock	10,594,146	12.5	54,040,225	13.1	64,634,371	13.0
Subsidiary common	164,758	0.2	31,648,943	7.6	31,813,701	6.4
Parent debt	10,500,000	12.3	39,920,100	9.6	50,420,100	10.1
Parent preferred stock	14,555,000	17.1	45,445,000	11.0	60,000,000	12.0
Parent common A stock	2,925,500	3.4	5,958,540	1.4	8,884,040	1.8
Parent common B stock	1,800,000	2.1	2,440,000	0.6	4,240,000	0.8
Consolidated surplus attributable to parent company	1,135,442	1.3	24,379,440	5.9	25,514,882	5.1
Parent reserves	390,682	0.5	7,549,639	1.8	7,940,321	1.6
Balance†	9,677,841	11.4	12,172,475	3.0	21,850,316	4.4
Total book assets	\$ 85,083,669‡	100.0	\$413,873,759	100.0	\$498,957,428	100.0

*Source: "Public Utility Securities," *Moody's Manual of Investments*, and annual report to stockholders.

†Including purchase money obligations, payables, accruals, and minority interest in surplus.

‡Excluding book assets of Continental Gas and Electric Company acquired in November, 1924.

TABLE 10—STATEMENT OF INCOME DISTRIBUTION: UNITED LIGHT AND POWER COMPANY*
(1925-1929)

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Distribution of Income	1925	1926	1927	1928	1929	Five-Year Total
Subsidiary earnings	\$14,183,331	\$14,579,663	\$17,148,962	\$24,907,157	\$34,776,250	\$105,595,363
Interest on subsidiary debt	5,064,883	5,464,604	5,999,061	10,087,444	12,386,611	39,002,603
Dividends on subsidiary preferred stocks and minority interests.....	2,938,721	3,444,155	3,945,374	5,934,702	9,208,339	25,471,291
Balance accrued to parent.....	\$ 6,179,727	\$ 5,670,904	\$ 7,204,527	\$ 8,885,011	\$13,181,300	\$ 41,121,469
Parent company other income†.....	2,263,605	1,451,067	2,442,636	219,421	182,682	6,559,411
Total accrued to parent.....	\$ 8,443,332	\$ 7,121,971	\$ 9,647,163	\$ 9,104,432	\$13,363,982	\$ 47,680,880
Interest on parent debt.....	2,861,894	3,546,816	3,589,499	3,251,271	3,026,977	16,276,457
Balance to parent stockholders.....	\$ 5,581,438	\$ 3,575,155	\$ 6,057,664	\$ 5,853,161	\$10,337,005	\$ 31,404,423
Dividends on parent preferred stock	1,211,660	1,329,531	1,348,365	1,350,739	2,469,505	7,709,800
Balance to parent common stockholders	\$ 4,369,778	\$ 2,245,624	\$ 4,709,299	\$ 4,502,422	\$ 7,867,500	\$ 23,694,623
Cash dividends on parent common stock (A and B)	1,085,996	1,441,534	1,430,339	1,466,505	1,841,937	7,266,311
Balance left in the business.....	\$ 3,283,782	\$ 804,090	\$ 3,278,960	\$ 3,035,917	\$ 6,025,563	\$ 16,428,312
Stock dividends paid on parent common stock	739,985	299,170				1,039,155
Balance uncanceled	\$ 2,543,797	\$ 504,920	\$ 3,278,960	\$ 3,035,917	\$ 6,025,563	\$ 15,389,157

*Source: "Public Utility Securities," *Moody's Manual of Investments*, and annual reports to stockholders.

†Net.

APPENDIX B

SOURCES OF STATISTICAL DATA APPEARING IN TEXT TABLES

TABLE	STUDY PAGE NUMBER
<p>1. Relative Proportions of Parent and Subsidiary Company Financing (December 31, 1924)_____</p> <p style="padding-left: 40px;">Source: Charts 7 to 11, inclusive.</p>	53
<p>2. Relative Proportions of Parent and Subsidiary Company Financing Accompanying Five Years of Expansion (1925-1929)_____</p> <p style="padding-left: 40px;">Source: Charts 7 to 11, inclusive.</p>	54
<p>3. Relative Proportions of Parent and Subsidiary Company Financing (December 31, 1929)_____</p> <p style="padding-left: 40px;">Source: Charts 7 to 11, inclusive.</p>	55
<p>4. Relation of Parent and Subsidiary Financing to Book Assets of the American Telephone and Telegraph Company (December 31, 1929)_____</p> <p style="padding-left: 40px;">Source: Derived from Condensed Balance Sheets in <i>Bell Telephone Securities, 1930</i> (American Telephone and Telegraph Company), pages 15 to 21.</p>	62
<p>5. Conversion Schedule for Bonds and Stocks of the Associated Gas and Electric Company_____</p> <p style="padding-left: 40px;">Source: <i>Commercial and Financial Chronicle</i>, 125 (August 13, 1927), 9-10.</p>	64
<p>6. Securities Issued by Five Public Utility Holding Company Systems during 1931 _____</p> <p style="padding-left: 40px;">Source: "Monthly Summaries of New Capital Flotations," <i>Commercial and Financial Chronicle</i>.</p>	68
<p>7. Progress in Changing the Financial Plan of the Associated Gas and Electric Company (1925-1929) _____</p> <p style="padding-left: 40px;">Source: S. O. Sears, "<i>The Associated Plan of Finance</i>" (pamphlet reprinted from the <i>Associated Magazine</i>, January, 1931).</p>	72

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8. The Effect of Decline of Gross Revenues on Net Operating Income of the New York Central Railway Company _____	82
Source: <i>Commercial and Financial Chronicle</i> , 133 (November 28, 1931), 3501.	
9. Relation of Total Funded Debt to Book Assets_____	83
Source: Charts 7 to 11, inclusive.	
10. Relation of Total Limited-Dividend Stocks to Book Assets _____	89
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11. Effect of Declining Gross Earnings on Holding Company Common Stock Earnings _____	91
Source: <i>Commercial and Financial Chronicle</i> , 134 (January 9, 1912), 319.	
12. Relation of Holding Company Residual Equities to Book Assets of Systems _____	92
Source: Charts 7 to 11, inclusive.	
13. Losses in Aggregate Residual Equity Values Compared with Equity Financing, (January 1, 1928, to December 31, 1931)_____	96
Source: Compiled from records of market prices and number of shares outstanding.	
14. Comparison of Earnings, Dividends, and Market Prices of Preferred and Common Stocks_____	106
Source: "Public Utility Securities," <i>Moody's Manual of Investments</i> .	
15. Effect of Parent and Intermediate Holding Company Debenture Bond Issues (1925-1929)_____	123
Source: "Public Utility Securities," <i>Moody's Manual of Investments</i> , and annual reports to stockholders.	
16. Convertible Bond Contracts Created by the Associated Gas and Electric Company (1925-1929)_____	126
Source: "Public Utility Securities," <i>Moody's Manual of Investments</i> .	

TABLE	STUDY PAGE NUMBER
17. Cash Dividends and Privileged Subscriptions of the American Telephone and Telegraph Company Compared with Stock Dividends of the North American Company _____	140
<i>Source: "Public Utility Securities," Moody's Manual of Investments.</i>	
18. Percentage of Operating Income Accrued to Parent Companies (1925-1929) _____	151
<i>Source: Appendix A, Tables 2, 4, 6, 8, and 10.</i>	
19. Percentage of Parent Company Accrued Income Reinvested (1925-1929) _____	154
<i>Source: Appendix A, Tables 2, 4, 6, 8, and 10.</i>	
20. Percentage of Reinvested Earnings Capitalized by Payment of Stock Dividends (1925-1929) _____	159
<i>Source: Appendix A, Tables 2, 4, 6, 8, and 10.</i>	
21. Percentage of Parent Company Accrued Income Converted into Corporate Income (1925-1929) _____	162
<i>Source: Appendix A, Tables 2, 4, 6, 8, and 10, and "Public Utility Securities," Moody's Manual of Investments.</i>	

APPENDIX C

SOURCES OF STATISTICAL DATA USED IN THE CONSTRUCTION OF CHARTS

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1. Corporate Organization of the American Power and Light Company (January, 1926, and December, 1929) _____	15
Source: "Public Utility Securities," <i>Moody's Manual of Investments</i> , and annual reports to stockholders.	"
2. Corporate Organization of the Associated Gas and Electric Company (January, 1925, and December, 1929) _____	16
Source: "Public Utility Securities," <i>Moody's Manual of Investments</i> , and annual reports to stockholders.	
3. Corporate Organization of the North American Company (January, 1925, and December, 1929) _____	17
Source: "Public Utility Securities," <i>Moody's Manual of Investments</i> , and annual reports to stockholders.	
4. Corporate Organization of the Standard Gas and Electric Company (January, 1926, and December, 1929) _____	18
Source: "Public Utility Securities," <i>Moody's Manual of Investments</i> , and annual reports to stockholders.	
5. Corporate Organization of the United Light and Power Company (January, 1925, and December, 1929) _____	19
Source: "Public Utility Securities," <i>Moody's Manual of Investments</i> , and annual reports to stockholders.	
6. Diagrams of Holding Company Management Relationships _____	24
Source: "Public Utility Securities," <i>Moody's Manual of Investments</i> , annual reports to stockholders, and management contracts.	
7. Financial Structure of the American Power and Light Company (December 31, 1925 and 1929) _____	46
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CHART	STUDY PAGE NUMBER
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