1. Introduction

There is a bit of the populist in most of us and considerable evidence that our propensities in this direction have been passed along from generation to generation since the early days of the republic. Andrew Jackson's campaign against the Second Bank of the United States is only one such early example [1]. The Sherman Act is another and a relatively recent manifestation of what appears to be a persistent theme in U.S. history, that is, an aversion to the emergence anywhere in our society of a concentration in private hands of political or economic power.

Although latent for the most part during periods of economic growth and prosperity, the public's suspicion of, and debate concerning, the power of big banks, money trusts, big business, big labor, and big oil tends to re-ermerge during periods of economic stress. At such times, bigness is labeled as a proximate cause for whatever present or recent past difficulties are perceived. Thus, it is not surprising that the landmark study by Berle and Means in 1932 [2] and the later multi-volume product of the Temporary National Economic Committee in 1940 [3] attracted so much attention to the problems they addressed.

During the 1930s interest in the suspected emergence of concentrations of economic power centered on non-financial corporations. Berle and Means considered the American Telephone and Telegraph Company (AT&T) to epitomize the alarming power of the large publicly-held corporation of that time. In their words:

With assets of almost five billions of dollars and with 454,000 employees, and stockholders to the number of 567,697 [AT&T] may indeed be called an economic empire – an empire bounded by no
geographical limits, but held together by centralized control. One hundred companies of this size would control the whole of American wealth; would employ all of the gainfully employed; and if there were no duplication of stockholders, would be owned by practically every family in the country [4].

The authors were quick to point out that size alone was not necessarily dangerous. Their concern was that size combined with public ownership effectively separated ownership from control of corporate assets at a time when the publicly-held corporation was emerging as the dominant economic unit, thus leaving the public increasingly dependent upon the performance of self-perpetuating bodies of corporate managers who, in turn, were effectively answerable to no one.

Berle and Means accurately perceived that the phenomenal growth of the large publicly-held corporation had not yet attained its zenith. Even they, however, might have been hesitant to forecast the extent to which such companies, and especially the largest among them, would grow as a fraction of the overall national economy. The New York Stock Exchange (NYSE) reported in 1979 that 11,000 of the roughly 2,000,000 corporations in the United States today have sufficiently wide ownership to be considered publicly-held; 3,700 have their shares listed or traded on stock exchanges; and 1,549 are traded on the NYSE [5]. At the end of 1975, the most recent year for which such figures are available, NYSE-listed firms accounted for an estimated 42% of aggregate corporate assets, 44% of aggregate corporate revenues, and 79% of aggregate corporate income [6]. NYSE-listed firms’ share of aggregate corporate net income has ranged during the most recent decade for which figures are available from a low of 70% in 1967 to a high of 96% in 1971 [7]. Over the past two decades NYSE-listed companies have accounted for 65–81% of the market value of all domestic corporations, with the percentage fluctuating (generally inversely) with changes in the level of stock prices [8].

Comparing measures in the preceding quotation from Berle and Means regarding AT&T’s size as a fraction of the U.S. economy in 1932 with similar measures in table 1 of AT&T’s present size and that of the other large firms enumerated there, it appears that the largest non-financial corporations today are substantially larger, from two to four times larger as fractions of the overall economy, then they were half a century ago. The public would appear to be more rather than less dependent today than when Berle and Means first wrote on the performance of a relatively small number of very large corporations and their managements.

It is curious, therefore, that in an interview for Dun’s Review more than a decade ago, Adolf Berle, then 73, expressed concern not for the increased size and power of non-financial corporations and their managers, but rather for “the emergence of a new concentrated power countervailing that of corporate managements [in the hands of institutional investors]” [9]. Berle expressed
<table>
<thead>
<tr>
<th></th>
<th>AT&amp;T</th>
<th>GM</th>
<th>IBM</th>
<th>Exon</th>
</tr>
</thead>
<tbody>
<tr>
<td>All U.S.</td>
<td></td>
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<tr>
<td>NYSE-listed</td>
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<td></td>
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<tr>
<td>(market value)</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Market value (1978)</td>
<td>1.041</td>
<td>330</td>
<td>396</td>
<td>1.69</td>
</tr>
<tr>
<td>Sales (1975)</td>
<td>3.198</td>
<td>500</td>
<td>400</td>
<td>97.7</td>
</tr>
<tr>
<td>Income (1975)</td>
<td>80</td>
<td>63</td>
<td>23.2</td>
<td></td>
</tr>
<tr>
<td>Percent of all U.S.</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>corporations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market value</td>
<td>70.1</td>
<td>32.6</td>
<td>12.1</td>
<td>4.9</td>
</tr>
<tr>
<td>Sales</td>
<td>41.9</td>
<td>16.1</td>
<td>9.6</td>
<td>1.9</td>
</tr>
<tr>
<td>Income</td>
<td>79.8</td>
<td>32.6</td>
<td>12.1</td>
<td>4.9</td>
</tr>
<tr>
<td>Percent of NYSE-listed</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
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<tr>
<td>companies</td>
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special concern about the size and apparently continuing growth of commercial bank trust departments as holders (and voters) of corporate shares. In his words:

In recent years, stock has become more and more concentrated in the hands of institutional investors. Among the most powerful are the trust departments of the big banks.... [A]bout fifteen or twenty of the big banks through their trust departments could today mobilize voting control of a very large percentage of American industry. ... The current estimate — it frightens me — is that by 1970 institutional investors will hold one-third of the stock of corporations listed on the New York Stock Exchange. That adds up to working control [10].

Berle concluded that size limitations on institutional investors in general and restrictions on the expansion of commercial banks and bank holding companies into other lines of business should be considered, to prevent the emergence of a new power elite from among such institutions [11].

What are the facts regarding the size and growth during recent decades of institutional investors in general, and commercial bank trust departments in particular, as investors in corporate shares, as voters of those shares and, through these and other business relationships with non-financial corporations, as potential successors to the power of managers of non-financial corporations? To what extent is there a basis in fact for Berle's concerns in 1968, as distinct from his and Means' concerns in 1932? And, to what extent may regulatory policies which trace their origin to legislation such as the Banking Acts of 1933 and 1935, the Glass–Steagall Acts, have contributed to the factual bases for these concerns?

These are the questions addressed below.

2. Institutional holdings of corporate stock

Berle's assessment that institutional holdings of corporate stock already were large by 1968 and growing, both absolutely and as a fraction of total stock outstanding, was correct, as was his assessment that bank trust departments were pre-eminent among institutional holders of corporate shares [12]. Even his quantitative estimate, that by 1970 institutional investors would hold one-third of all NYSE-listed stock, was surprisingly close to the mark given the sparse information then available regarding the magnitude of several important types of institutional stockholdings. A summary of holdings by major classes of institutional and other investors over the decade from 1969 to 1978 is contained in table 2. Here we see that institutional holdings of corporate stock amounted to approximately $296 billion, or 34.2% of all stock outstanding as of year-end 1969, of which bank trust departments held $186 billion or 63% of the institutional total [13].
Table 2
Market value of stockholdings, end of year (billions of dollars).

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</thead>
<tbody>
<tr>
<td>Banks a</td>
<td>186.6</td>
<td>185.4</td>
<td>230.9</td>
<td>283.5</td>
<td>241.9</td>
<td>171.3</td>
<td>219.9</td>
<td>275.2</td>
<td>256.9</td>
<td>289.7</td>
</tr>
<tr>
<td>Investment companies</td>
<td>51.3</td>
<td>50.1</td>
<td>59.5</td>
<td>65.4</td>
<td>49.9</td>
<td>35.0</td>
<td>44.0</td>
<td>48.9</td>
<td>39.3</td>
<td>36.8</td>
</tr>
<tr>
<td>Life insurance companies</td>
<td>13.7</td>
<td>15.4</td>
<td>20.6</td>
<td>26.8</td>
<td>25.9</td>
<td>21.9</td>
<td>28.1</td>
<td>34.2</td>
<td>32.9</td>
<td>35.5</td>
</tr>
<tr>
<td>Property-liability insurance companies</td>
<td>13.3</td>
<td>13.2</td>
<td>16.6</td>
<td>21.8</td>
<td>19.7</td>
<td>12.8</td>
<td>14.2</td>
<td>16.9</td>
<td>17.1</td>
<td>19.4</td>
</tr>
<tr>
<td>Other, including adjustment b</td>
<td>31.5</td>
<td>40.6</td>
<td>50.8</td>
<td>64.3</td>
<td>49.1</td>
<td>35.3</td>
<td>49.6</td>
<td>57.4</td>
<td>44.8</td>
<td>70.2</td>
</tr>
<tr>
<td>Total institutional c</td>
<td>296.4</td>
<td>304.7</td>
<td>378.4</td>
<td>461.8</td>
<td>386.5</td>
<td>276.3</td>
<td>355.8</td>
<td>432.9</td>
<td>391.0</td>
<td>451.6</td>
</tr>
<tr>
<td>Foreign</td>
<td>26.9</td>
<td>28.7</td>
<td>32.9</td>
<td>41.3</td>
<td>37.0</td>
<td>28.4</td>
<td>52.6</td>
<td>63.9</td>
<td>60.1</td>
<td>64.7</td>
</tr>
<tr>
<td>Individual and other d</td>
<td>543.0</td>
<td>526.0</td>
<td>592.4</td>
<td>635.0</td>
<td>477.9</td>
<td>377.0</td>
<td>441.1</td>
<td>562.9</td>
<td>544.0</td>
<td>524.7</td>
</tr>
<tr>
<td>Total stock outstanding</td>
<td>866.3</td>
<td>859.4</td>
<td>1003.7</td>
<td>1138.1</td>
<td>901.4</td>
<td>641.7</td>
<td>849.5</td>
<td>1059.7</td>
<td>995.1</td>
<td>1041.0</td>
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<td>Percent</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Bank/total institutional</td>
<td>63.0</td>
<td>60.8</td>
<td>61.0</td>
<td>61.4</td>
<td>62.6</td>
<td>62.0</td>
<td>61.8</td>
<td>63.2</td>
<td>65.7</td>
<td>64.1</td>
</tr>
<tr>
<td>Bank/total stock outstanding</td>
<td>21.5</td>
<td>21.6</td>
<td>23.0</td>
<td>24.9</td>
<td>26.8</td>
<td>26.7</td>
<td>25.9</td>
<td>25.6</td>
<td>25.8</td>
<td>27.8</td>
</tr>
<tr>
<td>Institutional/total stock outstanding</td>
<td>34.2</td>
<td>35.5</td>
<td>37.7</td>
<td>40.6</td>
<td>42.9</td>
<td>43.1</td>
<td>41.9</td>
<td>40.5</td>
<td>39.3</td>
<td>43.4</td>
</tr>
</tbody>
</table>

b Calculated as a residual. Includes mutual savings banks and non-bank administered endowments, foundations, and employee benefit plans. Also includes adjustments of various sorts for inter-institutional holdings, such as holdings by other institutions of investment company shares.
c As defined and tabulated in Sec. and Exchange Comm'n, Statistical Bulletin, July 1979, except that bank administered agency accounts, as reported in FDIC, Trust Assets of Insured Commercial Banks (1969–1977), are added thereto.
d Calculated as a residual. Includes certain institutional account types not covered by the above, such as stockholdings of churches and personal agency accounts managed by investment advisers. The latter was estimated as exceeding $20 billion in 1969. [Summary Volume] Sec. and Exchange Comm'n, Institutional Investor Study Report, H.R. Doc. No. 64, pt. 8, 92d Cong., 1st Sess. 18 (1971). No information is available regarding the former.
e Estimated by the author by regressing the ratio of bank stock holdings to total stock outstanding for 1969–1977 on a linear trend term and applying the projected ratio to SEC estimates of year-end 1978 total stock outstanding.
f Estimated by the author by regressing the ratio of total institutional stock holdings to total stock outstanding for 1969–1977 on a linear trend term and applying the projected ratio to SEC estimates of year-end 1978 total stock outstanding.

Source: Sec. and Exchange Comm'n, Statistical Bulletin, July 1979, except where otherwise indicated.
From year-end 1969 to year-end 1978, institutional stockholdings continued to grow, during good markets and bad, to more than $450 billion, representing approximately 43.4% of the market value of all common and preferred stock outstanding. This growth, of course, has not been uniform across institutional types. Bank holdings have increased somewhat more rapidly than those of other major institutions; investment company stockholdings declined over the decade, while holdings of life insurance companies increased at more than twice the average annual rate of growth of institutions as a group. Direct stockholdings of individuals remained more or less constant in absolute value over the decade, while their relative share of total stock outstanding declined.

The first element underlying Berle's concern over the possible emergence in financial institutions of a new concentration of economic power, then, appears to have a credible basis in fact. Institutional investors as a group have indeed become substantial owners of corporate stock during the past half century, and their growth appears to be continuing [14].

A substantial leap is required, however, to bridge the gap between a finding that institutional investors are important holders (and traders and voters) of corporate stock and a conclusion that such institutions are in a controlling position over a significant portion of American industry. It does not follow from a finding alone that institutional investors hold one-third of the aggregate market value of all corporate stock that any relatively small collection of institutions is in a position to control any, let alone many, large U.S. corporations. Some additional findings (that institutional stockholdings are highly concentrated in a relatively small number of large institutions, that institutional portfolios are concentrated in the shares of relatively few large companies, or that other business relationships confer on institutions other sources of influence over non-financial corporate managements) are required to sustain such a conclusion [15].

3. Concentration of institutional stockholdings

One of the more interesting findings of the Securities and Exchange Commission's (SEC) 1971 Institutional Investor Study was that certain of the larger classes of institutional investors in corporate stock are rather highly concentrated. By 1969 the ten largest bank trust departments administered 37% of all trust department assets, the twenty largest administered 51% and the fifty largest 70% [16]. To place these numbers in perspective, the ten largest bank trust departments together held approximately $68.7 billion in corporate stock as of year-end 1969, or about 8% of the market value of all stock outstanding at the time [17].

Investment advisers are the second largest institutional holders of corporate stock. In addition to managing the funds of investment companies, for which
such firms are well known, investment advisers also manage substantial pools of personal advisory accounts, employee benefit accounts, and the funds of educational endowments, foundations, and even certain insurance accounts. While mutual funds under investment adviser supervision held approximately $51 billion in stock in 1969, total accounts managed by such firms contained more than $95 billion in stock at the end of that year [18]. Here, too, assets under management are relatively concentrated. The five largest investment advisers managed 22.5% of all stockholdings held by this group during 1969; the ten largest managed 36%; the twenty-five largest nearly 60%; and the fifty largest almost 75% [19]. It follows that the ten largest investment advisers managed approximately $34.6 billion in common stock portfolios during 1969, or 4% of the market value of all stock outstanding [20].

While total stockholdings of life insurance companies were smaller than those of either banks or investment advisers, they were growing more rapidly and were far more concentrated in 1969 than was the case for any other institutional type. During that year the single largest life insurance company held more than 25% of all the stock-oriented, separate account assets in its industry. The three largest life insurance companies held better than 50% of all such assets, while the seven largest held more than 75% [21]. Together these firms held a little more than $10 billion in corporate stock, or approximately 1% of all stock outstanding. If these seven largest life insurers retained their share of total industry stockholdings through 1978, those holdings would have exceeded $27 billion, or 2.6%, of all corporate stock outstanding [22].

Similar degrees of concentration apparently exist among other types of institutional investors as well. The twenty-five largest property-liability insurance companies, for example, held approximately $11.2 billion in corporate stock, or 1.2% of total stock outstanding, at year-end 1969 [23]. The lesser amount of aggregate stockholdings of property-liability insurance companies and other institutional types, however, reduce their significance for the purpose at hand.

4. Concentration within institutional stock portfolios

Wall Street folklore has held for some time that institutional stockholdings tend to be concentrated in the shares of a relatively few “top tier” corporations. Until the early 1970s, however, this presumption does not appear to have been based on a very substantial body of factual data.

For example, a NYSE survey of institutional holdings of NYSE-listed securities at year-end 1962 found that five stocks accounted for 14.5% and fifty-one stocks accounted for 41.4% of the market value of all listed stocks held by the surveyed institutions [24]. As table 1 indicates, however, these percentages are almost identical to the fractions of total market value of
NYSE-listed stocks accounted for by the five largest and the fifty largest NYSE-listed corporations, respectively, during 1978 [25]. If the largest institutional holdings are concentrated in the largest NYSE-listed corporations only to this extent, one could conclude that institutional portfolios are not concentrated to a greater extent than are the portfolios of individual direct investors or the overall shareowner population.

The Wharton School reported in 1962 that, although the bulk of investment company stockholdings over the period 1952–58 were in the shares of thirty of the largest NYSE-listed companies, fund portfolios actually were less concentrated in those shares than was the market as a whole [26].

A similar study by the SEC four years later found essentially the same facts regarding the concentration of investment company portfolio holdings, i.e. that investment company portfolios, although heavily invested in the shares of larger companies, were not more concentrated in those shares than was the market as a whole [27]. The SEC, nevertheless, expressed some concern at the size of the holdings and concluded that, if other institutional investors followed similar investment practices, the market for certain large companies and even industries (such as the airline industry) might be virtually dominated by the investment decisions of relatively few managers of institutional portfolios [28].

All of these studies were poorly designed to assess the extent to which institutional portfolios are concentrated and the likelihood that one, two, or a few such institutions might in fact be in a position to control one or more large American corporations. A more comprehensive and carefully designed analysis of institutional portfolio holdings during 1969, which was conducted as part of the SEC's Institutional Investor Study, was reported by Rosenberg in 1974 [29]. Rosenberg's analysis was based on stockholdings of the fifty largest bank trust departments, seventy-one largest investment advisers, twenty-six largest life insurance companies, twenty-five largest property-liability insurance companies, and forty-one largest self-administered university endowments, foundations, and employee benefit funds in approximately 800 publicly-held corporations. The stock portfolios of institutions covered by his survey accounted for more than 70% of the stock held by all financial institutions on the survey date and for similarly large fractions of the stock held by each included institutional type.

Most of those analyses were based on holdings of a list of nearly 800 stocks, including 562 NYSE or American Stock Exchange (Amex)-listed securities and 231 stocks traded nationally over-the-counter (OTC). The sample includes the twenty-seven largest NYSE-listed securities, which accounted for 35% of the market value of all NYSE-listed stocks at the time [30].

Rosenberg's study begins with the construction of an index of concentration for each security, defined as “the ratio of the holdings in a firm to total portfolio holdings (portfolio ratio) divided by the ratio of the market value of the firm to the market value of all firms (market ratio)” [31]. As an illustration,
if holdings by institutions in a particular company's stock amount in the aggregate to 5% of the value of their combined stock portfolios, while the market value of the company's shares similarly amounts to 5% of the market value of all stock outstanding, the company's concentration ratio would be 1.0.

The major thrust of Rosenberg's findings is that for most large firms his concentration index, as defined above, is greater than 1.0, while for randomly selected and smaller firms it is equal to or less than 1.0, and the differences are striking. There is no doubt from his analysis that institutional portfolio holdings, for all types of institutions, are concentrated in the shares of a relatively few large companies, while individual direct investors tend to hold larger than market value proportions of their portfolios in the stock of smaller companies [32].

The extent of concentration within institutional portfolios is further demonstrated by observing the surprisingly large fraction of total portfolio value which is invested in the single largest stockholding and by the surprisingly small number of stocks which account for half the market value of all stockholdings in a typical institutional portfolio. Table 3, which summarizes such values for the securities underlying Rosenberg's study, shows that the largest position in a typical large bank trust department portfolio accounts for 19.5% of the market value of the entire trust department's holdings of sample stocks and that only eight stocks account for half the market value of sample stocks in the typical bank portfolio. Comparable figures for investment advisers show that 13.8% of the entire portfolio of sample stocks is invested in the single largest holding and ten stocks account for half the market value of all such stocks in the portfolio.

Review of holdings by other institutional types reveals that such degrees of concentration within portfolios are not unique to banks and investment advisers, but appear to be characteristic of institutions in general [33].

To be sure, financial institutions may hold large numbers of securities in their common stock portfolios. As shown in the right-hand column of table 3, the typical large bank trust department covered by Rosenberg's survey held 244 sample stocks; the typical investment adviser held nearly 100; and the typical property-liability insurance company averaged forty-eight. As evidenced above and elsewhere in table 3, however, most of these holdings are relatively small, and the great bulk of most of such portfolios tends to be invested in the shares of relatively few, large companies.

IBM, for example, appears among the eight companies comprising, on average, the top half of sample stockholdings of forty-eight of the fifty largest bank trust departments. General Motors is included among the stocks comprising the top half of the holdings of forty-two of the fifty banks; Exxon is included in thirty-four and Eastman Kodak in thirty-nine [34]. The degree of commonality in names of the companies in which institutional portfolio holdings are concentrated is striking, and they are, of course, the largest companies in the United States.
### Table 3
Concentration of holdings in institutional stock portfolios, sample stocks \(^a\), end of year 1969.

<table>
<thead>
<tr>
<th>Institution</th>
<th>Stock-holdings ($ billions)</th>
<th>Largest holding of individual stock as a percent of total stockholdings</th>
<th>Largest holding of individual stock as a percent of stock's total market value</th>
<th>Number of stocks accounting for 50% of total stockholdings</th>
<th>Number of stocks held</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank trust departments</td>
<td>165</td>
<td>19.5</td>
<td>2.1</td>
<td>8.1</td>
<td>243.8</td>
</tr>
<tr>
<td>Investment advisers</td>
<td>95</td>
<td>13.8</td>
<td>0.9</td>
<td>9.6</td>
<td>96.4</td>
</tr>
<tr>
<td>Property-liability insurance companies</td>
<td>11</td>
<td>16.9</td>
<td>0.6</td>
<td>8.4</td>
<td>47.7</td>
</tr>
<tr>
<td>Life insurance companies</td>
<td>11</td>
<td>14.3</td>
<td>1.0</td>
<td>9.3</td>
<td>43.3</td>
</tr>
<tr>
<td>Self-admin. employee benefit plans</td>
<td>13</td>
<td>39.0</td>
<td>4.3</td>
<td>7.8</td>
<td>39.0</td>
</tr>
<tr>
<td>Self-admin. foundations</td>
<td>12</td>
<td>43.7</td>
<td>3.8</td>
<td>2.6</td>
<td>27.7</td>
</tr>
<tr>
<td>Self-admin. endowments</td>
<td>3</td>
<td>19.3</td>
<td>0.2</td>
<td>6.7</td>
<td>35.8</td>
</tr>
<tr>
<td>All institutions</td>
<td>311</td>
<td></td>
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</tbody>
</table>

\(^a\) Sample stocks consist of the following: 27 largest NYSE-listed, 198 randomly selected NYSE-listed (27 largest excluded), 100 randomly selected Amex-listed, 150 randomly selected OTC, and 318 specifically selected for a variety of reasons. Total sample = 793 securities.

Given the extent of concentration in large, institutional portfolios, relatively few institutions hold among themselves fairly sizeable fractions of the stock outstanding for a great many U.S. companies. Assuming that five institutions are a small enough group to coordinate their views and actions on particular issues facing a company and that 5% of a company's shares is sufficiently large to assure the holders some degree of influence over important issues facing a company, then nine out of ten U.S. corporations having $1 billion or more in market value of equity would appear to be subject to at least some such influence. Specifically, forty-eight of the fifty-five U.S. corporations with equity values in excess of $1 billion in 1969 had five or fewer institutional shareholders which held in the aggregate 5% of the corporation's shares; two-thirds of such corporations had five or fewer institutional shareholders which held in the aggregate 10% of outstanding stock; and 16% had five or fewer institutional shareholders which held an aggregate of 20% of their shares [35].

As corporations become smaller, these fractions decline, irregularly at first, then quite rapidly. Below $250 million in market value, one finds relatively infrequent incidence of concentrated institutional holdings. Among companies whose market values were less than $10 million in 1969, for example, only one-quarter had five institutional stockholders with aggregate holdings of even 5% of the company's shares [36].

As all ten of the largest institutional holders of common stock are bank trust departments, these conclusions would not be affected to any important degree by substituting the word "bank" for "institution" in the paragraphs immediately above.

5. Multiple business relationships

Institutional holdings, by themselves, cannot describe fully the direction or extent of power relationships between the parties. Such a description must also make reference to the myriad of business and other relationships which exist.

A more comprehensive description of business and other relationships between 161 of the largest financial institutions and 288 sample companies was attempted by the SEC's Institutional Investor Study. The set of institutions is by now familiar; it consists of forty-nine of the fifty largest banks, sixty-nine of the seventy-one largest investment advisers, twenty-one of the largest property-liability insurance companies, and twenty-two of the largest life insurance companies. The 288-company sample of non-financial corporations contained the twenty-seven largest NYSE-listed companies; 154 randomly selected NYSE-listed, Amex-listed and OTC companies; and a judgment sample of 107 companies [37].

Each of the included institutions, of course, is a potential stockholder for
each company. In addition, each also is a potential creditor; each bank, investment adviser, and life insurance company is a potential employee benefit plan manager; each company may hold deposits in any bank; and each company and institution could have a joint personnel relationship through a common officer and/or director. One would expect such business and personnel relationships to involve more frequently the largest institutions and to exist more frequently between companies and institutions headquartered in the same geographic area.

Accordingly, data were collected on each of the enumerated business and personnel relationships and on company and institution size and geographic proximity for each of the 46,368 possible institution/company pairs [38]. Business and personnel relationships are the variables of interest; data were collected on company and institution size and on geographic proximity only to control for these sources of association between the business and other relationships.

Many of the observations, of course, are between institutions and companies which have no common business or personnel relationships. Indeed, only 10,982, or about one-fourth, of the possible observations are between companies and institutions which “know” one another in at least one of the ways enumerated above. After eliminating null observations from the sample, the frequencies of business and personnel relationships between sample institutions and companies which do “know” one another are as tabulated in table 4.

From table 4 it appears that banks, in part because of their size and in part because of the broad range of their services, tend to have far more contacts with sample companies than do institutions of other types. The average bank represented in table 4, for example, had business relationships with 196 separate sample companies, of which seventy-two, or a little over one-third, involved duplicate or multiple relationships with a company known in at least one other way. A typical investment adviser, by contrast, had relationships with only forty-three of the 288 sample companies, almost all of which were as a stockholder. Property-liability insurance companies had, on average, thirty-six relationships with such companies; life insurance companies had an average of sixty, of which twenty-seven were as stockholder and twenty-three were as creditor.

There is nothing necessarily undesirable about the existence of multiple business relationships between institutions and corporations, as long as each relationship is evaluated separately and entered into willingly by both parties and as long as conflicts inherent in certain combinations of the relationships are handled properly.

Statistical analyses, by identifying the existence of multiple relationships of certain types, can identify potential conflicts [39], but not the manner in which they are resolved. Similarly, analyses of statistical independence between multiple business relationships, if confirmed, can indicate the apparent absence

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of anti-competitive problems. Should strong, positive correlations be found between the relationships, of course, they would not provide *prima facie* evidence of tying relationships or improper exercise of economic power. They would, however, provide a strong motivation for inquiring into possible alternative explanations for their existence.

Analyses of the apparent independence (or interdependence) of business and personnel relationships between institutions and companies covered by the cross section of nearly 11,000 non-null institution/company pairs were undertaken by the *Institutional Investor Study*. Observations were grouped by institution type and correlations were calculated between the magnitude of institutional stockholdings or bondholdings and the presence of either a plan manager relationship or personnel relationship between the institution and the company. Other variables of interest important in the analyses were institution size, company size, and geographic proximity of institution and company headquarters.

Results of the correlations are intriguing. All correlation coefficients between measures of business and other relationships are positive and highly significant if the institution in question is a bank; all are nearly zero if the institution is not a bank, but rather an investment adviser, property-liability, or life insurance company [40].

Regression analyses then were employed to explore the pattern of intercorrelations among these relationships and to control for possibly spurious

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Table 4

<table>
<thead>
<tr>
<th>Institutions (number in parentheses)</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stock holding</td>
</tr>
<tr>
<td>Banks (49)</td>
<td>5,324</td>
</tr>
<tr>
<td>Investment advisers (69)</td>
<td>2,748</td>
</tr>
<tr>
<td>Property-liability insurance companies (21)</td>
<td>640</td>
</tr>
<tr>
<td>Life insurance companies (22)</td>
<td>598</td>
</tr>
</tbody>
</table>

correlative sources. Examples of intercorrelations which would be considered spurious are those which result from geographic proximity or from the respective sizes of institution and corporation. Large corporations are expected to maintain their principal banking or other financial relationships with large financial institutions and vice versa.

The findings reported by the SEC study go beyond such simple expectations, however. For banking institutions only, strong intercorrelations remain among all of stockholdings, bondholdings, the probability of officer/director interlocks, and the probability of institutional management of all or part of the corporation's employee benefit plans. These correlations remain significant even after size and regional proximity are controlled for. Should the institution be other than a bank, by contrast, no such systematic, statistical relationship appears to exist [41].

These findings are significant, not only statistically but also economically. For example, the probability that a sample bank will manage an employee benefit plan for a sample company is approximately 3.6 times greater if an officer/director interlock exists between the bank and the corporation, than if no such interrelationship exists [42]. The presence and magnitude of stockholdings and bondholdings also increase the probability of the existence of a plan manager relationship and/or a personnel interlock between banks and non-financial corporations.

For a non-bank financial institution, no such systematic relationships appear to exist among any of stockholding, bondholding, plan manager, or personnel relationships. Statistically, one can be quite comfortable with a hypothesis that multiple business relationships, where they exist between corporations and non-bank financial institutions, are independent events. In other words, the existence or size of any one such relationship does not appear to be correlated with the existence or size of any other such relationship.

The probability that the pattern of intercorrelation among multiple business relationship observed between banks and non-financial corporations could result from chance when in fact the relationships are independent of one another, is considered to be remote [43]. Banks appear to be generically different in this respect from non-bank financial institutions.

6. A legacy of Glass–Steagall

The above review of aggregate data shows that institutional investors have become major holders of corporate stock over the half century since Berle and Means first wrote, and that their growth as shareholders is continuing. It also shows that all ten of the largest stockholders are bank trust departments and that banks in the aggregate now account for almost two-thirds of all institutional stockholdings. Furthermore, institutional stock portfolios tend to be
concentrated to a surprising degree, and the shares in which they are concentrated are those of the largest U.S. corporations. As a result, most of the largest issuers have five or fewer institutional stockholders, typically banks, which together hold significant portions of the corporation's outstanding stock and with which the firms may have a number of other business relationship. As discussed, the multiple business relationships between banks and corporate clients are not statistically independent of one another and, in this respect, banks appear to be significantly different from other types of institutional investors. Adolf Berle's concerns in 1968, then, would appear to have a substantial basis in fact. A number of hypotheses, of course, would be consistent with these observations.

One such hypothesis would be that there are substantial economies of scale in the provision of financial services and especially in the provision of banking services. There is, of course, a substantial literature on economies of scale in commercial banking, which is generally supportive of this conclusion [44]. Not pursuing the argument further here does not imply that it is deemed to be invalid, only that, being well recognized, it may be less interesting than other hypotheses which also may have merit.

A second hypothesis, in combination with the first, perhaps, could be described as a "Robber Barons" theory of financial concentration. Under this hypothesis, financial institutions, especially banks, may be perceived as acquiring considerable size and concentration through economies of scale or any other means and, as a result, obtaining considerable power over client corporations. This power may be derived from a bank's creditor relationships, from its stockholdings, or from other sources. The financial institution's abilities to ration credit and vote shares, for example, could be used as levers to induce client companies to avail themselves of all the institution's services, perhaps on non-competitive terms.

Such an hypothesis would be consistent with the apparent clustering of stockholding, loan, deposit, personnel, and plan manager relationships between banks, trust departments, and client corporations. While not denying the possibility that such power may, on occasion, account for some multiplication of business relationships between banks and non-financial corporations, the possibility that such power would be a primary determinant in the establishment and continuation of such relationships over long periods of time, without generating large numbers of lawsuits and public scandals, appears unlikely – almost as unlikely as the probability that observed bank/company interrelationships are independent events.

A third hypothesis which warrants examination is that the prohibition on payment of interest on demand deposits, incorporated in the Banking Acts of 1933 and 1935 [45], has had the effect of "bundling" various banking services, including trust department services, into the deposit relationship between commercial banks and corporate customers. Given the mood of the time and
the intent of other sections of the same legislation [46], it seems clear that such a result was far from the minds of the legislation's sponsors [47]. Nonetheless, direct controls on rates or prices payable by financial institutions or others in marketplaces that are otherwise competitive operate almost invariably to direct competitive pressures into non-price forms. Electric toasters "given away" by savings and loan associations in exchange for deposits subject to Regulation Q ceilings, the "soft dollars" with which Wall Street was awash while fixed minimum brokerage commissions were maintained by the NYSE, even the innumerable empty seats flown around the country by scheduled airlines under Civil Aeronautics Board rate regulation, stand as testimony to the inexorable force of competition in conflict with rate regulation.

Similarly in the banking industry, efforts through rate regulation to suppress direct price competition for deposits have resulted in non-price forms of competition. Commercial banks also give away toasters to new holders of passbook savings accounts; branch banks and money dispensers crop up on every corner as banks and thrift institutions reach out to retail customers through "convenience", as well as through ubiquitous "free services", to attract deposits. Of more interest here, however, corporate clients also have become accustomed to the provision by banks of free or underpriced services in exchange for deposits. Many of these are provided by bank trust departments.

A direct comparison of fees charged by banks and investment advisers for essentially similar, portfolio management services gives insight into the magnitude of incentives for corporations to use bank trust departments rather than investment advisers or others for employee benefit plan management, for example. Aggregated over all classes of accounts, bank trust departments charged management fees during 1969 which averaged 0.21% of managed assets [48]. Investment adviser fee ratios averaged 0.46% of assets at that time [49]. The average fee ratio for bank-managed employee benefit funds was 0.10% [50], while for investment advisers the comparable average was 0.40% [51]. Although aggregates such as these may not be directly comparable due to important differences in the size distribution of accounts managed by the two institutional types, direct comparisons of fee ratios charged to clients of employee benefit and individual accounts, stratified by account size, continue to show bank-administered fee ratios to be consistently lower than those of investment advisers for all but the very largest of accounts, by amounts which vary from 8 to 32% of the investment adviser's fee [52].

Reasons for the ability of bank trust departments to be so intensely competitive in fees charged are not difficult to find. Trust departments are compensated for their services both directly, through management and trustee fees, and indirectly, through their ability to benefit from direct deposits by trust accounts in the bank, the "float" generated by account transactions and, prior to 1970, reciprocal deposits by broker-dealers in exchange for trust department brokerage fees [53].
Indirect revenues from reciprocal deposits by brokers were estimated by the SEC in 1969 to amount to roughly 10.7% of direct fees charged trust department accounts [54]; in addition, deposits and the float were estimated to approximate 30% of direct fee revenues [55]. Indirect revenues of such magnitudes, which are not available to non-bank fund managers, can easily account for the substantial difference observed in direct fees charged by bank trust departments and their principal non-bank competitors for portfolio management services.

It is difficult, of course, to estimate the extent to which the success of bank trust departments in attracting funds from alternative investment managers is attributable to the lower fees made possible by a bank's ability to utilize the float and deposits generated by such accounts. It is not at all unlikely, however, that differences as large as these many have been, and may continue to be, important to the competitive success of commercial bank trust departments. If so, it should be noted that this difference owes its existence to the prohibition on payment of interest on demand deposits contained in the 1933 and 1935 Banking Acts and would be eliminated by their repeal. It will be interesting to observe the impact on bank fees of the repeal of this prohibition and the gradual deregulation of interest rates on deposits as called for by the recently enacted Depository Institutions Deregulation and Monetary Control Act of 1980 [56].

7. Postscript on policy

The principal purpose of this article has not been to opine on public policy, but rather to examine the factual bases underlying opinions often expressed by others regarding public policy towards suspected concentrations of economic power in big business, big financial institutions, and big banks.

The facts reviewed here suggest that suspected concentrations of power in large non-financial corporations are real, not imagined. The public appears even more dependent today than in years past on the economic performance of major corporations, the largest of which account for surprisingly large fractions of the entire corporate sector and Gross National Product. This review of institutional investors suggests that their potential influence as stockholders and creditors and through other relationships on the affairs of large non-financial corporations also is substantial and growing. The analysis herein has demonstrated that large banks and associated trust departments may be particularly influential due to their large size, the concentration of their stockholdings, the number of their other business relationships with portfolio companies, and the tendency for those relationships to be focused on the same client corporations.

A distinction should be drawn, of course, between the ability of individual
banks or other financial institutions to influence individual non-financial corporations and the ability of a small nucleus of such financial institutions to influence many large corporations. Only the former would appear to follow from the analyses reviewed above.

Adolf Berle, armed with far fewer facts than those now available to us, concluded a decade ago that the alarming power of institutional investors, and especially large bank trust departments, justified legislation to prohibit banks or bank holding companies from engaging in non-banking businesses [57]. Representatives of the securities industry and competing financial institutions, such as insurance companies or investment advisers, likely would support Berle's conclusion [58].

An hypothesis developed in the preceding section of this article is that much of the controversy over Glass–Steagall may be focused on the wrong sections of that legislation, i.e. those sections which prohibit banks from engaging in securities activities. Arguably, the time may have come for outright repeal of those (different) sections of the 1933 and 1935 Banking Acts which regulate rates paid by banks for funds, independently of any action to repeal, weaken or strengthen direct prohibitions on bank securities activities.

Whether actions as severe as divestiture or direct prohibitions on certain activities are justified depends on one's assessment of both the severity of the problem and the efficiency costs incident to the proposed solution. To the extent that some portion of competitive success by banks in trust department or other activities is derived from efficiency rather than from other sources, direct prohibitions would deprive customers and the economy in general of the benefits of that efficiency. Absent compelling evidence that banks not only possess but also have used economic power inappropriately, one may be hesitant to incur such costs.

By the same token, in light of present findings, it would be reasonable for policy-makers to be reluctant to devise new public policies or support the continuation of old policies which encourage or contribute to the bundling of trust department or other services into the deposit relationship and, hence, provide banks wholly artificial competitive advantages over other financial institutions in the provision of financial services, including the management of securities portfolios. Restrictions on interest payments to depositors clearly provide such an artificial incentive and, given the absence of credible evidence that any positive benefits ever have been derived therefrom, should be high on a list of candidates for deregulation.
Notes

[6] Id.
[7] Id.
[10] Id. at 44.
[12] By contrast, institutional stockholdings in 1929, the time during which Berle and Means were undertaking their original study, were relatively small and had shrunk as a fraction of total stock outstanding since the turn of the century. See Institutional Investors and Corporate Stock, supra note 8, at 100; R.W. Goldsmith, Financial Intermediaries in the American Economy Since 1900, at 384 (1958).
[13] This definition, like other definitions of total institutional stockholdings, is incomplete, since certain types of institutions for which data are not regularly available are excluded. For further detail regarding institutional types included in or excluded from the definition, see infra notes b–d of table 2.

By 1972, the NYSE estimated that financial institutions probably held close to 45% of the market value of all NYSE-listed stocks. NYSE, Fact Book 51 (1973). Extrapolating this to 1978 would produce an estimate of 48% as the approximate fraction of market value of NYSE-listed stocks held by financial institutions.

[14] Another indication of apparently continuing institutionalization of the stock market is the continuing decline over the past two decades in the share of public transactions volume accounted for by individual direct investors. The share of public transactions dollar volume accounted for by individual investors on the NYSE dropped to 30% in the first quarter of 1976 from 38% in 1969 and 60% in 1960. NYSE, supra note 5, at 52; [Summary Volume] Sec. & Exchange Comm’n, Institutional Investor Study Report, H.R. Doc. No. 64, pt. 8, 92d Cong., 1st Sess. 78 (1971).

[15] In the absence of such additional findings, one could speculate that increased institutional ownership of corporate shares would tend to reduce rather than widen the gap between ownership and control of American industry by replacing dispersed and often unsophisticated individual shareholders with larger, more knowledgeable and potentially more active professional investors whose interests are aligned rather closely with those of other stockholders.

[18] [Summary Volume] Sec. and Exchange Comm’n, supra note 14, pt. 8, at 18.
[22] See id.; supra table 2.
[23] 2 Sec. and Exchange Comm’n, supra note 14, pt. 2, at 848. See also supra table 2.
[25] Although the composition of the largest stocks on the NYSE changes from time to time,
the fraction of total market value accounted for by a given number of the largest stocks does not tend to vary significantly. Thus, comparisons of portfolio and market concentration ratios probably can be made, at least roughly, across time intervals as wide as those herein.


[28] Id. at 294.


[31] Rosenberg, supra note 29, at 54.

[32] Id. at 55.

[33] To gain a sense of the extent to which these figures are affected by use of an 800 stock sample rather than an exhaustive set of all stocks in institutional portfolios, note that the largest holding by banks of sample stocks amounted on average to 11% of the bank’s entire portfolio (compared to 19.5% of its portfolio of sample stocks) and for investment advisers 6% (compared to 13.8%). As the largest holdings in some cases will be in stocks outside the sample, fractions expressed as a percentage of an entire portfolio ordinarily will be biased downward, just as fractions expressed as a percentage of sample stocks will tend to be biased upward when the largest holdings are in stocks which are part of the sample.

One should not over-react to the very high degree of concentration observed in the portfolios of foundations and self-administered employee benefit plans. Foundations generally are funded in large part by gifts of stock in a company founded or controlled by its major benefactor. Highly concentrated employee benefit plans invariably are profit-sharing rather than ordinary pension plans, and the stock involved is that of the sponsoring corporation.

[34] 3 Sec. and Exchange Comm’n, supra note 14, pt. 3, at 1346–47.


[36] Id.

[37] For a more complete description of the sample, see id. at 2720; see generally [Supp. II] id.

[38] 161 institutions X288 companies = 46,368 institution/company pairs.

[39] The most common of these relate to the use of inside information.

[40] 5 Sec. and Exchange Comm’n, supra note 14, pt. 5, at 2742.

[41] Id. at 2741–46.

[42] Id. at 2741, 2746.

[43] It should be noted that after the pattern of observed correlations between multiple business relationships and other measured characteristics of institutions/company pairs in the SEC sample have been taken into account, a substantial portion of total observed variation remains unexplained. This would suggest that additional data are needed in order to completely explain the pattern of observed relationships.


[46] For example, other sections of the Glass–Steagall Act evidence an intent to reduce the power of commercial banks by restricting their ability to invest in corporate securities and by forbidding them to act either as dealers or as investment bankers in corporate issues. Banking Act of 1933, ch. 89, §§16, 20, 21, 48 Stat. 162, 184, 188, 189 (current version at 12 U.S.C. §§24, 377, 378 (1976 & Supp. III 1979)).

[47] The intended result of the prohibition on payment of interest on demand deposits is difficult to infer from Congressional hearings preceding enactment of the legislation. No witness stressed the importance of the prohibition and few even mentioned it in their testimony. Senator Glass, apparently, was the prohibition’s sole proponent, feeling that high interest rates paid smaller banks by money center banks on correspondent balances had “lured money to Wall Street which was subsequently used to finance [stock market speculation]”. Cox, Regulation of Interest on Deposits: An Historical Review, 22 J. Fin. 274, 276 (1967).


[49] Id. at 364.

[50] Id. at 492.

[51] Id. at 216.

[52] Id. at 484–85.


[54] 2 Sec. and Exchange Comm’n. supra note 14, pt. 2, at 480.

[55] Id. at 482.


[57] Rosen, supra note 9, at 45.

[58] For a review of the controversy between the banking and securities industries over Glass–Steagall prohibitions on bank securities activities, see Mote, Banks and the Securities Markets: The Controversy, Economic Perspectives, Mar./Apr. 1979, at 14.