cautionary statements seem called for in the case of Emerson Electric, with a special reference to the market's current valuation of over a billion dollars for the intangible, or earning-power, factor here. We should add that the "electronics industry," once a fair-haired child of the stock market, has in general fallen on disastrous days. Emerson is an outstanding exception, but it will have to continue to be such an exception for a great many years in the future before the 1970 closing price will have been fully justified by its subsequent performance.

By contrast, both ELTRA at 27 and Emhart at 33 have the earmarks of companies with sufficient value behind their price to constitute reasonably protected investments. Here the investor can, if he wishes, consider himself basically a part owner of these businesses, at a cost corresponding to what the balance sheet shows to be the money invested therein.* The rate of earnings on invested capital has long been satisfactory; the stability of profits also; the past growth rate surprisingly so. The two companies will meet our seven *statistical* requirements for inclusion in a defensive investor's portfolio. These will be developed in the next chapter, but we summarize them as follows:

1. Adequate size.
2. A sufficiently strong financial condition.
3. Continued dividends for at least the past 20 years.
4. No earnings deficit in the past ten years.

1982, issue of *Forbes* reported that since 1972 Emery had lost 72.8% of its value after inflation. By late 1974, according to the investment researchers at the Leuthold Group in Minneapolis, Emery's stock had already fallen 58% and its price/earnings ratio had plummeted from 64 times to just 15. The "overenthusiasm" Graham had warned against was eviscerated in short order. Can the passage of time make up for this kind of excess? Not always: Leuthold calculated that $1000 invested in Emery in 1972 would be worth only $839 as of 1999. It's likely that the people who overpaid for Internet stocks in the late 1990s will not break even for decades–if ever (see the commentary on Chapter 20).

* Graham's point is that, based on their prices at the time, an investor could buy shares in these two companies for little more than their book value, as shown in the third line of Section B in Table 13-2.

5. Ten-year growth of at least one-third in per-share earnings.
6. Price of stock no more than 1½ times net asset value.
7. Price no more than 15 times average earnings of the past three years.

We make no predictions about the future earnings performance of ELTRA or Emhart. In the investor's diversified list of common stocks there are bound to be some that prove disappointing, and this may be the case for one or both of this pair. But the diversified list itself, based on the above principles of selection, plus whatever other sensible criteria the investor may wish to apply, should perform well enough across the years. At least, long experience tells us so.

A final observation: An experienced security analyst, even if he accepted our general reasoning on these four companies, would have hesitated to recommend that a holder of Emerson or Emery *exchange* his shares for ELTRA or Emhart at the end of 1970—unless the holder understood clearly the philosophy behind the recommendation. There was no reason to expect that in any short period of time the low-multiplier duo would outperform the high-multipliers. The latter were well thought of in the market and thus had a considerable degree of momentum behind them, which might continue for an indefinite period. The sound basis for preferring ELTRA and Emhart to Emerson and Emery would be the client's considered conclusion that he preferred value-type investments to glamour-type investments. Thus, to a substantial extent, common-stock investment policy must depend on the attitude of the individual investor. This approach is treated at greater length in our next chapter.

COMMENTARY ON CHAPTER 13

> In the Air Force we have a rule: check six. A guy is flying along, looking in all directions, and feeling very safe. Another guy flies up behind him (at "6 o'clock"–"12 o'clock" is directly in front) and shoots. Most airplanes are shot down that way. Thinking that you're safe is very dangerous! Somewhere, there's a weakness you've got to find. You must always check six o'clock.
>
> *–U.S. Air Force Gen. Donald Kutyna*

E-BUSINESS

As Graham did, let's compare and contrast four stocks, using their reported numbers as of December 31, 1999–a time that will enable us to view some of the most drastic extremes of valuation ever recorded in the stock market.

Emerson Electric Co. (ticker symbol: EMR) was founded in 1890 and is the only surviving member of Graham's original quartet; it makes a wide array of products, including power tools, air-conditioning equipment, and electrical motors.

EMC Corp. (ticker symbol: EMC) dates back to 1979 and enables companies to automate the storage of electronic information over computer networks.

Expeditors International of Washington, Inc. (ticker symbol: EXPD), founded in Seattle in 1979, helps shippers organize and track the movement of goods around the world.

Exodus Communications, Inc. (ticker symbol: EXDS) hosts and manages websites for corporate customers, along with other Internet services; it first sold shares to the public in March 1998.

This table summarizes the price, performance, and valuation of these companies as of year-end 1999:

FIGURE 13-1 E-valuations

	Emerson Electric	EMC Corp.	Exodus Communications, Inc.	Expeditors International of Washington
Capitalization				
Closing price, 12/31/99, $ per share	57.37	54.62	44.41	21.68
Total return, 1999 (%)	–3.1	157.1	1005.8	109.1
Total market cap, 12/31/99, $ millions	24845.9	111054.3	14358.4	2218.8
Total debt (including preferred stock), $ millions	4600.1	27.1	2555.7	0
Earnings				
Total revenues, 1999, $ millions	14385.8	6715.6	242.1	1444.6
Net income, 1999, $ millions	1313.6	1010.6	–130.3	59.2
Earnings growth, 1995 through 1999 (average annual %)	7.7	28.8	NM	19.8
Earnings per share (EPS), 1999 ($ fully diluted)	3.00	0.53	–0.38	0.55
EPS growth rate, 1995–1999 (average annual %)	8.3	28.8	NM	25.8
Annual dividend ($ per share), 1999	1.30	0	0	0.08
Balance sheet				
Current assets, $ millions	5124.4	4320.4	1093.2	402.7
Current liabilities, $ millions	4590.4	1397.9	150.6	253.1
Book value per share ($ 12/31/99)	14.27	2.38	0.05	2.79
Valuation				
Price/earnings ratio (×)	17.7	103.1	NM	39.4
Price/book value (×)	3.7	22.9	888.1	7.8
Net income/revenues (% net profit margin)	9.2	17.4	NM	4.1
Net income/book value (%)	21.0	22.2	NM	19.7
Working capital/debt (×)	0.1	107.8	0.4	no debt
Market cap/revenues (×)	1.7	16.5	59.3	1.5

Sources: Value Line, Thomson/Baseline, Bloomberg, finance.yahoo.com, the companies' SEC filings

Notes: All figures adjusted for later stock splits. Debt, revenue, and earnings are for fiscal years. Market cap: total value of common stock. NM: not meaningful.

ELECTRIC, NOT ELECTRIFYING

The most expensive of Graham's four stocks, Emerson Electric, ended up as the cheapest in our updated group. With its base in Old Economy industries, Emerson looked boring in the late 1990s. (In the Internet Age, who cared about Emerson's heavy-duty wet-dry vacuums?) The company's shares went into suspended animation. In 1998 and 1999, Emerson's stock lagged the S & P 500 index by a cumulative 49.7 percentage points, a miserable underperformance.

But that was Emerson the stock. What about Emerson the company? In 1999, Emerson sold $14.4 billion worth of goods and services, up nearly $1 billion from the year before. On those revenues Emerson earned $1.3 billion in net income, or 6.9% more than in 1998. Over the previous five years, earnings per share had risen at a robust average rate of 8.3%. Emerson's dividend had more than doubled to $1.30 per share; book value had gone from $6.69 to $14.27 per share. According to Value Line, throughout the 1990s, Emerson's net profit margin and return on capital—key measures of its efficiency as a business—had stayed robustly high, around 9% and 18% respectively. What's more, Emerson had increased its earnings for 42 years in a row and had raised its dividend for 43 straight years—one of the longest runs of steady growth in American business. At year-end, Emerson's stock was priced at 17.7 times the company's net income per share. Like its power tools, Emerson was never flashy, but it was reliable—and showed no sign of overheating.

COULD EMC GROW PDQ?

EMC Corp. was one of the best-performing stocks of the 1990s, rising—or should we say levitating?—more than 81,000%. If you had invested $10,000 in EMC's stock at the beginning of 1990, you would have ended 1999 with just over $8.1 million. EMC's shares returned 157.1% in 1999 alone—more than Emerson's stock had gained in the eight years from 1992 through 1999 combined. EMC had never paid a dividend, instead retaining all its earnings "to provide funds for the continued growth of the company."[1] At their December

[1] As we will see in Chapter 19, this rationale often means, in practice, "to provide funds for the continued growth of the company's top managers' wealth."

31 price of $54.625, EMC's shares were trading at 103 times the earnings the company would report for the full year—nearly six times the valuation level of Emerson's stock.

What about EMC the business? Revenues grew 24% in 1999, rising to $6.7 billion. Its earnings per share soared to 92 cents from 61 cents the year before, a 51% increase. Over the five years ending in 1999, EMC's earnings had risen at a sizzling annual rate of 28.8%. And, with everyone expecting the tidal wave of Internet commerce to keep rolling, the future looked even brighter. Throughout 1999, EMC's chief executive repeatedly predicted that revenues would hit $10 billion by 2001—up from $5.4 billion in 1998.[2] That would require average annual growth of 23%, a monstrous rate of expansion for so big a company. But Wall Street's analysts, and most investors, were sure EMC could do it. After all, over the previous five years, EMC had more than doubled its revenues and better than tripled its net income.

But from 1995 through 1999, according to Value Line, EMC's net profit margin slid from 19.0% to 17.4%, while its return on capital dropped from 26.8% to 21%. Although still highly profitable, EMC was already slipping. And in October 1999, EMC acquired Data General Corp., which added roughly $1.1 billion to EMC's revenues that year. Simply by subtracting the extra revenues brought in from Data General, we can see that the volume of EMC's existing businesses grew from $5.4 billion in 1998 to just $5.6 billion in 1999, a rise of only 3.6%. In other words, EMC's true growth rate was almost nil—even in a year when the scare over the "Y2K" computer bug had led many companies to spend record amounts on new technology.[3]

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[2] Appearing on CNBC on December 30, 1999, EMC's chief executive, Michael Ruettgers, was asked by host Ron Insana whether "2000 and beyond" would be as good as the 1990s had been. "It actually looks like it's accelerating," boasted Ruettgers. When Insana asked if EMC's stock was overvalued, Ruettgers answered: "I think when you look at the opportunity we have in front of us, it's almost unlimited. . . . So while it's hard to predict whether these things are overpriced, there's such a major change taking place that if you could find the winners today—and I certainly think EMC is one of those people—you'll be well rewarded in the future."

[3] The "Y2K bug" or the "Year 2000 Problem" was the belief that millions of computers worldwide would stop functioning at one second past midnight

A SIMPLE TWIST OF FREIGHT

Unlike EMC, Expeditors International hadn't yet learned to levitate. Although the firm's shares had risen 30% annually in the 1990s, much of that big gain had come at the very end, as the stock raced to a 109.1% return in 1999. The year before, Expeditors' shares had gone up just 9.5%, trailing the S & P 500 index by more than 19 percentage points.

What about the business? Expeditors was growing expeditiously indeed: Since 1995, its revenues had risen at an average annual rate of 19.8%, nearly tripling over the period to finish 1999 at $1.4 billion. And earnings per share had grown by 25.8% annually, while dividends had risen at a 27% annual clip. Expeditors had no long-term debt, and its working capital had nearly doubled since 1995. According to Value Line, Expeditors' book value per share had increased 129% and its return on capital had risen by more than one-third to 21%.

By any standard, Expeditors was a superb business. But the little freight-forwarding company, with its base in Seattle and much of its operations in Asia, was all-but-unknown on Wall Street. Only 32% of the shares were owned by institutional investors; in fact, Expeditors had only 8,500 shareholders. After doubling in 1999, the stock was priced at 39 times the net income Expeditors would earn for the year—no longer anywhere near cheap, but well below the vertiginous valuation of EMC.

THE PROMISED LAND?

By the end of 1999, Exodus Communications seemed to have taken its shareholders straight to the land of milk and honey. The stock soared 1,005.8% in 1999—enough to turn a $10,000 investment on January 1 into more than $110,000 by December 31. Wall Street's leading Internet-stock analysts, including the hugely influential Henry

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on the morning of January 1, 2000, because programmers in the 1960s and 1970s had not thought to allow for the possibility of any date past 12/31/1999 in their operating code. U.S. companies spent billions of dollars in 1999 to ensure that their computers would be "Y2K-compliant." In the end, at 12:00:01 A.M. on January 1, 2000, everything worked just fine.

Blodget of Merrill Lynch, were predicting that the stock would rise another 25% to 125% over the coming year.

And best of all, in the eyes of the online traders who gorged on Exodus's gains, was the fact that the stock had split 2-for-1 three times during 1999. In a 2-for-1 stock split, a company doubles the number of its shares and halves their price—so a shareholder ends up owning twice as many shares, each priced at half the former level. What's so great about that? Imagine that you handed me a dime, and I then gave you back two nickels and asked, "Don't you feel richer now?" You would probably conclude either that I was an idiot, or that I had mistaken you for one. And yet, in 1999's frenzy over dot-com stocks, online traders acted exactly as if two nickels were more valuable than one dime. In fact, just the news that a stock would be splitting 2-for-1 could instantly drive its shares up 20% or more.

Why? Because getting more shares makes people *feel* richer. Someone who bought 100 shares of Exodus in January watched them turn into 200 when the stock split in April; then those 200 turned into 400 in August; then the 400 became 800 in December. It was thrilling for these people to realize that they had gotten 700 more shares just for owning 100 in the first place. To them, that felt like "found money"—never mind that the price per share had been cut in half with each split.[4] In December, 1999, one elated Exodus shareholder, who went by the handle "givemeadollar," exulted on an online message board: "I'm going to hold these shares until I'm 80, [because] after it splits hundreds of times over the next years, I'll be close to becoming CEO."[5]

What about Exodus the business? Graham wouldn't have touched it with a 10-foot pole and a haz-mat suit. Exodus's revenues were exploding—growing from $52.7 million in 1998 to $242.1 million in 1999—but it lost $130.3 million on those revenues in 1999, nearly double its loss the year before. Exodus had $2.6 billion in total debt—and was so starved for cash that it borrowed $971 million in the

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[4] For more on the folly of stock splits, see Jason Zweig, "Splitsville," *Money,* March, 2001, pp. 55–56.

[5] Posting no. 3622, December 7, 1999, at the Exodus Communications message board on the Raging Bull website (http://ragingbull.lycos.com/mboard/boards.cgi?board=EXDS&read=3622).

month of December alone. According to Exodus's annual report, that new borrowing would add more than $50 million to its interest payments in the coming year. The company started 1999 with $156 million in cash and, even after raising $1.3 billion in new financing, finished the year with a cash balance of $1 billion—meaning that its businesses had devoured more than $400 million in cash during 1999. How could such a company ever pay its debts?

But, of course, online traders were fixated on how far and fast the *stock* had risen, not on whether the *company* was healthy. "This stock," bragged a trader using the screen name of "Launch_Pad1999," "will just continue climbing to infinity and beyond."[6]

The absurdity of Launch_Pad's prediction—what is "beyond" infinity?—is the perfect reminder of one of Graham's classic warnings. "Today's investor," Graham tells us,

> is so concerned with anticipating the future that he is already paying handsomely for it in advance. Thus what he has projected with so much study and care may actually happen and still not bring him any profit. If it should fail to materialize to the degree expected he may in fact be faced with a serious temporary and perhaps even permanent loss."[7]

WHERE THE Es ENDED UP

How did these four stocks perform after 1999?

Emerson Electric went on to gain 40.7% in 2000. Although the shares lost money in both 2001 and 2002, they nevertheless ended 2002 less than 4% below their final price of 1999.

EMC also rose in 2000, gaining 21.7%. But then the shares lost 79.4% in 2001 and another 54.3% in 2002. That left them 88% below their level at year-end 1999. What about the forecast of $10 billion in revenues by 2001? EMC finished that year with revenues of just $7.1 billion (and a net loss of $508 million).

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[6] Posting no. 3910, December 15, 1999, at the Exodus Communications message board on the Raging Bull website (http://ragingbull.lycos.com/mboard/boards.cgi?board=EXDS&read=3910).

[7] See Graham's speech, "The New Speculation in Common Stocks," in the Appendix, p. 563.

Meanwhile, as if the bear market did not even exist, Expeditors International's shares went on to gain 22.9% in 2000, 6.5% in 2001, and another 15.1% in 2002–finishing that year nearly 51% higher than their price at the end of 1999.

Exodus's stock lost 55% in 2000 and 99.8% in 2001. On September 26, 2001, Exodus filed for Chapter 11 bankruptcy protection. Most of the company's assets were bought by Cable & Wireless, the British telecommunications giant. Instead of delivering its shareholders to the promised land, Exodus left them exiled in the wilderness. As of early 2003, the last trade in Exodus's stock was at one penny a share.

CHAPTER 14

Stock Selection for the Defensive Investor

It is time to turn to some broader applications of the techniques of security analysis. Since we have already described in general terms the investment policies recommended for our two categories of investors,* it would be logical for us now to indicate how security analysis comes into play in order to implement these policies. The defensive investor who follows our suggestions will purchase only high-grade bonds plus a diversified list of leading common stocks. He is to make sure that the price at which he bought the latter is not unduly high as judged by applicable standards.

In setting up this diversified list he has a choice of two approaches, the DJIA-type of portfolio and the quantitatively-tested portfolio. In the first he acquires a true cross-section sample of the leading issues, which will include both some favored growth companies, whose shares sell at especially high multipliers, and also less popular and less expensive enterprises. This could be done, most simply perhaps, by buying the same amounts of all thirty of the issues in the Dow-Jones Industrial Average (DJIA). Ten shares of each, at the 900 level for the average, would cost an aggregate of about $16,000.[1] On the basis of the past record he might expect approximately the same future results by buying shares of several representative investment funds.†

His second choice would be to apply a set of standards to each

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* Graham describes his recommended investment policies in Chapters 4 through 7.

† As we have discussed in the commentaries on Chapters 5 and 9, today's defensive investor can achieve this goal simply by buying a low-cost index fund, ideally one that tracks the return of the total U.S. stock market.

purchase, to make sure that he obtains (1) a minimum of *quality* in the past performance and current financial position of the company, and also (2) a minimum of *quantity* in terms of earnings and assets per dollar of price. At the close of the previous chapter we listed seven such quality and quantity criteria suggested for the selection of specific common stocks. Let us describe them in order.

1. Adequate Size of the Enterprise

All our minimum figures must be arbitrary and especially in the matter of size required. Our idea is to exclude small companies which may be subject to more than average vicissitudes especially in the industrial field. (There are often good possibilities in such enterprises but we do not consider them suited to the needs of the defensive investor.) Let us use round amounts: not less than $100 million of annual sales for an industrial company and, not less than $50 million of total assets for a public utility.

2. A Sufficiently Strong Financial Condition

For industrial companies current assets should be at least twice current liabilities—a so-called two-to-one current ratio. Also, long-term debt should not exceed the net current assets (or "working capital"). For public utilities the debt should not exceed twice the stock equity (at book value).

3. Earnings Stability

Some earnings for the common stock in each of the past ten years.

4. Dividend Record

Uninterrupted payments for at least the past 20 years.

5. Earnings Growth

A minimum increase of at least one-third in per-share earnings in the past ten years using three-year averages at the beginning and end.

6. Moderate Price/Earnings Ratio

Current price should not be more than 15 times average earnings of the past three years.

7. Moderate Ratio of Price to Assets

Current price should not be more than 1½ times the book value last reported. However, a multiplier of earnings below 15 could justify a correspondingly higher multiplier of assets. As a rule of thumb we suggest that the *product* of the multiplier times the ratio of price to book value should not exceed 22.5. (This figure corresponds to 15 times earnings and 1½ times book value. It would admit an issue selling at only 9 times earnings and 2.5 times asset value, etc.)

General Comments: These requirements are set up especially for the needs and the temperament of defensive investors. They will eliminate the great majority of common stocks as candidates for the portfolio, and in two opposite ways. On the one hand they will exclude companies that are (1) too small, (2) in relatively weak financial condition, (3) with a deficit stigma in their ten-year record, and (4) not having a long history of continuous dividends. Of these tests the most severe under recent financial conditions are those of financial strength. A considerable number of our large and formerly strongly entrenched enterprises have weakened their current ratio or overexpanded their debt, or both, in recent years.

Our last two criteria are exclusive in the opposite direction, by demanding more earnings and more assets per dollar of price than the popular issues will supply. This is by no means the standard viewpoint of financial analysts; in fact most will insist that even conservative investors should be prepared to pay generous prices for stocks of the choice companies. We have expounded our contrary view above; it rests largely on the absence of an adequate *factor of safety* when too large a portion of the price must depend on ever-increasing earnings in the future. The reader will have to decide this important question for himself—after weighing the arguments on both sides.

We have nonetheless opted for the inclusion of a modest requirement of growth over the past decade. Without it the typical company would show retrogression, at least in terms of profit per

dollar of invested capital. There is no reason for the defensive investor to include such companies—though if the price is low enough they could qualify as bargain opportunities.

The suggested *maximum* figure of 15 times earnings might well result in a typical portfolio with an *average* multiplier of, say, 12 to 13 times. Note that in February 1972 American Tel. & Tel. sold at 11 times its three-year (and current) earnings, and Standard Oil of California at less than 10 times latest earnings. Our basic recommendation is that the stock portfolio, when acquired, should have an overall earnings/price ratio—the reverse of the P/E ratio—at least as high as the current high-grade bond rate. This would mean a P/E ratio no higher than 13.3 against an AA bond yield of 7.5%.*

Application of Our Criteria to the DJIA at the End of 1970

All of our suggested criteria were satisfied by the DJIA issues at the end of 1970, but two of them just barely. Here is a survey based on the closing price of 1970 and the relevant figures. (The basic data for each company are shown in Tables 14-1 and 14-2.)

1. Size is more than ample for each company.
2. Financial condition is adequate in the *aggregate,* but not for every company.[2]
3. Some dividend has been paid by every company since at least 1940. Five of the dividend records go back to the last century.

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* In early 2003, the yield on 10-year, AA-rated corporate bonds was around 4.6%, suggesting—by Graham's formula—that a stock portfolio should have an earnings-to-price ratio at least that high. Taking the inverse of that number (by dividing 4.6 into 100), we can derive a "suggested maximum" P/E ratio of 21.7. At the beginning of this paragraph Graham recommends that the "average" stock be priced about 20% below the "maximum" ratio. That suggests that—in general—Graham would consider stocks selling at no more than 17 times their three-year average earnings to be potentially attractive given today's interest rates and market conditions. As of December 31, 2002, more than 200—or better than 40%—of the stocks in the S & P 500-stock index had three-year average P/E ratios of 17.0 or lower. Updated AA bond yields can be found at www.bondtalk.com.

TABLE 14-1 Basic Data on 30 Stocks in the Dow Jones Industrial Average at September 30, 1971

	Price Sept. 30, 1971	*"Earnings Per Share"*[a] Sept. 30, 1971	Ave. 1968–1970	Ave. 1958–1960	Div. Since	Net Asset Value	Current Div.
Allied Chemical	32½	1.40	1.82	2.14	1887	26.02	1.20
Aluminum Co. of Am.	45½	4.25	5.18	2.08	1939	55.01	1.80
Amer. Brands	43½	4.32	3.69	2.24	1905	13.46	2.10
Amer. Can	33¼	2.68	3.76	2.42	1923	40.01	2.20
Amer. Tel. & Tel.	43	4.03	3.91	2.52	1881	45.47	2.60
Anaconda	15	2.06	3.90	2.17	1936	54.28	none
Bethlehem Steel	25½	2.64	3.05	2.62	1939	44.62	1.20
Chrysler	28½	1.05	2.72	(0.13)	1926	42.40	0.60
DuPont	154	6.31	7.32	8.09	1904	55.22	5.00
Eastman Kodak	87	2.45	2.44	0.72	1902	13.70	1.32
General Electric	61¼	2.63	1.78	1.37	1899	14.92	1.40
General Foods	34	2.34	2.23	1.13	1922	14.13	1.40
General Motors	83	3.33	4.69	2.94	1915	33.39	3.40
Goodyear	33½	2.11	2.01	1.04	1937	18.49	0.85
Inter. Harvester	28½	1.16	2.30	1.87	1910	42.06	1.40
Inter. Nickel	31	2.27	2.10	0.94	1934	14.53	1.00
Inter. Paper	33	1.46	2.22	1.76	1946	23.68	1.50
Johns-Manville	39	2.02	2.33	1.62	1935	24.51	1.20
Owens-Illinois	52	3.89	3.69	2.24	1907	43.75	1.35
Procter & Gamble	71	2.91	2.33	1.02	1891	15.41	1.50
Sears Roebuck	68½	3.19	2.87	1.17	1935	23.97	1.55
Std. Oil of Calif.	56	5.78	5.35	3.17	1912	54.79	2.80
Std. Oil of N.J.	72	6.51	5.88	2.90	1882	48.95	3.90
Swift & Co.	42	2.56	1.66	1.33	1934	26.74	0.70
Texaco	32	3.24	2.96	1.34	1903	23.06	1.60
Union Carbide	43½	2.59	2.76	2.52	1918	29.64	2.00
United Aircraft	30½	3.13	4.35	2.79	1936	47.00	1.80
U. S. Steel	29½	3.53	3.81	4.85	1940	65.54	1.60
Westinghouse	96½	3.26	3.44	2.26	1935	33.67	1.80
Woolworth	49	2.47	2.38	1.35	1912	25.47	1.20

[a] Adjusted for stock dividends and stock splits.
[b] Typically for the 12 months ended June 30, 1971.

TABLE 14-2 Significant Ratios of DJIA Stocks at September 30, 1971

	Price to Earnings		Current Div. Yield	Earnings Growth 1968–1970 vs. 1958–1960	CA/CL[a]	NCA/ Debt[b]	Price/ Net Asset Value
	Sept. 1971	1968–1970					
Allied Chemical	18.3 ×	18.0 ×	3.7%	(–15.0%)	2.1 ×	74%	125%
Aluminum Co. of Am.	10.7	8.8	4.0	149.0%	2.7	51	84
Amer. Brands	10.1	11.8	5.1	64.7	2.1	138	282
Amer. Can	12.4	8.9	6.6	52.5	2.1	91	83
Amer. Tel. & Tel.	10.8	11.0	6.0	55.2	1.1	—[c]	94
Anaconda	5.7	3.9	—	80.0	2.9	80	28
Bethlehem Steel	12.4	8.1	4.7	16.4	1.7	68	58
Chrysler	27.0	10.5	2.1	—[d]	1.4	78	67
DuPont	24.5	21.0	3.2	(–9.0)	3.6	609	280
Eastman Kodak	35.5	35.6	1.5	238.9	2.4	1764	635
General Electric	23.4	34.4	2.3	29.9	1.3	89	410
General Foods	14.5	15.2	4.1	97.3	1.6	254	240
General Motors	24.4	17.6	4.1	59.5	1.9	1071	247
Goodyear	15.8	16.7	2.5	93.3	2.1	129	80
Inter. Harvester	24.5	12.4	4.9	23.0	2.2	191	66
Inter. Nickel	13.6	16.2	3.2	123.4	2.5	131	213

Inter. Paper	22.5	14.0	4.6	26.1	2.2	62	139
Johns-Manville	19.3	16.8	3.0	43.8	2.6	—	158
Owens-Illinois	13.2	14.0	2.6	64.7	1.6	51	118
Procter & Gamble	24.2	31.6	2.1	128.4	2.4	400	460
Sears Roebuck	21.4	23.8	1.7	145.3	1.6	322	285
Std. Oil of Calif.	9.7	10.5	5.0	68.8	1.5	79	102
Std. Oil of N.J.	11.0	12.2	5.4	102.8	1.5	94	115
Swift & Co.	16.4	25.5	1.7	24.8	2.4	138	158
Texaco	9.9	10.8	5.0	120.9	1.7	128	138
Union Carbide	16.6	15.8	4.6	9.5	2.2	86	146
United Aircraft	9.7	7.0	5.9	55.9	1.5	155	65
U. S. Steel	8.3	6.7	5.4	(–21.5)	1.7	51	63
Westinghouse El.	29.5	28.0	1.9	52.2	1.8	145	2.86
Woolworth	19.7	20.5	2.4	76.3	1.8	185	1.90

[a] Figures taken for fiscal 1970 year-end co. results.
[b] Figures taken from *Moody's Industrial Manual* (1971).
[c] Debit balance for NCA. (NCA = net current assets.)
[d] Reported deficit for 1958–1960.

4. The aggregate earnings have been quite stable in the past decade. None of the companies reported a deficit during the prosperous period 1961–69, but Chrysler showed a small deficit in 1970.
5. The total growth—comparing three-year averages a decade apart—was 77%, or about 6% per year. But five of the firms did not grow by one-third.
6. The ratio of year-end price to three-year average earnings was 839 to $55.5 or 15 to 1—right at our suggested upper limit.
7. The ratio of price to net asset value was 839 to 562—also just within our suggested limit of 1½ to 1.

If, however, we wish to apply the same seven criteria to each individual company, we would find that only five of them would meet *all* our requirements. These would be: American Can, American Tel. & Tel., Anaconda, Swift, and Woolworth. The totals for these five appear in Table 14-3. Naturally they make a much better statistical showing than the DJIA as a whole, except in the past growth rate.[3]

Our application of specific criteria to this select group of industrial stocks indicates that the number meeting every one of our tests will be a relatively small percentage of *all* listed industrial issues. We hazard the guess that about 100 issues of this sort could have been found in the Standard & Poor's *Stock Guide* at the end of 1970, just about enough to provide the investor with a satisfactory range of personal choice.*

The Public-Utility "Solution"

If we turn now to the field of public-utility stocks we find a much more comfortable and inviting situation for the investor.†

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* An easy-to-use online stock screener that can sort the stocks in the S & P 500 by most of Graham's criteria is available at: www.quicken.com/investments/stocks/search/full.

† When Graham wrote, only one major mutual fund specializing in utility stocks–Franklin Utilities–was widely available. Today there are more than 30. Graham could not have anticipated the financial havoc wrought by can-

TABLE 14-3 DJIA Issues Meeting Certain Investment Criteria at the End of 1970

	American Can	American Tel. & Tel.	Anaconda	Swift	Woolworth	Average, 5 Companies
Price Dec. 31, 1970	39¾	48⅞	21	30⅛	36½	
Price/earnings, 1970	11.0 ×	12.3 ×	6.7 ×	13.5 ×	14.4 ×	11.6 ×
Price/earnings, 3 years	10.5 ×	12.5 ×	5.4 ×	18.1 ×[b]	15.1 ×	12.3 ×
Price/book value	99%	108%	38%	113%	148%	112%
Current assets/current liabilities	2.2 ×	n.a.	2.9 ×	2.3 ×	1.8 ×[c]	2.3 ×
Net current assets/debt	110%	n.a.	120%	141%	190%	140%
Stability index[a]	85	100	72	77	99	86
Growth[a]	55%	53%	78%	25%	73%	57%

[a] See definition on p. 338.

[b] In view of Swift's good showing in the poor year 1970, we waive the 1968–1970 deficiency here.

[c] The small deficiency here below 2 to 1 was offset by margin for additional debt financing.

n.a. = not applicable. American Tel. & Tel.'s debt was less than its stock equity.

Here the vast majority of issues appear to be cut out, by their performance record and their price ratios, in accordance with the defensive investor's needs as we judge them. We exclude one criterion from our tests of public-utility stocks—namely, the ratio of current assets to current liabilities. The working-capital factor takes care of itself in this industry as part of the continuous financing of its growth by sales of bonds and shares. We do require an adequate proportion of stock capital to debt.[4]

In Table 14-4 we present a résumé of the 15 issues in the Dow Jones public-utility average. For comparison, Table 14-5 gives a similar picture of a random selection of fifteen other utilities taken from the New York Stock Exchange list.

As 1972 began the defensive investor could have had quite a wide choice of utility common stocks, each of which would have met our requirements for both performance and price. These companies offered him everything he had a right to demand from simply chosen common-stock investments. In comparison with prominent industrial companies as represented by the DJIA, they offered almost as good a record of past growth, plus smaller fluctuations in the annual figures—both at a lower price in relation to earnings and assets. The dividend return was significantly higher. The position of the utilities as regulated monopolies is assuredly more of an advantage than a disadvantage for the conservative investor. Under law they are entitled to charge rates sufficiently remunerative to attract the capital they need for their continuous expansion, and this implies adequate offsets to inflated costs. While the process of regulation has often been cumbersome and perhaps dilatory, it has not prevented the utilities from earning a fair return on their rising invested capital over many decades.

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celed and decommissioned nuclear energy plants; nor did he foresee the consequences of bungled regulation in California. Utility stocks are vastly more volatile than they were in Graham's day, and most investors should own them only through a well-diversified, low-cost fund like the Dow Jones U.S. Utilities Sector Index Fund (ticker symbol: IDU) or Utilities Select Sector SPDR (XLU). For more information, see: www.ishares.com and www.spdrindex.com/spdr/. (Be sure your broker will not charge commissions to reinvest your dividends.)

TABLE 14-4 Data on the Fifteen Stocks in the Dow Jones Utility Average at September 30, 1971

	Price Sept. 30, 1971	*Earned*[a]	*Dividend*	*Book Value*	*Price/ Earnings*	*Price/ Book Value*	*Div. Yield*	*Earns. Per Share 1970 vs. 1960*
Am. Elec. Power	26	2.40	1.70	18.86	11×	138%	6.5%	+87%
Cleveland El. Ill.	34¾	3.10	2.24	22.94	11	150	6.4	86
Columbia Gas System	33	2.95	1.76	25.58	11	129	5.3	85
Commonwealth Edison	35½	3.05	2.20	27.28	12	130	6.2	56
Consolidated Edison	24½	2.40	1.80	30.63	10	80	7.4	19
Consd. Nat. Gas	27¾	3.00	1.88	32.11	9	86	6.8	53
Detroit Edison	19¼	1.80	1.40	22.66	11	84	7.3	40
Houston Ltg. & Power	42¾	2.88	1.32	19.02	15	222	3.1	135
Niagara-Mohawk Pwr.	15½	1.45	1.10	16.46	11	93	7.2	32
Pacific Gas & Electric	29	2.65	1.64	25.45	11	114	5.6	79
Panhandle E. Pipe L.	32½	2.90	1.80	19.95	11	166	5.5	79
Peoples Gas Co.	31½	2.70	2.08	30.28	8	104	6.6	23
Philadelphia El.	20½	2.00	1.64	19.74	10	103	8.0	29
Public Svs. El. & Gas	25½	2.80	1.64	21.81	9	116	6.4	80
Sou. Calif. Edison	29¼	2.80	1.50	27.28	10	107	5.1	85
Average	28½	2.66	1.71	23.83	10.7×	121%	6.2%	+65%

[a] Estimated for year 1971.

TABLE 14-5 Data on a Second List of Public-Utility Stocks at September 30, 1971

	Price Sept. 30, 1971	*Earned*	*Dividend*	*Book Value*	*Price/ Earnings*	*Price/ Book Value*	*Div. Yield*	*Earns. Per Share 1970 vs. 1960*
Alabama Gas	15½	1.50	1.10	17.80	10 ×	87%	7.1%	+34%
Allegheny Power	22½	2.15	1.32	16.88	10	134	6.0	71
Am. Tel. & Tel.	43	4.05	2.60	45.47	11	95	6.0	47
Am. Water Works	14	1.46	.60	16.80	10	84	4.3	187
Atlantic City Elec.	20½	1.85	1.36	14.81	11	138	6.6	74
Baltimore Gas & Elec.	30¼	2.85	1.82	23.03	11	132	6.0	86
Brooklyn Union Gas	23½	2.00	1.12	20.91	12	112	7.3	29
Carolina Pwr. & Lt.	22½	1.65	1.46	20.49	14	110	6.5	39
Cen. Hudson G. & E.	22¼	2.00	1.48	20.29	11	110	6.5	13
Cen. Ill. Lt.	25¼	2.50	1.56	22.16	10	114	6.5	55
Cen. Maine Pwr.	17¾	1.48	1.20	16.35	12	113	6.8	62
Cincinnati Gas & Elec.	23¼	2.20	1.56	16.13	11	145	6.7	102
Consumers Power	29½	2.80	2.00	32.59	11	90	6.8	89
Dayton Pwr. & Lt.	23	2.25	1.66	16.79	10	137	7.2	94
Delmarva Pwr. & Lt.	16½	1.55	1.12	14.04	11	117	6.7	78
Average	23½	2.15	1.50	21.00	11 ×	112%	6.5%	+71%

For the defensive investor the central appeal of the public-utility stocks at this time should be their availability at a moderate price in relation to book value. This means that he can ignore stockmarket considerations, if he wishes, and consider himself primarily as a part owner of well-established and well-earning businesses. The market quotations are always there for him to take advantage of when times are propitious—either for purchases at unusually attractive low levels, or for sales when their prices seem definitely too high.

The market record of the public-utility indexes—condensed in Table 14-6, along with those of other groups—indicates that there have been ample possibilities of profit in these investments in the past. While the rise has not been as great as in the industrial index, the individual utilities have shown more price stability in most periods than have other groups.* It is striking to observe in this table that the relative price/earnings ratios of the industrials and the utilities have changed places during the past two decades.

TABLE 14-6 Development of Prices and Price/Earnings Ratios for Various Standard & Poor's Averages, 1948–1970.

	Industrials		*Railroads*		*Utilities*	
Year	Price[a]	P/E Ratio	Price[a]	P/E Ratio	Price[a]	P/E Ratio
1948	15.34	6.56	15.27	4.55	16.77	10.03
1953	24.84	9.56	22.60	5.42	24.03	14.00
1958	58.65	19.88	34.23	12.45	43.13	18.59
1963	79.25	18.18	40.65	12.78	66.42	20.44
1968	113.02	17.80	54.15	14.21	69.69	15.87
1970	100.00	17.84	34.40	12.83	61.75	13.16

[a] Prices are at the close of the year.

* In a remarkable confirmation of Graham's point, the dull-sounding Standard & Poor's Utility Index outperformed the vaunted NASDAQ Composite Index for the 30 years ending December 31, 2002.

These reversals will have more meaning for the active than for the passive investor. But they suggest that even defensive portfolios should be changed from time to time, especially if the securities purchased have an apparently excessive advance and can be replaced by issues much more reasonably priced. Alas! there will be capital-gains taxes to pay—which for the typical investor seems to be about the same as the Devil to pay. Our old ally, experience, tells us here that it is better to sell and pay the tax than not sell and repent.

Investing in Stocks of Financial Enterprises

A considerable variety of concerns may be ranged under the rubric of "financial companies." These would include banks, insurance companies, savings and loan associations, credit and small-loan companies, mortgage companies, and "investment companies" (e.g., mutual funds).* It is characteristic of all these enterprises that they have a relatively small part of their assets in the form of material things—such as fixed assets and merchandise inventories—but on the other hand most categories have short-term obligations well in excess of their stock capital. The question of financial soundness is, therefore, more relevant here than in the case of the typical manufacturing or commercial enterprise. This, in turn, has given rise to various forms of regulation and supervision, with the design and general result of assuring against unsound financial practices.

Broadly speaking, the shares of financial concerns have produced investment results similar to those of other types of common shares. Table 14-7 shows price changes between 1948 and 1970 in six groups represented in the Standard & Poor's stock-price indexes. The average for 1941–1943 is taken as 10, the base level.

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* Today the financial-services industry is made up of even more components, including commercial banks; savings & loan and mortgage-financing companies; consumer-finance firms like credit-card issuers; money managers and trust companies; investment banks and brokerages; insurance companies; and firms engaged in developing or owning real estate, including real-estate investment trusts. Although the sector is much more diversified today, Graham's caveats about financial soundness apply more than ever.

TABLE 14-7 Relative Price Movements of Stocks of Various Types of Financial Companies Between 1948 and 1970

	1948	1953	1958	1963	1968	1970
Life insurance	17.1	59.5	156.6	318.1	282.2	218.0
Property and liability insurance	13.7	23.9	41.0	64.7	99.2	84.3
New York City banks	11.2	15.0	24.3	36.8	49.6	44.3
Banks outside New York City	16.9	33.3	48.7	75.9	96.9	83.3
Finance companies	15.6	27.1	55.4	64.3	92.8	78.3
Small-loan companies	18.4	36.4	68.5	118.2	142.8	126.8
Standard & Poor's composite	13.2	24.8	55.2	75.0	103.9	92.2

[a] Year-end figures from Standard & Poor's stock-price indexes. Average of 1941–1943 = 10.

The year-end 1970 figures ranged between 44.3 for the 9 New York banks and 218 for the 11 life-insurance stocks. During the subintervals there was considerable variation in the respective price movements. For example, the New York City bank stocks did quite well between 1958 and 1968; conversely the spectacular life-insurance group actually lost ground between 1963 and 1968. These cross-movements are found in many, perhaps most, of the numerous industry groups in the Standard & Poor's indexes.

We have no very helpful remarks to offer in this broad area of investment—other than to counsel that the same arithmetical standards for price in relation to earnings and book value be applied to the choice of companies in these groups as we have suggested for industrial and public-utility investments.

Railroad Issues

The railroad story is a far different one from that of the utilities. The carriers have suffered severely from a combination of severe competition and strict regulation. (Their labor-cost problem has of