
How U.S. Financial Regulations Reduce the Time Horizons for U.S. Investment

Michael T. Jacobs

Much has been made of the belief that American corporations are managed for the short term and that high-technology industries suffer in global competition as a result. This theme has resonated loudly from all corners of the globe, from Sony's Akio Morita to the Business Roundtable in America. A recent Grant Thornton Survey of American Manufacturers found that "an overwhelming 82 percent say U.S. manufacturers pay too much attention to short-term performance and should focus more on long-term results." The survey went on to conclude, "It appears that financing is a major cause of whatever gaps exist in U.S. innovation."

Still, most academics dismiss the notion of "short-termism" as an illusion, arguing that efficient markets produce efficient business decisions which are independent of time horizons.

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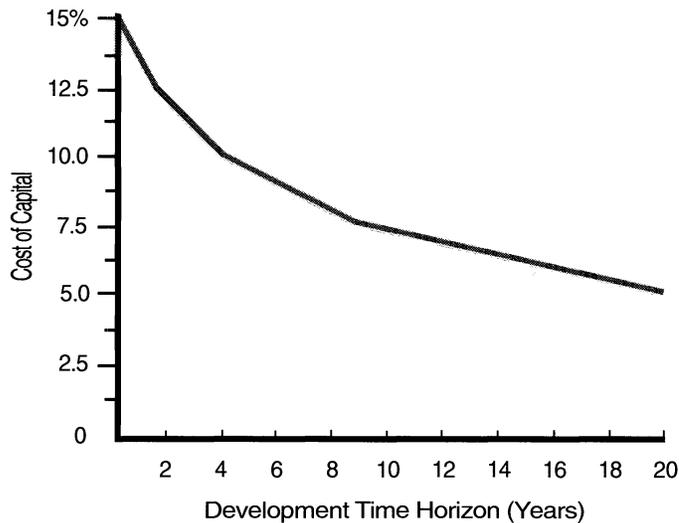
The consensus today among leading economists regarding the cost and availability of capital, which is often cited as an underlying cause of short-termism, is that no country enjoys a lasting advantage in its cost of capital.

In general, both the business and academic communities are correct. Global capital markets, by and large, are extraordinarily efficient. In an efficient global market, no nation has a lock on low-cost capital. However, capital cost disparities still exist. The regulations that govern how capital is allocated within a given country's borders can exacerbate investment risk, which influences the required return on capital, and thus affects the time horizons faced by managers when considering an investment.

The Cost of Capital and Time Horizons

Before defining the cost of capital and discussing how regulatory policy injects unnecessary risk into the U.S. capital market, it is useful to examine how the cost of capital affects management time horizons. Since the development of advanced technologies requires substantial

LOWER COST OF CAPITAL ALLOWS LONGER-TERM INVESTMENTS



lead time, any bias toward shorter time horizons would, by definition, inhibit technology development.

Simply put, as a company's cost of capital increases, its time horizon contracts. The time value of money dictates that dollars received in the future are worth less as the discount rate, i.e., cost of capital, increases. To graphically illustrate how capital costs influence time hori-

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zons, it is useful to look at a specific investment decision. Assume that an apparel company is considering the development of a leading-edge technology that will fully automate the design and cutting of fabric. The hardware and software cost is estimated to be \$100 million. If the

annual cost savings from using the new technology versus the current manual system is projected to be \$15 million, how quickly would the new equipment have to be developed, installed, fully debugged, and the work force trained in order for the investment to be justified?

As the figure illustrates, the answer to this question is dictated by the company's cost of capital. If the company had a cost of capital over 15 percent, the investment would have to be rejected since it would generate a negative return. With a 15 percent cost of capital, the new technology would have to be fully operational instantly in order to show a positive return. If, on the other hand, the company's capital cost was only 10 percent, management would have a four-year window in which to bring the new system on line. Moreover, a company whose cost of capital was only 5 percent could take over 20 years to commercialize the exact same technology and still show a positive return on the investment.

Given the constraints imposed on a business manager by capital costs, it is easy to understand why two rational decisionmakers seeking to maximize the value of their respective corporations would logically make different investment decisions. If it was expected that the new technology would require five years to develop and install, an executive running a company with a 12 percent cost of capital might choose to purchase an existing but less efficient technology, whereas an executive running a business with an 8 percent cost of capital might opt to develop the next generation of technology. Both managers would be making value-optimizing decisions, yet the CEO with the lower cost of capital would be credited as being a visionary, while the CEO with the higher cost of capital would be accused of being short-term oriented.

If the CEO with the higher cost of capital chooses to ignore the financial analysts and invest in the next-generation technology to keep up with foreign rivals who made the same investment, the value of his firm's stock would fall. An efficient equity market would appropriately penalize an investment decision with a negative net present value, reflecting the loss of value in the stock price. Yet for making the same investment decision, the competitor's stock would rise because for that company the new technology would generate a positive return. Business leaders in both countries would observe such market behavior and likely conclude that one

group of investors is short sighted and the other is prescient, when in fact they were both behaving rationally. This is how the business community and the academic community can both observe the same behavior and reach different conclusions about the existence of a short-term bias in the market.

Defining the Cost of Capital

In 1991, the Treasury Department and Commerce Department co-sponsored a series of roundtable discussions on the subject of financing technology. Participants included some of the nation's foremost executives, investors, and academics. After over two hours of debate, there was still no consensus definition of the "cost of capital." To fully appreciate the policy implications for capital costs, it is necessary to have a clear understanding of what constitutes a company's cost of capital.

Most observers equate capital costs with interest rates. This is why the typical solutions for reducing the cost of capital entail using fiscal or monetary policy. This is also why many observers concluded (incorrectly) that Japanese companies maintained a huge advantage in the cost of capital during the 1980s.

Because their stock prices escalated throughout the 1980s, companies in Japan were able to issue convertible bonds with little or no interest yield, which was viewed by some as free money. However, as Japanese companies prepare to redeem more than 14 trillion yen (\$120 billion) in convertible bonds over the next two years, they will realize that current interest expense is only one component of the cost of capital. Equally important is the cost of equity. Investors purchased convertible bonds in Japanese companies bearing such low interest rates only because they presumed their return would come in the form of equity appreciation. This not being the case, those companies are now forced to refinance the debt at much higher market rates.

A business's cost of capital is its cost of debt multiplied by the percentage of debt in its capital structure plus its cost of equity (which is the return a shareholder demands to buy or continue to hold the stock) times the percentage of equity in its capital structure.

A nation can have a cost of capital advantage, therefore, if its companies have access to lower-cost debt, lower-cost equity, or if its businesses are able to maintain more efficient capital structures.

Businesses could conceivably achieve more efficient capital structures if they were able to carry a higher percentage of debt without a correspondingly greater level of risk. This would result in an overall lower cost of capital since debt is always less expensive than equity (because interest receives more favorable tax treatment than dividends and because debt is a senior claim on the company's assets, thus a less risky security).

Causes of International Disparities in Capital Costs

As mentioned, the most commonly held view on why companies in one country might have a lower cost of capital than those in another country is that they have access to lower interest

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If lower interest rates in foreign countries were such an advantage, why then have more U.S. companies not borrowed in foreign currencies? Today, large and mid-sized U.S. companies are able to effectively borrow money anywhere in the world. The reason that more U.S. companies do not borrow in foreign currencies is that to do so would expose them to currency risk. However, when a foreign company funded with its home currency competes in the United States, it faces the same currency risk.

In other words, when General Motors competes in Japan, it can finance its operations in yen-denominated debt at virtually the same rate as its Japanese competitors. The Japanese purported borrowing cost "advantage" disappears. If a Japanese automaker competes in the United

States where borrowing rates are higher, under the assumption that its capital cost is determined solely by its home country interest rate, it is making a serious mistake. The Japanese car company also must factor in the currency risk of doing business overseas. The lower home borrowing rate in yen is offset by the risk of receiv-

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ing depreciating dollar-denominated revenues. A 1990 study by MIT professor James Poterba concludes that "The size of the U.S. and Japanese markets and the active cross-border arbitrage in fixed-income markets make large disparities in these markets unlikely."

The other red herring in the cost of capital debate is taxes. U.S. companies routinely complain that the tax code fails to adequately reward long-term investments. The Japanese as well as several European countries offer investors a substantial tax break on capital gains. Moreover, the United States taxes corporate profits twice by providing no corporate or personal deduction for dividend payments.

However, upon closer examination there is no evidence that the U.S. tax code unduly punishes investments as compared to foreign countries. Indeed, both the personal and corporate tax rates are higher in Japan and Germany than they are in the United States, which offsets the various tax breaks afforded to long-term equity investments. A 1989 study conducted by two of the nation's leading experts on the cost of capital, Robert McCauley and Steven Zimmer of the Federal Reserve Bank of New York, explicitly refutes the notion that the tax code is to blame for differences between countries in capital costs. To isolate capital gains, an area where the U.S. tax code is blatantly uncompetitive, as the only form of taxation on equity investment is unfair, they argue. Overall tax rates (at the personal and corporate level), tax credits, deduc-

tions, and allowances also affect the cost of equity and differ greatly among countries.

Risk and Regulations

Based upon the above evidence, many leading academics have concluded that the disparity in cost of capital purportedly faced by U.S. companies is as much a figment of our imagination as is short-termism. Here is where semantics can become a problem. Regulations governing the U.S. financial system add undue risk to investors. It is universally accepted that greater risks force investors to require higher returns on their investments. Some observers believe that those risks are a component of capital costs; others do not. Terms such as "agency costs" or "information costs" are used by some instead, but since those costs are ultimately borne by providers or users of capital, I will include them in the scope of capital costs.

Regardless of how one defines the cost of capital, what is important is to acknowledge that when investors lack either information or control, they perceive greater risks to investing. A nation's financial regulatory framework influences the ability of capital providers to understand how effectively their capital is being deployed by the corporations to whom they have allocated it, and it affects their ability to alter corporate policy if their capital is not being deployed efficiently. Those risks are accommodated either by giving companies less latitude to fund projects involving significant uncertainty (such as those with distant payoffs) or by requiring a higher return to offset the perceived risk, which drives up the cost of capital. In other words, regulatory policy can produce structural disparities in capital costs that have nothing to do with macroeconomic variables.

America's injurious financial regulations are largely circumvented by the venture capital market, which explains why so much money is allocated to technology start-ups in the United States. However, the side effects of regulations that undermine the confidence of lenders and public shareholders cannot be avoided by larger private or all public companies.

Banking Regulations and Efficient Capital Structures

The single largest source of global business cap-

ital is the banking system. And there are a number of fundamental differences in the regulations governing U.S. and foreign banks, differences that make leverage riskier in the United States and that result in less efficient capital structures for American companies.

For years it has been widely accepted that a company's capital structure does not affect its overall cost of capital. As leverage increases and the tax benefits of interest deductibility kick in, the overall risk to lenders and shareholders also rises, resulting in an offsetting increase in the underlying cost of debt and equity, thus the same overall weighted average cost of capital. This theory generally holds true within a given regulatory framework. However, dissimilar regulatory environments can produce different amounts of risk with the identical amount of leverage. Indeed, over the years German and Japanese companies have operated with substantially more debt in their capital structures than their American counterparts, yet experienced far fewer instances of bankruptcy.

The primary reason for this is that banks in Germany and Japan are owners as well as lenders, which produces an entirely different mindset among bankers and motivates them to work more closely with clients to avoid bankruptcy. In essence, debt in those countries is more flexible than in the United States, which makes leverage less risky for both the lender and the borrower. A company can borrow more money without the fear that its lender will put it out of business in times of difficulty.

U.S. banks are prohibited from being owners. Not surprisingly, they do not act like owners. During the Great Depression, Congress passed the Glass-Steagall Act of 1933, which banned stock ownership by commercial banks. After certain banks circumvented this law by forming holding companies to acquire the stock of non-financial institutions, Congress passed the Bank Holding Company Act of 1956 to prohibit bank holding companies from engaging in nonbanking activities. Bank holding companies are now restricted from owning more than 5 percent of a company's shares. Today, it is virtually unheard of for a U.S. bank to both lend to and own stock in a customer, which is the norm in countries such as Japan and Germany.

In addition to those legislated restrictions, there are serious legal liabilities assumed when a lender takes a stock position in the United

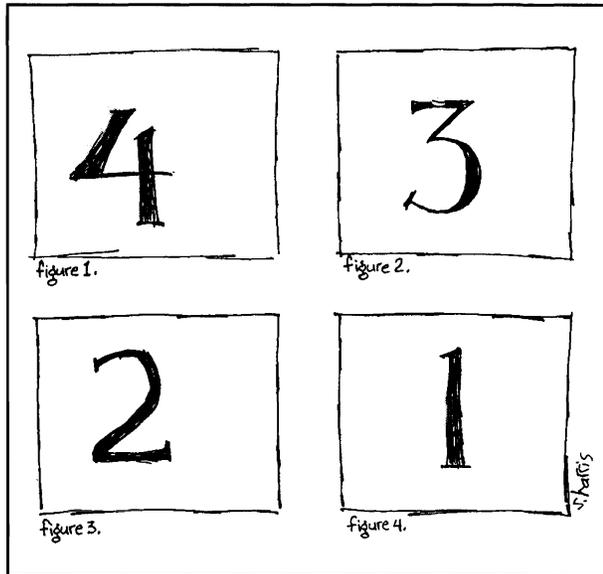
States. In the event of a bankruptcy, a senior lender can be stripped of its claims to collateral if the other creditors can show that the lender exercised some degree of control over the borrower. This principle, which is known as equitable subordination, is much more likely to be raised in the event that the lender owned an equity stake in the company. Consequently, the senior credit officers of most major banks uniformly prohibit, as a matter of policy, the bank from holding an equity position in a customer.

The simple practice of a single financial institution holding both debt and equity in client companies has a profound effect on how capital is allocated and monitored in countries such as Germany and Japan. If a customer fails, a bank with a stock position stands to lose most, if not all, of its equity investment. The interests of the capital provider and the business are aligned on the downside. If, on the other hand, the bank held no equity, and as a lender was adequately collateralized, it would suffer little, if any, prin-

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cipal loss from a bankruptcy. The bank's and the client's interests are not aligned in this case, making the bank much more receptive to putting a company out of business.

Alternatively, when a bank owns stock in a customer, and the customer is successful, the bank stands to benefit a great deal through appreciation in the value of its stock holdings. The bank's interests are aligned with its customer's on the upside as well. It has a strong economic incentive to fund business ventures with promise. But if the bank owns no stock, and the customer is successful, the bank is more likely to suffer than to benefit as a result of its customer's prosperity. The client would then demand a lower borrowing rate, which would hurt the bank's profits. Alternatively, the customer might go public or issue bonds to replace the bank loan. In either case the bank would



lose business as a result, because unlike in Europe, a U.S. bank cannot offer underwriting services to its customers (with very few exceptions). In sum, the interests of the bank and its customer are aligned when it holds both debt and equity, and they are constantly in conflict when the bank only finances loans.

For a technology company, or a company that uses advanced technology in its manufacturing process, the incentive structure of its lenders has a profound impact on the degree of financial leverage it is willing and able to carry. Following are some generalizations that contrast the dif-

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ferences between the behavior of banks in the United States and those in Germany or Japan, which illustrate the problems U.S. companies face when trying to finance technology development with bank borrowings.

German banks typically attract the best and the brightest job applicants because those banks are the hub of the national economy. They own major stakes in the leading industrial compa-

nies, serve on their boards, underwrite their stocks, and provide their insurance. In America, banks generally attract a second-tier graduate. The pay is comparatively low, and the job content is limited. As a result, finding a banker who is able to comprehend complex technologies and to appreciate long-term strategies is easier in a country like Germany.

The training in banks differs substantially between countries. U.S. bankers are trained largely in how to read financial statements, how to appraise assets, and how to document loans. Bankers in other countries are trained much more heavily in corporate strategies. In Japan, for example, a loan document is typically one or two pages in length. Most decisions are made consensually, rather than contractually. In fact, it is not uncommon for a Japanese banker to take a leave of absence from the bank to spend a year working for a customer to better understand its business. In the United States, commercial bankers have only a superficial knowledge of the business of the companies they lend to.

Because a U.S. lender has limited upside potential if its customer does well, bankers focus most of their attention on mitigating downside risks. They are more preoccupied with a company's hard assets, which can be readily liquidated in a bankruptcy, than its soft assets such as technologies, market positions, and workforce skills that might create successes in the future. That bias motivates American bankers to allocate capital to yesterday's winners, who have already acquired substantial assets, rather than to tomorrow's winners, who will produce handsome equity returns. Short-term risks are far more important to a lending decision in the United States than long-term returns.

The current mood in Congress is to further limit the capabilities of lending institutions that have consistently been in trouble from lending to third world countries, overfunding real estate, and overleveraging companies. Little consideration has been given to the fact that banks might not have ventured into such unfamiliar territories if they had been able to achieve adequate returns from their original mandate: funding commercial enterprises. As long as banks are unable to hold equity stakes in client companies and to offer investment banking services, they will be unable to consistently achieve competi-

tive returns from their core business and will become more and more irrelevant to U.S. corporations. The recent upsurge in bank profits is largely the product of investing in Treasury securities using low-cost funds. This practice does not fund technology development.

If U.S. banks were permitted to engage in equity investing and other activities with a higher degree of risk, the risks involved in non-traditional banking activities would need to be carved out of the deposit insurance safety net to avoid placing an enormous burden on the American taxpayer, who ultimately has to fund bailouts. Today, the U.S. financial institution that most closely resembles a German or a Japanese bank is GE Capital. GE Capital is unregulated and is not covered by the Federal Deposit Insurance Corporation. It is one of only two lending institutions with a AAA credit rating, and it is among the most profitable and best-managed financial institutions in the country. With \$155 billion in assets, GE Capital has experienced more rapid internal growth than any major bank in recent years. Its ties to an industrial company are invaluable. One of its units, which leases more commercial aircraft than anyone else, is staffed with salespeople who are licensed pilots. GE's truck leasing operation runs a 24-hour hot line manned by mechanics who assist customers with breakdowns. Moreover, one of the keys to its success during the leveraged buyout era was the fact that GE Capital frequently funded all capital categories involved in a transaction, holding senior debt, subordinated debt, and equity in the same company. By doing so, it evaluated the risk/return profile of the company's entire capital structure, rather than taking a narrow perspective. It is no coincidence that arguably the most successful lending institution in America operates outside the umbrella of the country's burdensome financial services regulation.

Regulatory Impediments to Shareholder Influence

In much the same way that U.S. banks lack influence and knowledge of the inner workings of a corporation, American shareholders are kept at bay by regulations that undermine their ability to hold corporations accountable for their performance. In no country is the public disclosure of information as comprehensive as

in the United States, leading many observers to conclude that we have the most informed investors in the world. However, in no country are shareholders less involved in the boardroom, where the most meaningful exchange of information and dialogue occurs. Moreover, the ownership of U.S. corporations is more diffused than in any other developed country (largely due to regulatory policy), forcing investors to provide oversight through collective action, a process itself laden with onerous regulations.

Quantifying the cost of equity capital is not easy. Precision is difficult because there is no observable market data that measures the return an investor requires to purchase a stock. However, it is universally accepted that when a bond lacks provisions (protective covenants) that offer bondholders recourse in the event that they disagree with corporate actions, the bond

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must pay a higher yield to attract investors. As an example, bonds that contain covenants protecting bondholders against "event risk" trade at a lower yield than similar bonds that do not. It is perfectly logical to assume, therefore, that when an equity security protects the rights of shareholders, it too carries a lower required return, affording the issuer a reduced cost of equity.

This hypothesis is supported by the routine notion of a "control premium," whereby a shareholder pays a premium on a per share basis to acquire a large enough block of stock to exercise greater influence. Control limits risk. Lower risk levels translate into lower risk premiums, thus lower required returns. The conclusion, therefore, is that when shareholder influence is undermined by regulations that inhibit the owners' ability to act individually or collectively to protect the value of their investment, regulatory policy raises the cost of capital and shortens

corporate time horizons.

During the 1980s state legislatures waged war on shareholders' rights. Largely due to a backlash against leveraged buyouts, 40 states enacted laws which made the takeover of a public company against its will difficult, if not impossible. In doing so, state corporate law stripped shareholders of many of the fundamental rights that have always accompanied ownership. As an example, in 1990 Pennsylvania enacted a law which contained the following provisions:

- Boards can subordinate the interests of shareholders to other constituencies such as employees, and directors are no longer held liable for taking actions that they knew in advance were not in the shareholders' best interests.
- Companies were given the right to confiscate any profits made by a shareholder in the event of a failed takeover where the losing bidder sold its stock within 18 months. This makes unsolicited takeovers prohibitively expensive by raising the costs of a failed takeover.
- Mandated severance payments to anyone laid off during the two years following a transaction, making achieving efficiencies after a change in control more difficult. The magnitude of the payment is driven solely by tenure, and no con-

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sideration is given to whether those laid off are productive employees. Union contracts now have to be honored for up to five years by new owners as well.

- Any shareholder who exceeds certain ownership thresholds (20, 33, or 50 percent) automatically has their voting rights stripped. Investors can only regain the ability to vote their shares if a majority of the remaining shareholders vote to reinstate those rights.

The Pennsylvania law is an example of the extremes that state legislatures went to in order to protect companies in their jurisdiction. With

no national debate on the ramifications of such measures, virtually the entire nation adopted one form or another of an antitakeover law during the 1980s.

In addition to intrusive state regulations, shareholders face myriad federal regulations that keep them fragmented and limit their ability to take collective action. Some of the more prominent ones include the following:

- The Employee Retirement Income Security Act (ERISA)—which governs the behavior of all corporate pension funds (the largest single class of shareholders in America)—encourages overdiversification of pension fund stockholdings, which limits the ability of large institutions to hold meaningful stakes in any single company.
- SEC regulations prohibit mutual funds from concentrating their assets in the stocks of a limited number of companies, which also promotes fragmented ownership.
- Through a strained interpretation of the Hart-Scott-Rodino Act, the Federal Trade Commission has concluded that a pension fund or a mutual fund that proposes a candidate for the board, solicits proxies, or takes a number of other actions necessary to provide effective accountability may be deemed to be violating the "investment-only" provision of the law.
- The IRS has threatened the tax-exempt status of pension funds that provide direction to corporations in which they own stock under the unrelated business income tax because by doing so the investor would theoretically be "entering the business" of its portfolio company.
- The proxy rules dictated by the Securities and Exchange Commission (SEC) are sufficiently complex and burdensome to confuse and confound all but the most sophisticated investor, making collective action difficult to achieve.

Conclusion

Recent initiatives by the SEC to relax proxy regulations are the first recognition in regulatory circles that having impotent shareholders is not in the economic interests of the country. However, the politics of further deregulating barriers to owner influence are complex, if not paradoxical. Most proponents of limited regulation advocate states' rights, yet it is the states that have enacted the greatest regulatory hurdles to shareholder influence. And most anti-regulation advocates are pro-business, yet it is

the business community that has fervently lobbied state legislatures and the SEC to impose barriers to shareholder involvement.

A new perspective is required to gain the political support needed to ease the regulatory burdens on commercial banks and shareholders that raise the cost of capital in the United States, thus penalizing investment in advanced technologies. Rather than restricting the activities of banks so that government watchdogs can prevent them from making mistakes, banks need to be freed up to own equity stakes in companies so that the market will force them to adopt the perspective of a long-term owner rather than that of a short-term lender. And rather than strip the rights of shareholders so that corporations will no longer be subjected to the short-term pressures of takeovers, shareholders need to be given the freedom to function as true owners so that they can effect change at corporations directly, rather than relying on the market for corporate control, i.e., takeovers, to provide the accountability shareholders are unable to provide.

The key to enhancing technology develop-

ment is to allow investors (who have the capital) and technologists (who need the capital) to work in a closer partnership so that better informed investors will have greater confidence in more accountable corporations. Then they will be more inclined to fund projects with uncertain outcomes and distant payoffs such as those involving advanced technologies, and we will not have to rely on industrial policies to overrule the market.

Selected Readings

Jacobs, Michael T. *Short-Term America: The Causes and Cures of Our Business Myopia*. Boston: Harvard Business School Press, 1991.

Jacobs, Michael T. *Break the Wall Street Rule: Outperform the Stock Market by Investing as an Owner*. Reading, Mass.: Addison-Wesley Publishing Company, 1993.