

Venture Capital Investment: Emerging Force in the Southeast

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VENTURE CAPITAL INVESTMENT THROUGHOUT THE UNITED STATES IN GENERAL AND THE SOUTHEAST IN PARTICULAR HAS GROWN DRAMATICALLY IN RECENT YEARS, BECOMING AN INTEGRAL PART OF OUR ECONOMY. IT HAS HELPED CREATE SUCH COMPANIES AS APPLE COMPUTER, INTEL, FEDERAL EXPRESS, DIGITAL EQUIPMENT, AND MICROSOFT (SAHLMAN 1990). PENSION FUNDS, BANK HOLDING COMPANIES, INSURANCE COMPANIES, INVESTMENT BANKS, AND NONFINANCIAL INSTITUTIONS ALL INVEST VENTURE CAPITAL IN ORDER TO PURSUE HIGH RETURNS AND DIVERSIFY INVESTMENT RISKS.

However, returns from venture capital investment have been mixed over the relatively short history of the industry. As more and more large institutional investors pour increasing amounts of assets into venture capital and as state and local governments seek to attract this capital and the industries it fosters, the potential benefits will grow, but not without raising public policy issues (Berlin 1998).

This article examines the history, structure, and evolution of the national venture capital industry. After providing that broad background, the authors focus on current development of venture capital in the Southeast and of states' promotion of such investment. This discussion includes a state-by-state analysis of local venture capital markets and state policies.¹

What Is Venture Capital Investment?

Venture capital investing can be defined broadly as "investment by professional investors of long-term, risky equity finance where the primary reward is

an eventual capital gain, rather than interest income or dividend yield" (Wright and Robbie 1997, xiii). This capital gain is realized when the venture capitalist or investing partners sell or otherwise liquidate their equity stake in the venture.

A diverse group of investors join venture capital partnerships. These investors include pension funds, endowments, foundations, bank holding companies, insurance companies, wealthy individuals, investment banks, and nonfinancial corporations. Table 1 shows the amounts of investment and distribution by each group of investors nationally from 1986 to 1992.

By investing in a particular entrepreneurial firm, the venture capitalist assumes a high level of risk. Sahlman (1990) found that 34.5 percent of venture capital investment results in a loss. The investor attempts to minimize these risks by controlling the stages and level of capital infusion, using built-in incentives to reward entrepreneurs' desirable behavior and often taking a very active role in managing the firm.

TABLE 1 U.S. Venture Capital Investors, 1986–92

	Investment (\$ billions)	Percentage
Pension Funds	9.85	45
Corporate	5.91	27
Public	3.94	18
Endowments and Foundations	2.57	12
Bank Holding Companies and Insurance Companies	2.49	12
Wealthy Families and Individuals	2.33	11
Investment Banks and Nonfinancial Corporations	2.11	10
Other	2.33	11
Total	21.68	100

Source: Fenn, Liang, and Prowse (1995, 45)

Venture capitalists may be categorized by either the sources of investment capital—whether captive or independent—or the stage of business development on which they focus their investments. Captive venture capitalists are generally subsidiaries of banks or insurance companies and are funded through the mother institution; independent firms must seek funding through third parties.

Independent firms are primarily organized as limited partnerships. The venture capitalists are general partners, and the third-party investors are limited partners. As general partners, venture capitalists have considerable control over the firm and its management. Venture capitalists set certain developmental targets for enterprises and may release additional funds only as each goal is met. This sequential financing arrangement results in the release of enough capital to get the firm to the next level of maturity and no more.

Limited partners, on the other hand, use the venture capitalists as investment intermediaries and play a much more restricted role in management of the firm(s). Even though limited partners have little involvement in day-to-day management, the contractually specified relationship between general and limited partners helps ensure that the interests of the latter are not overlooked, as is discussed further below.

Venture capitalists pool investment funds from a variety of limited partners. These funds usually have a fixed life span (typically specified as ten years in the initial contract but extended if the fund is successful) and are used to invest in new ventures for their first three to five years of existence. After this initial stage, the funds are focused almost exclusively on moving the businesses

they have financed up the development ladder toward eventual realization of investor returns.

Venture capitalists tend to set up new funds for different ventures before an existing fund's capital is exhausted, and then they repeat the process, often with the same limited partners. In this way they can preserve and leverage the knowledge and contacts associated with previous successful ventures.

Potential Conflicts of Interests between General and Limited Partners

While in principle all parties are interested in maximizing the value of the firms in the venture capital portfolios, venture capitalists may make decisions that run counter to outside investors' interests. These decisions include "spending too little time advising or monitoring the companies and entrepreneurs, charging excessive management fees, taking undue investment risks, and reserving the most attractive investment opportunities for themselves and their associates" (Fenn, Liang, and Prowse 1995, 35). A variety of contractual methods can minimize the potential misalignments of general and limited partners' interests. The contracts may include some or all of the following methods: limiting the life span of the venture fund, specifying limited partners' right to halt any further investments into the fund, tying most of the venture capitalists' ultimate profit to the "final" value of the firm, mandating distribution of the fund's proceeds, and outlawing other specific activities that would unfairly reward venture capitalists at limited partners' expense (Fenn, Liang, and Prowse 1995).²

1. Southeast refers to the six states that in whole or part make up the Sixth Federal Reserve District—Alabama, Florida, Georgia, Louisiana, Mississippi, and Tennessee.
2. Such agency problems are far from unique to venture capital investment. Wall and Peterson (1998), for example, discuss this issue in the context of costs imposed on banks by the measurement and regulation of capital adequacy.

The Investment Process

Stages. Sahlman (1990) presents eight stages of venture capital investing, described in the box on page 39. The primary goal, regardless of the stage at which venture capitalists enter the relationship, is to move the investment sequentially to a final, agreed-upon level of development, such as a public offering. After that level is reached the partners liquidate their equity and obtain their investment gains. If the venture has been successful, both the venture capitalists and the outside investors will realize most of their profits at this point.

Mechanics. Fenn, Liang, and Prowse (1995, 29) describe four investment activities undertaken by the

general partners in a venture capital firm during the phases of a project. These activities include selecting, structuring, monitoring, and exiting investments. Proper execution of each responsibility is essential if general partners are to profit from a venture.

General partners contact entrepreneurs, investment bankers, brokers, consultants, lawyers, and account-

ants in their search for information on potential deals. Of the hundreds of business plans that they receive from firms seeking capital, only those with the highest probability of success are funded.

Once this process of screening potential firms is complete, general partners attempt to negotiate the terms of the investment agreement with the target firm(s). As mentioned above, because of potential agency problems, the structuring of the deal is extremely critical. The ideal contract aligns the interests of the general and limited partners with those of the target firm(s).

General partners closely monitor their portfolio companies. Board representation, management employment contracts, voting rights, consulting services, and control of access to additional funding are the primary means by which venture capitalists influence the enterprise. Limited partners have very little direct control except through their ability to refuse further funding.

Finally, general partners must exit the relationship with the firm. Various means of exiting include public offering, private sale, and share repurchase. Of these, "the public offering generally results in the highest valuation of a company" (Fenn, Liang, and Prowse 1995, 34). In a public offering the company issues stock and becomes a public enterprise, but the partners generally

do not completely sever their relationship with the firm. For example, they are often legally required to hold shares of the firm for a specific period. During this period, venture capital investors often remain very active in the firm's management, reducing agency costs by forcing continued focus on the longer-term health of the firm. In a private sale the company is merged with or acquired by a larger company, and the general and limited partners are paid in cash or liquid securities. In the share repurchase option the firm is forced to buy back stock held by the general partners. The venture capital firm often uses this means of exiting when investments have been unsuccessful.

Common Characteristics of Projects

Finance theorists have developed classes of models that attempt to rigorously describe common characteristics of venture capital projects. The most prominent of the features modeled are the sequentiality of investments, the irreversibility of investments, and the option to postpone or terminate future investments in a project. While these features characterize new investments of most kinds, their rigorous treatment is more important in venture capital projects because of the higher risk involved.

Sequentiality. Venture capital investments tend to be made sequentially. Each dollar spent can be thought of as purchasing an option to make future investments in the firm. Even investments that appear to involve only a single decision can turn out to be sequential because many projects (especially large ones) take time to complete and can be halted in midstream (Dixit and Pindyck 1994, 320). For example, the construction of a large silicon chip manufacturing plant might involve the intermediate steps of building the physical infrastructure, purchasing and installing equipment, and training workers. Before such a project is completed market conditions could shift significantly and thus alter its final profitability.

Irreversibility. Another important feature of venture capital investing is that the investments made at each stage are largely irreversible. Once a factory is built or the initial research is completed, it is difficult if not impossible to recoup much of the investment if the project is unsuccessful. The potential for such sunk costs increases the total risk of the venture (Dixit and Pindyck 1994, 8).

Postponement or Termination. A third significant characteristic of venture capital investments is that projects can be postponed or terminated at each stage. The investors can evaluate whether to make further investments or delay or close down the operation altogether. Such a decision is sensitive to changes in the expected final value of the project or changes in the costs of completing the investments (Dixit and Pindyck 1994, 320).

As large institutional investors pour assets into venture capital and as state and local governments seek to attract this capital, the potential benefits will grow, but not without raising public policy issues.

Stages of Venture Capital Investment

Seed Investments

- Small amounts of capital are provided to an inventor or entrepreneur to determine whether an idea deserves further consideration.

Start-Up

- Companies are less than one year old.
- The company uses the money for product development, prototype testing, and test marketing.

First Stage—Early Development

- Investment continues through the first stage only if the prototypes look good enough for further technical risk to be considered minimal.
- First-stage companies are unlikely to be profitable.

Second Stage—Expansion

- A company in the second stage has shipped enough product to enough customers to have real feedback from the market.
- The firm is probably still unprofitable.
- The firm probably needs more capital for equipment purchases, inventory, and receivables financing.

Third Stage—Profitable but Cash Poor

- Sales growth is probably fast.
- New venture capital may be used for further expansion of manufacturing facilities, expanded marketing, or product enhancements.

Fourth Stage—Rapid Growth toward Liquidity

- A company may still need outside cash to sustain growth.
- The risk to outside investors is much reduced, and the cash-out point and method are underdetermined.

Bridge Stage—Mezzanine Investment

- Despite potentially knowing the approximate timing and form of exit of the venture capital from the company, the company still needs capital to continue growth.

Liquidity Stage—Cash-Out or Exit

- Investors can gain liquidity of a substantial portion of their holdings in a company.

Source: Sahlman (1990, 479)

Kinds of Risks

Venture capitalists face many risks in deciding to make initial investments and continue investing in portfolio firms. Berk, Green, and Naik (1997) develop a model to analyze three sources of risk, which they label technical, exogenous, and traditional. These various risks come to play at different points in the development of firms. Technical risks dominate the seed investment and start-up stages. Firms are susceptible to exogenous risks at all stages of development, and the full effects of traditional risks become apparent as the firm moves through the final stages of the process.

Technical Risks. In a start-up research and development venture, technical uncertainty refers to the “uncertainty associated with the success of the research itself” required to push the firm beyond the development stage (Berk, Green, and Naik 1997, 1). An example would be the difficulty entailed in developing a new

software product, which may or may not work under actual programming conditions.

Exogenous Risks. Exogenous risks are those associated with the possible obsolescence of the firm’s final output or product. This sort of risk is especially great in rapidly evolving markets such as the computer and software industries. For example, if Java becomes the industry standard, Sun’s virtual machine and Java-based operating system could threaten the supremacy of software designed for a Microsoft Windows environment (Clark 1997).

Traditional Risks. Berk, Green, and Naik (1997, 2) define traditional risks as those related to the “uncertainty about the costs and [general] demand [conditions] that determine the ultimate cash flows” from the venture. In other words, fluctuations in the larger economy could affect supply and demand for the firm’s final output. An unexpected economic recession (as opposed to the narrower threat posed by a competitor’s product),

for example, could cause a new venture to fail that in other times might succeed.

Early History of the U.S. Market

A multitude of factors converged to create the venture capital industry in the United States. This market has evolved over time in response to developments in technology, entrepreneurial need, capital availability, and the appropriate legal framework.

The first venture capital firm, American Research and Development, was established by Ralph E. Flanders, the former president of the Federal Reserve Bank of Boston, and General Georges Doriot of Harvard Business School, in 1946 (Pfirrmann, Wupperfeld, and Lerner 1997).

One of the firm's first ventures was investment of seed capital in a company created by four MIT graduate students in 1957. American Research and Development provided \$70,000 in exchange for 77 percent of common stock in the company. The company eventually evolved into Digital Equipment Corporation, and the original investment grew to \$355 million by 1971.

The next major step in the evolution of the U.S. venture capital industry was the Small Business Investment Company (SBIC) program of the Small Business Administration. Initiated in 1958, the aim of the program was to foster new company formation by augmenting more traditional sources with new sources of venture investment capital. The Small Business Investment Companies were allowed to borrow \$4 from the Small Business Administration for each dollar of equity they raised, and “by 1965, the 700 licensed SBICs dominated the domestic supply of venture capital” (Pfirrmann, Wupperfeld, and Lerner 1997, 22). Incompetence, fraud, and the resulting new regulatory environment in the industry led to the downfall of the program and to the eventual growing importance of private venture capital funds in this industry. As of 1997, Small Business Investment Companies made up 5 percent of the total capital pool (Pfirrmann, Wupperfeld, and Lerner 1997, 22).

While the recession of the 1970s contributed to a dampening of the venture capital market, “venture capitalists, entrepreneurs, and government joined in a combined effort to help revive the industry” (Pfirrmann, Wupperfeld, and Lerner 1997, 22). Several legislative changes helped. The first was the 1978 Employee Retirement Income Security Act’s (ERISA) “Prudent

Man” rule, which allowed pension funds to invest in higher-risk investments, including venture capital funds. Two more law and regulation changes in 1980 also contributed to the evolution of this market. First, the Small Business Investment Act of 1980 reduced the reporting requirements for venture capital firms by redefining them as business development companies as opposed to investment advisers. Moreover, the ERISA “Safe Harbour” regulation in 1980 reduced the legal oversight and potential liabilities of venture capitalists by legally defining pension funds as limited partners.

These regulatory changes opened up a large new source of venture capital funding. For example, pension funds, which supplied only 15 percent of the capital committed to venture funds in 1978, accounted for 46 percent by 1994 (see Table 2).

Later Evolution

With new funding sources and a conducive legal environment, the amount of capital raised by venture capital partnerships mushroomed. Over time institutional investors have come to dominate the market. As the industry has matured, these large investors have increased the size of the average venture capital fund from \$18 million in 1979 to \$68 million in 1993. As Table 3 illustrates, total capital commitment in the industry rose from \$661 million in 1980 to \$3.764 billion in 1994. At the same time the number of partnerships involved in later-stage deals grew from 4 percent to 26 percent of total partnerships, mostly at the expense of balanced partnerships. This shift reflects not only investors’ ability to fund these more expensive investments but also their demand for earlier profit realization. Later-stage companies may show profits in a couple of years rather than the five or more needed for seed-level investments (Pfirrmann, Wupperfeld, and Lerner 1997).

As discussed earlier, most successful ventures are exited through a public offering or a private sale. Venture capitalists realize the highest returns from firms that go public (Pfirrmann, Wupperfeld, and Lerner 1997). The number of venture capital–related initial public offerings and acquisitions grew from 27 and 28, respectively, in 1980 to 136 and 97 in 1994. The companies that go public are the relatively rare successes and represent a small fraction—only about 10 to 30 percent of the total—of all firms that receive seed and early-stage financing (Fenn, Liang, and Prowse 1995, 21). However, their net effect can be relatively large. Sahlman found that “in aggregate, 579 venture-capital-backed companies went public during the 11 years ending in 1988. Their total market value exceeded 30% of the total market value of all comparable companies going public during the same period” (1990, 482).

The returns on venture capital have fluctuated over time. Sahlman (1990) reports that between 1965 and

The venture capital market in the United States has evolved over time in response to developments in technology, entrepreneurial need, capital availability, and the appropriate legal framework.

TABLE 2
Sources of Capital Commitments to Private Independent Funds in the United States^a

	Total Capital Commitments ^b (\$ billions)					Endowments and Foundations	Banks and Insurance Companies
		Corporations	Individuals and Families	Pension Funds	Foreign		
1980	0.661	18	17	29	8	15	13
1981	0.867	17	23	23	10	12	15
1982	1.423	12	21	33	13	7	14
1983	3.408	12	21	31	16	8	12
1984	3.185	14	15	34	18	6	13
1985	2.327	12	13	33	23	8	11
1986	3.332	11	12	50	11	6	10
1987	4.184	11	12	39	13	10	15
1988	2.947	11	12	46	14	12	9
1989	2.399	20	6	36	13	12	13
1990	1.847	7	11	53	7	13	9
1991	1.271	4	12	42	12	24	6
1992	2.548	3	11	42	11	19	15
1993	2.545	8	7	59	4	11	11
1994	3.764	9	12	46	2	21	9

^aPercentage of annual total

^bExcludes funds of funds

Source: Pfirrmann, Wupperfeld, and Lerner (1997)

TABLE 3 Capital Raised by Venture Capital Partnerships by Stage of Investment

	Total Capital Commitments ^a (\$ billions)	Number of Partnerships by Investment Stage (Percent)		
		Seed	Balanced	Later
1980	0.661	35	61	4
1981	0.867	43	57	0
1982	1.423	38	57	5
1983	3.408	32	59	9
1984	3.185	34	59	7
1985	2.327	37	49	14
1986	3.332	41	49	10
1987	4.184	32	60	8
1988	2.947	41	55	4
1989	2.399	50	45	5
1990	1.847	14	72	14
1991	1.271	48	47	5
1992	2.548	36	40	24
1993	2.545	22	66	12
1994	3.764	30	44	26

^aExcludes funds of funds

Source: Pfirrmann, Wupperfeld, and Lerner (1997)

TABLE 4
Amount Raised by Venture Capital Funds
in the Southeast^a

	Venture Capital (\$ millions)
1990	14.0
1991	12.2
1992	7.8
1993	32.0
1994	266.1
1995	99.4

^a Includes Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee

Source: Brooks (1996)

1984 the median rate of return on venture capital firms exceeded 26 percent per year. For the 1991–94 period, the average rate of return realized by limited partners for each year was 24.0, 12.5, 19.7, and 16.2, respectively. Rates of return have declined since the early 1980s for a variety of reasons, including the rising valuation of deals caused by increased competition, greater focus on later-stage investments with lower risks and expected returns, and, possibly, a reduction in the quality of venture capitalists' decision making (Pfirrmann, Wupperfeld, and Lerner 1997).

Venture Capital Developments in the Southeast

As shown in Table 4, venture capital funds raised in the Southeast have grown from \$14 million in 1990 to \$99.4 million in 1995. While this amount is not massive (individual funds can grow to \$100 million or more), the trend is still clear and follows the growth of venture capital funds nationwide. Many factors have contributed to this growth, including the region's overall economic development, the gradual emergence of regional venture capital firms, increasing competition in venture markets elsewhere, state policies favorable to venture capital, and the growth of high-technology and communications-related industries.

Venture capital investments in firms throughout the Southeast vary widely by industry type, stage of development, and magnitude. As Table 5 shows, 32 percent of funds invested by venture firms went to companies in healthcare, 27 percent to communications firms, 13 percent to software and information companies, and smaller percentages to other industries. Nationally, software and information companies received the largest share of funds at 25 percent, followed by communications, healthcare, and business services.

Table 6 presents the stage of development of the companies that received venture capital in the Southeast in 1997. Expansion-stage companies picked up the largest percentage of venture capital at 36 percent. Early-stage firms followed closely with 28 percent while start-up and late-stage companies received 13 percent.

Nationally, in 1997, 70 percent of venture capital funds went to expansion- and late-stage firms, with the largest amount—53 percent—going to expansion-stage firms. Early- and start-up-stage firms received 15 and 5 percent of the total, respectively. This distribution contrasts with the more even balance between the start-up/early-stage and expansion/late-stage sectors in the Southeast.

Alabama. The largest share of Alabama's venture investment went to the healthcare industry (Table 7). Electronics and instrumentation companies, consumer businesses, communications firms, and the software and information companies followed. Venture capitalists made sixteen distributions of funds, totaling \$49,291,000, throughout the state in 1997 (Price Waterhouse 1998). Seed and early-stage companies each composed 31 percent of the companies given venture capital funding in Alabama in 1997. Expansion- and late-stage firms received 19 and 13 percent, respectively. As with the Southeast in general, the relatively high percentage of investment in earlier-stage firms probably reflects the relative nascence of venture capital investment in this state.

Florida. In Florida a total of \$340 million was distributed in 1997 (Table 7). Communications companies received the largest portion of this total, with the healthcare industry collecting the next-largest portion. Software and information firms, business services, and electronics and instrumentation firms, each with single-digit shares, make up the rest of the top five companies. Venture capitalists made fifty-nine separate distributions to firms in the state in 1997 (Price Waterhouse 1998). Expansion capital was awarded to 38 percent of the companies receiving venture capital in 1997 (Table 6). Florida, with 18 percent of the total, had the highest share in the Southeast of late-stage companies receiving venture funding (Table 6).

Georgia. Last year Georgia's venture capital investments were not only the largest in the Southeast but also the most diversified. The majority of the funds, 73 percent, went to healthcare, software and information, and communications companies, with the consumer and the distribution/retailing sectors completing the top five recipients. Georgia firms received eighty-one distributions of venture capital (Price Waterhouse 1998) totaling \$347,700,000 in 1997 (Table 7).

Georgia's success in 1997 in attracting ventures based on high technology is evident in a study by Price Waterhouse of Internet-related venture capital investments (see Table 8). Although still dwarfed by such

TABLE 5 Venture Capital Investment by Type of Company, 1997

	Southeast (Dollars)	Percentage	U.S. (Dollars)	Percentage
Biotechnology	3,039,000	0	670,014,500	5
Business Services	51,432,000	6	712,890,000	6
Communications	235,072,000	27	2,858,832,348	22
Computers and Peripherals	3,816,000	0	588,096,000	5
Consumer	58,420,000	7	693,311,000	5
Distribution/Retailing	24,620,000	3	700,364,000	6
Electronics and Instrumentation	40,085,000	5	408,940,000	3
Environmental	—	—	71,231,000	1
Healthcare	283,736,000	32	1,248,399,677	10
Industrial	52,745,000	6	693,679,500	5
Medical Instruments and Devices	6,305,000	1	612,919,000	5
Miscellaneous	—	—	21,450,000	0
Pharmaceuticals	7,475,000	1	233,282,000	2
Semiconductors/Equipment	—	—	101,251,000	1
Software and Information	116,371,000	13	3,176,119,248	25
Total	883,116,000	100	12,790,779,273	100

Source: Price Waterhouse (1998)

technology powerhouses as California's Silicon Valley and Boston's Route 128, Georgia ranked tenth among states in the number of Internet-related venture capital deals within the state, seventh in the total amount invested, and second in the amount invested from among those deals. In 1997 the \$30 million invested in an Atlanta developer of multimedia and Web/Internet services for corporations was the third-largest deal in the nation in this sector. Georgia, New York (second), and Connecticut (ninth) were the only states besides California included in Price Waterhouse's listing of the 1997 top ten Internet deals in terms of the total amount invested (Price Waterhouse 1998).

Louisiana. Business services firms received the lion's share of Louisiana's \$36,100,000 in venture capital funds in 1997 (Table 7). The industrial, healthcare, software and information, and communications sectors had much smaller shares. A total of twelve distributions of funds were made to firms in Louisiana in 1997 (Price Waterhouse 1998). Expansion-stage companies made up 67 percent of the venture capital recipients (Table 6). The relative number of expansion companies in the state receiving venture funding was the largest in the Southeast.

Mississippi. Most of Mississippi's venture capital investments—90 percent of \$10,420,000—went to consumer firms, with the remaining 10 percent to the medical instruments and devices industry. Two distributions of venture capital were made to firms in Mississippi in 1997 (Price Waterhouse 1998). These two disbursements went to a start-up and a public company.

Tennessee. Healthcare firms picked up almost three-quarters of the state's total venture capital investments, while industrial and communications firms received most of the remainder. Twenty-one distributions of venture capital were made to firms in Tennessee in 1997 (Price Waterhouse 1998). Expansion-stage firms, with 43 percent of the total, received the largest share of funding.

State Policies

The states in the Southeast have followed a variety of policies in attempting to increase the amount of venture capital and the number of venture capital firms operating in their states. The states have focused to varying degrees on increasing the number of venture capital funds and the amount funds invest within their respective states, developing the high-technology and research sectors, and increasing interaction among the various actors involved in the venture capital industry. These efforts have been implemented only relatively recently, so few clear results have emerged to show their impacts on investment or, more importantly, employment or income in the states.

Alabama. The science, technology, and energy division of Alabama's Department of Economic and Community Affairs helps provide research grants to scholars and businesses and aids in technology transfers from the National Aeronautics and Space Administration to local businesses. The state's Small Business Innovation Research Program provides information on

TABLE 6 Venture Capital Investment by Stage of Development, 1997 (percent)

	Start-Up/Seed	Early	Expansion	Late	Public	Turnaround	Not Categorized
Alabama	31	31	19	13	0	0	6
Florida	7	26	38	18	2	0	10
Georgia	15	33	32	11	1	1	6
Louisiana	8	17	67	8	0	0	0
Mississippi	50	0	0	0	50	0	0
Tennessee	10	24	43	10	5	0	10
Southeast	13	28	36	13	2	1	7
United States	5	15	53	17	0	0	9

Source: Price Waterhouse (1998)

federal financial assistance for technology development to small businesses and entrepreneurs.

Florida. Focusing on the number of venture capital firms operating in the state, Florida lawmakers are concerned that most of Florida's venture capital comes from outside the state. As a result, legislation has been proposed that would give a 100 percent credit on the state's premium tax for insurance companies that invest in Florida-based venture capital firms (McKinnon 1997). By focusing on creating more Florida-based institutional investors (because, as discussed above, it is institutional investors who seek out larger and later-stage deals), the state may promote even further the venture funding of later-stage companies.

Georgia. Initial failures in luring high-technology firms helped motivate Georgia's business leaders to see what could be done to make the state more competitive in securing and developing homegrown high-technology companies ("20 Years..." 1998). This motivation led in 1990 to the creation of the Georgia Research Alliance, a partnership among universities, businesses, and state government. Its main areas of focus are Georgia's telecommunications, environmental technology, and biotechnology industries. The alliance seeks to spur the creation of high-technology start-ups by bringing together scientists and entrepreneurs and systematically investing in the state's research infrastructure. The organization has raised more than \$200 million through a combination of state, federal, and private sources. The money is invested in eminent scholars, research facilities, and scientific equipment for Georgia's research universities.

Louisiana. Louisiana's Department of Economic Development has several programs and incentives to promote the flow of venture capital funds to businesses based in the state. For example, one program provides matching state funds of up to \$5 million for private Louisiana-based venture capital funds worth at least \$5 million. A related program provides for a coinvestment in a business located in the state of up to one-fourth of the funding for a given stage of investment, but

not more than \$500,000, for any qualified venture capital fund with at least \$7.5 million in private capital, which may come from outside the state. Yet another program provides \$1 for every \$2 of private capital up to \$5 million for minority venture capital funds that have at least \$250,000 of private investment (Louisiana Department of Economic Development 1998). In addition, tax credit legislation similar to that proposed in Florida has led to the creation of seventeen in-state venture capital firms (McKinnon 1997). Despite these initiatives, Louisiana still lags behind most of the Southeast in venture capital investment.

Mississippi. The Mississippi legislature passed the Venture Capital Act of 1994 to foster industry in the state. This program was funded through the sale of a \$20,000,000 general obligation bond guaranteed by the state. The act created the Magnolia Venture Capital Corporation and the Magnolia Venture Capital Limited Partnership to "increase the rate of capital formation, stimulate new growth-oriented business formations, create new jobs for Mississippi, develop new technology, enhance tax revenues for the state, and supplement conventional business financing" (Mississippi Legislature 1997, 4).

The Magnolia Venture Capital Corporation is intended to serve as the general partner primarily for potential high-growth businesses located in Mississippi. The corporation will invest in the companies, which in turn will be the limited partners. Seventy percent of the funds are to be invested in start-up businesses (less than thirty-six months old), and the remainder can go to older firms. From January 1, 1996, through January 31, 1997, the corporation received eighty business plans. Of those, sixty-two were determined to be eligible to apply for the program, ten are under review, five were referred to another venture capital firm, one was retracted, and one was approved (Mississippi Legislature 1997).

Tennessee. State Senate Joint Resolution 704, filed April 23, 1998, calls for Tennessee's Department of Treasury to study the feasibility of investing the assets of the Tennessee Consolidated Retirement System in

TABLE 7 Venture Capital Investment in Southeastern States by Type of Company, 1997^a

	AL	%	FL	%	GA	%	LA	%	MS	%	TN	%
Biotechnology	500	1	—	—	2,539	1	—	—	—	—	—	—
Business Services	—	—	24,307	7	4,375	1	22,250	62	—	—	500	1
Communications	5,000	10	140,268	41	79,641	23	700	2	—	—	9,463	10
Computers and Peripherals	90	0	226	0	3,500	1	—	—	—	—	—	—
Consumer	7,500	15	12,000	4	28,300	8	—	—	9,420	90	1,200	1
Distribution/Retailing	—	—	3,800	1	20,320	6	500	1	—	—	—	—
Electronics and Instrumentation	10,600	22	17,785	5	11,700	3	—	—	—	—	—	—
Environmental	—	—	—	—	—	—	—	—	—	—	—	—
Healthcare	23,100	47	96,400	28	88,770	26	3,050	8	—	—	72,416	73
Industrial	—	—	10,965	3	18,680	5	8,100	22	—	—	15,000	15
Medical Instruments and Devices	—	—	—	—	5,305	2	—	—	1,000	10	—	—
Miscellaneous	—	—	—	—	—	—	—	—	—	—	—	—
Pharmaceuticals	—	—	6,450	2	—	—	—	—	—	—	1,025	1
Semiconductors/Equipment	—	—	—	—	—	—	—	—	—	—	—	—
Software and Information	2,501	5	27,800	8	84,570	24	1,500	4	—	—	—	—
Total	49,291	100	340,001	100	347,700	100	36,100	100	10,420	100	99,604	100

^aThousands of dollars

Source: Price Waterhouse (1998)

TABLE 8
Internet-Related Investments, 1997

Number of Deals	
California	220
Massachusetts	48
Colorado	20
New York	17
Pennsylvania	16
Minnesota	14
Texas	12
Virginia	12
Washington	12
Georgia	9
(\$ millions)	
California	1,088
Massachusetts	224
New York	96
Colorado	72
Texas	56
Pennsylvania	53
Georgia	45
Virginia	40
Minnesota	33
Connecticut	29
\$ per Deal (millions)	
New York	5.6
Georgia	5.0
California	4.9
Massachusetts	4.7
Texas	4.7
Colorado	3.6
Virginia	3.3
Pennsylvania	3.3
Minnesota	2.4

Source: Price Waterhouse (1998)

alternative investments, including, but not limited to, venture capital, private equity, corporate restructuring, expansion capital, and energy and natural resources. In addition, Tennessee's Department of Economic and Community Development has new programs that target

small and minority-owned telecommunications firms. These programs provide firms with education, training support, market development counseling, and loan guarantees of up to 80 percent for a \$400,000 project.

Conclusion

In recent years venture capital investment throughout the United States and in the Southeast has shown dramatic gains. Nationally, venture capital has already played a major role in the formation of some of the most important and innovative firms in the U.S. economy and has provided an alternative outlet for investment funds from major institutional investors. As the venture capital industry matures in regions of the country where it has a longer history, it is seeking out new arenas for expansion, such as the Southeast.

The growth of venture capital investment in the Southeast has been supported by trends such as the region's economic development, the emergence of regional venture capital firms, increasing competition in venture markets in other parts of the country, state policies favorable to venture capital investing, and the growth of high-technology and communications-related industries in the Southeast. Venture capital investing has become an important alternative source of funds for less-developed, higher-risk entrepreneurial firms that may not have access to more traditional capital sources.

Starting from a small base just a few years ago, venture capital has become an integral part of new business formation in the Southeast. New technological advances, business opportunities, and entrepreneurial needs should continue to spur development of the region's venture capital industry.

State actions to spur venture capital investing in the region have been quite varied in nature. Government support of venture capital funds or projects has been active in some southeastern states and at least considered by the rest. So far, clear evidence on the impact of state venture capital support and, implicitly, funds on income and employment is not available. The role of public support for funds and projects therefore may still be questioned. Nonetheless, with or without state involvement, it seems likely that venture capital will become increasingly important to the emergence of new industries and technologies in the region.

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