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Venture Capital and Private Equity: Financing Innovation in the Private Sector

*Robert D. Pavey**

I have been spending the last twenty-five years of my life as a venture capitalist investing nationally, but located here in Cleveland.

The subject of this panel is financing private innovation. I do not claim to be an expert on all forms of financing private innovation, but I try to know a little bit about venture capital and private equity, and that primarily is what I am going to talk about. In the Question and Answer we can go beyond that, because venture capital is really — at least institutional venture capital, which is what I do — a small component of the financing of innovation in private companies in this country, and internationally.

We institutional venture capitalists get a lot of the press, but we are the tip of a very big private equity iceberg. The institutional venture capitalist is a firm like Kleiner Perkins, or Morgenthaler Ventures, or about six hundred other firms in this country that makes a full-time profession out of the investment of equity capital in young private growth companies. As a group we raise and invest three to four billion dollars a year.

We will talk later about where that money comes from, what kinds of things it is invested in, and how that fits into the overall financial markets, but first let me give you some background information. Institutional venture capital is a young industry. It had its birth after World War II in the late 1940s when some families who had been doing venture capital informally for decades set up dedicated venture capital groups — the Whitney family, the Rockefeller family, and the Phipps family through Bessemer.

Then the SBIC program gave the industry a big boost with a fair amount of government money. The SBA created a large number of things called SBIC's (Small Business Investment Companies), many of which were not successful, but people learned by doing, spun off, and started other private institutional venture capital firms which remain in business today. So we are a group of 500 or 600 entities that raise money and invest it as equity in young private growth companies.

Today, as shown in chart 1, institutional venture capital is a three-to-four-billion-dollar-a-year business. Back in the 1970s, we were a

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The following text was compiled from the transcript of the remarks made by Mr. Pavey at the Conference.

much smaller industry. We were an industry that invested several hundred million dollars a year.

Then there was a period of very dynamic growth through the mid-1980s. Some excesses developed, crept into our industry, as frequently appears when that kind of growth occurs in a young industry. The returns that we as an industry generated for the institutional investors who give us capital started to fall. The obvious happened, and we had a decline in the capital they were willing to give us as a group to invest.

Following this decline the Venture Capital industry came into balance in about 1991, and fund raising started swinging back the other way. I will talk later about why and what is happening in that marketplace. But the industry certainly has been cyclical. We are at a stage now where we were a decade ago in terms of amount of capital.

Now I am going to put that in a larger context, because the institutions that invest money with us think of us as an asset class — as private equity investors, not simply as venture capital investors. And I think that is probably the most accurate picture.

Back in the early 1980s (see chart 2) the cross-hashed portions of the private equity bar representing venture capital, was about all there was in terms of private equity. You see a very significant development in the middle of the 1980s, however, and that is the growth of buy-out funds which first became significant in 1983 or 1984. These are institutional investors which invest private equity in more mature companies. They have been lauded. They have been cursed. But they are certainly the largest factor today in the institutional private equity world in terms of the amount of dollars.

So whereas venture capital is a three-to-four-billion-dollar-a-year-business today, private equity is a twenty-billion-dollar-a-year-business of which venture capital is maybe twenty percent. Today many private equity firms, ourselves included, do some buy-outs as well as early stage seed investing. And the very large firms, now moving beyond the largest venture capital firms like Kleiner Perkins, and moving up to billion dollar firms like KKR or a Forstman Little, are in the black portion of the bar.

Buyouts are an industry that was generating wonderful returns in the 1980s. It, too, has cycled a bit, but is now returning to the levels of the 1987, 1988, and 1989 time frame.

Where does our money come from? The people that we as institutional investors raise that four or twenty billion from, depending whether you are looking at just venture capital or all private equity, are also institutions.

You may get a slightly different picture when we turn the discussion to Canada, but it is certainly the institutional investor that provides our capital; and as seen in chart 3, it is primarily pension funds. About half the capital comes from pension funds, both corporate and

the public employee retirement funds, then the balance from other kinds of institutions.

These sources of our capital are pools of capital that have a long-term orientation, that believe in diversity in their asset allocation, and that will allocate a few percent of their capital -- in the case of some very forward-thinking, long-term-oriented groups like the Yale University Endowment and others, as much as twenty-five percent of their capital — to private equity.

This capital is invested in the kind of private equity we have been talking about, and then they will also have an allocation to either other private investments, such as real estate, oil and gas, or international business. All this is in an effort to get away from the public markets where they anticipate their returns over the next decade or two are not going to live up to the results of the last decade.

For those of you who do not know it or have not focussed on it, the decade of the 1980s was a one-in-ten kind of decade for returns from both public domestic equity and public domestic debt. Institutions prospered. The Dow Jones Industrial Average back in the early 1980s was 700, and it is today, as you all know, well over 4,000. Institutional investors have fared very well with returns on equity portfolios over fifteen percent per year. As a result you read a lot today about more and more money moving into equities.

Many wise people who look forward over the next decade say that kind of return cannot continue to exist. Long-term equities, public equities, tend to produce a ten percent-per-year kind of return. Returns were certainly well above average in the decade of the 1980s.

So institutional investors are concluding they have to find other places to which to allocate some of their capital in order to continue to generate good returns. They are looking at a variety of private equity sources, and are giving money to funds like ours to invest.

To give you some sense of geography as we sit here in Cleveland and/or in Canada, the funds that raise this money are clustered as seen in chart 4. Because of the importance of the buy-out funds, many of which are located on the east coast, a good chunk of that private equity is raised by firms in New York and in the East. We will come a little later to where they invest it, at least the venture capital components, and that is a different picture. But the West and the Northeast house two-thirds of the private equity funds, and the rest of us are spread around all over the rest of the country.

Now I will focus on the capital our industry invests. Specifically, I am going to focus on the venture capital segment of private equity, which I think is the most innovation oriented and more the subject of my talk and the rest of today's talks.

The cycle of venture capital disbursements is very similar to the money raising cycle. Like most institutions, if you give it to us, we will

find a place to invest it. Venture capital investing peaked in the mid-'80s after growing from a very low base in the 1970s. It fell down in the early 1990s and has again started to rise.

We do not have year-end 1994 data yet from Venture Economics. Estimates are out from other people, and the '94 numbers are certainly up in this three-to-four-billion dollar level.

I have added some additional numbers to my chart 5, and some footnotes that I think are not in your handout materials. The thing I would like to emphasize — it goes back to my earlier comments on venture capital — is that we are really a very small factor in the innovation world.

We institutional venture capitalists — take the last year for which full year data is available, 1993 — put money in 276 companies that were first-time raisers of venture capital (that is the black portion of the bar). The rest of the money went into follow-on investments — investments in companies that had already raised institutional venture capital.

Even at the peak in the mid-1980s, our industry invested in 500 to 700 new companies in a typical year. Compare that to 500,000 new corporate formations in this country every year. And in order to put that in some context, I have made some notes on my chart 5.

First of all, "Angels," defined not as a family member, but arms length individual venture capital investors, invest fifty billion dollars a year in young growth companies, compared to the three to four billion from institutional venture capitalists. And measured in terms of number of companies, they invest in 1,000 companies for every one that we invest in. In conclusion, angels invest an average of about \$100,000 dollars in about 500,000 companies per year (total \$50 billion dollars), while institutional venture capitalists invest an average of \$10,000,00 dollars in 300-400 companies per year.

Those numbers really define our economic role. Institutional venture capitalists tend to finance the small number of young companies that can productively deploy large amounts of capital with the potential to produce major businesses. Angels, successful business people, people who have some capital, tend to be the primary source of money for the vast majority of corporate innovators in this country, many of whom will be very productive, but will remain small businesses.

Also, to put the buy-outs into some perspective, I have added another note. Mergers and Acquisitions (M&A's) were a 270 billion dollar business in this country last year, according to some numbers I just saw. The leverage buy-out component of that is significantly less than ten percent. Again, not a big factor in the overall corporate M&A world of this country, but perhaps the most innovative portion of the M&A world.

A little different break-down on disbursements gives you informa-

tion on how much institutional venture capital is actually going into seed companies as seen in chart 6. As you might well imagine, when the money starts to dry up, as it did in 1991, very little is available for start-ups. Much of it goes into later stage financing of the more mature companies. With a little more money flowing into our industry today, a little more is available for our early stage start-ups.

Chart 7 gives more information on what kinds of industries are raising this money; it is going into a fairly narrow slice of the U.S. economy. As anticipated this is the portion of the economy that needs millions of dollars to start an early stage company.

Most of our institutional venture capital is going into biotechnology, health care, electronics, communications, and computer software. These are the industries that have historically made money for the venture capital industry; they are dynamic growth industries. We need growth to make our process work.

So we venture capitalists are not a source of capital for large segments of the U.S. economy and for innovation that goes on in those segments. That money comes from other sources of private equity, such as either corporate support or from individual venture capitalists (angels), or buyout firms.

I described earlier where private equity is raised and chart 8 addresses where venture capital is invested. Again, it is very much bi-coastal. A large chunk of institutional venture capital goes to California, and specifically to the Silicon Valley where a lot of innovation takes place in these industries we just talked about. And a second concentration of it goes up into the Northeast. The rest of the country gets a much smaller share of institutional venture capital. Fortunately, it receives a larger share of other kinds of private equity.

People, especially those not in California or Boston, argue that all we need to do is form more venture capital firms, and we will have more innovation. I think that is not the entire answer. We certainly have good technology in Cleveland. We also have several good venture capital firms here. What we really need is a lot more experienced growth company executives, more people who have the skill and knowledge to build these dynamic, rapidly growing companies. There is a symbiotic relationship between the technology, the management talent, and the capital that is working very well in Silicon Valley. It is also working very well in Boston; it is working to a degree here in Cleveland, Minneapolis, and some other cities where the pieces are beginning to come together nicely.

This is, unfortunately, too regional a success story, and I think as we turn to north of the border, we will see that some of the problems that we are finding in the Midwest are also problems that are being encountered in Canada. My advice is to do everything you can to nurture your successes. Successful young companies create an environment

where more young companies are able to succeed. Successful venture capital firms like ours also create an environment where other venture capital firms can succeed. My other advice is to view private equity more broadly than simply as institutional venture capital. The other sources of private equity are critical to financing innovation in most cities in North America, and their role is under-recognized and under-supported.

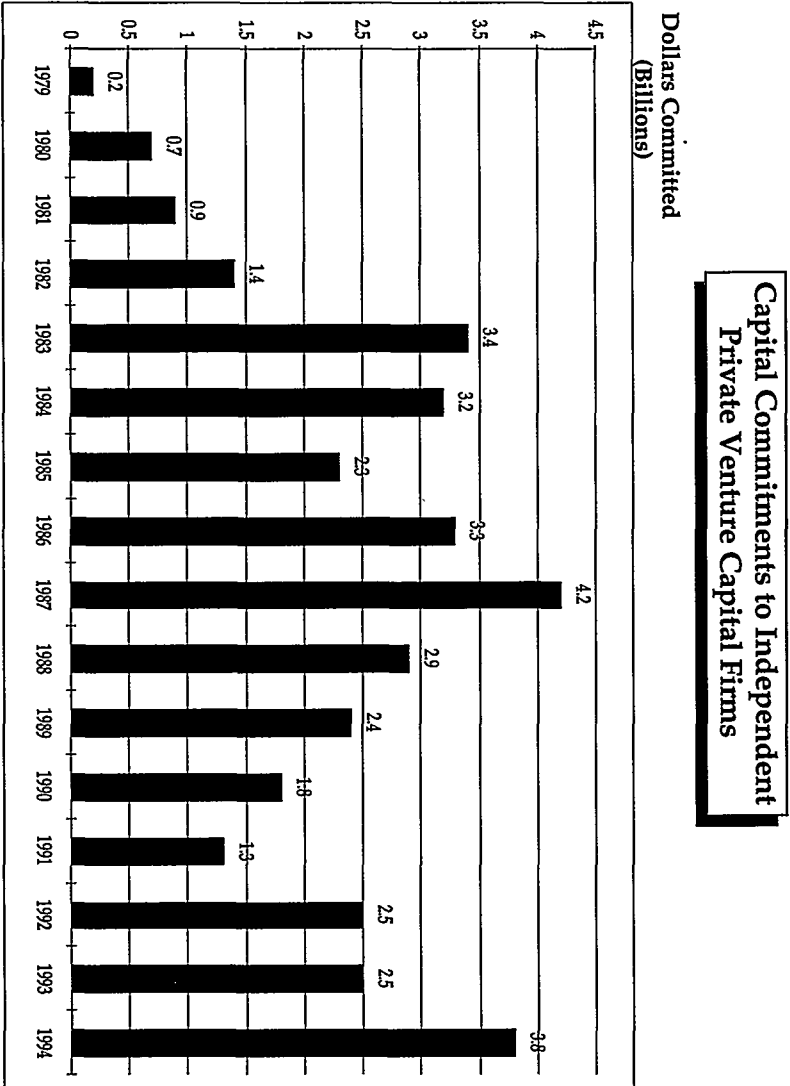
To end on an optimistic note, my firm has found that perhaps the best indicator of the venture environment is seen on chart 9. It is a graph that relates the price/earnings ratio (P/E) of a young growth company stock fund (the T. Row Price New Horizons Fund) to the P/E of the Standard & Poors 500. This ratio historically bounces back and forth between one and two. In a sense it is a measure of the premium that the stock market is willing to pay for the kind of growth companies that we build.

The ratio gets overdone at times, and it certainly got overdone in 1969. That was a crazy peak right when I got into this industry. And from then to 1974, life was very difficult and we wondered what in the world we were doing. What followed was a very good time to be in this business starting in the mid-1970s and continuing into the early 1980s. A much more difficult time followed in the late 1980s and early 1990s. And it is now starting to get better again.

You read a lot of reports that venture capital is becoming overdone. We think not. We think there is still a pretty clear indication seen on chart 9, that while there are some excesses in certain segments of venture capital technology, overall there is significantly more good news ahead before we get into trouble.

There is also an important lesson to be learned from this discussion. We have the world's strongest venture capital industry in the United States because we have the strongest over-the-counter stock market. It is essential that government policy recognize the importance of our stock markets.

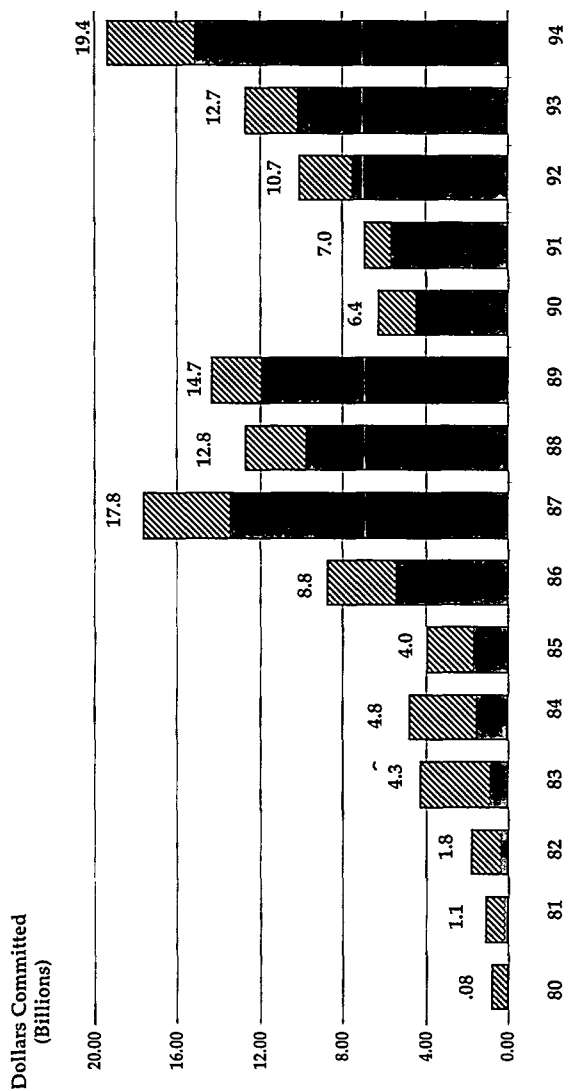
That covers my prepared remarks, and I think what I am going to do now is let our other speaker talk a bit about Canada. Then I would be happy to talk more about other kinds of capital and how they affect the venture capital process.



SOURCE: Venture Economics

MORGENTHAUER VENTURES

Capital Commitments to All Private Equity Funds

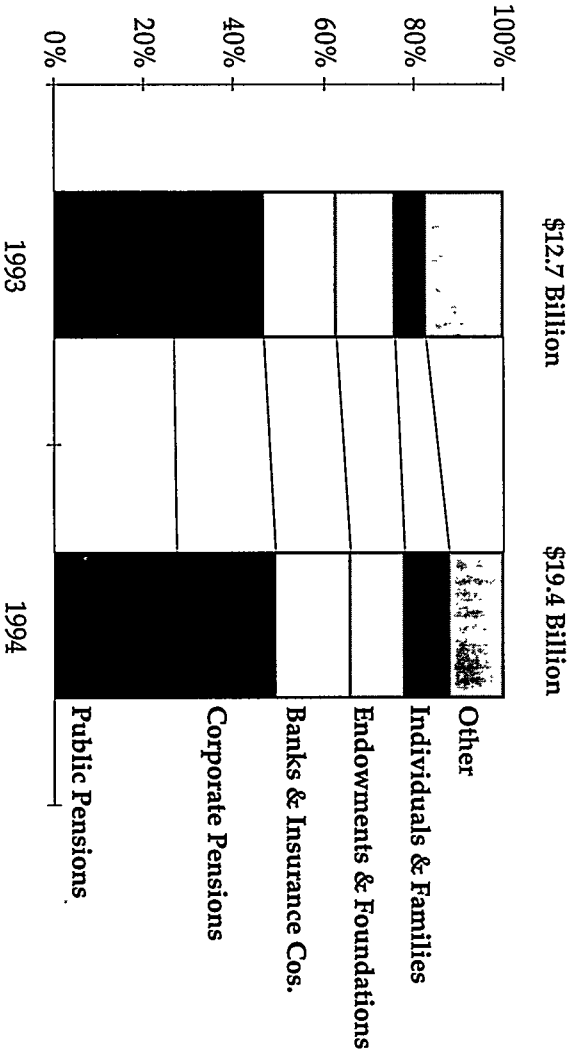


▨ Venture Capital
 ■ Buyout and Other

MORGENTHAU & VENTURES

SOURCE: The Private Equity Analyst and Venture Economics

Sources of Institutional Private Equity

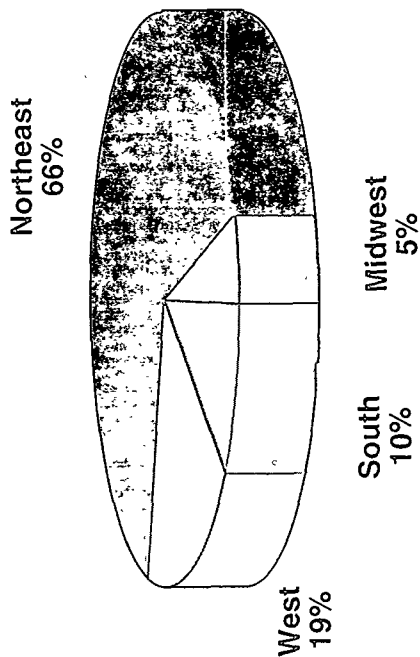


Source: The Private Equity Analyst

MORGENTHAUER VENTURES

**Private Equity Funds Raised
By Geography**

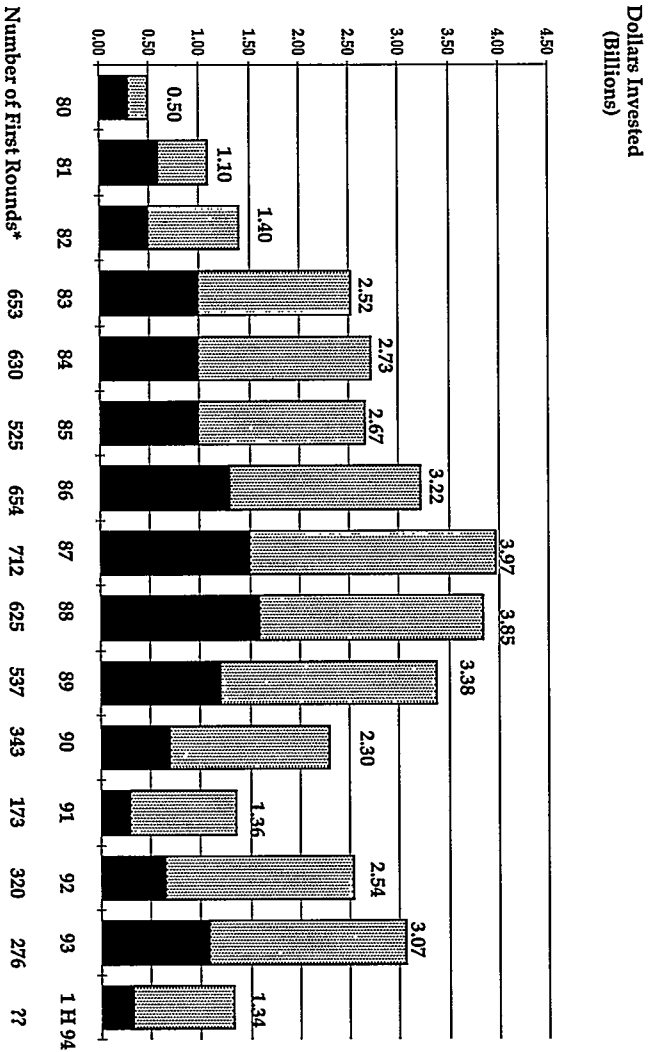
1994 = \$19.4 Billion



SOURCE: The Private Equity Analyst

MORGENTHAUER VENTURES 4

Venture Capital Disbursements

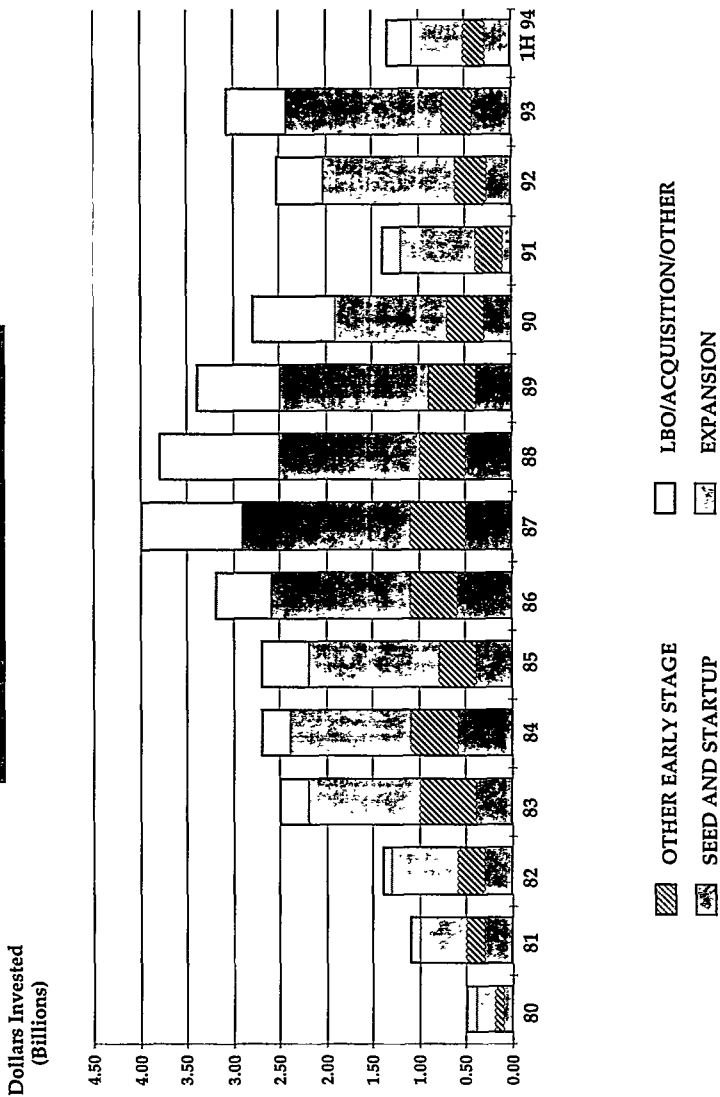


* Note: Angels invest \$50 billion/year, financing 1,000 companies for every one company financed by institutional venture capitalists. Similarly 4,500 M&As totaling \$270 billion were completed in 1994.

SOURCE: Venture Economics

MORGENTHAUER VENTURES

**Venture Capital Disbursements
By Financing Stage**



SOURCE: Venture Economics

MORGENTHAU LER VENTURES 6

**Venture Capital Disbursements
by Industry**

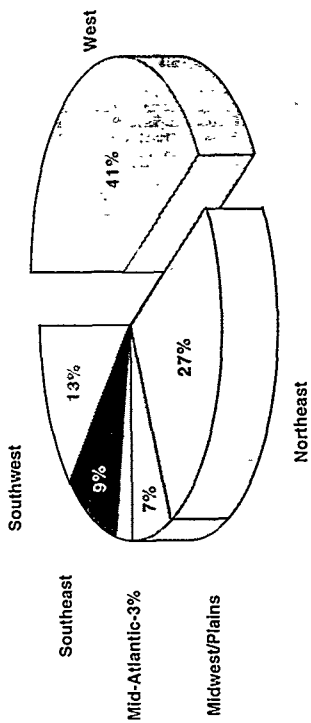
Industry	6 mo./1994		1993		1992		1991		
	\$(MII)	No. of Cos.	\$(MII)	No. of Cos.	\$(MII)	No. of Cos.	\$(MII)	No. of Cos.	
		Total		New		Total		New	Total
Biotechnology	138	55	283	92	261	95	112	60	8
Medical/Healthcare	260	100	437	159	442	192	152	115	19
Computer H/W	52	29	98	56	138	78	168	79	11
Computer S/W & Svce.	178	122	630	202	562	214	337	178	48
Telecom & Datacom.	160	63	384	113	366	125	169	96	18
Commercial Comm.	26	24	134	31	53	29	20	14	6
Other Electronics	78	37	86	67	140	84	129	69	17
Ind. Products	10	23	54	43	77	65	47	44	10
Ind. Automation	-	4	30	7	7	11	3	10	1
Energy	1	3	7	4	29	7	3	4	0
Consumer	99	50	314	83	196	88	135	68	18
Other	338	60	613	112	271	99	83	55	17
Total	\$1,340	570	\$3,070	969	\$2,542	1,087	\$1,358	792	173

Source: Venture Economics

MORGENTHALER VENTURES

Venture Capital Disbursements
By Geography

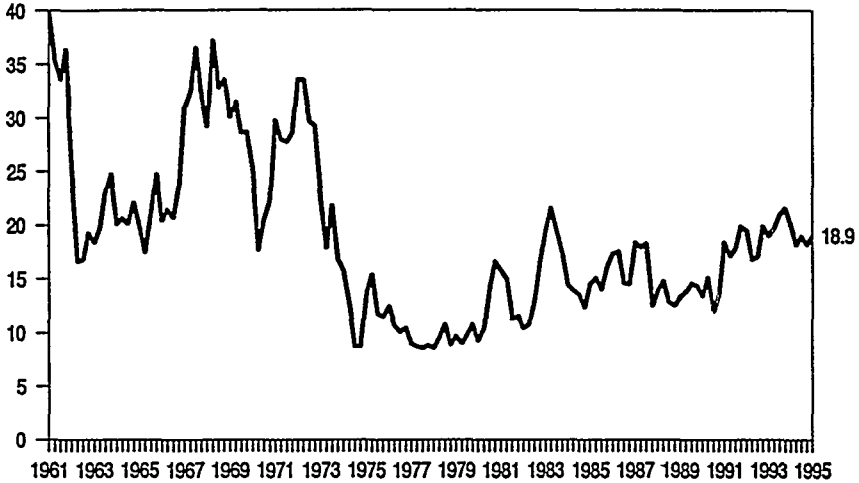
1993 = \$3.07 Billion



Source: Venture Economics

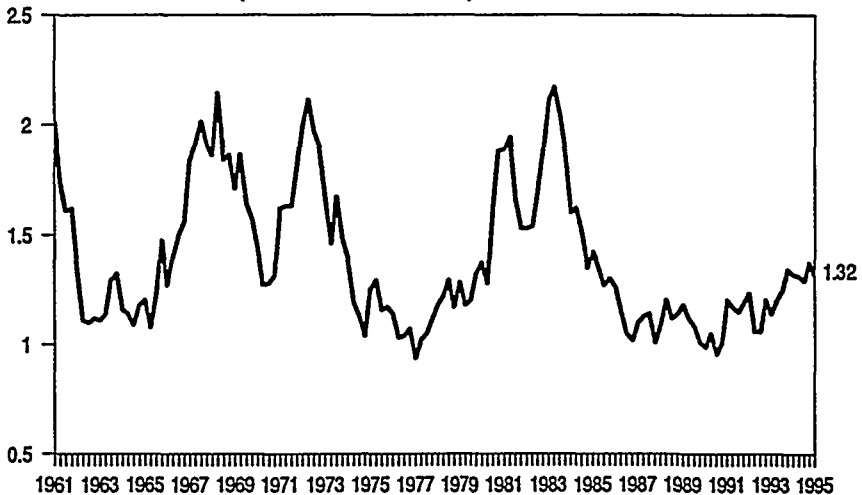
MORGENTHAUER VENTURES 8

T. Rowe Price New Horizons Fund, Inc.
P/E Ratio of Fund's Portfolio Securities
(12 Months Forward)
March 31, 1995



This chart is intended to show the history of the average (unweighted) p/e ratio of the fund's portfolio companies. Earnings per share are estimated by the fund's investment advisor from each quarter end.

P/E Ratio of Fund's Portfolio Securities
Relative to the S&P 500 P/E Ratio
(12 Months Forward) March 31, 1995



This chart is intended to show the history of the average (unweighted) p/e ratio of the fund's portfolio companies compared with the p/e ratio of the S&P 500 Index. Earnings per share are estimated by the fund's investment advisor from each quarter end.

T. Rowe Price Associates, Inc.

