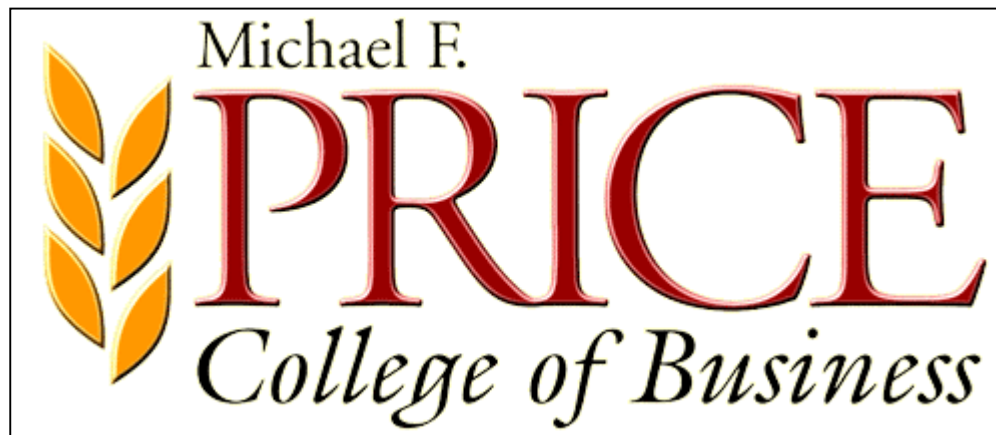


CORPORATE FINANCE

Venture Capital And Initial Public Offerings (IPOs)



Professor Bill Megginson

FIN 5043 - 930

Fall Semester 2001

Survey Current Venture Capital Practices In U.S., Europe & Asia And Forecast Trends

- **U.S. Venture Capital Techniques & Practices**
 - Patterns observed in U.S. venture capital financing
- **The U.S. Initial Public Offering (IPO) Market**
 - Phenomenal growth 1990-99; Troubled years 2000-01
- **European Venture Capital Techniques & Practices**
 - How the industry compares to America's
- **The Evolving European IPO Market**
 - Growing, but still struggling for critical
- **Smaller, But Rapidly Growing Asian VC Market**
 - Differs from US model in financing sources & targets
- **Key Requirements For A Strong Venture Capital Industry**
 - Can a strong VC industry be developed from scratch?



U.S. Venture Capital Techniques & Practices: Overview

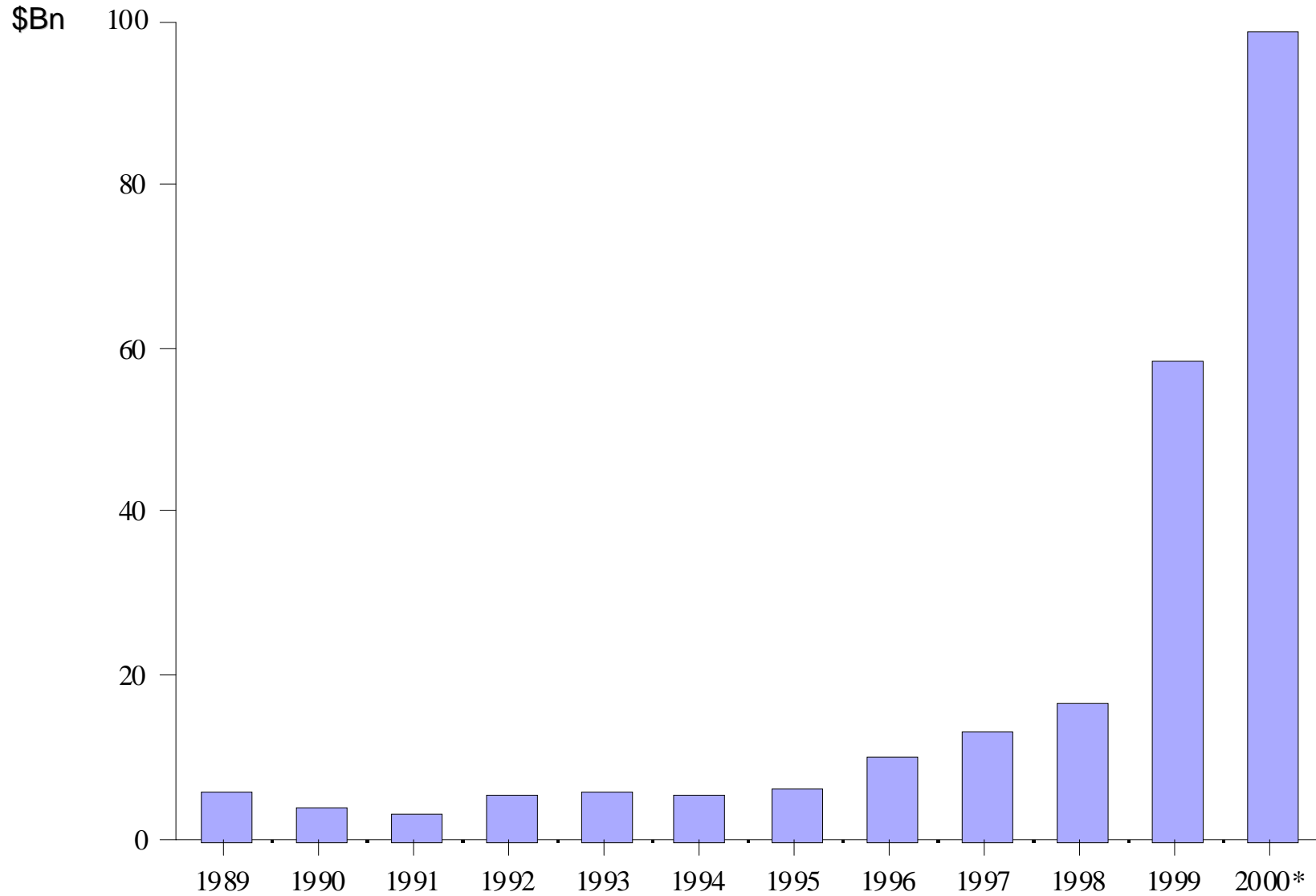
- **Modern Venture Capital In U.S Began After WWII**
 - Remained very small until 1978
- **Total VC Funding & Investment Has Surged Since 1993**
 - Annual fund-raising \$2-4 billion, 1980-1993
 - Reached \$59.2 Bn in 1999, \$76.2 Bn in 2000; off sharply 2001
 - Fund-raising & investment highly (but not perfectly) correlated
- **Types Of Institutional Venture Capital Funds In The U.S.**
 - Institutional venture capitalists vs “Angel capitalists”
 - SBICs; Financial & corporate VCs; VC limited partnerships
- **Typical Structure Of VC Limited Partnerships**
 - VC firms launch multiple (separate) funds over time
 - Typically raise \$100 mn-\$1billion via subscriptions
 - Fund invests during years 1-5; harvests during years 5-10
 - Typically 20% “carried interest” plus management fee

Annual Fundraising By US Venture Capital Funds, 1996-2000

Year	Number of Funds	Amount Raised, \$Bn	% Follow-On Funds
1996	150	\$10.7	71%
1997	228	17.9	79
1998	252	27.7	88
1999	391	59.2	78
2000	401	76.2	NA

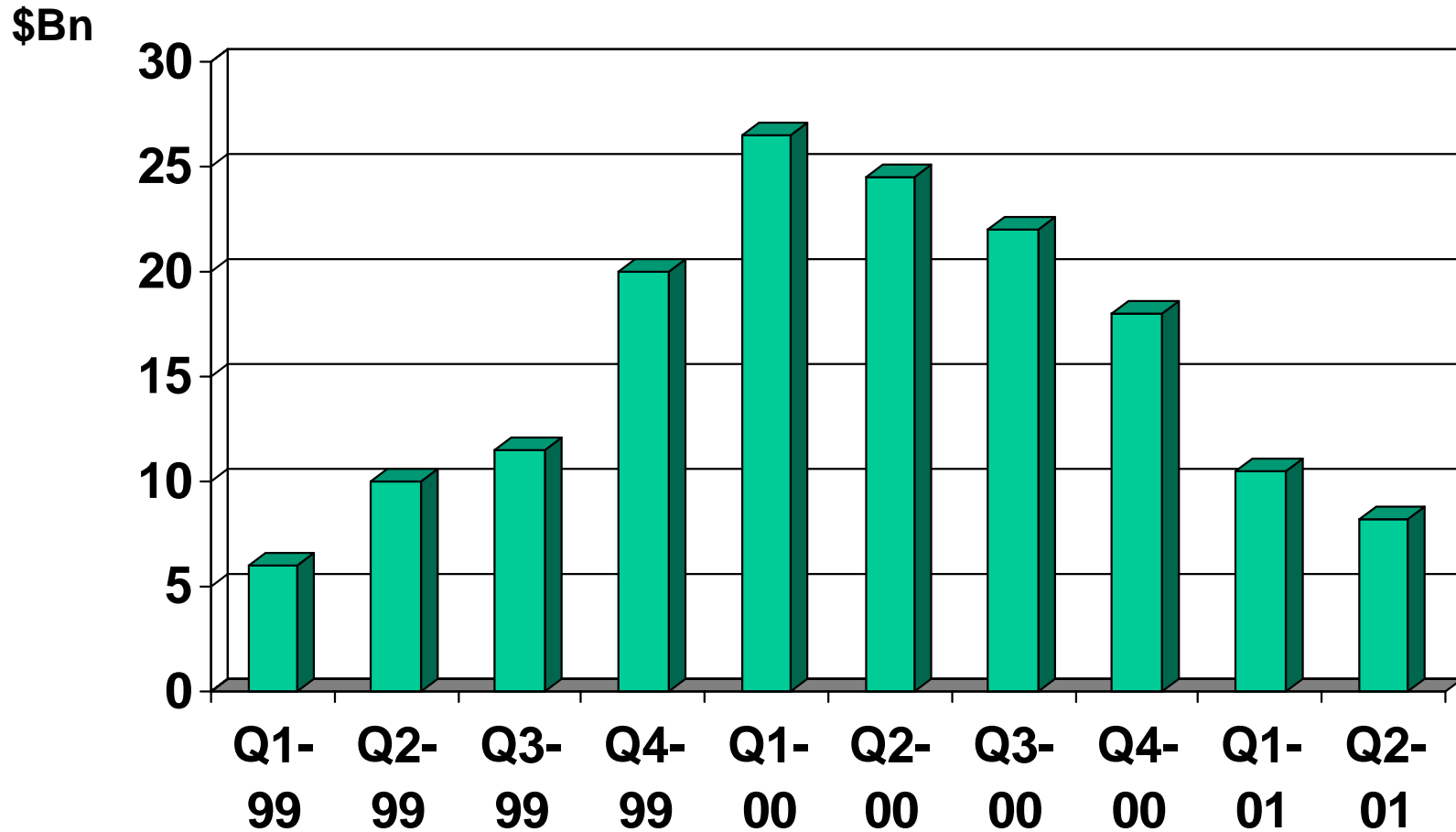


Annual Investment By US Venture Capitalists



*Annualized, as of 6/30/00

Equity Investment In U.S. Venture-Backed Companies, 1999Q1 - 2001Q2



Market Share Of US Venture Capital Industry: By Type Of Fund, Q2 1999

Investor type	Amount (\$ Mn)	Percent
Private partnerships	\$5,050	66.8%
Other partnerships	1,037	13.7
Corporations	732	9.7
Corporate venture groups	226	3.0
SBICs	217	2.9
Individuals	151	2.0
Investment Bank/Fincl Instit	113	1.5
Other investors	35	0.5
Total	\$7,561	100.0%

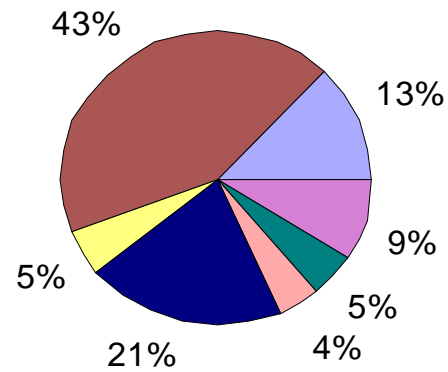
U.S. Venture Capital Techniques & Practices: Sources Of Capital

- **Sources Of Capital Has Changed Significantly Over Time**
 - Originally, most funding from wealthy individuals
 - During 1960s & 70s, financial institutions very important
- **Since 1978, Pension Funds Have Become Predominant**
 - Capital gains tax cut, Labor Dept rule change in 1978
 - Pension funds invest up to 5% in VC; also reinvested profits
 - University & other foundations/endowments also important
- **U.S. And Foreign Corporate Participation Highly Variable**
 - Corps have deservedly bad reputation “fair weather investors”
 - Conflicting objectives; raised \$7.4 bn 1999, only \$2 bn 2001
 - Now generally participate as limited partners, not sponsors
- **Federal & State Governments Play Small Role in VC Industry**
 - SBIR program fairly successful; few others have been

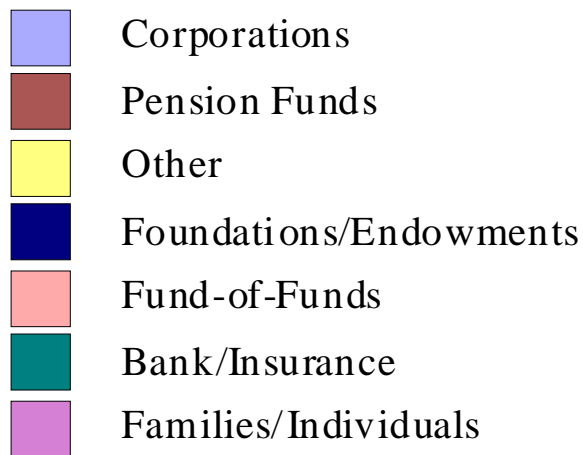
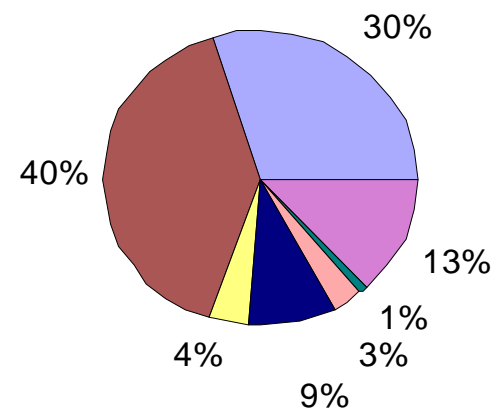


Sources Of Capital Contribution To US Venture Capital Funds

1996



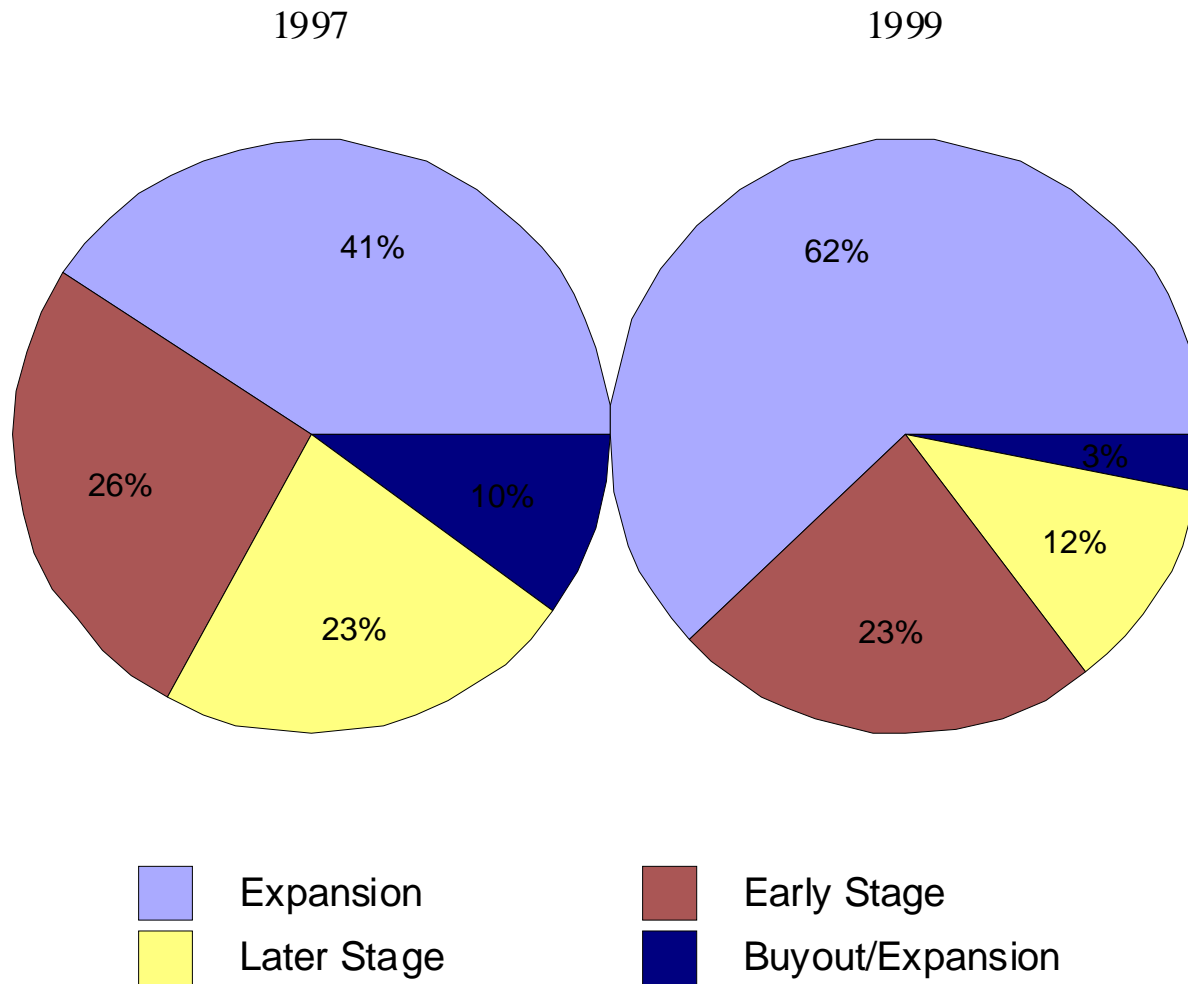
1997



U.S. Venture Capital Techniques & Practices: How Investments Are Structured

- **Venture Capitalists Typically Make Early, Expansion Stage Investments In (Private) Entrepreneurial Growth Companies**
 - Relatively few pure start-ups are funded by VCs
 - Early vs later-stage investment preferences change over time
 - Growth of internet investing causing shift to more start-ups
- **The earlier the stage of investment, the more onerous the VC's terms will be (price, control surrendered)**
 - Expect to earn 30-50% annual return, depending upon stage
 - VCs almost always invest using convertible preferred stock
 - Covenants severely restrict entrepreneur's discretion
 - Entrepreneurs bear most risk, but can earn high return
- **VCs Always Look For "Exit Opportunity"**
 - IPO the preferred exit vehicle, followed by merger/acquisition
 - Record \$37. Bn VC-backed mergers 1H2000 (132 deals)

U.S. Venture Capital Investments, By Stage Of Company Development, 1997 & 1999



U.S. Venture Capital Techniques & Practices: Geographic & Industrial Investment Patterns

- **VC Investments Are Highly Concentrated Geographically**
 - California usually receives over half US total VC investment
 - Northern California (Silicon Valley) attracts 25-50% of total
 - New England, NYC, Washington DC also major recipients
- **VC Investment Has Always Favored High-Technology**
 - Specific target industries change over time
 - Since 1997, internet-related investments have dominated
- **VCs Have An Extraordinary Investment Record**
 - Have backed the most successful US companies (Microsoft, Intel, Sun, AOL, Amazon, Fedex, Apple, Amgen, Yahoo!)
 - Have generated disproportionate number of patents
 - Have actually achieved financial investment goals (IRR)



U.S. Venture Capital Investment By Industry

First Half 2000 Versus Full-Year 1998

Industry	Q1-Q2 2000	1998
Internet specific	51.5%	13.4%
Computer software & services	15.8	21.6
Communications	13.8	17.8
Consumer related	1.9	6.9
Other products	4.1	12.7
Medical / Health	3.4	12.8
Semiconductor / Other electronic	4.9	4.2
Biotechnology	1.9	5.2
Computer hardware	1.7	3.1
Industrial / Energy	1.2	2.4
Total (\$Millions)	\$49,391	\$18,705

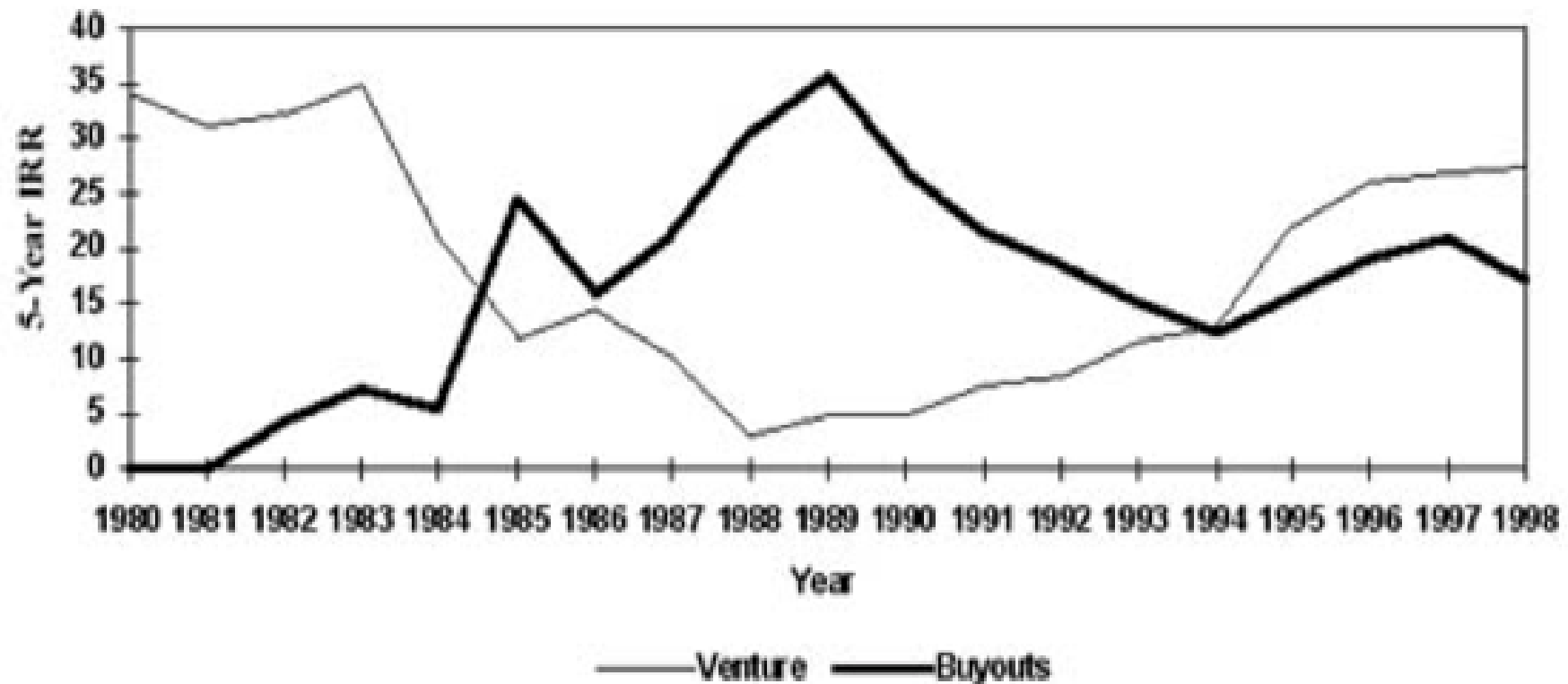
Internet Related Venture Investments 1st Quarter 2000

Internet Category	Amount Invested (\$Mn)	Percent of Total
Internet/online content or services	\$15,554	39.9%
Online software & services	6,165	15.8
Online commun. & infrastructure	9,203	23.6
Internet/online E-commerce	8,083	20.7
Total Internet Related	\$39,005	100%

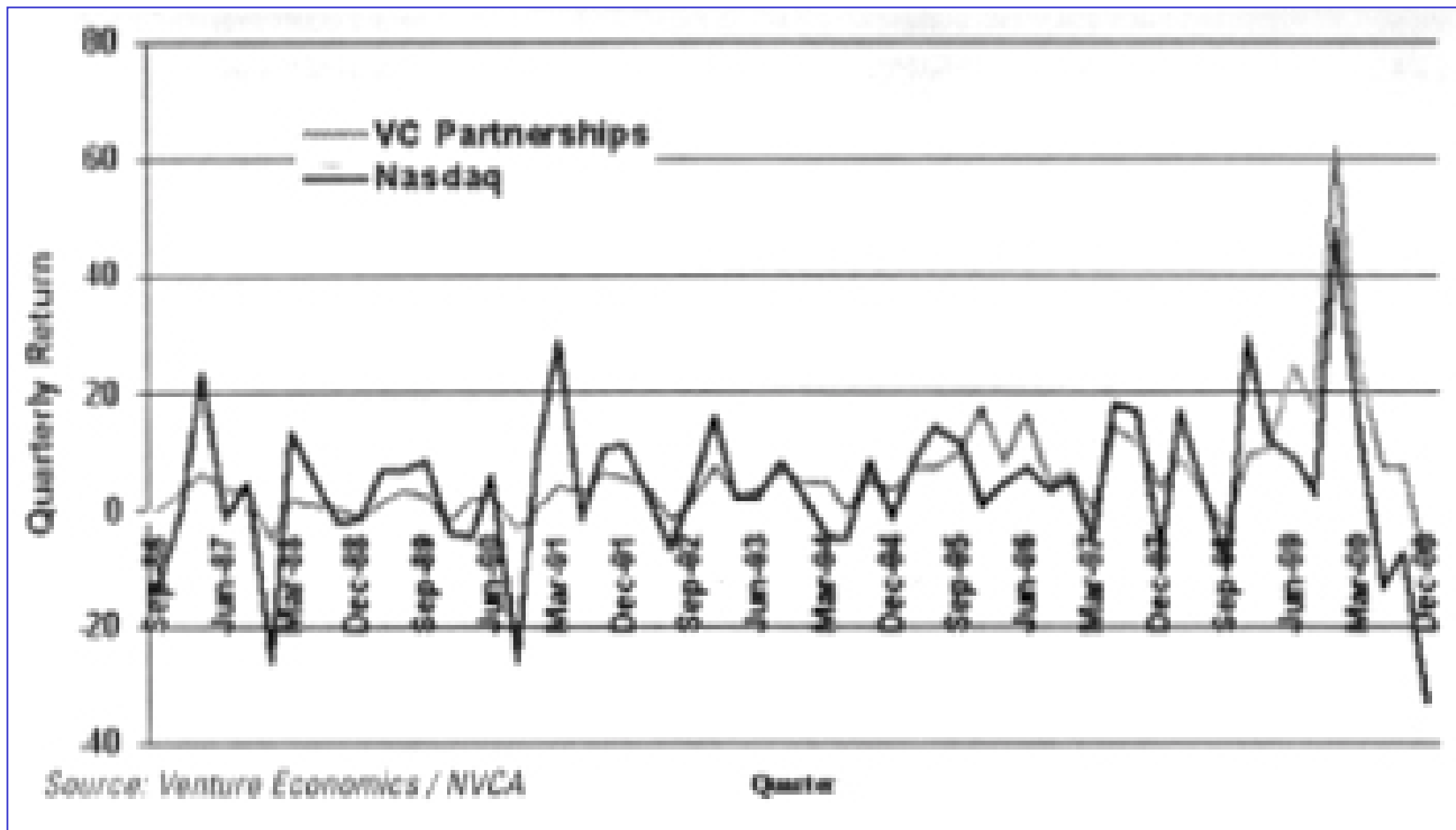


Returns To U.S. Venture Capital & Buyout Funds

5 Year Rolling IRRs for Venture Capital and Buyout Funds



U.S. Venture Capital Partnership Returns Vs. Public Market (Quarterly) Returns, 1969-200



Investment Horizon Returns For U.S. Limited Partnerships Formed 1969-2000

Sample	3 Month	1 Year	3 Year	5 Year	10 Year	20 Year
Early/Seed Stage	-12.3%	40.7%	89.4%	63.5%	35.1%	23.5%
Balanced Stage	-7.9	33.3	61.3	42.7	26.8	17.4
Later Stage	-9.2	18.3	31.0	30.8	25.0	18.1
All Venture	-10.2	32.5	62.5	46.8	29.4	19.6
All Buyouts	-1.4	11.2	14.7	17.4	16.5	18.5
Mezzanine	0.8	15.7	11.1	11.6	12.6	11.9
All Private Equity	-4.8	19.0	30.1	28.1	22.0	19.2

The U.S. Initial Public Offering Market

- **IPO Market Usually Considered Key U.S. Economic Strength**
 - 300-700 U.S. firms able to tap public equity market each year
 - Generally raise \$50-200mn for firm & founding shareholders
 - Though highly cyclical, was very strong 1991-2000
 - NASDAQ the leading IPO market, but NYSE also strong
 - 544 IPOs raised \$71 bn (1999); 429 IPOs, \$73 bn (2000)
- **VC-Backed IPOs Are An Important Subset Of Total IPOs**
 - Number peaked in 1996 at 280 issues vs 239 in 2000
 - But 2000's total raised, \$22.9 Bn, exceeds 1996's \$11.9 Bn
 - 370 internet IPOs raised \$46.2 Bn in 99; 9 times 98 number
- **Market Dominated By “Bulge Bracket” Investment Bankers**
 - Most IPOs yield 7% U/W fees, suggests little competition
 - VC-Backed IPOs attract most prestigious underwriters
 - Many technology IPOs dramatically underpriced (up to 500%)
 - 2001 has been catastrophic; not one IPO in September



U.S. Initial Public Offerings: 1990 - 2000

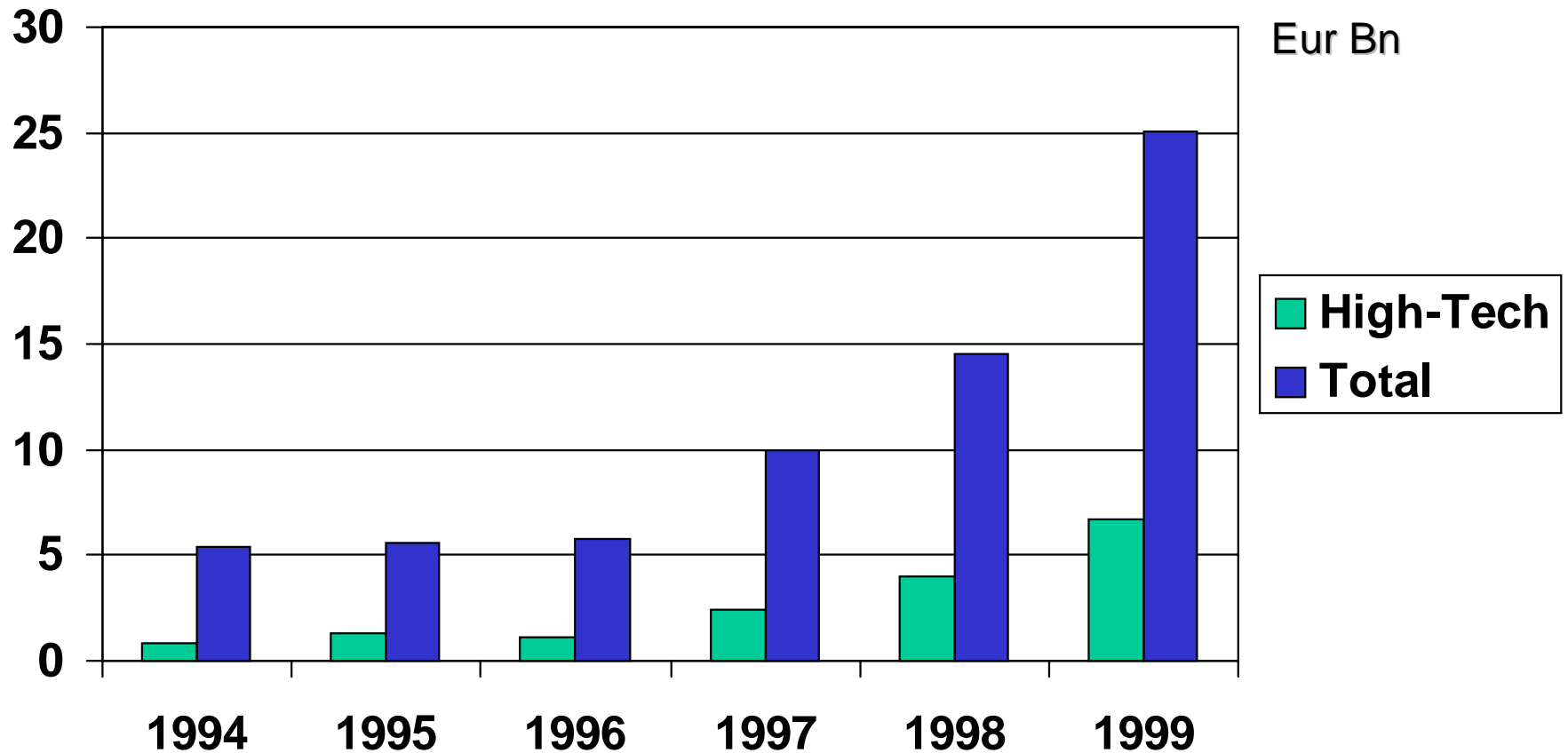
Year	Number of IPOs	Proceeds (\$Bn)
1990	172	\$4.8
1991	367	16.8
1992	517	24.1
1993	707	41.3
1994	610	28.5
1995	580	30.0
1996	872	49.9
1997	631	43.3
1998	374	36.5
1999	544	71.0
2000	429	73.3
Total (1990-2000)	5,803	\$419.5 Bn

European VC Techniques & Practices: Similarities With U.S.

- **European Venture Capital Comparable To U.S. In Size**
 - Total private equity amount raised often exceeds U.S.
 - Eu25.1 Bn in 11,000 firms 1999; Eu125 Bn since 1980
 - Eu4.5bn into technology in 2Q2000 vs Eu6.7bn in 1999
- **Investment Concentrated Geographically & Industrially**
 - Over half of European total invested in UK
 - Technology accounted for 28% of 1998's total investment
 - New investments targeted at internet; shifting to start-up
- **Policy-Makers Trumpet Importance Of VCs, Entrepreneurs**
 - Most governments trying to encourage entrepreneurship
 - UK govt recently arranged MIT-Cambridge partnership
 - Stock exchanges trying to develop European NASDAQ



European Private Equity And Venture Capital Investments, 1994-1999 (Billion Euros)

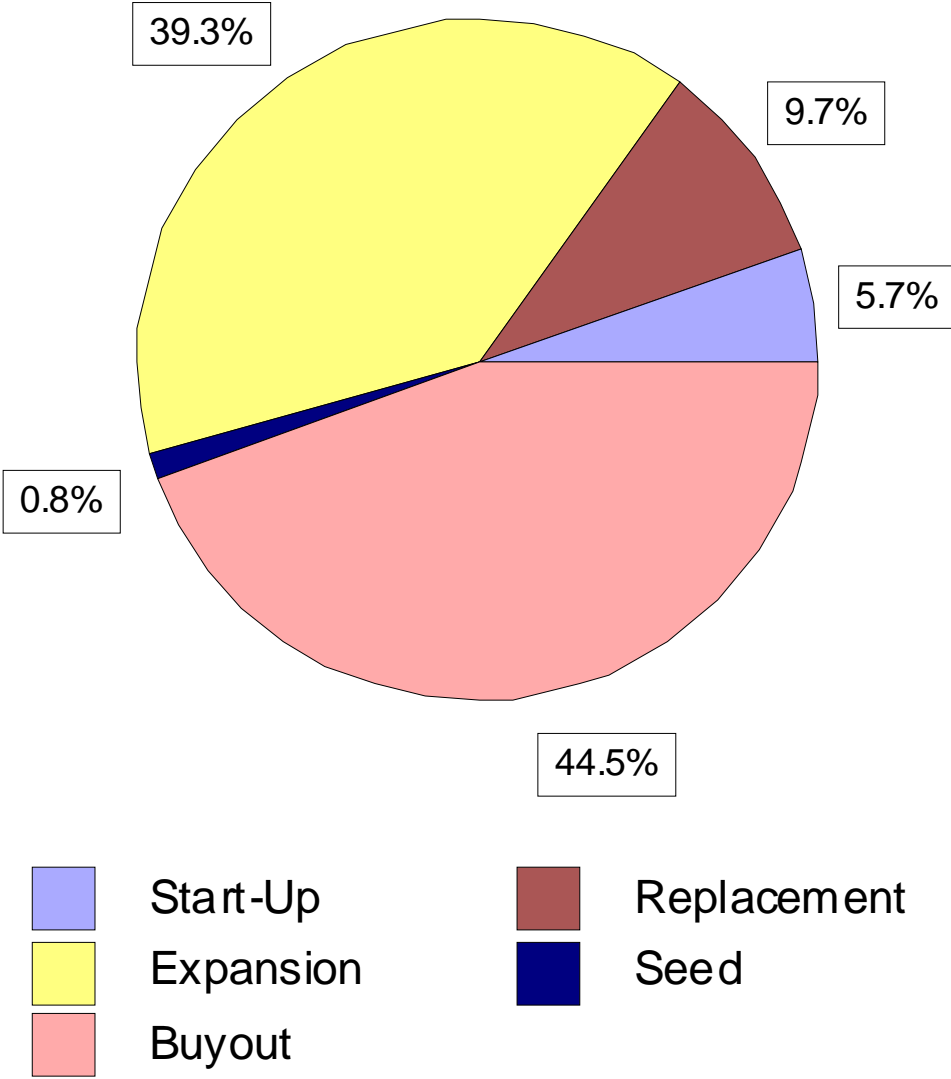


European VC Techniques & Practices: Differences With U.S.

- **Little Of European VC Is “True” Venture Capital**
 - Total private equity pool large; inflows of \$41 bn in 2000
 - Over 2/3 of private equity in Buyout or Generalist funds
 - True European venture capital at most 1/4 US industry size
 - Industry is highly fragmented by nationality, language
- **Fraction Of Investment In High-Tech Far Lower Than U.S.**
 - Even with 60% increase since 1998, only 33% of total
 - Lack of European “Silicon Valley” a severe handicap
 - Little tradition of technology transfer from universities
- **Little European VC Goes To Start-Up, Early-Stage Firms**
 - Over 80% of 1999 private equity for buy-outs & expansion
 - Only 11% was for start-ups; less than 2% for seed capital
 - Even with recent emphasis on early-stage, far behind U.S.



European Venture Capital Investments, By Stage Of Company Development, 1996

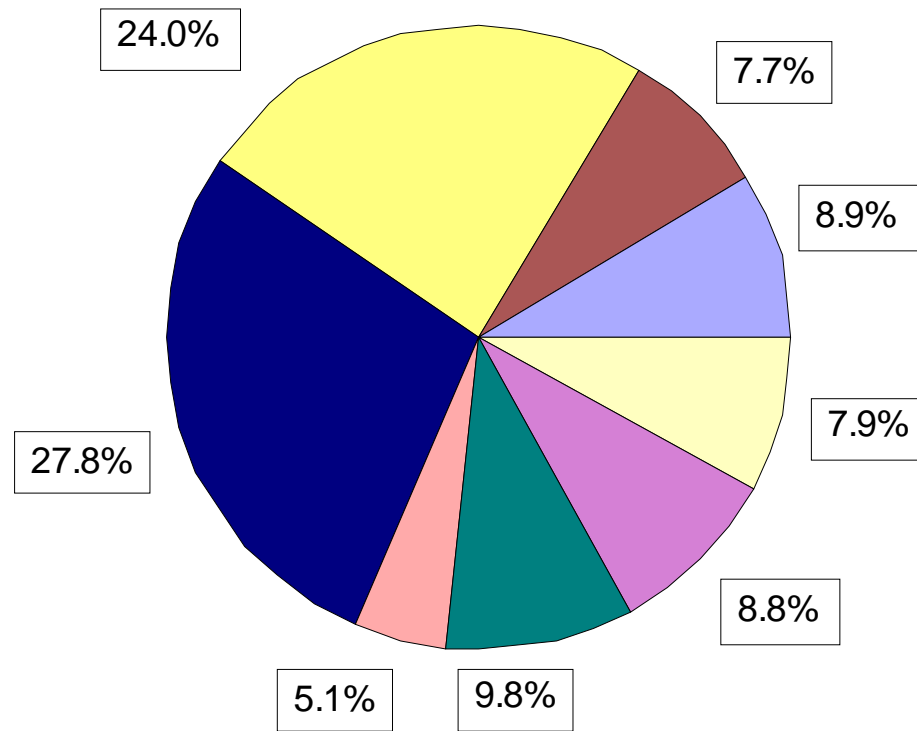


European VC Techniques & Practices: Differences With U.S. (Continued)

- **European VCs Beginning to Use Convertible Preferred Stock**
 - Not allowed in many countries; distrusted elsewhere
 - Much of VC investment structured as debt; very rare in U.S.
 - Use has grown rapidly with spread of U.S. tactics
- **Much Different Sources Of Capital For European VC**
 - Banks are single biggest contributors; often conflicting aims
 - Pension funds the second largest, but US pension funds now larger contributors than any others
 - Only 8% capital comes from private, non-institutional sources
 - Insurance cos, other corporations inherently conservative
- **European VC Funds Achieve Fairly Low Financial Returns**
 - Generally lower than other European private equity funds
 - Far lower returns than American VC funds

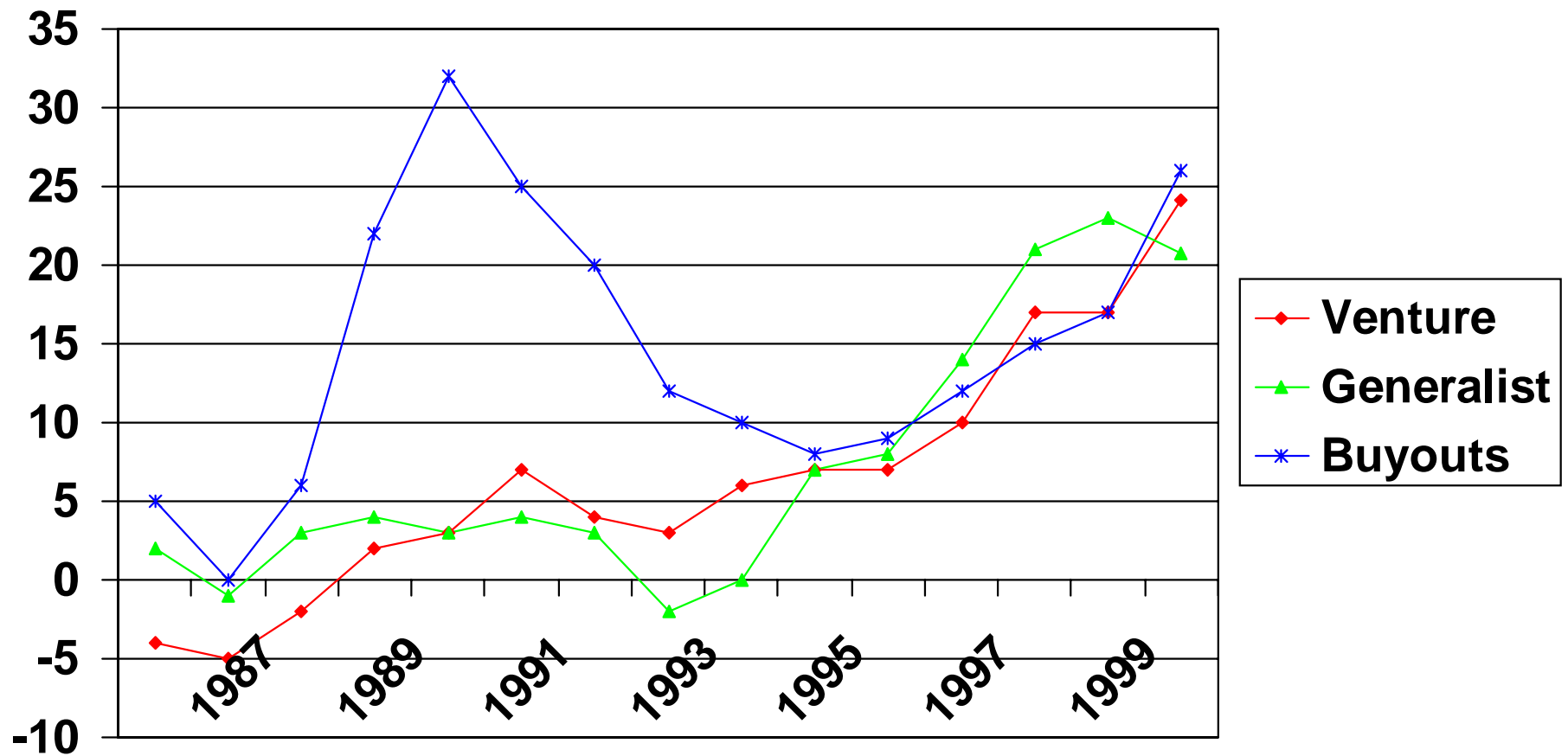


Sources Of Funding For European Venture Capital Funds, 1998



- | | | | |
|---|--------------------------|---|---------------------|
|  | Insurance cos. |  | Private individuals |
|  | Pension funds |  | Banks |
|  | Governments |  | Corporate |
|  | Reinvested capital gains |  | Other |

European Private Equity Fund Returns: 5-Year Rolling IRRs



European VC Techniques & Practices: Five Priorities For Action By Policy-Makers

- **European VC Association’s White Paper, “Priorities For Private Equity” Lists Five Keys For Enabling European VC**
 - Identify priorities for VC and their principal domain of activity
 - “Volume of private equity must increase 3-4 times to match fraction of GDP reached by leading countries.”
- **Priorities That Increase Investment Opportunities:**
 - (1) Create an entrepreneurial environment (cultural)
 - (2) Encourage tax-efficient share incentives (fiscal)
- **Priorities That Improve Funding:**
 - (3) Develop long-term capital sources (legal)
 - (4) Facilitate [venture capital] fund formation (fiscal)
 - (5) Give public support only if also private support (economic)
- **Study available at <http://www.evca.com/pdf/WhitePaper.pdf>**



The Evolving European IPO Market

- **Until Recently, Stock Markets Fairly Unimportant In Europe**
 - Bank-based corporate financial system in continental Europe
 - Privatizations, technology prompted growth of stock markets
 - Success of NASDAQ, NYSE showed need for IPOs
 - Early Efforts (late 1980s) did not last through first downturn
- **Several Recent Attempts To Form Pan-European Markets**
 - LSE, Deutsche Bourse merger plans collapsed Sept 2000
 - Europeans much more successful with futures markets
 - EASDAQ now has 44 listings and Eu21.2 Bn market cap
 - LSE's new techMARK has 181 listings
- **Euro.NM Group More Successful Thru March 2000**
 - 300+ firms listed in Neuer Markt, others
 - Most of the new listings have been technology companies
 - Neuer Markt has lost 90% of market cap since Mar 2000

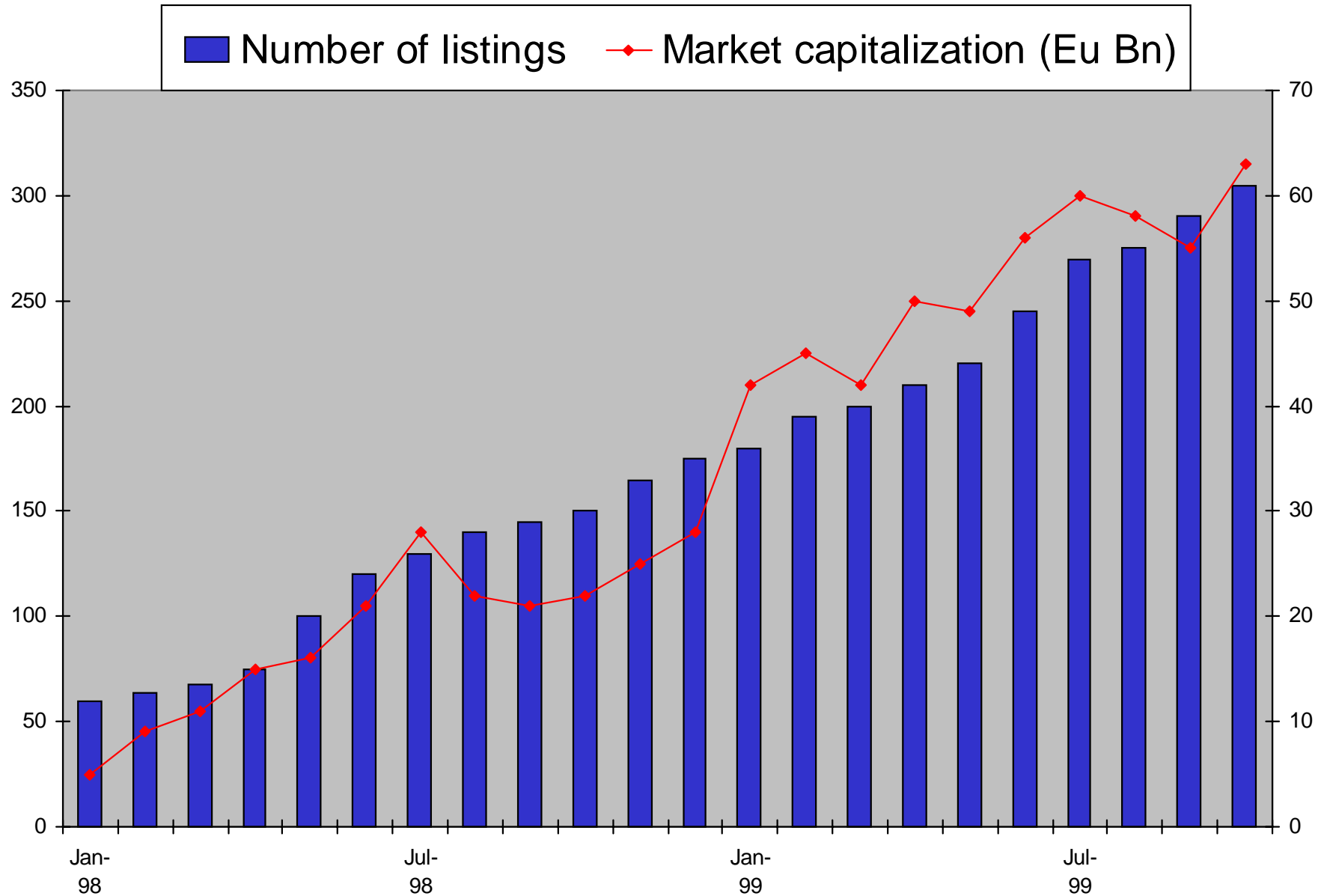


The Evolving European IPO Market (Continued)

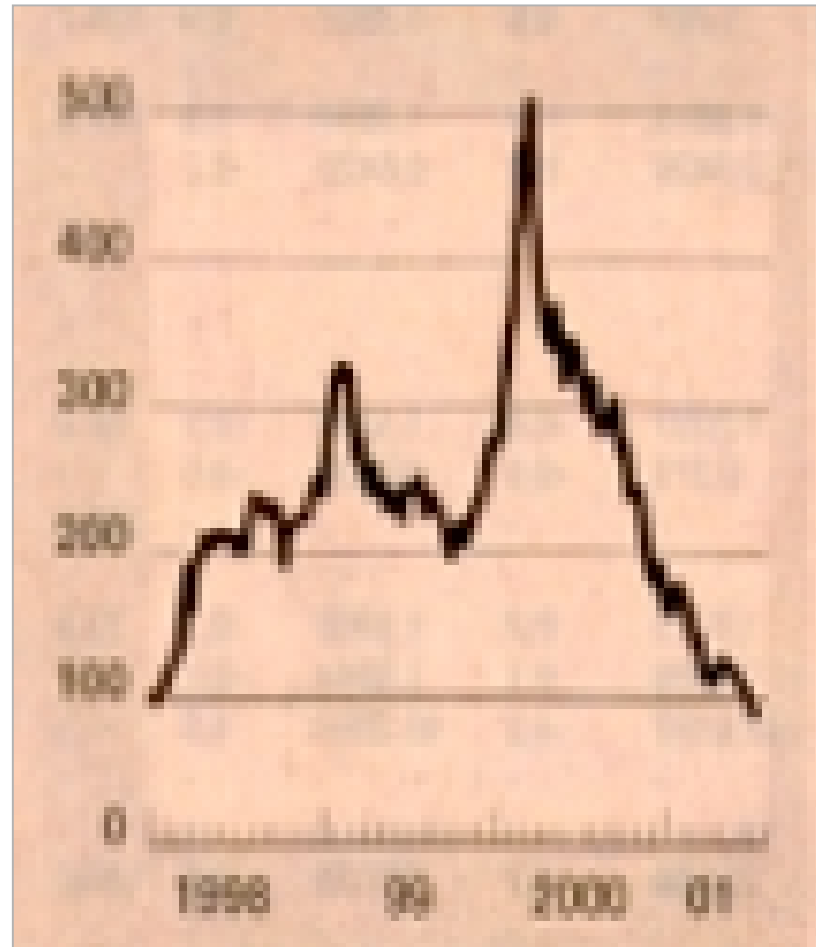
- **The Neuer Markt: Europe's Most Successful IPO Market**
 - Has enjoyed rapid growth since launch in 1997
 - Has more than 240 listings, 300 IPOs, mostly German
 - Total capitalization Eu215 Mar 2000; now about Eu 25 Bn
 - Stresses intl accounting standards, transparency in listings
 - Institutions now account for 55-70% of market demand
 - Last few months have seen cancelled offers, other weakness
- **Biggest Long-Term Threats: NASDAQ-Europe And ECNs**
 - NASDAQ plans to open European market eventually
 - All established stock markets endangered by ECNs
- **Other International IPO Markets, Alliances Forming**
 - Hong Kong's Growth Enterprise Market (GEM) strong opening
 - Israel trying to entice NASDAQ to set up market in country



Development Of The Neuer Markt Thru 1999



Neuer Markt Value Relative To FTSE All World Index, Jan 1998 - Jun 2001

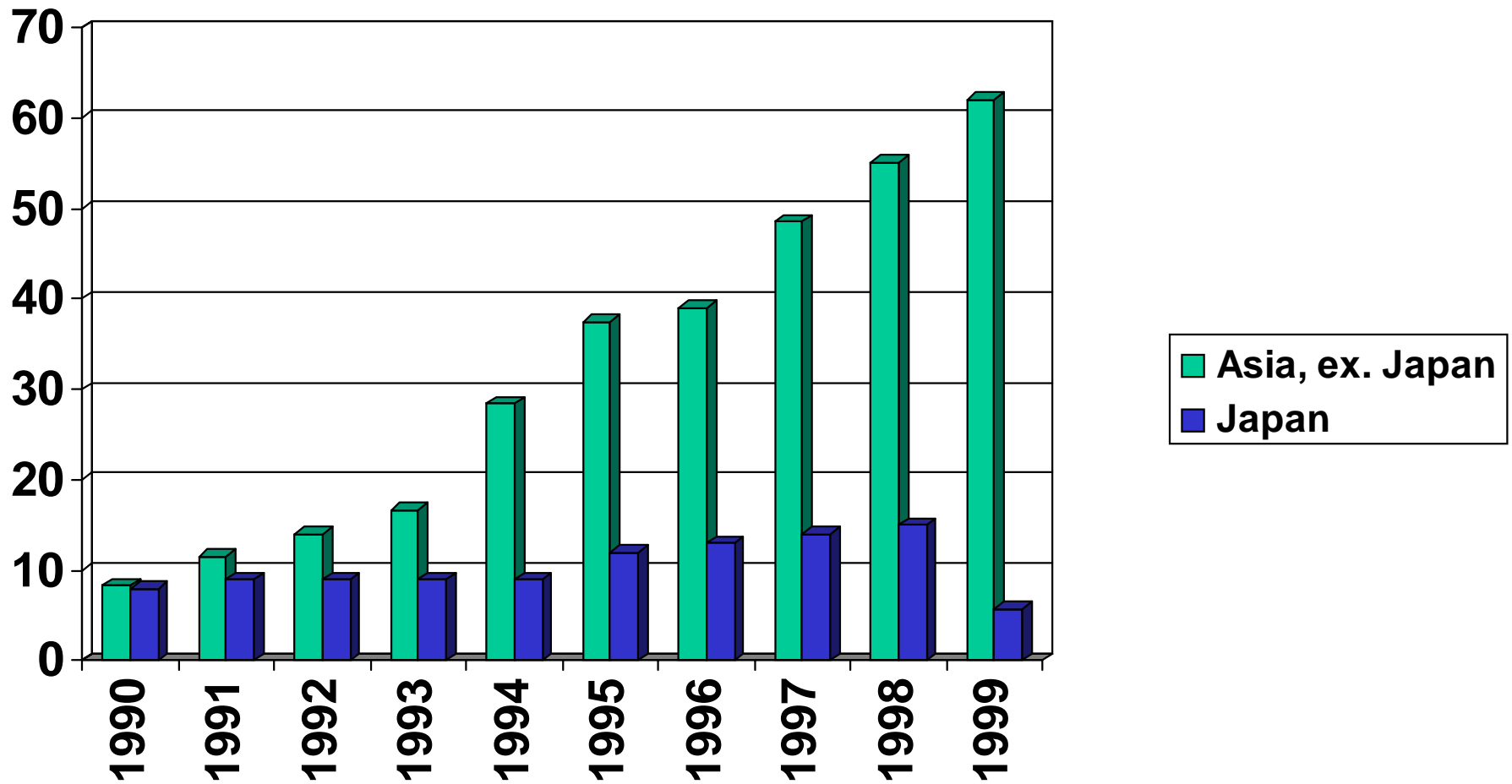


Asian Venture Capital Practices & Overview

- **“Classic” VC Has Played Little Role In Asia Until Recently**
 - Rapid growth fueled by other sources (families, groups)
 - Total Asian VC pool now \$77.8bn; \$7.7bn in 1999
 - Technology accounts for \$1.7bn, or 20% of 1999 total
- **Largest VC Pool in Japan; Very Conservatively Managed**
 - Controlled by banks, brokerages as source of loan business
- **China Accounts For Two-Thirds Of Developing Asia VC**
 - Attractive growth market, but risky, key sectors regulated
- **Hong Kong, Singapore Play Key Coordinating Roles in VC**
 - Two-thirds of VC raised locally, most of the rest comes from or through Singapore, Hong Kong
- **All Governments Trying To Develop VC**
 - Corporations & govt, not VC partnerships, are key VC actors
 - India has had some success; \$700mn in 1999, mostly tech



Asia's Venture Capital Pool, \$Bn, 1990-1999



Key Requirements For A Strong Venture Capital Industry

- **U.S. Is Often Considered The “Model” For Venture Capital**
 - But this model is very hard to reproduce, even if desired
- **Instead Ask: What Economic, Cultural & Legal Features Will Promote A Strong VC Industry? Following Are Essential:**
 - A tradition of entrepreneurship & risk-taking
 - A well-established legal system, with good investor protection
 - A supportive, but non-interventionist, government
 - A stable regulatory system, that doesn't penalize start-ups
 - A free (and mobile) labor market, rich in engineering talent
 - A non-punitive taxation regime that allows use of stock options
 - A strong R&D culture--especially in universities or national labs
 - A vibrant IPO market: but could be a result, not a prerequisite
- **Funded Pension System (Independent Funds) Very Helpful**



Conclusion:

**Over The Next Two Decades,
Several Countries Are Likely To
Develop Successful Venture Capital
Industries--Though Many Attempts
Will Fail**



Shanghai Seminar On Venture Capital

Fudan University

[Http://www.fudan.edu.cn](http://www.fudan.edu.cn)



Pudong Institute On The American Economy
December 9 & 10, 1999

CUHK Seminar On Venture Capital



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