Appendix A: The High Tech 100

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(continued)

Corporation	Services and Products	Web Site (www.+)
Critical Path	Software to maximize the value of the Internet	cp.net
Digex	Web and applications hosting	digex.com
Digital Lightwave	Technology for management of optical networks	lightwave.com
Doubleclick	Online advertising, email, and database marketing	doubleclick.com
E.piphany	Customer relationship management software	epiphany.com
ЕЬау	Online marketplace	ebay.com
Efficient Networks (6)	Designer and manufacturer of DSL solutions	efficientnetworks.com
E*Trade Group	Online investing, banking, lending, and advice	etrade.com
Entrust	Enhanced Internet security services	entrust.com
Espeed	Business-to-business electronic marketplace trading	espeed.com
Excite@Home (7)	Online portal	excite.com
Exodus (8)	Web hosting	exodus.com
Extreme Networks	Ethernet network infrastructure equipment	extremenetworks.com
Foundry Networks	Enterprise and service provider switching and routing	foundrynetworks.com
Freemarkets	Sourcing software and service solutions	freemarkets.com
Globespan (9)	High-speed broadband equipment and solutions	globespanvirata.com
Go2Net (10)	Online portal	go2net.com
Healtheon/WebMD	Internet services for physicians and consumers	webmd.com
Homestore.Com	Online information for real estate industry	homestore.com
i2 Technologies	Value chain management software solutions	i2.com
Informatica	Business analytics software	informatica.com
Infospace.com	Wireless and Internet software and services	infospace.com
Inktomi	Network infrastructure software solutions	inktomi.com
Internap	Centrally managed Internet connectivity services	internap.com
Internet Capital (11)	Business-to-business e-commerce network	internetcapital.com
Interwoven	Enterprise content management software	interwoven.com

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ISS Group	Protect information from online threats	iss.net
Juniper Networks	Core, edge, mobile, and cable Internet services	juniper.net
Kana Communications	Software for managing customer relations	kana.com
Liberate Technologies	Digital video solutions for telephone networks	liberate.com
Lycos (12)	Web portal, search engine, and related sites	lycos.com
Macromedia	Multimedia Internet applications	macromedia.com
MarchFIRST (13)	Was an Internet professional services firm	No longer on the web
Mercury Interactive	Testing for IT infrastructure	mercuryinteractive.com
Metromedia Fibre (14)	Digital communications fibre infrastructure	mfn.com
Micromuse	Service and business assurance software	micromuse.com
Microstrategy	Business software for web, wireless, and voice	microstrategy.com
MMC Networks (15)	Network processors for feature-rich products	mmcnet.com
MRV Communications	High-bandwidth low-cost Ethernet access solutions	mrv.com
Netegrity	Solutions for securely managing e-business	netegrity.com
Network Associates	Network security and availability technology	nai.com
Network Solutions (16)	Internet domain names and related services	networksolutions.com
Next Level	Integrated multimedia access systems	nlc.dom
Niko	Services relationship management software	niku.com
Novell	Net business solutions	novell.com
Pairgain (17)	DSL broadbase access systems	adc.com
Phone.com (18)	Software for multinetwork communication services	openwave.com
Portal Software	Strategic billing for convergent network services	portal.com
Priceline.com	"Name Your Own Price" e-commerce	priceline.com
PSI Net (19)	Commercial Internet service company	cogentco.com
PurchasePro.com	Procurement and strategic sourcing applications	purchasepro.com
Quest Software	Application management solutions	quest.com

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(continued)

Corporation	Services and Products	Web Site (www.+)
Rational Software	Business software development platforms	rational.com
RCN Corporation	Phone, cable TV, and high-speed Internet services	rcn.com
RealNetworks	Internet media delivery	realnetworks.com
Redback Networks	Solutions for broadband networks	redback.com
Retek	Software services for the retail industry	retek.com
RSA Security	Builds secure e-business processes	rsasecurity.com
Sapient	Business and technology consultancy	sapient.com
Scient (20)	Internet technology consulting	scient.com
Siebel Systems	E-business applications software	siebel.com
Software.com (21)	Software for multinetwork communication services	openwave.com
Sonicwall	Internet security solutions	sonicwall.com
Symantec	Internet security solutions	symantec.com
Terayon Communications	Broadband networking equipment	terayon.com
Tibco Software	Business solutions for infrastructure software	tibco.com
Ticketmaster Online (22)	Online local network for information on cities	citysearch.com
Verio (23)	Internet business solutions	verio.com
VeriSign	Digital trust services for businesses and consumers	verisign.com
Verticalnet (24)	Collaborative supply chain solutions software	verticalnet.com
Vignette	Online content management applications	vignette.com
Virata (25)	High-speed broadband equipment and solutions	globespanvirata.com
Vitria Technology	Integration solutions on collaborative platforms	vitria.com
WebMethods	Integration software within and across enterprises	webmethods.com
Winstar (26)	Broadband network	idt.com
Yahoo	Global consumer and business Internet services	yahoo.com

The numbers refer to notes about acquisitions, mergers, and bankruptcies that can be found on the web version of this appendix at www.inthecompanyofowners.com.

Source: Authors' analysis of NASDAQ.com, plus SEC filings and company web sites.

Appendix B: The High Tech 100's Mixed Track Record

Shareholder Returns from Each Firm's IPO to July 26, 2002

A majority, or 57 percent, lost money over this period:

- On average, these fifty-seven companies posted losses of 73 percent.
- Twenty-one of them traded below \$1 as of July, putting them in danger of being delisted by NASDAQ.
- Another eight had gone bankrupt by then.

The other 43 percent still traded above their IPO price:

- 8 percent were more than 1,000 percent ahead.
- 19 percent were more than 500 percent ahead.
- 27 percent were more than 100 percent ahead.
- Cisco was 18,812 percent higher.
- AOL was 12,038 percent higher.
- Network Solutions was 4,587 percent higher.

How much money would a High Tech 100 mutual fund have made?

- Cost of one share of each company at the IPO \$725
- Value of the fund on 7/2002

\$430

• Investor return over the period of the fund

-41 percent

Returns from IPO through July 2002:

- 32 percent had a return of at least 10 percent a year.
- 68 percent had less than 10 percent a year.

The total shareholder return used for bankrupt companies is zero. For firms that were merged or acquired, the return is calculated to the last price at which they traded or the price at which they were sold. Companies that trade on the NASDAQ for under \$1 for thirty consecutive days are in danger of being delisted, although they can return if their stock price improves.

For more detail on the High Tech 100's share performance, see the web version of this appendix at www.inthecompanyofowners.com.

Source: Authors' analysis of publicly available stock prices.

Appendix C: How Workers Took a Beating on Employee Ownership

Type of Ownership	No. of Companies	No. of Employees Owning Stock	Stock Value in March, 2000	Stock Value in August, 2002	Loss
KSOPs*	1,397	4.8 million	\$229 billion	\$174 billion	\$107 billion
401(k)s**	2,813	13.6 million	\$191 billion	\$147 billion	\$ 94 billion
ESOPs	6,431	3.4 million	\$ 96 billion	\$ 58 billion	\$ 49 billion
Profit sharing	174	0.9 million	\$ 18 billion	\$ 12 billion	\$ 8 billion
Employee Stock Purchase Plans	746	1.4 million	\$ 6 billion	\$ 4 billion	\$ 3 billion
Total	11,561	24.1 million	\$540 billion	\$395 billion	\$261 billion

*A KSOP is a hybrid between an ESOP and a 401(k).

**Includes only 401(k)s that hold employer stock.

Total as a percent of all publicly traded U.S. stock in August 2002: 4.8%.

Source: Authors' analysis of corporate filings to the U.S. Department of Labor and of SEC filings.

The losses are larger than the drop in value from March 2000 to August 2002 because employees were buying more stock even as share prices fell. So they also lost money on most of what they purchased after March, 2000. For more detail, see the notes as well as the web version of this appendix on www.inthecompanyofowners.com.

Appendix D: The Corporate America 100

Corporation	Web Site (www.+)
99 Cents Stores	99only.com
Abercrombie & Fitch	abercrombie.com
Aetna	aetna.com
Alberto Culver	alberto-culver.com
Alliant Energy	alliantenergy.com
Alltel	alltel.com
American Express	americanexpress.com
American Standard	americanstandard.com
Anheuser Busch	anheuser-busch.com
Appalachian Power	aep.com
Atlas Air	atlasair.com
Automatic Data Processing	adp.com
Baker Hughes	bakerhughes.com
Barr Laboratories	barrlabs.com
Bergen Brunswig (1)	amerisourcebergen.net
BJ Services	bjservices.com
C.R. Bard	crbard.com
Berkshire Hathaway	berkshirehathaway.com
Boston Properties	bostonproperties.com
Brinker International	brinker.com
Brunswick	brunswick.com
Campbell Soup	campbellsoup.com
Capital One Financial	capitalone.com
Cendant	cendant.com
Charles Schwab	schwab.com
Cigna	cigna.com
Cinergy	cinergy.com
City National	cityntl.com
Colgate Palmolive	colgate.com
Compaq Computer (2)	hp.com
Conoco	conoco.com
Cooper Industries	cooperindustries.com
Cox Radio	coxradio.com
Darden Restaurants	darden.com
Diamond Offshore Drilling	diamondoffshore.com
Dollar General	dollargeneral.com
DQE	dqe.com

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Dun & Bradstreet	dnb.com
Eastman Chemical	eastman.com
El Paso Energy (3)	cmenergy.com
EMC	emc.com
Entergy	entergy.com
Equifax	equifax.com
Fairchild Semiconductor	fairchildsemi.com
FedEx	fedex.com
Florida Progress (4)	progress-energy.com
Ford Motor	ford.com
Gannett	gannett.com
GATX	gatx.com
Georgia Pacific	gp.com
Global Marine (5)	gsfdrill.com
Guidant	guidant.com
Halliburton	halliburton.com
HealthSouth	healthsouth.com
H.J. Heinz	hjheinz.com
Hollinger International	hollinger.com
Hon Industries	honi.com
IMC Global	imcglobal.com
IMS Health	imshealth.com
International Rectifier	international rectifier.com
Ipalco Enterprises (6)	aesc.com
Johnson & Johnson	jnj.com
Kemet	kemet.com
King Pharmaceuticals	kingpharm.com
Kroger	kroger.com
La Branche & Company	labranche.com
ta branche & Company	
Lexmark	lexmark.com
Lexmark Lockheed Martin	lexmark.com lockheedmartin.com
Lexmark Lockheed Martin Mandalay Resort Group	lexmark.com lockheedmartin.com mandalayresortgroup.com
Lexmark Lockheed Martin Mandalay Resort Group Martin Marietta Materials	lexmark.com lockheedmartin.com mandalayresortgroup.com martinmarietta.com
Lexmark Lockheed Martin Mandalay Resort Group Martin Marietta Materials Medicis Pharmaceutical	lexmark.com lockheedmartin.com mandalayresortgroup.com martinmarietta.com medicis.com
Lexmark Lockheed Martin Mandalay Resort Group Martin Marietta Materials Medicis Pharmaceutical McDonalds	lexmark.com lockheedmartin.com mandalayresortgroup.com martinmarietta.com medicis.com mcdonalds.com
Lexmark Lockheed Martin Mandalay Resort Group Martin Marietta Materials Medicis Pharmaceutical McDonalds Metro-Goldwyn-Mayer	lexmark.com lockheedmartin.com mandalayresortgroup.com martinmarietta.com medicis.com mcdonalds.com mgm.com
Lexmark Lockheed Martin Mandalay Resort Group Martin Marietta Materials Medicis Pharmaceutical McDonalds Metro-Goldwyn-Mayer Mitchell Energy (7)	lexmark.com lockheedmartin.com mandalayresortgroup.com martinmarietta.com medicis.com mcdonalds.com mgm.com devonenergy.com
Lexmark Lockheed Martin Mandalay Resort Group Martin Marietta Materials Medicis Pharmaceutical McDonalds Metro-Goldwyn-Mayer Mitchell Energy (7) M & T Bank	lexmark.com lockheedmartin.com mandalayresortgroup.com martinmarietta.com medicis.com mcdonalds.com mgm.com devonenergy.com mandtbank.com
Lexmark Lockheed Martin Mandalay Resort Group Martin Marietta Materials Medicis Pharmaceutical McDonalds Metro-Goldwyn-Mayer Mitchell Energy (7) M & T Bank Murphy Oil	lexmark.com lockheedmartin.com mandalayresortgroup.com martinmarietta.com medicis.com mcdonalds.com mgm.com devonenergy.com mandtbank.com murphyoilcorp.com
Lexmark Lockheed Martin Mandalay Resort Group Martin Marietta Materials Medicis Pharmaceutical McDonalds Metro-Goldwyn-Mayer Mitchell Energy (7) M & T Bank Murphy Oil Neiman Marcus Group	lexmark.com lockheedmartin.com mandalayresortgroup.com martinmarietta.com medicis.com mcdonalds.com mgm.com devonenergy.com mandtbank.com murphyoilcorp.com neimanmarcus.com
Lexmark Lockheed Martin Mandalay Resort Group Martin Marietta Materials Medicis Pharmaceutical McDonalds Metro-Goldwyn-Mayer Mitchell Energy (7) M & T Bank Murphy Oil Neiman Marcus Group Nordstrom	lexmark.com lockheedmartin.com mandalayresortgroup.com martinmarietta.com medicis.com mcdonalds.com mgm.com devonenergy.com mandtbank.com murphyoilcorp.com neimanmarcus.com nordstrom.com
Lexmark Lockheed Martin Mandalay Resort Group Martin Marietta Materials Medicis Pharmaceutical McDonalds Metro-Goldwyn-Mayer Mitchell Energy (7) M & T Bank Murphy Oil Neiman Marcus Group Nordstrom OGE Energy	lexmark.com lockheedmartin.com mandalayresortgroup.com martinmarietta.com medicis.com mcdonalds.com mgm.com devonenergy.com mandtbank.com murphyoilcorp.com neimanmarcus.com nordstrom.com oge.com
Lexmark Lockheed Martin Mandalay Resort Group Martin Marietta Materials Medicis Pharmaceutical McDonalds Metro-Goldwyn-Mayer Mitchell Energy (7) M & T Bank Murphy Oil Neiman Marcus Group Nordstrom OGE Energy Pactiv	lexmark.com lockheedmartin.com mandalayresortgroup.com martinmarietta.com medicis.com mcdonalds.com mgm.com devonenergy.com mandtbank.com murphyoilcorp.com neimanmarcus.com oge.com pactiv.com
Lexmark Lockheed Martin Mandalay Resort Group Martin Marietta Materials Medicis Pharmaceutical McDonalds Metro-Goldwyn-Mayer Mitchell Energy (7) M & T Bank Murphy Oil Neiman Marcus Group Nordstrom OGE Energy Pactiv PepsiCo	lexmark.com lockheedmartin.com mandalayresortgroup.com martinmarietta.com medicis.com mcdonalds.com mgm.com devonenergy.com murphyoilcorp.com neimanmarcus.com nordstrom.com oge.com pactiv.com pepsico.com
Lexmark Lockheed Martin Mandalay Resort Group Martin Marietta Materials Medicis Pharmaceutical McDonalds Metro-Goldwyn-Mayer Mitchell Energy (7) M & T Bank Murphy Oil Neiman Marcus Group Nordstrom OGE Energy Pactiv PepsiCo Pitney Bowes	lexmark.com lockheedmartin.com mandalayresortgroup.com martinmarietta.com medicis.com mcdonalds.com mgm.com devonenergy.com murphyoilcorp.com neimanmarcus.com nordstrom.com oge.com pactiv.com pepsico.com pb.com
Lexmark Lockheed Martin Mandalay Resort Group Martin Marietta Materials Medicis Pharmaceutical McDonalds Metro-Goldwyn-Mayer Mitchell Energy (7) M & T Bank Murphy Oil Neiman Marcus Group Nordstrom OGE Energy Pactiv PepsiCo Pitney Bowes Pride International	lexmark.com lockheedmartin.com mandalayresortgroup.com martinmarietta.com medicis.com mcdonalds.com mgm.com devonenergy.com murphyoilcorp.com neimanmarcus.com nordstrom.com oge.com pactiv.com pepsico.com pb.com prde.com
Lexmark Lockheed Martin Mandalay Resort Group Martin Marietta Materials Medicis Pharmaceutical McDonalds Metro-Goldwyn-Mayer Mitchell Energy (7) M & T Bank Murphy Oil Neiman Marcus Group Nordstrom OGE Energy Pactiv PepsiCo Pitney Bowes	lexmark.com lockheedmartin.com mandalayresortgroup.com martinmarietta.com medicis.com mcdonalds.com mgm.com devonenergy.com murphyoilcorp.com neimanmarcus.com nordstrom.com oge.com pactiv.com pepsico.com pb.com

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SPX	spx.com
Scientific Atlanta	scientificatlanta.com
Smith International	smith-intl.com
St. Joe	joe.com
Sunoco	sunoco.com
Target	target.com
Temple Inland	templeinland.com
Time Warner (8)	aoltimewarner.com
Tribune	tribune.com
Ultramar DiamondShamrock (9)	valero.com
Unocal	unocal.com
Venator (10)	footlocker-inc.com
Vulcan Materials	vulcanmat.com
Wells Fargo	wellsfargo.com
Wilmington Trust	wilmingtontrust.com

The numbers refer to notes about acquisitions, mergers, and bankruptcies, which can be found on the web version of this appendix at www.inthecompanyofowners.com.

Source: Authors' analysis of NYSE.com and corporate web sites.

Notes

For an expanded version of the notes, see the web site for our book: www.inthecompanyofowners.com.

Preface

xii "As Federal Reserve Board chairman Alan Greenspan noted in mid-2002 . . ": Schaffler and Marchini (2002).

xvi "Just as important is the corporate governance . . ." See Millstein (1998).

- 3 The genealogy of the concept of risk sharing has not been addressed as the principal theme in the many histories and studies of the high-tech industry, although it has been mentioned in passing in some of the studies of specific companies. The research for this chapter was based on four primary sources: original archival material, such as oral histories available at the Stanford University Library's Silicon Genesis Oral Histories Project; original interviews done for this book; newspaper and magazine articles; and filings made to the SEC. We also used secondary sources, including books, doctoral theses, and articles that often mention these issues briefly as a corollary to their main subject. For overview studies of the industry, see Chandler (1977), Riordan and Hoddeson (1998), and Campbell-Kelly and Aspray (1996).
- 3 "Eight cocky young semiconductor whizzes . . . ": The story is told in an oral history by Gordon Moore, one of the eight and a cofounder of Intel. See Moore (1995). The names of the "Traitorous Eight" are: Julius Blank, Jean Hoerni, Victor Grinich, Eugene Kleiner, Jay Last, Gordon Moore, Robert Noyce, and Sheldon Roberts.
- 3 William B. Shockley: Shockley was named one of the most influential scientists and thinkers of the twentieth century by *Time* magazine. There's no extensive biography of Shockley, although Riordan and Hoddeson (1998) give him extensive coverage and were an invaluable source for this chapter. See also two brief biographies by

Moll (1996) of the National Academy of Sciences and the Nobel Foundation (1973) and Hiltzik (2001).

- 4 Shockley's discontentment with a lack of royalties and equity: This has been discussed by Moore (1999), Seitz and Einspruch (1998), Riordan and Hoddeson (1998), and Lewis (2000). Manners and Makimoto (1995) provide the context, discussing how engineers watched Texas Instruments' stock go up from \$5 in 1952 to \$191 in 1959.
- 5 "Your objective in this undertaking . . . ": Riordan and Hoddeson (1998), p. 234. They found the letter from A. Beckman to W. Shockley dated September 3, 1955, in the Shockley Papers, Stanford University Archives, Stanford California, Accession Listing 95–153.
- 5 Shockley Semiconductor Laboratory: For first-person accounts by members of the lab see the Stanford University Archives interviews with Moore (1995), Sello (1995). See also Moore (1999). For a complete account, see Riordan and Hoddeson (1998).
 - 5 "For example, Moore described . . . ": Moore (1995).
 - 6 "A commercially viable silicon transistor . . . ": Moore (1999).
- 6 Arthur Rock: Authors' interview with Arthur Rock on January 10, 2002. See also Anthony Perkins (1994), Rock (2000).
 - 6 "Each of the eight . . . ": Perkins (1994).
 - 7 "Being their own boss . . . ": Lecuyer (2000).
 - 7 "Treat workers well . . . ": Authors' interview with Arthur Rock (2002).
- 7 Corporate culture at Fairchild: See Moore (1995) on the egalitarian philosophy that he and Noyce shared; Wolfe (1983) on Noyce's mindset; Manners and Makimoto (1995) and Berlin (2001).
- 7 Fairchild Semiconductor: For the story from the key actors, see interviews with Moore (1995), Hodgson (1995), Sello (1995), and Sporck (2000). The story of the breakup of the Shockley group and Fairchild is told in more detail by Wolfe (1983), Rostky (1995, 1997), Riordan and Hoddeson (1998), the Public Broadcasting System's program "Transistorized" (1999), Berlin (2001), and Lecuyer (2000).
- 7 "\$250,000" and "Suddenly it became apparent ...": Manners and Makimoto (1995) and Fox (1997).
- 8 Noyce wanted to extend options . . . : From our interview with Arthur Rock (2002). For the Arthur Rock quote see Perkins (1994). See also Fox (1997), Rostky (1997), Berlin (2001), and Sporck (2000).
 - 9 John Carter visit: Wolfe (1983).
- "11" "By 1970 . . . ": Seitz and Einspruch (1998) provide the most comprehensive map with company names showing 42 companies by 1970 and about 120 companies that they trace to Fairchild Semiconductor through Shockley, and their offspring's offspring (and so forth) by 1986. Several emerged directly from Bell Labs and were not included in this count.
 - 11 "Exploded like a seed pod . . . ": Malone (1985).

- "Many of the region's . . . ": Saxenian (1994a).
- 12 National Semiconductor: According to Berlin (2001), Charles Sporck quit Fairchild in March 1967 after articulating views similar to those of Noyce. He took over National Semiconductor. See Sporck (2000).
- 12 Advanced Micro Devices: Bruener (2000), Levering, Moskowitz, and Katz (1984).
 - 13 "Since Intel . . . ": Authors' interview with Arthur Rock (2002).
- 14 "... around the Stanford area ...": On the seminal role that Stanford University played in nurturing a focus on intellectual capital before it became a common theme, see Tajnai (1985). On the role of Stanford's legendary dean, Frederick Terman, see Saxenian (1994a), Norr (1999), and the evidence of a recent dean in Gibbons (2000).
 - 14 Regis McKenna: McKenna (2000), pp. 373–374.
- 15 "... they were never all of one opinion ...": Saxenian (1994a), Ward (2000), Rostky (1997).
- 15 Intel: Jackson (1997), Faggin (1995), Zielenziger (1988), Kehoe (1997), Grove (1999), and Intel's web site at www.intel.com/jobs/workplace/benefits.htm.
- J. Robert Beyster: Authors' interview with Beyster (2001). See also Beyster (2002) for additional interviews on employee ownership. SAIC's employment and sales are from its 4/17/2001 10-K on file with the SEC.
- 16 Cray: Cray's company went public in 1976 at \$1.10 a share adjusted for subsequent stock splits. An investment of \$15,500 would have appreciated to \$1 million by 1986, the year that Microsoft went public (see Flanagan 1986). Our description is based mostly on Clifford and Cavanagh (1985) of McKinsey & Co. See also Neimark (1986). Cray was named one of the one hundred best companies to work for in America in the early 1990s, Levering, Moskowitz, and Katz (1993). Later it was acquired by Silicon Graphics in a failed merger and became an independent company again in March of 2000.
- 17 Apple: Davidson and Bailey (1985), Musil (1997), Associated Press (1997), and the company's December 5, 1997, 10-K report to the SEC.
 - 18 "Wozplan" and "Woz couldn't say no . . . ": Moritz (1984).
- 18 "A lot of people took advantage of him . . . ": Butcher (1988), Malone (1985).
 - 19 "Of course you want . . . ": Schlender (1998).
- 19 Oracle: Posner (1985), Stone (2002), Kaplan (1999), and company's proxy filed September 11, 2000, with the SEC. Other key companies that used and later expanded stock options include Advanced Micro Devices, Computer Associates, Intuit, Silicon Graphics, and Sun Microsystems (Southwick 1999).
- 19 Seagate and Tandem: Mamis (1983), Seagate (1999), Kang and Quinlan (2000), Levering, Moskowitz, and Katz (1984), *Business Week* (1980), and Ristelheuber (1995).

- 19 Leland Stanford: Clark (1931), Tutorow (1971), and Norr (1999).
- 20 "A casual dress code . . . ": Adapted from Kehoe (2002).
- 20 "If a company has the attitude ...": See Verespej (1990) and Packard (1995).
- 20 "If people have some part ...": Packard (1995). The company introduced an employee share purchase plan in 1957 just before it went public. Professor Frederick Terman of Stanford played a key role in the launch of Hewlett-Packard. Also Said (2001) and Saxenian (1994a).
 - 21 Varian Associates: Gullixson (1998), Ginzton (1996).
 - 21 "What I learned . . . ": Allen (2001).
 - 22 Adobe: Verespej (1996), and company web site at www.adobe.com.
- $\,$ 22 $\,$ 3Com: Mamis (1983). Sales and employment are from 10-K filed with the SEC on August 8, 2001.
- 23 "They all run together in a more or less indistinguishable mass . . . ": Malone (1985).
- 23 "... many techies knew each other ...": These ideas are a summary of the analysis of Saxenian (1994a, 1994b).
 - 23 ... "unusually high levels of job-hopping ...": Saxenian (1994a).
- 23 Venture capitalists: For the Valentine and Hambrecht quotes, see Mamis (1983). Also see Perkins (1994) and Gupta (2000).
- 24 Microsoft history: Ichbiah and Knepper (1991), Microsoft Corporation (2000), Manes and Andrews (1993), Ballmer (2000), Stross (1997), Buckman (2000), Financial Times (2001), Egan (1992), Matthews (1998), Cusumano and Selby (1995). The other two software companies with large market share in 1986 were Lotus and Ashton-Tate. They held 30 percent of an estimated \$5 billion market in 1985, Ichbiah and Knepper (1991). Ashton-Tate gave options only to employees above the position of director. Clancy (1989).
 - 24 Microsoft founding: Microsoft Corporation (2000).
 - 24 "... Gates balked ...": Manes and Andrews (1993).
 - 24 "... creating stock initially held ...": Manes and Andrews (1993).
 - 25 "Expanded the option program to cover all . . . ": Microsoft public relations.
 - 25 "We never thought . . . ": Microsoft Corporation (2000).
 - 25 "We're using ownership . . . ": Stross (1997).
 - 25 "Early on Bill and I . . . ": Authors' interview (by email) with Ballmer (2001).
- 25 "Once Microsoft workers are hired . . . ": Authors' interview (by email) with Malloy (2001).
- 25 "... at the end of April 2000 ...": Stock prices are from SiliconInvestor.com, operated by Infospace. See Ballmer (2000) for the text of Ballmer's memo discussing this. See also Buckman (2000), *Financial Times* (2001).
- 26 "Not even the height of the Wall Street . . . ": Egan (1992). The stock went up 1,200 percent from the IPO to the time of this newspaper article.

- ²⁶ "Gates and Ballmer take no options..." and their ownership stakes: Based on Microsoft's proxy filing of September 27, 2001, with the SEC and market value of \$326.59 billion on March 29, 2002, according to SiliconInvestor.com.
- 26 "Still, all the other employees owned 20 percent . . . ": Based on a 1993 statement in a Microsoft internal publication called *Micronews*, quoted in Stross (1997). This is the only credible estimate in the public record.
- "... average workers reaped the rewards of the bull market ...": For a look at how much employees made from options at leading high-tech firms over the decade, see web Appendix 1 at: www.inthecompanyofowners.com
- 26 ESOPs: ESOPs that have tended to foster a participatory culture are the smaller closely held companies. For publications and case studies of such companies, see the National Center for Employee Ownership, www.nceo.org, and the Beyster Institute for Entrepreneurial Employee Ownership, www.beysterinstitute.org. For smaller high-tech firms, the ESOP Association, www.the-esop-emplowner.org/, the Ohio Employee Ownership Center, www. dept.kent.edu/oeoc/, and the Profit Sharing Council of America, /www.psca.org/sig/sigaward.html.
- 27 "Smaller less noticeable firms . . . ": The reference is mainly to high-tech firms that are not well-known and often remained private or were later acquired.
 - 27 John Cullinane: Mamis (1983).
 - 27 Compaq: Davis (1987) and Dell (1999).
- 27 Rolm: Based entirely on Dolan (1984) and Richards (1988). Rolm had been named one of the hundred best companies to work for in America before its merger with IBM. Levering, Moskowitz, and Katz (1984).
- 28 IBM CEO Thomas J. Watson Jr.: Watson (1987). The article was written by Mr. Watson at *Fortune* magazine's invitation.
- 29 "IBM extended stock options broadly at the end of the 1990s": Lohr (2002). After he became chairman and CEO of IBM, Louis V. Gerstner Jr. extended options from 300 to 60,000 employees.
- VentureOne: MacGregor (1994). Other studies shed light on this, too. A nonrandom survey of engineers by *Electronic Engineering Times* in 1993 showed that about 25 percent got stock options, while that figure had increased to 44 percent by 1995. Bellinger (1993, 1995). Another survey by iQuantic showed that stock options had still not completely penetrated high-tech companies in the 1996–2000 period. For options granted to new hires, these companies increased participation rates from 50 percent to 75 percent between 1996 and 2000 for individual contributors and from 0 percent to 60 percent for nonexempt employees. Ongoing option grants went to 100 percent of executives, 80 percent of managers, 51 percent of individual contributors, and 20 percent of nonexempt employees and increased by one-third to one-half over the period. The authors say penetration was highest in the smallest firms. Buyniski and Silver (2000).

- 31 Advanced Research Projects Agency, SAGE and ARPANET: Hafner and Lyon (1996), Abbate (1999), Segaller (1999), the Public Broadcasting System at www.pbs.org/internet/timeline/timeline-txt.html; Robert H Zakon at www.isoc.org/zakon/Internet/History/HIT.html; and the San Antonio Public Library at www.sat.lib.tx.us/Displays/itintro.htm.
 - 32 @: Hafner and Lyon (1996).
- 32 First international connection: The connection used NORSCAR, one of the world's largest seismological observatories, which is based in Norway. For details, see www.norsar.no/NORSAR/.
 - 32 Email: Hafner and Lyon (1996), Abbate (1999), and Segaller (1999).
- 32 Discussion groups: See timeline at www.pbs.org/internet/timeline/timeline-txt.html for 1979.
- 32 Gradual linking up of the Internet: Hafner and Lyon (1996), Segaller (1999), Abbate (1999).
- 32 "... inter-networking of networks": On the origins of the term, see Segaller (1999).
 - 32 "broke the 10,000 mark": Segaller (1999).
 - 32 World Wide Web: Berners-Lee (2000).
 - 32 727,000 and 175 million: Hafner (2002).
 - 32 40 billion and 1.4 trillion: Weinstein (2002).
 - 32 115 million and 19 hours: Nielsen/Net Ratings (2001).
- 34 "... then flamed out ...": On dot-com flameouts, see Kaplan (2002) and Kuo (2001).
 - 34 Rachel: Authors' interviews of Portal Software Employees (2001).
- 35 Byland: 03/16/2000 Congressional Testimony by Federal Document Clearing House Inc.
- $35\,$ "We would be crucified . . . ": Authors' interview with Chris Wheeler of Internap (2001).
 - 36 "High technology isn't about . . . ": Clark (1999).
- 37 "Not long ago ...": Speech of John T. Chambers available at www.cisco.com. For similar views, see Bostrom (2002).
 - Bezos story: Authors' interviews of Amazon employees (2001).
 - 39 "First and foremost": Authors' interview with Frank Marshall of Covad.
- 39 "AOL's merger with Time Warner had been a big mistake": For a detailed study, see Munk (2002).
- 40 "...cyber-cockroach ...": Brophy (1999). Stiegman (2000) ascribes the quote to former AOL CEO James Kimsey. Also Stauffer (2000) and Brophy (1999). Call center: Adapted from Pressman (2000). The average wage is from an industry benchmark study in Rouzer (2000).
 - 41 "I learned a long time ago . . . ": Heymann, Caron, and McLean (1996).

- 42 Portal employees: Authors' interview with Portal Software Employees (2001).
- 43 "I had no problem . . . ": Authors' interview with Rasipuram "Russ" V. Arun of Infospace Inc (2001).
 - Tibco employee: Authors' interview of Tibco Software Employees (2001).
- 44 "When the company's profits . . . ": Authors' interview with Vivek Ragavan of Redback Networks (2001).
- 44 "We have a saying . . . ": Authors' interview with Marcel Gani of Juniper Networks (2001).
- 45 "We tell workers ...": Authors' interview with Sandy Gould of RealNetworks (2001).
 - 45 Jack: Authors' interview at Portal Software Employees (2001).
- 46 "... tend to feel that it's their right ...": Authors' interview with Jay Wood of Kana Communications (2001).
- 46 Meg Whittman of eBay: Tempest (1999). On eBay's culture, see also Bunnell and Luecke (2000) and Cohen (2002).
- 46 "... they feel as accountable to employees as the employees do to them": Michael Lewis (2000) says Thorsten Veblen (1921) predicted this. Jim Clark told Lewis, "The power is shifting to the engineers who create the companies."
- 47 "The challenges for executive . . . ": "When the company's profits . . . ": Authors' interview with Vivek Ragavan of Redback Networks (2001).
 - 47 Silicon Graphics: Lewis (2000) and Clark (1999).
 - 48 "... disenfranchised entrepreneur ...": Clark (1999).
 - 48 Netscape: Clark (1999).
- 49 "Netscape's dress code is ...": Web site accessed on 11/01 at home.netscape.com/jobs/hr/culture/index.html.
 - 49 Barksdale and teams: Cusumano and Yoffie (1998).
- 49 "Each of the teams working . . . ": Andreessen talk at MIT on November 14, 1996, quoted and cited in Cusumano and Yoffie (1998).
 - 50 Groupware example: Quittner and Slatalla (1998), and Radosevich (1996).
 - 52 "... motivates people ...": and "This is a great reward ...": Kadlec (1995).
- 52 Browser market share: Pitta (1996), Wall Street Journal (1997), and Fordahl (2002).
- 52 Netscape-Microsoft legal battles: Shiver and Hiltzik (2000), Hiltzik and Shiver (2001), and Hopper (2002).
- 52 Cisco history and culture: Bunnell (2000), Greenfeld (2000), and Young (2001).
- 53 "... more than 90 percent ...": Based on the table Option Grants in Last Fiscal Year from Cisco's corporate proxies of 9/28/01, 9/28/00, 9/24/99, 9/23/98, 10/1/97, 10/4/96 on file with the SEC and available at www.sec.gov.

- 54 "... sixty-nine acquisitions ...": See list on the company's web site under "About Cisco" www.cisco.com/warp/public/750/acquisition/summarylist.html.
 - "When you combine companies . . . ": O'Reilly and Pfeffer (2000).
- 54 Cisco's acquisition process: O'Reilly and Pfeffer (2000). See also Thurm (2000), Bunnell (2000), and Paulson (2001).
 - 55 "This is an empowerment . . . ": Hall (2000).
 - 55 "The buddy system": O'Reilly and Pfeffer (2000).
- 55 "... 8 percent ... 6 percent ... ": Byrne (1998), and O'Reilly and Pfeffer (2000).
 - 55 "Most people forget . . . ": Barner (2000).
- 55 Sales and employment: These data are from Cisco's web site, the Factsheet, under About Cisco: newsroom.cisco.com/dlls/corpfact.html. Cisco's inventory problems and building halts: Piller (2001); Cerent and Monterey: Hall (2000).
- 57 \$300,000. per person: See Chapter 4, How High Tech Firms Share the Wealth.
 - James at Tibco: Authors' interview of Tibco employees (2001).
 - 59 Francine at Portal: Authors' interview of Portal employees (2001).
 - 59 Robert at Tibco: Authors' interview of Tibco employees (2001).
- 59 "A company that is owned . . . ": Authors' interview with Rick Tavan of Tibco Software Inc. (2001).
- 60 "The Internet Age": Authors' interview with Vivek Ranadive of Tibco Software (2001).

- 63 Thales: Aristotle (1996), McCarty (2000), Also Malkiel and Quandt (1969) and Bernstein (1996).
- 64 "Options granted to employees to purchase their company stock . . . ": For an overview of employee stock options, see Bernstein, Binns, Hyman, Staubus, and Sherman (2002), and National Center for Employee Ownership (2001a, 2001b).
- "Most companies choose three to five years": In high tech, 65 percent of vesting schedules are four years, Buyinski and Silver (2000). For vesting variations in broad-based plans in many industries, see Weeden, Carberry, and Rodrick (2001).
- "... most employees simply sell the stock when they exercise their option ...": We are referring to nonexecutive employees in this statement. Indeed, the research by Huddart cited below suggests that two-thirds of the stock option exercises of lower level employees happen six months after options vest if they're "in the money." This suggests they may be too eager to take quick profit from options.
- 66 "... research on the stock option behavior ...": Huddart and Lang (1996, 2002), and Heath, Huddart, and Lang (1999).

- U.S. futures and option markets: On the history, see Bernstein (1996). For commodities options, see the web site of the Chicago Board of Trade on the board's history at www.cbot.com. For stock options, see the web site of the Chicago Board Options Exchange at www.cboe.com/AboutCBOE/History.asp.
- Tulip craze: Malkiel (1996). Bernstein (1996) says new research on this tulip market suggests that "options gave more people an opportunity to participate in a market that had been previously closed to them." He concludes that the bad name for options was cultivated by vested interests who resented the interlopers. Also see Garber (1989).
- 67 Barnard's Act: Morgan and Thomas (1962). However, efforts to curtail option-like instruments were not effective and subsequent legislation to make them more effective failed to pass Congress.
- 67 History of options in the United States: New York Stock Exchange (1917), Kairys and Valerio (1997), and Baskin and Miranti (1997). A form of option trading on foxes developed in New England in the early part of the twentieth century (Balcom 1916).
- Norton: Cheape (1985) and Tymeson (1953). Originally, Norton gave low-interest bank loans to these employees to buy stock at book value, with the remaining cost—up to 90 percent—paid by dividends.
- "Ownership widened...": Stock purchase plans in these days had elements of both today's stock purchase plans and stock option plans. All the way up until the 1950s, it was common to refer to both as "stock purchase options." The key aspect was that workers didn't have to take inordinate risks with their savings to gain equity. They primarily benefited in the potential upside of the stock's movement.

What we know as stock options today typically required no upfront money from the employee, whereas stock purchase plans offered executives stock at a discount. Often, the plans used low-interest loans and dividends to pay for the stock and reduce the risk to executives. Both approaches tried to offer them the opportunity to take an equity position without tying up as much of their own capital as would be required if they paid for it with cash from a savings account. However, if the discount on a stock purchase plan was large enough, it would look more like a stock option plan. See also an earlier use of stock by the English East India Company in Baskin and Miranti (1997).

- 68 "The separation of ownership and control . . . ": Chandler (1977). See also Berle and Means (1997).
- "... exposes of insider dealing and stock speculation by executives": For a famous early case, see the Erie Railroad story in Gordon (1988). For a study of the important railroad corporations in these days and a review of railroad corruption, see Perrow (2002). On dilution of shareholders through issuing shares at a discount and as bonuses to railroad executives, see Baskin and Miranti (1997). Fabozzi and Zarb (1986) say Congressional and private investigations exposed widespread trading of

options and the underlying securities. See also Pecora (1939). Executives who owned large amounts of company shares gave themselves and employees discounts to buy the stock using privileged subscriptions. Mitchell (1905) and Dewing (1941) say the discounts on these purchases often amounted to 15 to 25 percent.

- "Stock options . . . spread steadily throughout the 1920s and 1930s": Taussig and Barker (1925) studied 400 corporations between 1904 and 1915 and found that virtually none of them paid any form of incentive compensation. Earlier, options were used by bankers, utility holding companies, and investment trusts, Baker (1940) and Dewing (1920).
- 68 McKinsey and Chrysler: Guthmann and Dougall (1955). Wage substitution for executives in troubled companies was a common motive for the early use of stock options. For a copy of Eastern Air Lines CEO E. V. Rickenbacker's option contract see Washington (1942).
- 69 John Calhoun Baker quotes: Baker (1940) is the best study of options and the controversy they raised in this early period. See also Baker (1937, 1938).
- "Shareholders filed lawsuit after lawsuit . . . ": A young Harvard graduate student, Jay Eliasberg, filed a lawsuit against Standard Oil of New Jersey, U.S. Steel, May's Department Store, and CIT charging that companies were committing fraud by having stock options and asserting that the options were unnecessary because their executives had no intention of leaving the companies: *Business Week* (1952a). For a review of other cases challenging stock options, see Washington (1942) and Washington (1951). See also Johnson (2000) on options as corporate waste.
- 69 IRS and Supreme Court: Commissioner v. Smith, 324 U.S. 177, 65 Sup. Ct. 591 (1945), rehearing denied, 324 U.S. 695, 65 Sup. Ct. 891 (1945). On court battles, see Washington (1951). On the Supreme Court decision, see *Business Week* (1945).
 - 69 New York Supreme Court: Baker (1938).
- 70 "In 1950 Congress overruled . . . ": Congress called them "restricted stock options" because they made rules that restricted them. See *Business Week* (1953b). On the battles over taxes, see Washington (1951).
 - 70 "... the capital gains rate was just ...": Tax rates from Fox (1997).
- "70 "By 1952, a third of the 1,084 companies. . . ": Business Week (1953a), Garcia (1942) notes how the postwar bull market expanded option profits. Some companies included rank-and-file employees, but these were mainly bargain share purchase programs called stock options, Business Week (1951a).
 - 70 1953–1959 bull market: Garcia (1942).
- "... the business press ran articles ...": Business Week (1951a, 1952b, 1963), U.S. News (1961). See also Henry Ford's (1961) defense, and Ewing and Fenn (1962). On the significant option-related wealth for executives from 1929 to 1958, see Burgess's study (1963). Husband and Dockeray (1972). De Figueiredo (1994) examines the use of options in the 1960s to transform newspapers from control by founding families to control by professional managers.

- 70 Senator Albert Gore Sr.: Commonweal (1961).
- "Then in 1976 . . . ": Fox (1997). Whenever stock options were in disfavor, corporations simply found other ways to transfer value to executives, as the Conference Board's detailed published surveys of executive comp over this period indicate (1970–1983, 1985–2000). When options did not qualify for tax breaks, companies set up "nonqualified plans." For example, after 1982, most corporations had both qualified and nonqualified plans, although the number with nonqualified plans fluctuated. Fox (1997) additionally reports that the combination of restrictions on options and high capital gains taxes after 1976 led to option grants that "tended to be, by previous standards, huge." From 1946 to 1958, Union Carbide had a famous plan where executives were given loans to buy stock, the stock was collateral on the loan, and dividends were used to repay the loan, Burgess (1963).
- 71 Black-Scholes: For a very readable explanation, see Bernstein (1996). See also Bodie, Kaplan, and Merton (2002).
- 72 On options after 1981: A July 1979 U.S. Department of Labor ruling gave managers of pension plans more flexibility to use options and expanded their use by institutional investors, *Forbes* (1980). On the 1981 law, see *Business Week* (1981). Congress called them "incentive stock options" since emphasizing the incentive side was a large part of policy discussions at the time (Jassy 1982). Because inventive stock options put certain restrictions on companies, many also continued to maintain "non-qualified" (for tax incentives) option plans. This allowed them to have a freer hand in structuring options as they pleased. The next Conference Board survey (1982) shows that corporations began the switch to government "qualified" stock options after the 1981 law. By 1990, Conference Board (1990), 75 percent of top corporations had both plans, 5 percent qualified plans only, and 20 percent nonqualified plans only.
- 72 Toys "R" Us: Fox (1997). Before 1981, Firestone Tire chief John J. Nevins pushed stock options to many levels of the company (Sull 1999). Lee Iacocca's option profits at Chrysler received a lot of press attention at the time, Reuters (1984), Dworkin (1985), and Helyar and Lublin (1998).
- "In 1992 . . . \$2.4 billion": Based on an analysis of Standard and Poor's Execucomp data by the authors for the first year national data is available. These are profits on the exercises of stock options, net of the exercise price.
 - 74 Goldstein: Fox (1997).
- 74 "Relatively few major companies ": The extremely slow broadening of who was included in option plans can be traced by examining the Conference Board's regular surveys (1970 to 2000), especially Buenaventura and Peck (1993).
- "The best opinion seems to be . . . ": Casey and Lasser (1952). They also report stock option overhang (potential shareholder dilution) for the 1950s from a McKinsey & Company study. Mr. Casey argues that options may not even be appropriate to junior executives who would prefer cash.

- 74 Thomas Ware: Ewing and Fenn (1962). The median overhang in 100 NYSE plans was 4.7 percent at the time.
 - 75 Conference Board: Buenaventura and Peck (1993).

- "... a host of ways to extend ownership ...": Many companies allow employees to purchase discounted stock through employee stock purchase plans. In the past, some employers have used company stock to pay for deferred profit-sharing plans. Before 401(k)s came along in 1978, many old thrift/savings plans were partly invested in company stock.
- 80 High Tech 100: They are the hundred publicly traded corporations with the largest market value as of October 2000 that had more than half of their revenues related to the Internet.
- "... all those ephemeral dot-coms ...": The Wall Street Journal reported 500 recent dot-com failures (Kelly 2002), and 690 companies delisted from the NASDAQ since the end of 2000 (Edmondston 2002). Many are described in the book *F'd Companies* (Kaplan 2002) and on the web site www.F**kedcompany.com. On the bursting of the Internet bubble, see Mandel (2000) and Perkins and Perkins (2001).
- High Tech 100 index: The index is the sum of the stock prices of all companies on the list whose stocks were trading on that date. The peak of the recent technology market boom was March 10, 2000, when the NASDAQ Composite was at 5,048. The lowest point as of this writing was July 26, 2002, when the NASDAQ was at 1,262. Stock prices are from public market sources and exclude companies that went bankrupt, were acquired, or merged with another company. Daily market statistics on the NASDAQ are from www.nasdaq.com.
- \$1.3 trillion: This market value of the High Tech 100 on March 10, 2000, is rounded and is based on Standard and Poor's Compustat database. It includes all companies that weren't acquired or bankrupt over the period, so AOL is excluded.
- \$162 billion: This market value number is rounded and is based on prices from July 26, 2002.
- 80 Market values for the NASDAQ: According to the NASDAQ's market data research (www.marketdata.nasdaq.com/mr4b.html), the total market value of the entire NASDAQ was \$6.71 trillion on March 10, 2000. It declined to \$1.95 trillion on July 26, 2002. Values for the NASDAQ National Market are somewhat lower. See also Adiga (2002), Vickers and others (2002).
- 81 "...eight ...had declared bankruptcy ...": They are: Excite@Home Corporation, Covad Communications Group (which later reorganized and continues to trade on the NASDAQ as a public company), Exodus Communications, marchFIRST Inc., Metromedia Fibre Network Inc., PSI Net Inc., Scient, and Winstar Communications. By January 2002, the following companies had merged with other

companies or been acquired: Alteon Web Systems Inc., America Online Inc., Concentric Network Corp., Efficient Networks Inc., Go2Net Inc., Lycos, MMC Networks Inc., Network Solutions Inc., Pairgain Technologies Inc., Phone.com Inc., Software.com Inc., Ticketmaster Online Citysearch Inc., Verio Inc., and Virata.

- 81 Total employment of the High Tech 100: Based on end of the year SEC filings for 1999 through 2001. In order to arrive at a strict comparison, the figures exclude companies that were bankrupt, merged, or acquired, unless both companies were originally part of the High Tech 100.
- "These companies have real customers and real sales . . . ": Sales are net revenues from SEC filings at the end of the 1999 fiscal year and the end of the 2001 fiscal year. These figures exclude companies that went out of business or were acquired so that the comparison between both points in time includes the same group of companies. They also don't show some declines in sales between these two points. We show 1999 and 2001 sales for the High Tech 100 on the web version of Appendix A.
- 81 "As Federal Reserve Board chairman Alan Greenspan . . . ": Schaffler and Marchini (2002).
- 81 Employee equity: Employee equity is the total claim on the equity of a corporation that all its employees have. It is the sum of all direct stock ownership by employees as reported in SEC filings (which provide direct ownership for the top five managers and typically the stock owned and reserved for the employee share purchase plan), plus all stock options currently held by employees and available for future issue. We compute the potential ownership as if all options were exercised. All ownership stakes are then diluted by the ownership represented by the stock options.
- "... stupendous amount of paper wealth ...": We estimated paper wealth using the stock price on the day for which the wealth was determined, the total number of stock options outstanding, and their weighted average exercise price as of the most recent SEC filings. We included both vested and unvested options. This table usually appears in the stock option plan section of a company's annual report (Form 10-K) to the SEC and is labeled "Other information regarding options outstanding and options exercisable as of (date)." The figure of \$1 million per employee was computed by dividing by 177,000 employees as of December 31, 1999, for the High Tech 100. All wealth figures in this chapter are averages. They assume that all employees shared equally in paper wealth. This is obviously not the case, but no better figure can be provided based on publicly available records of the SEC.
- 82 "...83 percent of employee options were below their company's stock prices ...": We computed this based on an examination of actual exercise prices for all one hundred companies from their most recent SEC filings for 2001, including all vested and unvested options.
- 83 "... a total of some \$78 billion ...": This figure may sound somewhat unbelievable in light of all the negative press high-tech stock options received following the market slump. But if anything, our method gives a conservative estimate. For ex-

ample, in 2001, the California State Department of Finance (Morain 2001) estimated that some \$84 billion worth of stock options were exercised in that state alone in 2000, accounting for a remarkable 10 percent of its total wages and salaries that year. This includes options issued by all companies, not just high-tech ones, as well as those held by top executives. But the agency believed that the majority were at high-tech companies, mostly Internet ones in Silicon Valley where most of the High Tech 100 are headquartered. Since our number includes high-tech companies nationwide, the department's findings gave us some comfort that we hadn't overestimated.

"... actual cash profits employees and executives made ...": We computed the profit on stock options by taking all those that High Tech 100 companies reported as exercised in their SEC filings for 1994 to 2001. We imputed an exercise price using the conservative assumption that each employee sold at a price midway between the high and low price of the company's stock for the period in which the options could have been exercised. This assumes that the average employee neither beat the market by always selling at the highest point nor missed the market by selling at the lowest point.

If the company had previously gone public, all employees were presumed to have exercised during a year beginning after the exit date for the IPO. The exit date is the date before which a specific group of insiders are prohibited from selling their stock or exercising options when there has been an IPO. We assumed that all employees who exercised options abided by the exit date and then immediately sold the stock and pocketed the cash profits. For nonexecutive employees, the notion that they exercised and sold is one reasonable assumption based on the research of Huddart and Lang (1996, 2002) and Heath, Huddart, and Lang (1999). However, to the degree that employees held onto their stock, our estimates of their profits are excessive.

The figure of \$53 billion is for all employees who are not the top five executives of the companies. The total profit was divided between this group of employees and top five executives using the recent share of options actually held by both groups for each company based on its SEC filings. It includes profits on sales immediately after the company's IPO and thereafter. The smaller group of employees who worked for the companies immediately after the IPO made amounts larger than the average per worker overall.

- 83 "... dot-conned investors ...": Cassidy (2002).
- \$4 \$70,000 a year: This is an estimate by the authors based on those firms that made compensation information available to Compustat.
- 85 "... data we gathered came mostly ... from the SEC ...": All numerical data used in this chapter were calculated based entirely on SEC filings. The determination of whether a company actually granted stock options to most of its employees was gathered mainly from SEC filings. When this was not discernable from SEC filings, we used publicly available sources such as Dow Jones Interactive and Lexis/Nexis to find

the answer. When that did not work, we requested an answer from the public relations departments of the company by email or telephone.

"This is called dilution": Several perspectives and measures of potential dilution are provided in this book. The type discussed here involves taking all currently issued and outstanding options as a percent of total shares outstanding. "Employee equity" is figured using what's called overhang. It's calculated by summing all currently issued and outstanding options, plus all options available for future grants. These are then considered as a percent of total shares outstanding. A final perspective is the run rate, which measures how many options a company issues every year. We compute it by taking the annual option grants from SEC filings (subtracting cancelled options) as a percent of total shares outstanding. For comparable dilution and employee equity figures for the 1,500 largest U.S. corporations, see Siegl, Loayza, and Davis (2002).

87 Table 4.2: Who Owns the High Tech 100?: Direct ownership for the board and top executives is available in each company's proxy statement (Form DEF–14A). So is the share of all employee options outstanding that are currently in the hands of the top five executives. The figure for options held by board members is an estimate based on those companies that report this information, which all companies don't do.

Total stock options outstanding, and the total number of options available for future issue (the sum of which equals the overhang, or total employee equity), is available in a company's Annual Report (Form 10-K) in the stock option section and in the table on stock option activity. Shares reserved or held in the employee share purchase plan (ESPP) are also available in this document. The figure for direct ownership through ESPPs is based on the shares reserved for these plans from the companies for which information is available. Not all companies disclose this. Because the SEC requires executives to report their beneficial ownership by adding their actual direct stock ownership and the ownership potentially resulting from options exercisable within sixty days, there may be some double-counting in the columns expressing top five executive ownership from stock and options. This is not avoidable using publicly available information.

- 88 Employee share purchase plans: On the operation of these plans, see Carberry and Rodrick (2000).
- 401(k) Plans: Data on company stock in High Tech 100 401(k) plans was based on an analysis of the Form 5500 report on file with the U.S. Department of Labor. These data are accessible at the web site www.FreeErisa.com. While most High Tech 100 did not stuff their 401(k)s with company stock, they also didn't offer traditional pension plans (defined benefit plans), so the 401(k) was, in general, the only potentially diversified retirement plan available.
- 90 "... employee equity didn't shrink as companies grew ...": Based on an analysis we did of option overhangs and employee equity of the High Tech 100.

Another survey finds that the largest companies actually provide employees the greatest potential value from stock options (Buyniski and Silver 2000).

- 90 Microsoft not in the High Tech 100: It wasn't included because more than half its sales don't come from the Internet.
- 90 "Microsoft's employee option program . . . ": Based an analysis of the company's recent SEC filings.
- 91 Table 4.3: How Founders Share the Wealth: The founders' diluted equity was computed by taking his or her beneficial ownership in these filings (which also includes options exercisable within sixty days according to SEC rules), adding potential ownership represented by options, and arriving at their total potential equity stake. This was then diluted by assuming that all stock options outstanding or available for future issue to nonexecutive employees were exercised. The information on total nonexecutive employee equity was computed as follows: We took all options outstanding or available for future issue from the accompanying 10-K for each company and computed the percent of potential ownership it might represent, adding all shares reserved for employee share purchase plans that principally cover nonexecutive employees, and diluting this total amount by assuming that all stock options outstanding or available for future issue to nonexecutive employees were exercised.
- "... ninety-eight of the High Tech 100": The best available survey of participation rates, by iQuantic (Buyniski and Silver 2000), found that software and e-commerce companies that have fewer nonexempt employees than equipment makers actually grant options to 33 percent and 48 percent of their nonexempt employees, respectively. One-third of the High Tech 100 were identified as being in this survey. Most of them are in the counties surrounding San Jose, California. A 2000 Gallup poll, (Financial Times 2000), showed that one in three households in the surrounding Santa Clara County owned options, with 23 percent in San Mateo, 21 percent in San Francisco, and 15 percent in Contra Costa counties.
- \$21 billion: We used the method described above for computing profits on stock options, but focused entirely on exercises in the year immediately after the IPO. The figure assumes that the profits on these option exercises were equally divided among all employees working for the company at the time of exercise. Using public information, it's not possible to determine precisely how many employees shared in these option exercises.
- 93 39,000 employees: Based on SEC filings for the IPO year or Dow Jones Interactive or Lexis/Nexis.
- 93 "Higher-paid employees also often received a larger number of options than lower-paid ones . . . ": For a comparison of CEOs' annual option grants to those of other employee groups in companies with broad-based option plans, see web Appendix 2 at: www.inthecompanyofowners.com.
 - 93 \$1.27 a share: Based on an averaging of the exercise prices by the authors.

- 93 \$8.61 a share: Based on an averaging of the IPO offering prices by the authors.
- "A rapid, and we now know irrational, runup . . . ": The percentages were computed by the authors from stock exchange data and IPO offering prices. Note the percentages cited express not the stock price increases relative to the offering price of the stock in the IPO, but relative to the price of the cheapest stock option granted.
- 94 Portal Software: Based on a case study by the National Center for Employee Ownership (2000) and analysis of recent SEC filings.
 - 95 Francine and Jack: Authors' interviews.
 - 95 Jennifer: Authors' interviews.
 - 96 Owen: Authors' interviews.
- 96 Tibco Software option exercises: Based on our analysis of the company's SEC filings using the estimation methods for option profits described above.
- 96 VeriSign Inc. option exercises: Based on our analysis of the company's SEC filings using the estimation methods for option profits described above.
- 97 Excite@Home option exercises: Based on our analysis of the company's SEC filings using the estimation methods for option profits described above.
 - 97 Mitch and Rachel: Authors' interviews.
 - 98 Peter: Authors' interviews.
 - 98 Jay Wood: Authors' interviews.
 - 98 Wendy: Authors' interviews.
 - 100 Jerry and John: Authors' interviews.
- 100 Taxes and Alternative Minimum Tax: See Bernstein and others (2002), Fenton, Stern, and Gray (2000), NCEO (2001a, 2001b), Curtis (2001), and Ungar and Sakanashi (2001). The authors do not extend a personal endorsement regarding any stock option advice to any source or approach mentioned in this book. Any review of approaches is for general discussion purposes only.
- 101 "That's not fair": Schwanhausser (2001b) and (2002), report that the bill never passed. The tax bills for this problem initially became due for thousands of employees on April 15, 2001. These citizens created a lobbying organization called Reform AMT (www.reformamt.org/).
- 102 Oppenheimer Funds survey: Schwanhausser (2001b). On this question see also Buyniski and Silver (2000).
- 102 "This happened to dozens of Microsoft employees . . . ": Morgenson (2001a).
- 103 Rosen: Authors' interviews. The authors do not extend a personal endorsement regarding stock option advice to any source mentioned in this book. The concept of "critical capital" is trademarked by MyCriticalCapital(TM).com (Business Wire 2000) and was developed by veteran certified financial planners, Alan B. Ungar and Mark Sakanashi (2001).

Chapter 5

"... what experts call the run rate": In the context of stock options, the run rate is the number of stock options granted in any particular year (minus those options cancelled), as a percent of total shares outstanding at the end of that year. For run rates of the 1,500 largest companies in the United States and by industry group, see Siegl, Loayza, and Davis (2002). The 2001 national average is 2.1 percent. For run rates of a large diversified sample of firms offering broad-based options, see Weeden, Carberry, and Rodrick (2001). The average is 5.4 percent, including technology and some Internet firms. The authors used the Standard and Poor's Execucomp database on the top 1,500 companies to compute that the average national burn rate (similar to the run rate without excluding cancelled options) went up by 48 percent from 1992 to 2000, climbing from 2.23 percent to 3.29 percent per year. For the 500 largest firms it more than doubled, from 1.3 percent to 2.88 percent per year.

Stock options that are cancelled and forfeited: When employees leave the company, their options are often forfeited and thus canceled. Options whose term expires also disappear. Also, if the stock price falls dramatically, companies may cancel existing options and issue new repriced ones, or cancel existing options and exchange them for other options

106 "the run rate": The run rate for any particular company can be computed by going to the Form 10-K (Annual Report) of that company at the SEC web site, www.sec.gov. Every public corporation is required to report its annual option grants and option cancellations in a table, and its total shares outstanding.

"High Tech 100 firms gave employees about 90 percent of all outstanding stock options . . . ": We determined the percent of annual option grants that were given to average employees, i.e., not the top five officers, based on grants over previous years in the following way. The SEC requires that all public companies specify in their proxies the percent of option grants in the last fiscal year given to the top five executives as a percent of those given to all employees. In order to arrive at the percent of option grants for a broad group of non-top five officers, you subtract this percent from 100 percent.

107 Chambers: Duffy (2000).

107 Lawler: Heath (1999).

109 The Annual Option Spigot Chart: The average (median) run rates for the High Tech 100 *before dilution* are: 2001: 5 percent (3 percent); 2000: 7.2 percent (8.2 percent); 1999: 8.4 percent (7.5 percent); 1998: 10.4 percent (7.7 percent); 1997: 10.8 percent (8.8 percent). The distribution between Employees' Share and Top Officer's Share was figured using the actual percent of options given to these groups (as described above) for 1999 (namely 83.5 percent) and 2000 (namely 89.1 percent) and the average of these two years for previous years (namely 86.3 percent). We assume that cancellations and forfeitures were randomly distributed between the top five officers and other employees for the purpose of these figures. Note that the drop in run

rates from 1997 to 2000—especially the drop from 1999 to 2001—can be best explained not by a decrease in the number of options granted by the High Tech 100 but rather by an increase in cancellations and forfeitures. For other studies on run rates, see iQuantic's on the broad high-tech industry showing a doubling of the burn rate (their comparable measure that excludes cancelled options) from 3.3 percent to 6.9 percent from 1996 to 1999. Buyinski and Silver (2000).

- 109 1.5 billion options: This is an estimate based on the total options granted by the High Tech 100 in 2000. Companies that had been acquired as of January 2002 or are out of business have not been included. The estimate does not include cancellations and forfeitures.
- 110 80 percent of outstanding options in the hands of employees by 2000: This percent is based on determining the *aggregate* percent of ALL option grants that are in the hands of average employees (not the top five officers). To do this, you take all the stock options available for employees other than the top five executives as a percent of total stock options outstanding. This was computed by going to the company's Proxy, called DEF 14-A.
- 110 Estimate of all options given over the High Tech 100 history: This rough estimate assumes that companies gave the same number of options granted in their last fiscal year (adjusted backward for stock splits) for all years they were public and for two years before their IPO. It also assumes that all bankruptcies and mergers took place in 2000 for those companies that underwent such transactions from 1999–2000. These estimates do not include cancellations and forfeitures.
- 110 Yahoo: On Yahoo's corporate culture, see Angel (2002) and Vlamis and Smith (2001). All Yahoo equity stakes are not the actual stakes reported in the proxies. Rather, as is the practice of this book, they have been diluted with the assumption that all outstanding stock options and those available for future issue were exercised.
 - 111 Ragavan: Authors' interview.
 - 112 Gani: Authors' interview.
 - 112 Siebel: Haines, Farber, and Froehlich (2001).
 - 113 Callisch: Steen (2000).
 - 113 Wood: Authors' interview.
 - 113 Sclavos: Authors' interview.
- 114 "... psychological impact of the crash ...": Many business stories suggested the stock option culture was dead. See *San Jose Mercury News* (2001), *Denver Post* (2001), *Houston Chronicle* (2001), *Financial Times* (2000). The issue was raised in countless major newspapers and business magazines, some of which bordered on wrongly claiming that all options were worthless and that the concept of stock options had no real future in tech companies.
- 114 Steve Ballmer's memo: Available from ZD Wire (2000) through Dow Jones Interactive at Rutgers University Library. Also cited by Buckman (2000). The number of employee levels at Microsoft was provided by the company's public relations firm in

response to our query on February 27, 2002. Microsoft has 32 levels including the following numbered levels: 50–70 and 80–92. Thus, all levels below level 67 would be the 18 lower levels. See also *Newsweek* (2000).

- 115 Microsoft temporary workers: Kelley (1999).
- 115 Microsoft special stock option grant: See Pender (2001), who writes: "Last April, Microsoft said it would give all its employees an extra one-time stock grant. It didn't cancel the old options, so there was no charge to earnings." Mulligan and Piller (2000) write: "In an action sure to reverberate through the high-technology world, software giant Microsoft on Tuesday granted new stock options to all 34,000 full-time employees, aiming to compensate them for the stock's 40 percent dive this year."
- 115 "Overall 47 percent While the other 53 percent . . . ": Here is how High Tech 100 companies compensated their workers for underwater options:

An Announced Repricing	3 percent
An Announced Special Additional Share Grant	6 percent
An Announced Option Exchange	35 percent
An Announced Restricted Stock Grant	5 percent
An Unannounced Additional Share Increase	
in the Run Rate	47 percent
An Announced or Unannounced Additional	
Share Grant	53 percent

This covers the period January 1, 2000, to March 1, 2002. All the percentages in the table add up to more than 66 percent because a handful of companies took multiple actions. In some cases it is possible that a large increase in the run rate was the result of additional stock option programs of acquired companies. This table is based on our study of the SEC filings for 2000 and 2001 of all High Tech 100 companies.

- 115 "We will go and look at the entire base . . . ": Authors' interview.
- Accounting Standards Board, so companies found several ways around it. The Board said that when companies reprice stock options, they must record any increase in the value of the repriced options as a compensation cost. See Harbert (2000) who reports an iQuantic.com study that 61 percent of tech companies repriced in a tenyear period before the board's new ruling. Ittner, Lambert, and Larcker (2001) found that 59.6 percent of 217 high-tech firms had repriced their stock options at least once since their IPO and more than 31 percent did it twice. For the board's home page see, www.fasb.org. The SEC's material on "Repricing," is available at www.sec.gov/divisions/corpfin/repricing.htm. The Division of Corporation Finance has other materials available at www.sec.gov/divisions/corpfin.shtml. To avoid lots of underwater options, many consultants recommended giving staggered option grants throughout the year instead of one big package, so that employees in falling markets would get options at varying exercise prices, a kind of "dollar price averag-

ing for stock options." See Herhold (2000) and Gomes (2001). On past executive repricing, see Brenner, Sundaram, and Yermack (2000) and Chance, Kumar, and Todd (2000).

116 "... exchanged old options for new options after six months ...": While we say this approach essentially repriced options, it did not officially count as repricing. The method was called "Six month and a day," "slow-motion swaps," or "voluntary option exchanges." Employees surrender their underwater options, cancel the old options, and wait six months for new options at an unknown exercise price. The accounting penalties can be avoided by setting the new strike price more than six months after employees cancel the old options. If it does this the company can avoid taking charges against earnings as required by Financial Accounting Standards Board rules. It was widely used by High Tech 100 companies. We collected and analyzed the press releases of all companies that used this method.

- 116 "Well, no one is repricing . . . ": Authors' interview.
- 116 Owen of Amazon: Authors' interview.
- 117 Janes of Amazon: Authors' interview.
- 117 Amazon: On the option grant see Pulliam (2000), which points out this new grant was already underwater by the time of her November 2000 article. This is probably why Amazon took further action with repricing and later an option exchange. On the Bezos email, see *Electronic Commerce* (2000). See also Schroeder and Simon (2001), Norris (2001), Simon (2001), Weiss (2001), *Investors Daily* (2000), and Edwards (2001). We have attempted to adjust all references to Amazon's stock prices in employee interviews for splits to March 2, 2002, so that they are consistent. For this purpose, we consulted SiliconInvestor.com of Infospace. On Amazon's corporate culture, see Saunders (2002), Daisey (2002), Spector (2000), Alpert and Pollock (1999).
 - 118 "The FASB rules . . . ": Authors' interview.
 - 118 Sprint: Sprint (2000).
- 119 "Companies must ask shareholders permission . . . ": 40 percent of the High Tech 100 went to their shareholders for approvals for new stock option and stock ownership programs in 2000. In these shareholder meetings, 32 percent of the companies asked and got shareholder approval for new stock option programs or to increase the shares available in such programs. About 5 percent of the companies asked and got shareholder approval for new stock option plans, 27 percent asked and got shareholder approval for increasing the shares reserved for stock option plans, 13 percent asked and got shareholder approval to increase the shares reserved for employee share purchase plans, and 9 percent asked and got shareholder approval for automatic evergreen plans that replenish options outstanding each year.
 - 119 "Some of us have tried other creative ways . . . ": Authors' interview.
 - 119 Bill Coleman: Authors' interview.

- "When you throw in those who jacked up their run rates . . . ": Companies need to have enough extra authorized but unused options to do this. To compare 1999 and 2000 run rates, using SEC filings, we computed them for the High Tech 100 for December 31, 2000, (including some special fiscal years when available) and compared them to the fiscal year ending December 31, 1999, (or special fiscal years when available) for 86 of the 100. All companies for which data was available in both years were included, even Excite@Home, Covad, and Exodus, which later declared bank-ruptcies.
 - 120 Curry of Amazon: Simon (2001).
 - 121 Jain: Authors' interview.
- 121 "... Amazon did surveys of labor markets to determine how much it should pay employees ...": Based on interviews by Aaron Bernstein.
 - 122 Sclavos: Authors' interview.
 - 122 Owen: Authors' interview.
 - 122 Zach Works at Amazon: Bernstein and Hof (2000).
- 123 Bezos at Amazon's 2001 Annual Meeting: These are direct quotes from questions and answers addressed to Jeff Bezos at the 2001 Annual Meeting before 200 shareholders as reported by Edwards (2001).
 - 123 Unions at Amazon: Bernstein and Hof (2000) and Newsday (2001).
 - 125 "You bet the wage substitution . . . ": Authors' interview.
 - 125 Wheeler: Authors' interview.
 - 125 "Our executive salaries . . . ": Authors' interview.
- 125 "Two surveys back up this notion . . . ": The iQuantic survey was mentioned to us in a confidential interview with a human resource management executive. The pre-IPO dot-com survey is by WetFeet.com, an Internet job recruitment site, and Hewitt Associates LLC, a corporate consulting firm (Wetfeet 2000).
 - 126 Francine, Tom, Jack, and Goeff at Portal: Authors' interview.
 - 126 Jerry and Sue at Excite: Authors' interview.
- 127 Tibco story: Authors' interview. For his view on business and corporate culture, see Ranadive (1999).
- 128 "It can be risky for management to hype potential option winnings \dots ": Authors' interview.
 - 128 Bell: Authors' interview.
 - 128 Bill of Tibco: Authors' interview.
- 129 "... they needed options to make sure they didn't lose the talent they had worked so hard to get ...": Experts such as Matt Ward of Westwardpay.com (Handel 2000), and Corey Rosen of the NCEO recommend more frequent option grants and longer option terms to deal with market ups and downs and its impact on employee morale and commitment. But before the bust, Buyinski and Silver (2000) report a trend toward shorter even monthly vesting and this raises troubling issues about the holding power of options, which was their original goal.

- 132 Dilution: There are several aspects to the dilution public shareholders face when an employee option is cashed in for a share of stock. First, any increase in the company's market capitalization will be shared with option holders, leaving less for prior stockholders. Also, any profits the company pays out in dividends will be spread out over more shares, which means less per share for each stockholder. The added shares also dilute existing shareholders' percentage control of the company, which could, for example, make some investors ineligible for board seat if they are based on such percentages. Shareholders' voting rights are diluted as well. In addition, all these dilution effects can make the company's shares look less attractive to new investors, which means that the stock price may rise more slowly than it otherwise would.
- 133 "... stock option overhang ...": For a benchmark on overhangs in the 1,500 largest corporations in the country and by economic sector, see Siegl, Loayza, and Davis (2002), which shows average overhang in these companies as 14 percent at the beginning of 2002.
- 133 "Of course, employees have to pay money to buy the stock that an option entitled them to purchase.": When employees exercise options, they must pay the company the exercise price in order to receive the stock to which the option entitles them. They're then free to sell the share at the higher market price, reaping an immediate profit that the company forgoes. Still, from this perspective, options aren't a pure giveaway, but rather are at least in part a way for a company to raise capital by selling shares. For example, in 1999, Amazon employees exercised 16 million shares, paying the company \$320 million in the process (Henig and Sperling 2000).
- 133 "Companies that offer options typically publish the information needed to compute this figure in their annual SEC": To learn how to use public SEC filings to find the overhang for a company, see www.inthecompanyofowners.com, the web site for our book.
- 133 "Total equity": Total equity is the same concept as "employee equity" used in Chapter 4, except in this case we're referring to the total equity of all the insiders at a company, including the top five executives, all other employees, and board members. In Chapter 4 and throughout the book, "employee equity" refers only to employees other than the top five executives.
- 137 "... a break on Federal taxes": For a detailed study of options and taxes see Desai (2002).
- 137 "This can be a whopping number": Tax benefit estimates from Henry and Conlin (2002).
- 138 "... they don't have to treat that very same option as an expense ...": Desai (2002) reports option exercises as a percent of operating cash flow for 1996 through 2000 in general and for 150 corporations.
- 138 Microsoft's earning and options and Maffei quote: Norris (1997). Also see Jereski (1997), which says: "But a telltale footnote to its income statement revealed

that pretax earnings would have been \$2.8 billion—\$570 million less—if Microsoft had compensated its employees entirely with cash." At "its \$83.75 closing stock price on the Nasdaq Stock Market yesterday would reflect an earnings multiple of nearly 30 times last year's earnings instead of about 24 times."

- 139 "... Enron had received a large tax break for options ...": Leonhardt (2002b). Enron also gave options to a broad group of employees.
 - 139 Greenspan: Hitt and Schlesinger (2002).
 - 140 "Silicon Value is now . . . ": Authors' interview.
- "Today, 80 percent of the workforce is involved in nonmanufacturing activities . . . ": OCED (2000). We are indebted to James Sesil of Rutgers University for this reference. The growing role of intellectual property in capital was the subject of a Federal Reserve Bank of Kansas City conference in Jackson Hole, Wyoming (Murray 2001).
 - 141 "Knowledge is not like a stock of ore . . . ": Griliches (1994).
 - 142 "There is a trade-off . . . ": Authors' interview.
- 142 "We're creating a company in which human resources . . . ": Authors' interview.
- 143 "When you start a company, you own 100 percent of this pie . . . ": Authors' interview.
- 143 Warren Buffett: For "royalty on the passage of time," see Tully (1998). For his letters to shareholders, see www.berkshirehathaway.com/.
- 148 "The crazy thing . . . ": From Joseph Blasi's interview with Beyster in 1988. Also see www.saic.com.
 - 148 "Here in Seattle it all centers around Microsoft . . . ": Authors' interview.

- 153 High performance work system: The most careful definition of a high-performance work system is by Huselid in Becker, Huselid, and Ulrich (2001). It's based on the characteristics that reduce a company's turnover and improve its market value, including return on assets and sales per employee. This approach emphasizes the importance of all parts of a company culture supporting each other.
- 154 "... various forms in the United States ...": For an overview of the different types of employee ownership, see Bernstein, Binns, Hyman, Staubus, and Sherman (2002). For more detailed descriptions, see the web sites of the primary nonprofit organizations that address employee ownership: The Beyster Institute for Entrepreneurial Employee Ownership (www.beysterinstitute.org); the ESOP Association (www.the-esop-emplowner.org); the National Center for Employee Ownership (www.neco.org); the Profit Sharing/401k Council of America (www.psca.org); the Kelso Institute (www.kelsoinstitute.org/); the Center for Economic and Social Justice (www.cesj.org/index.html); and the Capital Ownership

Group (www.capitalownership.org/). Various states also have special centers, including the Ohio Employee Ownership Center (dept.kent.edu/oeoc/); the Virginia ESOP Education Services (www.vlsc.bus.vcu.edu/va_esop.htm); The Global Equity Organization (www.global equity.org); and Ownership Associates (www.ownership associates.com).

See also the International Association of Financial Participation (perso.wanadoo.fr/iafp/); Employee Benefits Research Institute (www.ebri.com); WorldatWork, the professional association for compensation, benefits, and total rewards (www.worldatwork.org); the National Association of Stock Plan Professionals (www.naspp.com); and the ICA Group (www.ica-group.org).

154 "...9,000 private companies, mostly smaller ones ...": For a list and the web sites of the 100 largest mostly private employee ownership companies, see: www.business-ethics.com/employee.htm#EO Chart.

Appendix C: Many companies have more than one type of employee ownership plan. So we lumped the employees and the assets of all secondary plans in with the primary one at each firm. This approach allows us to measure the number of companies and employees in the United States involved in employee ownership without double counting, as all previous estimates have done—including our own.

Also, Labor Department data on new contributions of company stock to KSOPS, 401(k)s, and profit-sharing plans weren't available after 1999. So we assumed that they continued at 9.4 percent a year, the average between 1994 and 1999. We used the same 9.4 percent assumption for employee stock purchase plans, for which no specific data were available even before 1999. We assumed that contributions to ESOPs didn't grow at all after 1999, based on the flat growth of ESOPs reported by the Labor Department. To the extent that these assumptions understate the degree to which employees pulled back from employer stock purchases during the market drop, both the stock values and the losses as of August 2002 would be smaller.

- 154 "... researchers have done more than seventy ...": Kruse (2002).
- 155 Books: See Blasi (1987, 1988), Kruse (1984, 1993b), Blasi and Kruse (1991), and Quarrey, Blasi, and Rosen (1986). We warned about the risk of employee ownership and corporate governance problems in *The New Owners* (1991). We specifically warned about the risk of employee ownership investments in company stock (such as those in 401(k) plans) and the need for a corporate governance response to this risk. For the reviews, see Kruse and Blasi (1995) (updated in Kruse and Blasi [1997, 2000a, 2000b] and Blasi and Kruse [2001a]), and Sesil, Kruse, and Blasi (2001).
- 155 "... synthesize all the findings gathered over the years ...": As we were writing this book, the NCEO published a partial synthesis (2002c).
- 155 Definition of "major" study: A major study is a comprehensive study using careful statistical techniques that relies on a large sample of the population or all of the companies for which data is available in the population being researched.

157 "... the companies in all these studies granted roughly 8 percent of their shares to employees": This is our estimate of the average total employee ownership found in studies involving ESOPs, defined-contribution plans, employee stock purchase plans, and stock options. The ownership at companies in which employees own more than 5 percent is about 12 percent (Blasi and Kruse 1991, and Blasi, Conte, and Kruse 1992). It's about 2 percent to 3 percent in ESOP companies. The total overhang from stock options among companies with broad-based option plans is about 11 percent on a post-dilution basis.

158 Iroquois: Johansen and Mann (2000), Johansen (1999, 1998).

158 Indentured servitude: Galenson (1981, 1984), Morgan (1995), Hofstadter (1973), Phillips (1987), Taylor (2001), Carr, Menard, and Walsh (1991), Perkins (1988), Weiss and Schaefer (1994), Paulson (1981), Bogart and Kemmerer (1942), Williamson (1944), and Hawke (1988). Indentured servitude could benefit both landowner and servant when the owners followed the terms of the indenture. But because there was such unequal power, some owners took advantage of their servants by prolonging their terms. In addition, those who finished their indenture in areas such as Pennsylvania were much more likely to get land than those in areas like the Chesapeake, where rising land prices shut them out of the market.

158 Whaling: Hohman (1926). We are indebted to Paul Cyr, librarian at the New Bedford, Massachusetts Free Public Library Whaling Collection Archives, who helped us do research on how compensation schemes worked on whaling vessals. See also Melville (1998), Bemis (1886), Clark (1886).

159 Homestead Act: United States (1862), Gates (1936, 1962), Poulson (1981), Bogart and Kemmerer (1942), Republican Association of Washington (1859), Union Republican Congressional Committee (1868), Hibbard (1924), Cowan (1936–1940), Shannon (1936), and Davis, Hughes, and McDougall (1969).

160 "... promises and plans to extend land ownership to free blacks ...": Cimbala (1989), Cox (1958), Bentley (1955), and *The Sea Islands: An Experiment in Land Redistribution* available at chnm.gmu.edu/courses/122/carr/seaframe.html.

Sharecropping: See Ransom and Sutch (2001), Royce (1993), Reid (1973), Nieman (1994), Mitchell (1979), U.S. Special Committee on Farm Tenancy (1937), Davis (1982). On the theory, see Stiglitz (1974), Braverman and Stiglitz (1982), and Cheung (1968). Cohn (1948).

161 "... sharing profits with employees ...": French companies largely pioneered profit sharing at the French National Fire Insurance Company in 1820 and in 1842 at the Paris painting and decorating firm E.J. The practice spread to other French firms such as Godin of Guise and Bon Marche store, and then to England. Plans of the day typically involved sharing profits with a substantial proportion of ordinary employees and didn't vary year to year at the discretion of the employer, according to an 1889 report by the International Congress on Profit Sharing. There were about 240 plans set up in England between 1880 and 1910. Some took a form called "copartner-

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ship," in which employees were given their profit shares in company stock and had representatives on the board of directors. In the United States, 50 plans were known to exist as of 1896, and 67 plans were identified in 1937.

- 161 Albert Gallatin: U.S. Congress (1939), Encyclopedia Brittanica (2001), Derber (1970).
- 162 "... small groups of skilled craft workers ...": Commons (1918–1935). Carpenters in Philadelphia set up an employee-owned company in 1791, as did cordwainers in 1806, Boston tailors in 1849, and German tailors in New York in 1850.
- 162 "...late 1800s ...": See Bemis (1886) and Shaw (1886) for regional reviews of profit sharing and employee ownership plans in the Midwest and New England done for the American Economic Association. The Minneapolis barrel-making industry had significant employee ownership, while fishing in New England had extensive profit sharing. On WalthamWatch in Massachusetts, see Gitelman (1965). At this time, Andrew Carnegie gave ownership to his top managers to create "golden handcuffs," but he felt wider employee ownership and profit sharing ran counter to human nature (Derber 1970). He said that if workers wanted to become owners of wealth, they should purchase the stock with their savings (Carnegie 1933).
- 162 Clark: See Clark (1886), who made the basic argument of our book: "Cooperation aims to increase the margin from which the increment of gain is drawn. It makes industry more productive. It goes to the employer somewhat more and to the laborer much more than they now receive." The British political economists John Stuart Mill and Alfred Marshall also supported employee ownership (Jensen 2001). We are indebted to Christopher Mackin of Ownership Associates and David Ellerman of the World Bank for this reference.
- 162 Pillsbury: Shaw (1886). Pillsbury's theory connected the incentive effect and the corporate culture, as Shaw makes clear: "The habitual attention to one's work and the work of one's fellows that is developed by a personal interest in the business is a great advantage in the modern manufacture of flour. By infinite pains and great enterprise 'Pillsbury's Best' has been made the standard flour of the world and the maintenance of its enviable reputation depends much on the workmen in the mills."
 - 162 Rand McNally: Gilman (1889).
- 162 Brookings: Brookings (1925, 1929, 1932). Abram Hewitt, the manufacturer, former mayor of New York City, and congressman, espoused a combination of employee ownership and profit sharing.
- 162 Procter & Gamble: Howert (1986) and Lief (1958). For studies on a number of well-known cases at the time, see Zahavi (1983) on the Endicott Johnson shoe company; Taylor (1928) on the Leighton retail chain; Atkins (1922) on the A. Nash clothing company; Meine (1923) on the Dennison Company (which is Avery Dennison Inc. today); and Hultgran (1924) on the Dix manufacturing facilities. On Endicott Johnson and General Electric, see the SUNY/Albany historical web site at www.albany.edu/history/histmedia/.

- 162 Filene: La Dame (1930), Filene (1924, 1930). Kodak's 1912 profit-sharing plan was tied to stock dividends to remind employees that they had a stake in the company similar to the shareholders. Sears considered its profit-sharing plan "the unifying symbol around which the entire organization revolved," and posted its current stock price in all buildings.
- 162 Illinois Central Railroad: National Industrial Conference Board (1928), Foerster and Dietel (1927), and Tead (1926).
- 162 King Camp Gillette: Sobel and Sicilia (1986), Gillette (1924), and Severy (1907).
 - 163 "In 1900 . . . ": National Industrial Conference Board (1928).
- 163 DuPont: National Industrial Conference Board (1928), and Wall (1990) where Alfred DuPont writes: "... the solution to the problem of industrial discontentment ... lies in the proper distribution of wealth between capital and labor in years to come based on some economic principle which will be satisfactory and which can be defended on the grounds of science and fairness."
 - 163 George Eastman: National Industrial Conference Board (1928).
 - 163 Gallatin quote: U.S. Senate (1939).
- 164 National Civic Federation: See McQuaid (1986). For a later study on welfare capitalism after the New Deal, see Jacoby (1997).
- 164 "... Harvard University's President ..." See Eliot (1917), who said the level of profit sharing was not meaningful enough in most plans to create a significant incentive effect. On profit sharing before World War II: See Gilman (1889), Emmet (1917a, 1917b), National Civic Federation (1920, 1921), Groton, Dennison, Gay, Kendall, and Burritt (1926), and Derber (1970).
- 164 Special Conference Committee: For the Rockefeller quote, see Brookings (1932). He told the Industrial Relations Commission in their 1914–1915 hearings that he believed capital and labor were partners and that in any industry in which he was connected he would gladly welcome the workers as stockholders. On the committee, see Hirao and others (1998) and an Internet library summarizing original historical materials on the subject by a Japanese professor on the web site of his university at: comp-irh.tamacc.chuo-u.ac.jp/comp-irh/SCC/SCC.html and comp-irh.tamacc.chuou.ac.jp/comp-irh/SCC/scc-tbl.html. An English-language abstract of the Hirao (1998) book, Big Business and Workers in the U.S.: The Formation of the Nonunion Industrial Relations System in the 1920s, by Professor Takelusa Hirao, is available at: comp-irh.tamacc.chuo-u.ac.jp/comp-irh/SCCProject/Labor-Policy.html. On Clarence Hicks and employee ownership, see Hicks (1924).
- 164 Employee ownership figures for various companies: See National Industrial Conference Board (1928). On Standard Oil, see also, Rukeyser (1927). The U.S. Department of Labor did a thorough review of employee ownership publications (1927). On Philadelphia Rapid Transit, see Mitten (1926). On the Columbia Conserve Company, see Douglas (1926), Vance (1956), and Bussel (1997). Another unique em-

ployee ownership program founded at this time was the American Cast Iron Pipe Company, see www.acipco.com. Gardiner C. Means at the Columbia Law School took a cynical view of this big push to get workers to buy stock with their savings in the twenties: ". . . the great popularity of customer and employee stock-selling plans was to a considerable extent due to a drying up of the market for corporate stock among the rich and the necessity of seeking new capital among individuals of moderate means" and not "a permanent trend." For evidence, see Advertising Council (1957).

- 165 GE and Owen Young of GE: See National Industrial Conference Board (1928), pp. 26–29, McQuaid (1986), and Jensen (1956). On Swope, see Strother (1927).
- 165 "... 800,000 employees owned ...": See National Industrial Conference Board (1928). For a second source on this estimate, see United States Federal Trade Commission (1923).
- 165 "... underscoring the excessive risk workers bore when employee ownership was based almost entirely on the use of their savings to buy company stock": Two corporate executives who emerged as spokespeople for employee ownership warned against excessive risk to workers. Henry S. Dennison (n.d.) of the Dennison Company wanted to use stock to pay bonuses but not to encourage the use of worker savings to buy stock. To reduce risk, Gerard Swope of GE wanted workers to have stock in only established companies (Strother 1927).
- 165 Profit sharing after World War II: The profit-sharing spurt began with a new tax ruling, Section 162, subsection h of the Internal Revenue Code. On the War Labor Board's boost to profit sharing, see Jacoby (1997). Vandenberg comments: See U.S. Senate (1939); General developments: Knowlton (1954), Simons (1948), Encyclopedia Britannica (1961), which is the most thorough discussion of profit sharing during this period. For the best summary of research immediately after the war, see Latta 1979. On the use of stock plans before the salary stabilization board, see U.S. Salary Stabilization Board (1952).
- 166 "Profit sharing reached its peak . . . ": For a summary of survey data on the prevalence of profit-sharing plans, the percent of employees involved, and the profit share as a percent of payroll, see Kruse (1993a).
- 167 "... 401(k)s have been squeezing out most serious attempts at profit sharing ...": The best statistical evidence is in Kruse (2002), which shows that only 355 deferred profit-sharing plans that were not part of 401(k) plans existed among all public and private companies at the end of 1998 in all corporations with more than 100 employees.
- 167 Kelso: See Kelso and Adler (1958, 1961). Kelso's articles, books, and lectures are available at the web site of the Kelso Institute: www.kelsoinstitute.org/. Two other institutes have developed around these broad themes: The Center for Economic and Social Justice, at (www.cesj.org/index.html); and the Shared Capitalism Institute at (www.sharedcapitalism.org/). See also Gates (1999, 2000).

- 167 "While ESOPs can be structured in several ways . . . ": ESOPs and other forms of employee ownership dilute current shareholders, except those in which workers use their own money to buy the stock at the full market price. However, this happens in less than 5 percent of ESOPs, studies show.
- 169 "... now often have a majority of their stock in the hands of employees": The ability to use tax-subsidized credit to buy large blocks of stock—an idea pioneered by Louis Kelso—has resulted in ESOPs being the driving force behind most majority employee ownership corporations. While the general growth of ESOPs has stalled in recent years, the number of majority employee ownership firms is on the rise as a result of smaller ESOPs buying more of their company and newer tax incentives for larger employee stakes as a result of S corporation law. For example, a decade ago, the membership of the ESOP Association, the major Washington-based lobbying organization for ESOPs, consisted mainly of companies with less than 50 percent ESOPs. Today, 70 percent of its membership are in firms with more than 50 percent ESOPs.
- 170 Census Bureau data on self-directed work teams: See Blasi and Kruse (2000). This also provides a complete review of the high involvement workplace literature. See also Kruse and Blasi (2000a, 2000b) and Bailey, Berg, and Sandy (2001).
- 170 "... only 1 percent to 2 percent make widespread use of innovative work methods": This is based on Blasi and Kruse's (2000) measurement of high-performance work cultures. These are workplaces that have more than half of their employees in self-directed work teams, work-related meetings to solve problems, job rotation, and where the average training hours, the total recruitment costs, and the flatness of their organization, and pay and benefits are significantly different than that of their industry group.
- 170 Stock Options: Study of 490 corporations: See Sesil, Kroumova, Kruse, and Blasi (2000). For a full version of the report see Blasi, Kruse, Sesil, Kroumova, and Carberry (2000). For "knowledge industry" companies, see Sesil, Kroumova, Blasi, and Kruse (2002). For the Wharton study, see Ittner, Lambert, and Larcker (2001).
- 172 ESOPs: See Kruse and Blasi (1995, 1997, 2000a, 2000b), Kruse (1999), Blasi and Kruse (2001a), and Sesil, Kruse, and Blasi (2001). For a comparison of 1,200 ESOP and non-ESOP firms, see Kruse and Blasi (2001).
- 173 Stock gains of 562 companies: See Blasi, Conte, and Kruse (1992). On equity gains, see also Blasi, Conte, and Kruse (1996). On 382 companies, see Mehran (1999). See also Blair, Kruse, and Blasi (2000).
- 174 "... ESOPs effect on sales and employment growth": Kruse and Blasi (2001).
- 175 Profit sharing: Kruse (1993a, 1993b). See also: Weitzman and Kruse (1990), Kruse (1999), and Azfar and Danninger (2001).
 - 176 "... 760 randomly selected": Black and Lynch (2000).

176 Employee participation: For an excellent review of the literature on participation, see Ichniowski, Kochan, Levine, Olson, and Strauss (1996). For examples of individual workplaces or industries that have at times combined various forms of partnership capitalism with participation, see Rubenstein (2001) in autos; Ichniowski, Shaw, and Prennushi (1995) in steel; Dunlop and Weil (1996) in textiles; and Kelley (1994) in machine tools. Also see Blasi and Kruse (2000), Appelbaum and Batt (1994), and Appelbaum (2000).

176 Robert of Tibco: Authors' interview.

176 Reinventing the Workplace: Levine (1995).

177 "... randomly choose 193 manufacturing worksites ...": Black and Lynch (2000). They also found that employee voice had a larger effect on productivity when it was done in unionized workplaces and that the proportion of nonmanagers using computers also positively influenced productivity.

177 "... 433 worksites over a sixteen-year period and 660 more over nineteen years.": Cappelli and Neumark (1999).

177 The HR Scorecard: Becker, Huselid, and Ulrich (2001). The most successful companies were extremely serious about performance management. They gave 95 percent of employees performance appraisals, tied incentive or merit pay to performance for 82 percent of employees, made 86 percent of employees eligible for incentive pay, targeted total compensation at the 59th percentile, and made sure a low-performing employee had a more than 6 percent difference in incentive pay compared to a high performing employee. One strength of Huselid's approach is a very specific system to measure companies' move toward a high-performance work system that the company itself can manage. But a very small number of companies say they actually track these items.

A key focus of this work is how the compensation system, among others, can be out of alignment with the rest of the company's work system. The authors measured the percentage of employees owning stock in each company and the percentage of stock employees owned in each company. As expected, employee ownership alone did not predict improved performance. One limitation is that the study did not measure the use of stock options or stock as incentive pay, but focused on incentive pay in the form of cash bonuses. One lesson from high-tech companies and broad-based stock option companies, Weeden, Carberry, and Rodrick (2000, 2001), is that most integrate performance appraisal, incentive pay, AND stock options together in a seamless system of performance management.

178 "... Harvard Business Review ...": Rosen and Quarrey (1987) and Quarrey and Rosen (1986). Rosen, Klein, and Young (1986) explained how this worked and were the first to determine that the initial annual stock grant had to equal 15 to 25 percent of pay at a minimum.

178 General Accounting Office: U.S. GAO (1987). The National Center for Employee Ownership wrote on its web site in April 2002: "The measures the GAO

used were controversial because they assumed that employee ownership firms did not increase overall compensation when they set up an ESOP. In fact, it appears that about half of all ESOP companies do increase compensation, and few decrease it. The GAO results are probably too conservative because of this assumption."

- 179 National Opinion Research Center: Kalleberg, Knoke, Marsden, and Spaeth (1996). See also Lawler, Mohrman, and Ledford (1992).
 - 179 Harvard University study: Freeman and Dube (2000).
- 180 "... a strong tie between higher pay and the more widespread use of various participation methods": Blasi and Kruse (2001b) show that nonunion companies tend to pay workers significantly higher fixed wages if self-directed work teams and other high-performance work practices are used comprehensively in the company. However, only companies that systematically use many high-performance work practices with most of their workers provide a meaningfully large compensation premium.

Chapter 8

185 "...less than 2 percent ... in joint decisionmaking": Blasi and Kruse (2000).

"... employees paid for about 64 percent of all this stock ownership themselves ...": This 64 percent consists of \$72 billion worth of shares workers bought through employee share purchase plans and \$5 billion they purchased through company profit-sharing plans. Workers also used savings they diverted from other investments to buy \$178 billion worth of employer shares through 401(k)s. Only the remaining 36 percent of the \$400 billion represents true property sharing. Included here is \$10 billion in company contributions to profit-sharing plans, \$46 billion in ESOPs, and another \$87 billion in the matching stock that many companies contribute to their employees' 401(k) plans, Kruse (2002), U.S. Department of Labor, Bureau of Labor Statistics (1997). ESPP assets are based on the Corporate America 100, supplemented by unpublished data on all retirement plans with less than 100 participants by Douglas Kruse. Market values have been updated to December 31, 2001. On excessive use of company stock, see also Meulbroek (2002), Benartzi (2001), and Benartzi and Thaler (2001).

186 "As of 2000 . . . 12 billion options . . . ": Based on authors' computations from Standard and Poor's Execucomp data for the 1,500 largest U.S. corporations. This is an estimate of the total outstanding options available for all employees. See also Hitt and Schlesinger (2002), based on Ciesielski (2001).

186 "\$1.2 trillion . . . ": The value of all the stock on the major exchanges on 12/31/2000 was \$12.2 trillion, according to Wilshire Associates. The \$1.2 trillion is 10 percent of that figure. Of course, executives and employees must pay the exercise price to buy this stock, so their options wouldn't have netted them this amount. However, they control shares worth \$1.2 trillion.

186 "... 10 percent ...": Based on authors' computations from Standard and Poor's Compustat. This is a conservative number because it does not include options available for future issue but not yet granted. Siegl, Loayza, and Davis (2002) show the average total overhang in these companies as 14.1 percent, including those options available for future issue.

186 "Roughly, 30 percent of them ...": Based on the Corporate America 100. This is the aggregate percent of all options outstanding at these companies that are held by the top five executives. It includes options that are both exercisable and unexercisable. On the slow trend toward wider distribution, see Mehran and Tracy (2002).

187 "... comprise less than 5 percent of traditional companies": U.S. Department of Labor, Bureau of Labor Statistics (2000).

187 "We estimate that only about 6 percent of the country's 10,000 public companies": This figure comes from an extrapolation of the 6 percent of the Corporate America 100 that have broad-based option plans. The 2 percent figure comes from the U.S. Department of Labor, Bureau of Labor Statistics (2000), which showed that 1.7 percent of all private industry employees received stock options in 1999, including after-hire and signing-bonus stock options. Both estimates exclude private companies, many of which also offer options to their workers.

187 "... up from 5 percent in 1992": Authors' computations from Standard and Poor's Compustat show average dilution was 5.2 percent in 1992. The median dilution was 2.2 percent that year, almost quadrupling by 2000 to 8.2 percent.

Construction of the Corporate America 100: The index excludes members of the High Tech 100, of which there was only one, America Online, as of October 2000. There is one significant difference between the High Tech 100 and the Corporate America 100. The first describes the hundred largest companies in the Internet industry, as measured by their market value. The Corporate America 100, however, is a random sample of all companies on the New York Stock Exchange that had market values similar to those of the High Tech 100 (i.e., only in the sense that they were above the threshhold \$1.6 billion as of October 2000). We thought this was the best way to compare a single industry to the rest of Corporate America. Another option would have been to use the hundred largest firms on the NYSE, but that comparison would not have provided a picture of the average ownership of traditional corporations. We choose a random sample to make the Corporate America 100 as representative as possible of the mainline public stock market, excluding technology companies, which are mainly traded on the NASDAQ. Four of the Corporate America 100 do not offer a stock option plan to any of their employees, including executives. They are Warren Buffett's Berkshire Hathaway, Florida Progress Corporation and Appalachian Power, both utilities, and Diamond Offshore Drilling.

190 Table 8.1 Corporate America's Top-heavy Wealth Sharing: For a detailed description of our calculations see the book's web site. Figures for direct stock ownership by nonexecutive employees are based on Form 5500 records filed by each company

with the U.S. Department of Labor. While the High Tech 100 information is from 2000, the data for the Corporate America 100 covers 1999.

- 191 "However, this group typically constitutes less than 5 percent of the workforce . . . ": U.S. Department of Labor, Bureau of Labor Statistics (2000).
- 192 Run rate: Actual average run rates for the Corporate America 100 before dilution are: 1997: 1.86 percent; 1998: 1.63 percent; 1999: 1.87 percent; 2000: 2.27 percent; indicating a gradual rise over the period. The average is 1.9 percent, or 1.86 percent on a post-dilution basis, hence, almost 2 percent. The most recent numbers closely match the average run rate for the 1,500 largest U.S. companies (Siegl, Loayza, and Davis 2002).
- 192 "... 27 percent went to the top five executives alone": Based on our analysis of SEC filings for 2001.
 - 192 Mercer study: William M. Mercer (2001b).
- 193 "... worth an average of about \$6,727 ...": This is based on our calculations using the public records the companies have on file with the U.S. Department of Labor (Form 5500) regarding their retirement benefit plans.
- 193 "\$40,000 in 1999": Authors' computation based on Standard and Poor's Compustat.
- 193 "In 1980 . . . ": See Business Week (1991) for 1980 and Business Week (2002) for the current figure. See also Reingold and Grover (1999). According to Hall and Liebman (1998), only 19 percent of total executive pay in 1980 came from stock options. They contributed 80 percent by 2001, Lavelle, Jespersen, and Arndt (2002). This reflects the value of exercised options, but excludes unexercised ones. For the trend from 1992 to 1999 for the top five executives, see Mehran and Tracy (2002).
 - 194 Arthur Rock: Authors' interview.
- 194 "We calculated how much the top five executives . . . ": As of our press date, information for 2001 was only available for a third of executives. They had option profits of \$6 billion at that stage, so it's possible that their total for the year could exceed that of 2000, despite the sharp downdraft in the stock market. The computations for all years are based on our analysis of the Execucomp database of Standard and Poor's, covering the largest 1,500 companies. For an explanation of how we computed these numbers, see more detailed footnotes on the book web site, www.inthecompanyofowners.com. To see how much the top five made every year, go to web Appendix 3 (also on www.inthecompanyofowners.com.)
- 194 "In sum, executives granted themselves higher annual increases . . . ": For a comparison of annual percentage executives and employees each received in the 1990s, see web Appendix 4 on www.inthecompanyofowners.com.
- 194 "... a total net profit of nearly \$80 billion at the end of 2000 ...": This figure for 2001 had come close to \$25 billion by our press time, with data in for only a third of executives. So the total paper wealth for 2001 might surpass the prior year, as occurred with annual option profits.

195 "... a 1999 article by Kevin J. Murphy ...": Murphy (1999). However, Murphy cites research evidence on both sides of this question and writes: "Based on my own observations and extensive discussion with executives, board members, and compensation consultants, I tend to dismiss the cynical scenario of entrenched compensation committees rubber-stamping increasingly lucrative pay programs with a wink and a nod." He also says: "Although there are undoubtedly exceptions outside board members approach their jobs with diligence, intelligence, and integrity regardless of whether they have social or business ties with the CEO. Faced with a range of market data on competitive pay levels, committees tend to err on the high side. Faced with a choice of a sensible compensation plan and a slightly inferior plan favored by the CEO, the committee will defer to management. Similarly, faced with a discretionary choice on bonus-pool funding, the committee will tend to over- rather than under-fund. The amounts at stake in any particular case are typically trivial from a shareholder's perspective, but the overall impact of the bias has likely contributed to a ratcheting of pay levels."

Murphy's comprehensive review is on his web site at: www-rcf.usc.edu/~kjmurphy/jmjpe.pdf. For the empirical evidence on CEO influence over these committees, see also Newman and Mozes (1997).

195 "A 2001 study by a Harvard University Law School professor": Bebchuk, Fried, and Walker (2002).

195 Federal Reserve chairman: See Greenspan (2002). The speech was given March 26, 2002, at Stern School of Business, NYU, and is available at www.federalreserve.gov.

196 Fortune: Loomis (2001).

197 Harvard study: Hall and Liebman (1998). Results are for the median CEO. They conclude: "We do however believe that our results contradict the claim that there is little or no link between performance and CEO pay." Hall and Liebman carefully look at the changes in the value of stock and stock options as the firm's market value changes. They conclude that: "both the level of CEO compensation and the sensitivity of CEO compensation to performance has increased sharply over the past fifteen years." They also write: "We do not claim that the current relationship between CEO pay and firm performance is sufficiently strong or that current contracts are efficient."

The Hall and Liebman article is available for PDF download on Prof. Liebman's web site at: www.ksg.harvard.edu/jeffreyliebman/papers.htm, or from the working papers section of the National Bureau of Economic Research at www.nber.com or www.nber.org. The working paper is # W6213, October 1997. An earlier study of the 1969–1983 period did not find a strong link between CEO compensation and company performance, but it was before the huge expansion in stock options, see Jensen and Murphy (1990). Murphy and Conyon (2000) found similar findings to these in comparing U.S. and British firms, with a stronger association between executive wealth and firm performance in the United States than in Britain.

- 198 "On this score, Murphy is clear . . . ": Murphy (1999). He also says that options give executives an incentive to avoid dividends and favor share repurchases, because they're tied to stock price appreciation and not total shareholder return. Options also give executives an incentive to pursue riskier investments, since option value will increase with more stock price volatility. Also see Stabile (1999).
- 199 "... CEOs should be paid ...": Hall and Liebman (1998). For a review, see Murphy (1999).
- 199 "... E*Trade Group Incorporated CEO Christos M. Cotsakos managed to earn a total of \$80 million ..." Craig (2002), Leonhardt (2002a), and Kirby (2002).
- 199 "Across corporate America, even a rough calculation . . . ": Authors' estimates based on comparing the increase in market value of the 1,500 corporations in Execucomp to the increase in actual profits from stock option exercises for the top five executives.
- 200 U.S.-English comparisons: Murphy and Conyon (2000), available at www.rcf.usc.edu/~kjmurphy/Pauper.pdf. The 1.48 percent refers to the combination of stock ownership, option ownership from options, and Long Term Incentive Plan grants.
- "share of the option pie . . . ": The study was performed by the authors in 2001 using Execucomp. The average share of options granted annually to the top five, out of all options granted by the company, was 31 percent. Using standard, median, and robust regressions, this share doesn't predict total shareholder return in the year the option grant is given over all years tested. The previous year's percent of option grants doesn't predict total shareholder return in the following year.
- 201 "... they've surrendered tremendous ownership to executives with no clear evidence ...": The Wall Street Journal's Holman W. Jenkins Jr. (2002) raised a similar point recently in his regular Business World column: "... if options have a genuine incentive effect but management is capturing too much of the gains, the mystery is easily solved: options grants are too big. Now if academic economists want to do something useful, they would explore whether CEOs have gained outsized bargaining power in relation to shareholders and boards. Our guess is yes because so much of a company's stock-market value these days depends on the image and reputation of the CEO."
- 202 General Motors: Proxy filed with the SEC on April 18, 2002, for the quote. On the Stock Incentive Plan, see Proxy filed with the SEC on April 16, 1997.
 - 202 General Electric: Proxy filed with the SEC on March 23, 2001.
 - 203 Ayn Rand: Rand (1943, 1957).
- 203 Michael Eisner: Lambert (2001). *Business Week* did a recent rating of how Eisner stacks up against his industry peers in terms of his pay relative to shareholder return. He received the lowest grade the magazine gets. See Lavelle, Jespersen, and Arndt (2002).
 - 204 Pepsi: See Solomon (1989), Anfuso (1995),

Chapter 9

- 205 "thousands of mostly closely held companies that have used ESOPs..." Employees in these companies often use them to buy the company from a small business owner who wants to cash out or retire, Bernstein, Binns, Hyman, Staubus, and Sherman (2002), and NCEO (2002g). Case studies of many of these companies can be found on the web sites of the nonprofit groups working with employee ownership. For the hundred largest majority employee-owned companies, see NCEO (2002h) available at: www.nceo.org/library/eo100.html.
- 205 "... a more attractive and versatile approach than ESOPs ...": ESOPs undoubtedly would have a greater role to play if the U.S. government hadn't significantly cut back the tax incentives for them in public companies in recent years.
- 206 "... hourly paycheck, which has risen by a grand total of only about 3 percent since 1973, after adjusting for inflation . . . ": See Mishel, Bernstein, and Boushey (2002).
- 206 "... capital has provided a far greater source of increased income in America in the past three decades ...": Capital income is from rent, dividends, interest income, and realized capital gains. In 1999, the bottom four-fifths of households got 46 percent of the wage income in the economy and 20 percent of the capital income. Overall, labor income has fallen as a share of national income since 1950 while the capital share has grown. Mishel, Bernstein, and Boushey (2002).
- 207 "... the single largest form of worker ownership today ... 401(k)s ...": Appendix C. This is true when KSOPs, which are a hybrid of 401(k)s and ESOPs, are included with 401(k)s.
- 208 "If you are not able to allow people to criticize you . . . ": Authors' interview. 209 ". . . \$65,000 worth of equipment, while the Corporate America 100 . . . with \$250,000 worth . . . ": Based on an average property, plant, and equipment per worker using 2000 SEC filings.
- 210 Run rates: We computed run rates as options granted minus options cancelled as a percent of total shares outstanding. We estimated the run rates for the 490 companies for a sample using their 2000 SEC filings. The run rates for 150 traditional companies are from an average of non-Internet/e-commerce/software industry groups, Weeden, Carberry, and Rodrick (2001). The run rates of the 1,500 companies are from Seigl, Loayza, and Davis (2002). The doubling of run rates is based on our analysis of Standard and Poor's Execucomp from 1992 to 2000 using the burn rate. (The burn rate is the same as the run rate, except that it doesn't include cancelled options, which are not given in Execucomp). For all 1,500 companies, average burn rates went from 2.2 percent in 1992 to 3.1 percent in 2000, an increase of 143 percent. For the 500 largest corporations, they went from 0.77 percent in 1992 to 2.5 percent in 2000, a 324 percent increase.
- 211 "it could make sense to use at least part . . . ": While there may be a case to be made for reducing the stock options going to top executives and managers and us-

ing them for other levels in some companies, in fact, this isn't what companies with broad-based options have done. Instead, most increase their run rates. On average, these firms provide 39 percent of their options to top executives, compared to 29 percent in the Corporate America 100, Weeden, Carberry, and Rodrick (2001).

212 "... the U.S. stock market has risen by 10 percent a year ...": The exact numbers from 1925 to 2001 are 10.7 percent for large company stocks and 12.5 percent for small company stocks. This is the annual compound growth rate with dividends reinvested, based on the geometric mean. Adjusted for inflation, which was 3.1 percent annually over the period, the return was 7.4 percent for large-company stocks and 9.2 percent for small-company ones. In the 1990s, large-company returns averaged 18.2 percent a year before inflation, while small-company ones came in at 15.1 percent, Ibbotson Associates (2002).

213 "mixing option grants with ESOPs, employee share purchase plans, or profit-sharing plans": When companies can't or don't want to provide enough stock options to give workers a meaningful annual return—a minimum of 15 percent—they could use these other forms of employee ownership to achieve the same purpose. For example, the stock parceled out each year through an ESOP will deliver employees much the same wealth as they would receive from options. If a company aimed to give its hourly workers \$1,600 a year in ownership profits, it could set up an ESOP that gives them \$1,000 a year initially. After five years, this would grow to \$1,600 if the company's stock grew by 10 percent a year.

Similarly, employee stock purchase plans are an underused vehicle for promoting employee ownership, because they can be designed to function like short-term stock options. One way is to allow workers to accumulate money through payroll deductions, then give them a long offering period in which to buy the stock. That way, they can wait to buy until they know they have a profit that's even greater than the standard 15 percent discount such plans typically provide.

Cash bonuses and profit sharing, too, can be use to promote partnership capitalism, by helping to firm up the connection between employees' extra effort and rewards for better performance.

- 215 "... study of the 490 non-Internet firms ...": Blasi, Kruse, Sesil, Kroumova, and Carberry (2000).
- 215 "... compared 1,200 ESOP firms to 1,200 similar non-ESOP ones ...": Kruse and Blasi (2001).
- 215 "Two smaller studies . . . ": Kardas, Scharf, and Keogh (1998), Mackin, Rodgers, and Scharf (2000), and Buchele and Scharf (2001).
 - 215 "... wealth of literature on profit sharing ...": Kruse (1998).
- 216 "workers should get a minimum of 15 percent of their annual paycheck annually . . . ": Various studies indicate that incentives below the range of about 5 percent annually do not even get the attention of employees: Honeywell-Johnson and Dickinson (1999), Bucklin and Dickenson (2002), Kruse (1993a), Rosen, Klein, and

Young (1986). They also indicate that group incentives are at least as good as individual ones in affecting performance, and that social interactions among employees are generally better under group incentives. There appears to be a tradeoff between effort and reward for employees; when significant effort is required to improve company performance, larger incentives are required.

- 217 Table 9.1: What Employees Could Expect to Earn from Partnership Capitalism: The source is National Center for Employee Ownership. Weeden, Carberry, and Rodrick (2001). This workbook is invaluable in setting up a broadbased stock option plan because it includes benchmarks for every major industry.
- 217 "... the bull market of the late 1990s, when stocks climbed by 20 percent to 30 percent a year ...": Ibbotson Associates (2002).
 - 219 "Average wages": Mishel, Bernstein, and Boushey (2002).
- 219 "Workers would come out ahead if they could sell their ESOP shares and diversify . . . ": Federal regulations allow workers nearing retirement to diversify their ESOP shares. Workers leaving companies with ESOPs before their retirement can take the value and roll it over into an IRA without waiting until retirement.
- 219 "At Enron, for example, 60 percent of the company's 401(k) . . . ": Oppel (2002).
 - 220 "The more senior people get more stock options . . . ": Authors' interview.
- 221 "If you look at a seventy-five-year-old smoke-stack industry company . . . ": Authors' interview.

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- 223 "Awarding stock options to all . . . ": Authors' interview.
- 224 "Many also skimped on the amounts . . . ": On the importance of using financial incentives to get employees to share private knowledge and discretionary effort for the benefit of the firm, see Laffont and Martimort (2002), and Nalbantian (1987).
 - "We don't have any manufacturing . . ." Authors' interview.
 - 225 "As late as the early 1980s, tangible assets . . ." Ip (2002).
- 225 "In emerging industries that depend as heavily as the Internet . . ." For the amount of options granted in the biotechnology industry, see web Appendix 5 on www.inthecompanyofowners.com.
- 225 "As far back as 1979 . . . ": Jensen and Meckling (1979). Also Blair (1995, 1996).
- 226 "They also must extend the changes across the entire organization . . . ": Becker, Huselid, and Ulrich (2001) actually have designed a system companies can use to evaluate the degree to which they have achieved this goal. It can be used to evaluate whether a company has created an entrepreneurial culture. See also Huselid, Jackson, and Schuler (1997), and Heckscher and Donnellon (1994) on the postbureaucratic kind of corporation high-performance work practices imply. On measuring ownership

culture, see Mackin (1998, 2002) and NCEO (2002f). In addition, the two professors among us have developed a national survey of employees to assess the extent of partnership capitalism in large U.S. companies. This is a three-year project separately funded by the Rockefeller Foundation and the Russell Sage Foundation at the National Bureau of Economic Research. We developed the survey with Richard Freeman of Harvard University, Christopher Mackin of Ownership Associates, and several other scholars.

- 226 Frank Marshall: Authors' interview.
- 226 "Skeptical economists have long argued . . . ": Alchian and Demsetz (1972), Kandel and Lazear (1992), Weitzman and Kruse (1990), and Laffont and Martimort (2002).
 - 227 "Even in the New Economy . . . ": Authors' interview.
 - 227 "Equity in a bigger company . . . ": Authors' interview.
- 227 "In recent years, experts on employee ownership have come to believe that the free rider problem can be overcome by encouraging cooperation . . . ": Laffont and Martimort (2002), Axelrod (1984), Bonin and Putterman (1988), Fudenberg and Maskin (1986), Jensen and Meckling (1979), Kandel and Lazear (1992), Leibenstein (1966), Nalbantian (1987), and Putterman and Skillman (1988).
- 228 "Many high-tech companies back up this approach by awarding larger option grants to team players . . . ": Becker, Huselid, and Ulrich (2001). This is done by creating stark differences between the incentive pay of high-performing employees and low-performing ones.
 - 228 "You can be a real star . . . ": Authors' interview.
 - 228 "The culture of employee ownership": Authors' interview.
 - 228 "The biggest thing I notice . . . ": Authors' interview.
 - 229 "There is a psychological buy-in . . . ": Authors' interview.
 - "The partnership culture is transferable . . . ": Authors' interview.
 - 229 Beyster: Authors' interview.
 - 230 "We don't have nearly as much of the politics . . . ": Authors' interview.
- 230 "They handed out options like they were going out of style . . . ": Authors' interview.
- 231 "I think there is a legitimate question . . . ": U. S. Senate Committee on Banking, Housing, and Urban Affairs (2002).
- 231 "... a strong, independent board of directors ...": Monks and Minow (1996, 2001). Also see Millstein (1998).
- 232 "We looked more closely . . . ": Based on our analysis of board structures using recent SEC filings.
 - 232 "High-tech boards tend to have fewer . . . ": See IRRC (2000b).
- 232 "Partnership capitalism also would seem to call for an employee representative \dots ": Olson (1994).

- $232\,$ "Workers on boards . . . European countries": See Rogers and Streeck (1995).
 - 233 "I think the ownership culture . . . ": Authors' interview.
 - 235 Vivek Rawadive: Authors' interview.
 - \$11 million a year: Lavelle, Jespersen, and Arndt (2002).
 - 236 "You need to be more persuasive . . . ": Authors' interview.
 - 236 "We try to set up an environment . . . ": Authors' interview.
 - 237 "Most shareholders have more information . . . ": Authors' interview (2001).
 - 237 "I know as a manager . . . ": Authors' interview.
- 239 "Stock options are one way capitalism has been democratized \dots ": Schlesinger (2002)
- 241 "In the late 1990s, options provided U.S. corporations with a break from federal taxes . . . ": Desai (2002). On the devastating effect on state budgets from the ups and downs of taxes on option profits, see Sterngold (2002).

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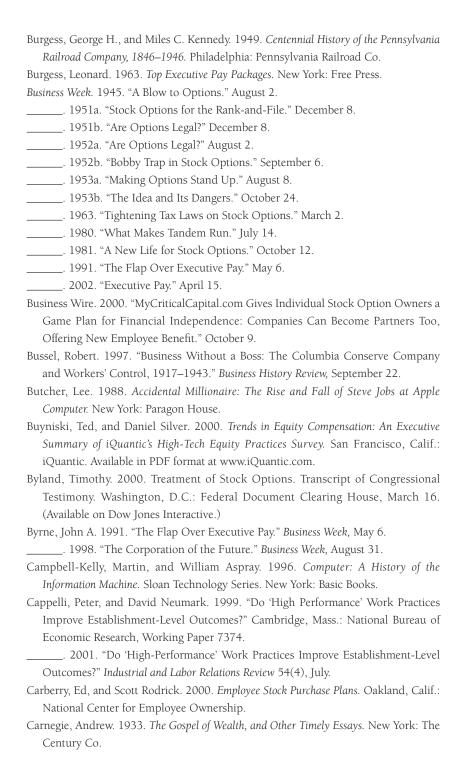
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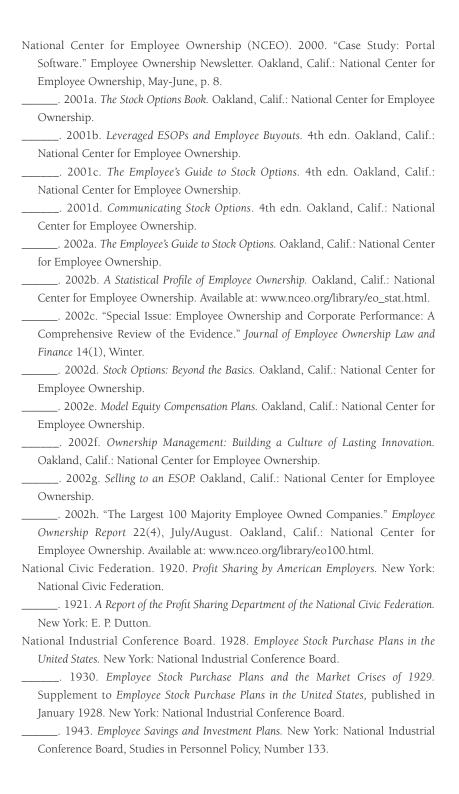
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