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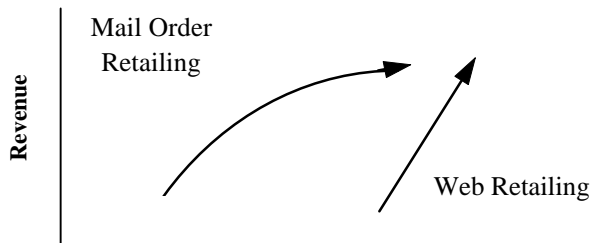
**Internet
Retail**

Mary Meeker, Internet (212) 761-8042 / mmeeker@ms.com

Sharon Pearson, Retail (212) 761-6415 / pearsons@ms.com

The Internet Retailing Report

**The Future of Web-Based Retailing Should Mimic
The History of Mail Order-Based Retailing —
But with a Faster and Longer Ramp**



- Internet-based retailing/commerce is alive and well. Revenue and usage trends from Web-based retailing/commerce leaders (such as CUC, America Online, Dell, and E*Trade) are positive. Sequential rates of revenue growth for many other emerging Web-specific retailers (such as Amazon.com) have been encouraging, though early-stage losses are also high.

- In this report we describe the trends, the companies, and the outlook for Internet-based retailing. Based on our review of the development of retailing in the past, we conclude that, in time, the opportunity for retailing and direct-marketing cost savings on the Web will be significant, though it will likely only affect certain retailing sectors.

- The Internet is supporting unprecedented growth and is affecting many industries — we have found it useful to cross industry disciplines (in this case, technology and retailing) to fully understand the evolution of business on the Internet. This report is the third in a series that includes *The Internet Advertising Report* (published December 1996) and *The Internet Report* (published December 1995).

Contributors:

Steve Roach, Economist (212) 761-7153

Sheelagh McCaughey, Retail (212) 761-7155

Chris DePuy, Internet Infrastructure (212) 761-6562

Research Assistance:

Russell Grandinetti, Technology (212) 761-4864

Alex Cobb, Technology (212) 761-6004

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Internet Retail

Mary Meeker, Internet (212) 761-8042 / mmeeker@ms.com

Sharon Pearson, Retail (212) 761-6415 / pearsons@ms.com

The Internet Retailing Report

Introduction

We've been pondering the Internet and its many investment offspring for quite a few years now. We have watched America Online since it had just 300,000 subscribers and Netscape and CNET from their first days as public companies. We've covered Microsoft since its market cap was \$3 billion and people wondered if it would ever ship a copy of Windows that worked. In all that time, the Internet has continued to impress us as the most powerful new technology change that we have ever seen — with the potential to be a major channel for distributing goods and services.

But for investors, we have recommended a cautious approach to the Internet. Our first book, *The Internet Report*, emphasized the infrastructure companies like Cisco and content aggregators like America Online as primary beneficiaries of the Internet's buildout. Our second, *The Internet Advertising Report*, extended our list of potential Internet winners to include software companies like Microsoft and Netscape, and we added CNET as an early contender in Internet media and advertising. Although that space is still very small, the rapid growth of the Internet as a new mass medium suggests to us that the opportunity will be significant.

This report, *The Internet Retailing Report*, has us even more torn. Retail offers large market potential — and the

greatest uncertainty yet for Internet applications and companies. The Net provides a powerful, efficient new channel for retailing to more than 35 million Web users (we expect more than 150 million by 2000), who are just a mouse-click away from consummating transactions 24 hours a day, seven days a week. Yet the speed with which this channel will be implemented in different retail sectors — let alone which companies will capture excess returns — is highly debatable.

Morgan Stanley's technology and retailing analysts agree on many (but not all) of the likely outcomes of retailing on the Internet. The following are among our initial thoughts about what could be a major market opportunity:

- The Web won't displace traditional shopping and will remain a niche channel for some time, yet it will ramp rapidly in revenue and usage. Some segments will likely see relatively significant growth: We anticipate faster take-up in insurance, financial services, computer hardware/software, travel, books, music/video, flowers/gifts, and automobiles.
- Key criteria for successful retailing on the Net include market opportunity, leading brand, low cost structure with economies of scale, superior databases, having fast and effective fulfillment and distribution, leveraging the latest

technology, creating a sense of community, and ensuring ease of use and speedy delivery for customers.

- Companies that use technology to build and leverage the infrastructure for Internet retailing will likely be attractive investments, including **Dell** (\$107), **Microsoft** (\$120), **America Online** (\$50), and **Federal Express** (\$52) (see chapter 1 for investment details). We think it's still too early to tell, but the more risk-tolerant may also look at traditional retailers that are extending their franchises to the Web, such as **CUC** (\$25) and **Barnes & Noble** (\$41). We have also identified some new "virtual retailers" — **E*Trade** (\$16) and **Amazon** (\$17) — as potentially good public market proxies for the growth in Internet retailing, although we do not cover either stock. Many of these stocks have experienced significant runs in the year to date, and are trading at high relative valuations, so we wouldn't be surprised to see some volatility in the names.
- Business-to-business transactions are often overlooked in the fixation on consumer retail — but Internet commerce is already big for some major firms (and provides serious cost savings). By July, Cisco expects its sales over the Web will be at an annual run rate of \$2 billion, and GE buys more than \$1 billion in supplies over its Web-based trading network. Advances in EDI and other efficiency gains will drive increasing volumes through this channel.
- Internet retailing will likely grab share from mail order over time: we expect a few great Web franchises and investments to emerge — as well as many disasters, just like the boomlet, bust, and boom in mail order in the 1980s. Overall consumer mail-order sales, after 20 years of development, comprise only about 5% of U.S. retail sales, whereas business-to-business mail-order sales account for 10% of wholesale sales. So Internet retailing will likely remain quite small in the scheme of overall retailing.
- Buyers and sellers alike will find the new channel compelling, with large selections being offered conveniently and interactively. The channel should also offer attractive demographics — a big jump in the number of teenagers during the next ten years should add a PC-literate group of consumers. And we feel that it is significant that advertising is right at the point of purchase.

But our analysts are not in complete accord on other aspects of Internet retailing. The tech team thinks first-mover ad-

vantage may be important: Barriers to entry may rise in certain segments as established Web merchants (and powerful, focused traditional retailers of the Barnes & Noble ilk) gain solid brand positions. The retail group, by contrast, doesn't think being first matters much, since barriers to entry will likely remain low on the Web.

While Web retailing in general may be somewhat fragmented right now, with lots of market players, it's likely that real market share — and profitability — will be dominated by just a few. In other words, we may see a "Wal-Marting" of the Web, as sites consolidate under a few major brands in each category — just look at what Yahoo! has already done in the Web search-engine space. Regarding pricing, on a broad scale, it's not clear whether prices will be higher or lower on the Web, as shipping and handling costs must be factored into each purchase. The tech team believes that all-in prices may be comparable or lower, while retail sees them as comparable or perhaps higher.

There may prove to be a business-model paradox on the Web. While "virtual companies" enjoy inherent advantages of lower relative costs for facilities and support, sales and marketing expenses may rise rapidly as customer-acquisition costs ramp in what should be increasingly competitive markets. In the end, we expect it will be crucial for leading Web retailing brands to be the low-cost producers and the most efficient companies with scale. The ubiquitous, interactive, and searchable nature of the Web makes these attributes more important than ever; the price wars have already started. . . .

While many Internet retail companies may be high-growth, they may not be high-tech, high-margin, or high-valued. Retailing companies inherently carry low margins (and low valuations), and the retailing industry is highly competitive, suffers from frequent shifts in market share, is subject to the whims of fickle consumers, and typically provides for a lower return on investment than technology companies do. True, the Web offers an efficient distribution channel for goods and services and opportunities for high market share for the lowest-cost, best-positioned companies. But it also creates the possibility of killer, blood-bath competition as its opportunities continue to draw lots of new market entrants, leading to massive price-cutting and high cross-promotion costs. For most pure-play Internet-based retailers, this will likely mean the postponement of profits for a while.

The book industry offers a terrific example of the promise of Internet retailing . . . and of how uncertain its future appears to be. Morgan Stanley was an early investor in leading brick-and-mortar bookseller Barnes & Noble, and retail analyst Bruce Missett has been a longtime fan of the company and rates the stock Strong Buy. BKS, as the nation's largest bookseller (with more than \$2 billion in revenues in 1996), has in its recent Web site launch a new avenue for growth that leverages existing assets and extends its market dominance, the retail group believes. On the technology side, we've had long associations with first-of-a-kind companies, including Apple, Cisco, America Online, Netscape, and CNET, and we tend to give the benefit of the doubt to paradigm-shift companies like Amazon.com. Investors have followed suit: During AMZN's recent IPO

roadshow, tech investors tended to be enthusiastic (or at least very curious) about the company's prospects, while retail investors tended to be very skeptical.

Wicked price competition and pressure haven't made it easier to gauge the future profitability of Web shopping. In March, Barnes & Noble went live on America Online (and, as noted, on the Web in May) with 30% discounts on all hardcovers, and 20% discounts on all paperbacks. In May, Amazon.com announced 40% discounts on its top 500 selling books, augmenting its 10% standard discount for all books. On May 16, CUC announced 40% discounts on all best-sellers on Books.com, augmenting its 15–30% discounts on most of its titles and its Frequent Buyers Club discounts.

The Economics of Retail Surfing

Regardless of how Internet pricing evolves, there may be many users willing to pay to increase their "personal productivity." Below, Morgan Stanley Chief Economist Stephen Roach explores how the Internet has important appeal in an increasingly busy society.

The work-leisure tradeoff has long been a classic dilemma of economic theory. And it has increasing relevance in the high-stress 1990s. With most Americans working harder and longer than ever before, compression of leisure and family time has become endemic to high-stress lifestyles. In search of new tools to resolve this dilemma, we believe that Internet-based shopping may hold an important key.

First, consider the numbers. According to the results of a recent Harris poll, the median number of hours worked per week in the United States rose from 40.6 in 1973 to 50.6 in 1995. Over the same period, time devoted to leisure activities is estimated to have fallen from 26.2 hours per week in 1973 to 19.2 hours in 1995. Moreover, given the growing numbers of dual-earner households, there is good reason to believe that overall family leisure time has plunged sharply in the past 20 years.

It doesn't take a rocket scientist to figure out what's going on here. Reflecting Corporate America's newfound penchant for cost control, businesses have embarked on aggressive programs of headcount reductions. At the same time, the great American hiring machine has been less aggressive in adding to payrolls than has typically been the case in the past. Lacking the normal expansion of the work force, businesses have put more pressure on existing workers. The re-

sult is an acceleration in corporate productivity that has its counterpart in a contraction of "personal productivity" — the amount of time that individuals have for leisure and family.

Enter the Internet. Who knows how much time an individual devotes to the seemingly mundane tasks of grocery shopping, banking, dry cleaning, and gift giving? Depending upon income strata and personal tastes, we believe that an average family could spend anywhere from 10 to 30 hours per week on such activities. In America's increasingly suburban existence, there would be an additional increment of time devoted to transportation required for these activities. The day may well come when 20 hours of such maintenance activities could be accomplished through five hours of Web-surfing, complete with fee-based home-delivery and automatic payment options. These options are not costless, but they may well be within the means of an affluent society that is more than willing to pay for greater personal productivity. Needless to say, to the extent that new Web-based options can cut down on the "maintenance" portion of the average family's lifestyle infrastructure, it could play a key role in making the increasingly onerous work-leisure tradeoff of the 1990s seem more tolerable.

In technology land, the "killer app" is the new product that creates its own demand. Much of the new Internet-based retail activities are mere replacements of existing mail-order options. To the extent that new applications can facilitate an improvement of hard-pressed lifestyles, the electronic delivery of retailing may well have its greatest potential. The mail-order paradigm, in my view, is just the tip of the iceberg.

Nearly all investors have questions about the appropriate valuation methodology for Internet retailers. New Web merchants may suffer from heavy spending in the early years to acquire name recognition and customers without seeing sizable revenue; established retailers, though, could offset those Web-related expenses against a store-wide revenue base. Discounting future profitability is always tricky with early-stage growth companies. But we have to balance low retail margins and the severe multiple compression that high-fliers in mail order and TV shopping once suffered against the fast growth we expect for some long-term winners.

Our tech/Internet and retail analysts agree that the marketing and press generated by the aforementioned companies will help drive online sales of books, and act as a catalyst for online sales of other products. Online market share likely will be consolidated among far fewer players than the 10,000 or so retail booksellers in the U.S. Barnes & Noble's brand name is powerful, and the company's Web-based efforts — aided by rapid product delivery time — should support impressive revenue growth, both in the U.S. and internationally. BKS also has strong relationships with publishers and authors that may lead to more compelling online "chat" sessions. Moreover, the retail analysts believe that Barnes & Noble's size and low-cost infrastructure provide a powerful cost advantage on the Web. Still, Web revenues should remain a fraction of store-based sales.

We agree that book selling on the Web has the potential to become a large market. Both AMZN and BKS should support revenues that surprise on the upside. From the tech analysts' perspective, Amazon has powerful revenue and usage momentum because of its earlier start (although profitability timing and levels have yet to be determined). Amazon also has some compelling cash flow characteristics — annual inventory turns are between 50 and 60 times (since Amazon doesn't own its inventory, the retail analysts point out), compared with 2 to 3 times for Barnes & Noble. If Amazon can hit scale, improved purchasing power should help gross margins and the company could become cash-flow-positive again. A potential offset, however, would be rapidly rising customer acquisition costs. Our retail analysts are more skeptical about whether AMZN will become profitable — or even survive the competitive on-

slaught from BKS, a company whose brand-name recognition is evident in stores and advertising nationwide, not just on the Internet.

Yet when the tech/Internet folks think about Amazon vs. Barnes & Noble, we are constantly reminded of Dell vs. Compaq. Remember, both companies just sell PCs (commodities, you know), yet they have been two of the most successful public companies in creating shareholder wealth in the last 15 years. Now it's a question of determining the appropriate valuation . . .

Netting it all out . . . who will win? Read *The Internet Retailing Report* for some inspiration and insight into key issues, but in the end, you'll have to decide. Go buy a book on the Web!

Small (but Sweet) Signs of Web Sales Potential

America Online, with 8 million subscribers, indicates that in 1Q97 more than \$98 million in merchandise was purchased directly through AOL. Each user, on average, visited AOL's Marketplace 11 times and spent more than \$12 in the quarter, and at least 15% of all AOL subscribers have made a transaction in the last 12 months.

E*Trade estimates that, in 1Q, NASDAQ/NYSE trading volume through its 145,000 accounts drove 0.7% of total exchange volume, for \$32 million in revenue. At the end of the quarter, E*Trade held more than \$4.1 billion in customer assets. It is especially notable that as of 1Q, Charles Schwab had more than 750,000 online accounts and held more than \$50 billion in assets for those customers.

Amazon.com says that it ended 1Q with 340,000 customers — in 1Q, they purchased an average of \$47 in books through Amazon's Web site (or \$16 million in product). At an estimated \$20 per book, that's 800,000 books shipped in the quarter, or over two books per customer.

Auto-by-Tel estimates that in 1Q it assisted in the sales of 61,250 cars through its network of 1,400 subscribing dealers — that's \$1.3 billion in car sales in a quarter, or about 1.9% of all non-fleet light vehicles sold in the U.S. during the quarter.

Table 1

Captive Web Retail Data for Selected Companies

	1996				1997
	CQ1	CQ2	CQ3	CQ4	CQ1
AOL					
- Estimated Value of Total Merchandise Sold Via AOL (\$000)	\$42,110	\$56,120	\$55,901	\$87,000	\$98,300
<i>Q/Q Growth</i>	--	33%	0%	56%	13%
- Number of AOL Subscribers at Quarter End (000s)	5,782	6,193	6,612	7,852	8,036
- Number of AOL Subscribers that Visited Marketplace in Quarter	NA	NA	NA	1,100	1,600
- Pct. of AOL Users that Visited Marketplace in Quarter	NA	NA	NA	14%	20%
- Estimated Merchandise Sold per AOL Subscriber in Quarter	\$7.28	\$9.06	\$8.45	\$11.08	\$12.23
- Number of AOL Marketplace Visits in Quarter (000s)	9,100	7,500	15,500	49,200	90,000
- Average AOL Marketplace Visits per Subscriber	2	1	2	6	11
- Estimated Merchandise Sold per AOL Marketplace Visit	\$4.63	\$7.48	\$3.61	\$1.77	\$1.09
E*Trade					
- Transaction Revenue Generated (\$000s)	\$9,160	\$13,719	\$13,970	\$20,372	\$32,201
<i>Q/Q Growth</i>	--	50%	2%	46%	58%
- Number of Active Accounts at Quarter End	53,000	74,000	91,000	113,000	145,000
- Average Transactions per Day at End of Quarter	5,798	8,009	8,360	12,200	14,283
- Number of Transactions per Quarter	328,000	503,000	485,000	689,000	807,000
- Transactions per Account in Quarter	6.2	6.8	5.3	6.1	5.6
- Revenue per Transaction	\$27.93	\$27.27	\$28.80	\$29.57	\$39.90
- Transaction Revenue Generated per Account	\$173	\$185	\$154	\$180	\$222
- Total Assets Held in Customer Accounts at End of Quarter (\$B)	\$1.6	\$2.0	\$2.6	\$3.3	\$4.1
- Revenue per Internet User	\$0.76	\$0.86	\$0.67	\$0.73	\$1.01
Amazon					
- Quarterly Revenue (\$000s)	\$875	\$2,230	\$4,173	\$8,468	\$16,005
<i>Q/Q Growth</i>	--	155%	87%	103%	89%
- Customer Accounts at Quarter End	--	--	--	180,000	340,000
- Number of Visits per Day at End of Quarter	--	--	--	50,000	80,000
- Revenue per Account	--	--	--	\$47	\$47
- Revenue per Visit	--	--	--	--	\$2.74
- Revenue per Internet User	\$0.07	\$0.14	\$0.20	\$0.30	\$0.50
- Estimated Size of Average Book Purchase	\$20	\$20	\$20	\$20	\$20
- Estimated Number of Books Purchased (000s)	44	112	209	423	800
Auto-By-Tel (1)					
- ABT Quarterly Revenue (\$000s)	\$436	\$952	\$1,434	\$2,203	\$3,400
<i>Q/Q Growth</i>	--	118%	51%	54%	54%
- Number of ABT Paying Franchises of Subscribing Dealerships at Quarter End	546	728	978	1,206	1,400
- Revenue per Subscribing Dealer (2)	--	\$1,495	\$1,681	\$2,017	\$2,609
- Number of Purchase Requests Generated	42,000	75,000	105,000	125,000	175,000
- Revenue per Purchase Request Generated	\$10	\$13	\$14	\$18	\$19
- Estimated Closure Rate of Purchase Requests	25%	28%	31%	33%	35%
- Estimated Number of ABT Units Sold Through Service	10,500	21,000	32,550	41,250	61,250
- Estimated Price per ABT Unit Sold (3)	\$22,000	\$22,000	\$22,000	\$22,000	\$22,000
- Estimated Dealer Sales Revenue from ABT Units Sold (\$000)	\$231,000	\$462,000	\$716,100	\$907,500	\$1,347,500
- Estimated ABT Revenue per Unit Sold	\$42	\$45	\$44	\$53	\$56
- Size of Domestic Retail New Light Vehicle Market, Excluding Fleet Sales (in MM of Units) (4)	3.2	3.2	3.2	3.2	3.3
- Size of Domestic Retail New Light Vehicle Market, Excluding Fleet Sales (\$B)	67,384	67,384	67,384	67,384	68,276
- Purchase Requests Generated as a % of Total Domestic Units Sold	1.31%	2.34%	3.27%	3.90%	5.38%
- Estimated Units Sold as a % of Total Domestic Units Sold	0.33%	0.65%	1.01%	1.29%	1.88%
- Estimated Revenue per Unit Sold as % of ABT Unit Price	0.19%	0.21%	0.20%	0.24%	0.25%
- Estimated Total Car Sales Passed Through ABT per Internet User (5)	\$28.73	\$43.10	\$50.90	\$48.37	\$62.85
Number of Total Internet Users (MM)	12	16	21	28	32

(1) All ABT Units are New Domestic Retail Sales of Light Vehicles

(2) Calculated using average number of dealers in quarter.

(3) Estimated price of each ABT unit sold (\$22,000) is slightly higher than average price for all units sold (\$21,000) due to the demographics of ABT customers.

(4) Fleet sales have been roughly estimated at 15% of total domestic retail new light vehicle market.

(5) We use our estimates for domestic Internet users as ABT services are only offered in North America.

The Internet Retailing Report — Chapter Summaries

Like *The Internet Report* and *The Internet Advertising Report*, this document is a beast to read; so for the tired, the weary, and the sane, we offer the summary points from each chapter in the following pages. (Note: Since each chapter is designed to stand alone if needed, we have repeated some key points in places.)

Chapter 1: Morgan Stanley's Internet Retail Stock Portfolio and Proxies

◆ In this chapter we provide a few **thoughts on building an Internet retail stock portfolio**. Companies that use technology to build and leverage the infrastructure for Internet retailing will likely continue to be attractive investments: **Dell, Microsoft, America Online, and Federal Express** are the core names in our Internet retail portfolio; they also have been Morgan Stanley focus stocks for quite some time. We think it's still too early to tell, but the more risk-tolerant investor might also want to look at traditional retailers that are extending their franchises to the Web, such as **CUC and Barnes & Noble**. We also identify some new "virtual retailers" — **E*Trade and Amazon.com** — as good public market proxies for the growth in Internet retailing, although we do not cover those two stocks.

◆ The **landscape for Web-based retailing should be much clearer in a year or two**, as a good deal of the dust will have settled as the pure-play first-movers (like Amazon) and the traditional retailers that have gone online (like Barnes & Noble) duke it out. In the interim, we think that investors should take a selective portfolio approach to investing in this emerging sector, choosing a mix of old and new companies that appear to be well positioned for this new opportunity. As usual, with tech-centric companies, valuations can shift like the wind . . . so timing is crucial. Note that many of these stocks have experienced significant runs in the year to date, and are trading at high relative valuations, so we wouldn't be surprised to see some volatility in the names.

◆ Given the history of other types of Internet-related and mail order companies, we believe **we are likely to see a "boomlet-bust-boom" cycle for Internet retailing companies**, where rapid growth is followed by a slowdown, skepticism, lack of momentum, and investor fears about competition. Successful companies will ride these out until they catch the next wave of positive investor sentiment, consolidation, increasing share, and real profit generation. Thus, after an initial burst of energy followed by some fits and starts along the way, a handful of leading Web retailing brands will likely emerge as great investments/franchises. We expect that many traditional retailers will also extend their franchises and market share via Web efforts (in part, through the power of cross-promotion).

Many more Web-specific retailers will likely be investment disasters, as were many mail-order firms in the 1980s. However, and again like mail-order, in Internet retailing **a select few well-managed/positioned companies should emerge as winners**; these might include such mail-order winners as Dell Computer, Gateway 2000, Lands' End, and Viking Office Products. When new retail distribution channels have been created in the past, new companies have capitalized on these changes: Consider telephone-based mail-order (LL Bean), discount superstores (Wal-Mart), television mail-order (QVC), and direct-marketing membership (CUC).

◆ **Internet retail companies may be high-growth, but may not be high-tech or high-margin. Valuations should reflect this over time.** While the best-of-the-best direct-marketing companies can trade at price-to-sales ratios (market capitalization to last 12-months' sales) in excess of 1.0 (for example, CUC trades at 4.2, Dell trades at 2.3, Viking Office Products trades at 1.0, and Gateway 2000 trades at 1.0), the average for our group of public direct marketers, excluding the aforementioned companies, is 0.4 times, and the average net margin is 1.0%. The tricks with valuing Internet retailers include factoring out the hype, determining normalized growth in a white-hot market, and determining the normalized financial model.

Chapter 2: An Update on Internet Usage Trends/Forecasts

- ◆ **The Internet is growing at an unprecedented pace**, and, for now, we believe most market data are suspect. There are numbers that seem solid, like the 8-million-plus America Online users (largely consumers) and the over 50 million users of Netscape Navigator (although Netscape believes that 80% of those users are Intranet users, and frequency of usage “beyond the firewall” is tough to predict).
- ◆ We believe there are **35 million Internet users (our point estimate for the end of 1996 was 28 million)**. This strikes us as especially impressive since we estimate there were only about 9 million users at the end of 1995. These users are a mix of both business and consumer users.
- ◆ We project **compounded annual growth in Internet users for the next four years of 54%**, and we believe that **more than 150 million people will use the Internet by the year 2000** — in fact, this assumption may be conservative, since there are already 230 million PC users worldwide.
- ◆ Given the early stage of Internet growth, **non-North American usage is at a higher rate of adoption than any other new technology** — using the number of Internet hosts as a proxy, while North America still dominates (with about 67% share), its share has fallen as the rest of the world catches up. In the last two years, Europe (with 22% share) has grown 222%, and Asia (which has doubled its share from 3% to 6%) has seen 550% growth.

Chapter 3: The Internet’s Potential as a Retailing Channel

- ◆ We continue to believe that the Internet may be the next mass medium. The Internet has the potential to become a powerful new **distribution channel** for retailers. History has taught us that **changes in the distribution of goods and services can create substantial business opportunities for deft companies**. Though most Internet-based retailers will likely fail, the strongest companies should survive.
- ◆ The Internet provides great **one-to-one tailored marketing** — we believe that a vendor’s ability to interact with users at the point where they view a site’s ads and content may prove to be a key facet of Internet retailing.
- ◆ **The biggest retail market opportunities on the Internet will likely coincide with mail-order opportunities**. In our view, the markets for goods and services that have the best potential for Web retailing are as follows: insurance/financial services; computer software/hardware; travel; books; magazines; music/video; flowers/gifts; and autos. Specific retail categories that we believe may take longer to develop (or may never develop fully) include groceries/food; apparel; sporting goods; tools/home repair; and toys.
- ◆ **The convenience of online shopping is key** — given the increasing time constraints placed on the average consumer, the ability to “purchase time” by buying online should be an attractive alternative to many.
- ◆ **Web demographics are compelling for marketers and retailers. Favorable teenage demographics** over the next ten years could act as a **catalyst for Internet shopping**.
- ◆ **A variety of shopping formats** will likely be successful on the Internet.
- ◆ **Our Internet team thinks first-mover advantage for Web retailers may be important:** Barriers to entry may rise in certain segments as established Web merchants (and powerful, focused traditional retailers of the Barnes & Noble ilk) gain solid brand positions. **The retail group, by contrast, doesn’t think being first matters much, since barriers to entry will likely remain low on the Web.**

- ◆ Strong **brand-name recognition** should be a critical success variable. We expect this branding element to result in a couple of companies in each sector dominating mind share and profits (what we call the “Wal-Marting” of the Web), while the rest struggle, with varying degrees of success.
- ◆ **Inventory risk** and who carries it, and who has **scale**, are key issues for Internet retailers.
- ◆ **Pricing benefits** for Web shoppers may, in many instances, be **offset by shipping costs**, though certain retailing categories (especially in mid-to-high-priced commodity-oriented products) should experience lower pricing in general. It also remains to be seen how much traditional retailers who experience margin expansion due to Internet-induced shipping/handling/inventory savings will use this advantage in lowering prices further.
- ◆ There will likely be **heavy price and marketing competition as retailers try to dominate the various retailing categories** on the Web. And **revenue growth should be easier to nab than profits**.
- ◆ Over the last few decades, several **new retail concepts** — category-killer retail stores, catalog companies, and home/TV shopping — were each expected to significantly alter the traditional retail landscape and adjust market shares; category-killer stores did, while home/TV shopping and mail order didn’t. This chapter includes a timely history of the mail-order industry.
- ◆ We believe that key criteria for successful retailing on the Internet will include: 1) pursuing a **viable market opportunity**; 2) possessing/creating a **leading Web brand**; 3) having a **low cost structure** with economies of scale to offset gross margin pressure; 4) superior database/fulfillment/distribution capabilities; 5) knowing how to **leverage technology** (and interactivity and databases) while **maintaining creativity**; 6) creating a sense of **community/membership** among customers; and 7) understanding how to **drive profits in addition to revenue**. Finally, retailers should provide customers with a **broad selection, competitive prices, and great service, as well as ease-of-use and speedy delivery**.

Chapter 4: Potential Size of the Internet Retail Market

Sizing the market for Internet retailing seems a bit like, “pick a number, any number...” When you do simple stuff like include online/Web assisted auto sales in Internet retailing data, Internet retail numbers get very big very fast.

- ◆ In this chapter **we look at four different ways of sizing the market**: 1) Using mail order as an analog; 2) Morgan Stanley forecasts using Web usage growth and estimated transactions per user; 3) International Data Corporation (IDC) forecasts; and Forrester Research forecasts. Using these sources, we arrive at a wide range of market size estimates for the year 2000 (from a base of sub-\$1 billion in market revenue in C1996E) — given the ubiquitous nature of the Web, these are all worldwide market size estimates (except for Forrester, which is U.S. only).

Respective year 2000 Internet estimated retail market sizes are: 1) Mail order analog — **\$115 billion in annual consumer sales plus \$260 billion in business sales within 5–8 years (rather than the 20 years it took mail order)**; 2) Morgan Stanley — **\$21-57 billion — with a mid-point estimate of about \$35 billion in sales in C2000E** — these forecasts are focused on the consumer market and if past is prologue, the business-to-business market could be 2-2.5 times larger; 3) IDC — **\$100 billion in online commerce revenue in C2000E** (including both consumer and business-to-business commerce); and 4) Forrester Research — **\$7 billion in U.S. online shopping revenue in C2000E**, with business-to-business commerce growing to \$66 billion in the same year.

- ◆ **Clearly these C2000E market sizes for Internet retail vary widely, but one thing appears clear — there will be compelling market growth**. Simply, it’s too early to responsibly predict how large the Internet retailing market for consumers and businesses may be, but we do believe that we have laid out appropriate frameworks for gauging/forecasting

market growth. And we look forward to obtaining market evidence that allows Morgan Stanley and others to corral, then fine-tune market growth estimates.

◆ **When new things like the Internet come along it's easy to make bold predictions about how the world will change – but as they say, the more things change the more they stay the same...** When mail order shopping began to hit its stride in the early 1980s and 800-numbers were launched by most cataloguers in the late 1980s (and also when TV-shopping, thanks to QVC and HSN, was aired for the first time), prognosticators did their thing and said people would stop going to stores and purchase everything from home and/or business. Remember the wealthy Texan in David Byrne's movie *True Stories* — she lived in her bed, shopped from her bed, got married in her bed? Well, it's 1997, and we aren't all living from our beds and traditional retailing in most sectors is alive and well. And, hey, traditional retailing is a form of entertainment...and entertainment never goes away...

◆ **But Internet retail should evolve and should be accepted more rapidly than mail order retail was.** Simply, the Internet is being deployed more rapidly than any new technology ever – call it velocity – there are 220 million PCs in use worldwide (and 35 million Internet users) – all of these PCs (and more) should be Internet-enabled within five years. And then there's the annual run rate of 100 million TV sets (and hope for cable modems), yes, Bill Gates, Larry Ellison and Marc Andreessen want those too...One can find and acquire millions of goods and services and in the not too distant future one will be able to do this consistently, quickly, interactively and in an entertaining way. By our math, the Web is ramping at a rate 3-5 times faster than the PC industry did...so using a little extrapolation...**it took the domestic mail order/direct marketing industry 20 years to rise from next-to-nil to roughly \$371 billion in revenue (for both consumer and business-to-business), with consumer reaching 5% of total retail sales and business-to-business 11% of total wholesale sales. One could extrapolate that Internet retailing could get to the same level in 5-8 years.**

Chapter 5: Where Do Users Spend Their Time Online?

◆ According to PC Meter's February survey, **the most popular Web sites based on reach were the Excite Group, AOL, Yahoo!, Netscape, and Microsoft** — we believe the highly trafficked Web sites are the Internet equivalent of Madison Avenue real estate.

◆ From July 1996 through February 1997, **those categories of Web sites that saw the greatest growth in reach** included **Travel and Tourism** sites like Travelocity and American Airlines (up 93%, to 16% reach), **Shopping-specific** sites like Amazon.com and Shareware.com (up 54%, to 31% reach), and **Marketing and Corporate** sites like Netscape and Real Audio (up 49%, to 66% reach).

◆ Shopping and shopping-related activities are becoming increasingly popular online — a recent CommerceNet survey indicated that **approximately 73% of Web-using respondents spent some percentage of their online time searching for information about specific products or services.** Of this group, 53% went on to make an actual purchase (either online or offline), and 15% actually made a purchase online.

Of those Web users who have made a purchase (either online or offline) as a result of looking at a Web site, 37% spent less than \$100, while 31% spent \$500 or more. **Convenience is clearly an important factor stimulating online shopping**, as 69% of the respondents who have purchased products or services on the Web in the past, or believe they are likely to do so in the future, cite convenience as a major factor.

Chapter 6: The Latest and Greatest from Some of the Hottest Web Retailing Brands

◆ In this section, we show **examples of how various retailers and other businesses are approaching their online product and service offerings**, in the hopes of gaining traffic/users and generating revenue from online retail/commerce. Note

that all of these sites are focused on **building a sense of community among users and are attempting to become the “source” for their respective market spaces.**

◆ **If you aren’t inspired to take a Web shopping trip after perusing this chapter, we’d be surprised!** Even so, one should note that most, but certainly not all, of these sites still have limited product offerings compared with the brick-and-mortar world. For example, while Realtor.com has nearly one million home listings, its data cover the entire country; thus, pickings can be pretty slim on a region-by-region basis. Yet it’s also important to point out that the sites, in general, have improved significantly over the past 12 months — by including more content, features, and improving ease-of-use — and we believe this trend will likely continue.

Chapter 7: For Shoppers, the Web Offers Niche and Mass Markets, and Unique Ways to Find Products Quickly

◆ The Web has created many new interactive opportunities to bring buyers and sellers together and to facilitate and speed transactions. In this chapter, we **describe and then profile four distinct techniques (that link to retail-specific Web sites) for driving transactions**, specifically: 1) **yellow pages**; 2) **online malls**; 3) **special interest links**; and 4) **agentic technology**. All of these techniques are intended to improve the shopper’s experience on the Web by making it easier, faster, and more entertaining to find goods and services that are of specific interest to the individual shopper. We believe it’s essential that Web retailing sites create communities of interest in various areas, so that shoppers keep coming back.

◆ In time, **agentic technologies will likely prove to be a key tool for online shoppers** as, in effect, they allow users to have round-the-clock personal shopping assistants. Agentic technology, by its nature, can cause complications for many retailers but benefits for those who are smart facilitators.

Chapter 8: A Look at an Emerging Web Retailing Market — Book Selling — Amazon.com and Barnes & Noble

◆ As a relevant case study of the major issues in electronic commerce, we take a close look at online book selling, one of the most developed corners of Internet retailing. Amazon.com is one of the leading Web brands in the retailing space, created for the Web and by the Web. **Amazon’s early efforts have changed the way a growing number of consumers shop for books, and the company is creating a new business model for retailing — the financial model isn’t proven yet, but the work is in process.** Keep in mind that this chapter is simply a case study of online book selling, and not a recommendation of Amazon’s stock.

◆ The **strong consumer reception to Internet book shopping is quickly attracting dominant “bricks-and-mortar” retail booksellers.** Barnes & Noble recently launched its Web site, and Borders has plans as well.

◆ In this chapter, we **set the stage for our discussion of bookselling on the Web** with a brief history of Amazon.com. We then discuss the market opportunity, the dynamics, and the business model of online book retailing. We also compare and contrast the Internet efforts of Amazon and Barnes & Noble, their relative competitive advantages, and the operational and financial opportunities and challenges they face on the Web. Our discussion is intended to provide the details and the focus areas for understanding the key factors in the financial evolution of Web retailing.

◆ **Amazon has a wad of key ingredients that in our judgment may make for a successful company:** a large and rapidly growing market opportunity, first-mover advantage, a great brand name and product, leading market share on the Web, happy customers that do the “word of mouth” thing, and what we consider an impressive management team.

◆ In our view, the biggest issues for Amazon are that **the company hasn’t yet demonstrated that it’s a money maker** and the book business is a low-margin business — Barnes & Noble and Borders (\$2-billion-plus annual revenue players in the book retailing business) both support net margins of 2–3%; Amazon, meanwhile, has structural margin advantages, in that it doesn’t have capital investments related to storefronts and operating expenses for salespeople, but it has structural margin

disadvantages in that it doesn't have purchasing power because it's not a scale player in a scale business, yet; and finally, Barnes & Noble, especially, views Amazon as a very serious competitor and has aggressively launched its Web site (notably, two years later than Amazon's). So competition in the form of aggressive pricing and marketing is sure to rise.

◆ Barnes & Noble comes to the Web with a different perspective than Amazon. As the nation's leading bookseller — over 1,000 stores that generated \$2.4 billion in revenues in 1996 — **Barnes & Noble sees the Internet as an important new avenue for growth that leverages existing assets.** These assets include an established distribution center that will have the capacity to ship 400,000 titles overnight, relationships with 20,000 publishers, state-of-the-art inventory tracking and replenishment systems, and a national advertising program that promotes and supports the brand name. Barnes & Noble's Internet business is in its infancy but is expected to begin contributing to earnings in 1998.

◆ **Our conclusion is that, in the little world of Internet book selling, we are about to see a mini-marketing battle, like a junior version of Coke vs. Pepsi.** The likely results will be: strong revenue growth for both Amazon and Barnes & Noble, as the global book business provides a huge opportunity; increased acceptance of the Web as a medium for commerce; consolidation of book sales market share (at least on the Web); and insight into whether leading, first-mover Web companies can maintain share when powerful established players enter their markets. But the billion-dollar question remains: When will these businesses make money? Hang on for the ride as Amazon aspires to become the next Dell, and Barnes & Noble tries to head it off at the pass.

Chapter 9: General Considerations for Those Entering the Internet Retailing Business

◆ While it is certainly beyond the scope of this report to write a comprehensive business plan for an Internet retailing company, we do think it is relevant to discuss some of the **key strategies and ingredients that we believe entrepreneurs and investors should look for when evaluating online retail businesses.** Many of the traditional business requirements still hold true for the online space, but due to the rapidly changing economic dynamics of the medium and the scarcity of certain resources (like programmers and individuals who have a solid grasp of technology, retailing, and marketing), there are several basic requirements that we believe deserve more attention than usual.

◆ A couple of general, big-picture thoughts follow: 1) **Brand strength, excellent infrastructure, and economies of scale** should be key. 2) In terms of **barriers to entry, the tech team thinks first-mover advantage may be important, and barriers to entry may rise in certain segments** as established Web merchants (and powerful, focused traditional retailers of the Barnes & Noble ilk) gain solid brand positions; **the retail group, by contrast, doesn't think being first matters much, since barriers to entry will likely remain low on the Web.** 3) Real market share — and profitability — will be dominated by a few; we expect **a handful of Internet retailing concerns to be big successes, and boatloads to be disasters.** 4) **Retailing is a low-margin business** (a 2.1% net margin average for Morgan Stanley's universe of 134 domestic public retailing companies). **It's a sobering fact that we have not yet seen a big, positive-cash-flow winner in Web retailing.** And 5), we expect **Internet retailing companies, in time, to be valued like retailing companies, not technology companies.**

◆ We believe that the keys to success in the Internet retailing business include pursuing a large **market opportunity**, creating a leading **brand**, knowing how to **scale** the business, knowing how to **leverage technology** (including interactivity and databases) while **maintaining creativity**, creating a sense of **community or membership** among customers, and understanding how to **drive profits as well as revenue.** Finally, history shows that success in retailing results from **providing customers with excellent product selection, convenience and fast delivery, and low prices.**

◆ A key element of online retailing that we believe facilitates closer communication is the **e-mail address — the fact that the customer and the retailer can contact one another at any time or day is very powerful.** Furthermore, the cus-

tomer can, in effect, access the retailer's database 24x7, and the retailer has all of the customer's preference data at its fingertips — that's a huge asset.

◆ For those especially interested in developing a Web business, we recommend *Net Gain* (Harvard Business School Press), by John Hagel and Arthur Armstrong, which is available from your favorite book vendor's Web site. The authors point out that the **key to Web retailing success is driving critical mass in the following areas: membership, usage profiles, advertisers/vendors, transaction profiles, and transactions. Once the customers are nabbed, if they are kept happy, they can be retained and cultivated — thus, to coin some cliches, the big Web retailers will get bigger, and customer knowledge will be power.** In our “Are You My Mother?” children's book anecdote, every six months or so we ask Steve Case of America Online, “What's critical mass for AOL?” Well, first it was 500,000 subscribers, then 1 million, then 5 million, now 10 million. Because of AOL's constant pursuit of new members, its profits haven't risen with subscriber growth, although the revenue and market capitalization certainly have.

Chapter 10: Econ 101 Meets the Web

◆ In this chapter, we offer a little food for thought, sit back in our economist armchairs, and lift a little of what we learned in Econ 101 and apply it to business on the Internet. In time, the growth of Internet commerce may offer a new **economic proposition for both consumer and vendor.** For the **consumer**, the potential opportunities are **convenience, increased access to information and the ability to aggressively source**, while the opportunity for those **vendors** who **understand the underlying dynamics of this new market**, who may be **well-positioned to capture the potential benefits**, and who **execute** is the chance to capture a greater share of potentially **larger, more efficient markets** (though it is unclear if the endgame here is more or less profitable businesses, and it may well vary from market to market).

◆ We see the Web as a means by which **companies may expand the market into which they sell**, and the benefits derived could include **freedom from many current geographic limitations, more effective targeting for marketing and advertisement, an enhanced ability to deal with customers directly**, and an **increased propensity for customers to purchase.**

◆ This **critical mass of consumers in each market is important** — without the threat of significant erosion of market share, many businesses have little reason to alter current market dynamics.

◆ We believe these **economic shifts and lower prices may create a rise in incremental demand from consumers**, pushing up the volume of goods sold (but not necessarily increasing profits for vendors). Barnes & Noble has indicated that online book shoppers buy 5–10 times as many books as offline book buyers. While part of this phenomenon is due to the demographics of online shoppers, we think it is a directionally significant data point.

◆ Finally, we think that as the online user community grows and a critical mass of consumers is created in each online market, **the dynamics of pricing may continue to shift in favor of a more empowered consumer.** Where this leaves vendors is another question, and we believe this will vary from market to market. The outcome for consumers is pretty simple: **less vendor overhead, increased competition**, and a **more efficient purchasing process** may well lead to **lower prices** in general.

Chapter 11: Business-to-Business Electronic Commerce

◆ **The opportunity for businesses to take advantage of the Internet as a distribution channel is likely even larger than the consumer market in absolute size and impact.** This chapter focuses on **the size of the opportunity and the drivers of electronic commerce technology adoption** over time, and **discusses the technology and cost efficiencies that Internet-enabled products and services should bring**, and how they may create a shift in the way that much business-to-business commerce is conducted.

◆ We did a reality check on how big this market could be and came up with some impressive numbers — **Cisco believes that it will be on a \$2 billion run rate in sales transacted via the Internet by the end of its fiscal year (July 1997), and Dell Computer is doing more than \$1 million in online sales per day.** These companies primarily sell to corporate customers, so it seems that business-to-business sales on the Internet are on a rapid ramp.

◆ The opportunity for businesses to move commerce online is **fundamentally a cost savings story**, as companies should be able to leverage their Web presences into huge sales, service, and support savings — **Cisco says that without its Web site, it would need to double its engineering sales/support group to 2,000 engineers**, which is real savings. In many markets there may well be **consolidation of share**, as smaller players feel price and service pressure from the big players, who now can be everywhere (the ubiquity of the Web makes price and service comparison as simple as it has ever been); **new market share increases may mean increased revenue potential for the consolidators.**

◆ However, in an increasingly competitive market, **benefits and efficiencies achieved by businesses using the Web as a distribution channel will either be reinvested in future growth or passed along to customers** in the form of lower prices and improved service for retail goods and services. There will likely be big benefits for those companies that provide the products and services to facilitate Web-based retail. **Thus, it is still unclear if, for all but a few, the projected cost savings** (stemming from reduced transaction and sales support/service costs) **and volume increases** (due to lower pricing stimulating more purchases) **would result in more profitable businesses.**

◆ Much like the Internet's growth to date, we believe that development of the online business-to-business commerce market will be divided into several distinct segments, each ramping at a certain point, and each involving a different group of companies. These should include: hardware/**infrastructure** companies (Cisco, Ascend, Worldcom/UUNet and the ISPs generally); providers of **software and groupware/communications applications** for e-mail, teleconferencing, and so forth (Netscape, Microsoft, and IBM/Lotus); companies offering business-to-business "**merchant system**" software (Microsoft, Netscape, Open Market, IBM, and iCat); and **third-party providers of EDI and related products and services** for these new business-to-business marketplaces (IBM, General Electric, Sterling Commerce, and the Netscape/GE Information Systems joint venture, Actra Business Systems).

◆ Regarding the evolution of the market for merchant software, we make the following points: 1) **The demand for merchant system software is still in its infancy**; 2) **the market is not yet as large as many initially expected** (many companies have built their own software in-house, and there is a great deal of downward price pressure and demand for increased functionality without incremental cost increases); 3) **future growth should, over time, ramp nicely** as online commerce grows, **but we should see less of a "hockey stick" effect** than in other Internet-based product and service markets; and 4) over the next couple of years, **the majority of this merchant system software market growth should be in the business-to-business market.**

◆ **The most common form of structured business-to-business commerce is EDI (electronic data interchange)**, generally defined as the application-to-application exchange of formatted transactional data between business entities. This exchange may take place over any type of data network, including company-run private networks, value-added networks (VANs) run by third-party providers, and the Internet (the share of VAN-based transmissions has been estimated, according to the Gartner Group, to fall from 63% of the total in 1993 to 35% in 1999, with the majority of share being taken by Internet-based transmissions). Common applications of EDI include the sending of purchase orders, invoices, shipping notices, and other frequently used, standardized business documents and forms.

◆ **Benefits that companies can derive from the use of electronic commerce and EDI include: a shortening of business process cycles** by reducing delays caused by postal paper chains; **reduction of costs** for the creation, recording, and storage of paper documents and records; **shorter lead times and reduced inventory holdings**; and **improved customer service.**

- ◆ Though there are a number of estimates for the size of the business-to-business market, we think a reasonable example is IDC's prediction that business purchases will be on the order of \$80 billion in 2000. **Though we are not hanging our hats on exact numbers at this early stage** (the midpoint of our consumer retail estimate of \$35 billion in 2000, plus our rough estimate that business-to-business sales will be 2.0-2.5 times larger than consumer, yields a range of \$70-88 billion), **the point is that we believe this market, in time, will be big.** We would simply say that many of these market size predictions have real "directional significance."
- ◆ **While 95% of the Fortune 1,000 companies are using EDI, according to Forrester Research, there are 6 million businesses in the U.S., and only 2% of them are using EDI.** The low transaction costs and standardized communication protocols of Internet-based EDI should combine to create much-improved cost structures and larger markets for buying and selling, encouraging the adoption of business-to-business electronic commerce by even the smallest of businesses, and in turn raising the tide of value that electronic commerce creates for all of those who leverage it.
- ◆ The value created by **Internet-based commerce could result, if economic theory holds, in an increasing cycle of growth** as more businesses move online; as larger markets are created for vendors to sell into; as purchasers' enhanced ability to select and price product increases the potential for cost savings and for product and service-quality improvements; and as more efficient competition is created (and more demand along with it).

Chapter 12: A Look at the Universe of Emerging and Traditional Retailers on the Internet

- ◆ This is the "**where's the traffic?**" part of our report. In order to compile a list of the leading shopping sites on the Web, we have used PC Meter consumer data. The data aren't perfect (but they're some of the best stuff out there in Webland), yet they have directional significance. In this chapter, the **"Top 50" shopping sites on the Web are ranked based on February 1997 usage.** The **five most frequently used shopping areas** were: 1) **shareware.com** (CNET's software site), 2) **download.com** (another CNET software site), 3) **columbiahouse.com** (the Columbia House music and video site), 4) **Amazon.com** (Amazon's book site), and 5) **hotfiles.com** (Ziff-Davis' software site).
- ◆ It's not a surprise that **software downloading is one of the most popular means of shopping on the Web** — as most of this software is available for free from the sites. But the good news, for money-hungry entrepreneurs, is that for-sale software sites are popping up in the ranks. Other areas experiencing lots of traffic on their shopping sites, in addition to Columbia House and Amazon, are Surplus Direct (PC hardware and software), Gateway 2000 (PCs), and QVC (you name it).
- ◆ The traditional retailers that have shown the greatest interest in online commerce to date have largely been in hardlines, catalog/mail order, and industries where customers do not feel the need to touch merchandise prior to making a purchase.
- ◆ In this chapter, we **list and describe the top shopping Web sites** in many shopping categories, including **software, hardware/electronics, online malls, clothing/apparel, flowers/gifts, music/entertainment, specialty retail, direct-mail/marketing, auction, financial services, travel, and package delivery.** We also list and describe the top 20 shopping areas on America Online. We conclude with a look at the online efforts of some of the more traditional retailers.

Chapter 13: Internet Commerce Security

- ◆ To date, **the success of electronic commerce conducted over the Internet has been limited by several factors, including:** 1) **few compelling consumer products;** 2) **a lack of consumer bandwidth** required to advertise and market products and services in the most effective manner possible; 3) **a limited audience;** 4) **insufficient benefit for existing transaction service companies** (such as Visa, Mastercard, or American Express), resulting in their reluctance to market and endorse the concept; 5) **a dearth of time-proven, brand-name security technologies** available to enable secure transactions, and 6) the fact that routing sensitive data over a public network, such as the Internet, has raised **privacy and piracy** issues that did not exist before.

- ◆ We expect that **over the next several years, security technologies will come to market and profoundly affect the business models of retailers, wholesalers, and existing transaction service providers. One such security technology is the SET (secure electronic transaction) protocol.**
- ◆ We believe that **the business need for reliable security technologies will**, despite some likely bumps and bruises on the way, **drive the adoption of security standards and protocols.** According to the Yankee Group, the market for integrated network security, secure electronic commerce, and remote access and firewall markets will grow from \$1 billion in 1996 to \$5 billion in 2000. Secure electronic commerce alone is expected to grow from about \$270 million in 1996 to \$1 billion in 2000.
- ◆ In this chapter, we assert that **electronic Internet commerce is not as risky as one would be led to believe from reading much of the industry press**— we believe that **Internet commerce security’s “bark” is much worse than its bite. Like ATM cash machines, which initially were deemed unacceptable by some users, we believe that the Internet, over time, will become very broadly used.**
- ◆ **We think that overcoming the psychological barriers toward Internet security could be more difficult than overcoming the technical challenges.** For all of the concerns that have been expressed about potential security breaches and online fraud, it is striking to us that, to date, there has been no real barrage of front-page stories detailing the horrors of little old ladies from Pasadena losing their savings to some type of online hoax or group of hackers. Still, it clearly will take time to ease the collective public consciousness about Internet security and for people to feel comfortable about making payments and purchasing items online.
- ◆ **We divide the Internet commerce security industry into several distinct pieces: software vendors** (Security Dynamics/RSA, Netscape, Microsoft, Open Market, Connect, Broadvision); **transaction service companies** (Cybercash, First Virtual, Digicash, Hewlett-Packard/Verifone, Mondex); **traditional financial services organizations** (MasterCard, Visa, American Express); **companies developing smart card and related technology** (Gemplus, Security Dynamics/RSA, Motorola, Certicom); and **certificate authorization services** (VeriSign, CertCo, GTE/Cybertrust, U.S. Postal Service).

Chapter 14: A Trip Down Mail-Order Memory Lane, and Some Lessons Learned Along the Way

- ◆ We believe that the **growth trends seen in mail-order retail are a reasonable proxy for the potential growth trends in Internet retail.** Like mail order, **Internet shopping offers customers convenience, broad product assortments, competitive prices, sales tax benefits on a case-by-case basis, good customer service, overnight delivery (at a cost) to your door, and the comfort of shopping with a brand-name vendor.**
- ◆ However, we believe Internet shopping, in time, has the potential to provide an experience that does all of these things a little or a lot better than mail order (thanks to the interactive nature of the Web). **Near term, Internet issues related to slow access speeds, limited availability of many products, and still-low Web-retailer brand-name recognition are gaiting issues to Web shopping growth versus mail-order growth, but this should change rapidly as bandwidth expands and retailers increase their Web-based offerings.** In addition, cross-promotion of Web-based retailing offerings from established brands, such as Barnes & Noble, should help drive sales.
- ◆ In this chapter, **we explore the history and trends of mail order**, to demonstrate trends that may show up during the development of Internet retailing. Historically, the highest revenue categories in mail-order include: 1) insurance/financial services; 2) apparel; 3) general merchandise/housewares/gifts; 4) magazines; 5) electronic goods; 6) sporting goods; 7) auto clubs; 8) collectibles; and 9) books. These trends will likely be similar in Web retailing, we think, although the dollars initially may be skewed less toward apparel, sporting goods, and collectibles, given the Web’s current limits on presentation. It is worth noting that, **after lots of initial enthusiasm about mail-order retailing, that industry was inundated with new competitors, profitability declined, a recession kicked in, industry consolidation ensued, and profits declined**

further, although a few standout companies gained meaningful market share (to name a few: Dell, Gateway, Fingerhut, Lands' End, J.C. Penney, Eddie Bauer, L.L. Bean, and J. Crew). As with mail-order retailing, we expect a few outstanding Internet retailing companies to emerge as the winners over time.

Chapter 15: Glossary of Internet Terminology

Chapter 16: History of Retailing, a Time Line

Chapter 17: Appendix

- 1) General Thoughts on Internet Tax Issues
- 5) A Framework for Global Electronic Commerce — Clinton Administration Draft
- 2) Morgan Stanley Domestic Retail Company Universe
- 3) Morgan Stanley Domestic Technology Company Universe
- 4) Public Internet Companies
- 5) Internet IPO Market Environment

Chapter 1: Morgan Stanley's Internet Retail Stock Portfolio and Proxies

Summary

◆ In this chapter we provide a few **thoughts on building an Internet retail stock portfolio**. Companies that use technology to build and leverage the infrastructure for Internet retailing will likely continue to be attractive investments: **Dell, Microsoft, America Online**, and **Federal Express** are the core names in our Internet retail portfolio; they also have been Morgan Stanley focus stocks for quite some time. We think it's still too early to tell, but the more risk-tolerant investor might also want to look at traditional retailers that are extending their franchises to the Web, such as **CUC** and **Barnes & Noble**. We also identify some new "virtual retailers" — **E*Trade** and **Amazon.com** — as good public market proxies for the growth in Internet retailing, although we do not cover those two stocks.

◆ The **landscape for Web-based retailing should be much clearer in a year or two**, as a good deal of the dust will have settled as the pure-play first-movers (like Amazon) and the traditional retailers that have gone online (like Barnes & Noble) duke it out. In the interim, we think that investors should take a selective portfolio approach to investing in this emerging sector, choosing a mix of old and new companies that appear to be well positioned for this new opportunity. As usual, with tech-centric companies, valuations can shift like the wind . . . so timing is crucial. Note that many of these stocks have experienced significant runs in the year to date, and are trading at high relative valuations, so we wouldn't be surprised to see some volatility in the names.

◆ Given the history of other types of Internet-related and mail-order companies, we believe **we are likely to see a "boomlet-bust-boom" cycle for Internet retailing companies**, where rapid growth is followed by a slowdown, skepticism, lack of momentum, and investor fears about competition. Successful companies will ride these out until they catch the next wave of positive investor sentiment, consolidation, increasing share, and real profit generation. Thus, after an initial burst of energy followed by some fits and starts along the way, a handful of leading Web retailing brands will likely emerge as great investments/franchises. We expect that many traditional retailers will also extend their franchises and market share via Web efforts (in part, through the power of cross-promotion).

Many more Web-specific retailers will likely be investment disasters, as were many mail-order firms in the 1980s. However, and again like mail order, in Internet retailing **a select few well-managed/positioned companies should emerge as winners**; these might include such mail-order winners as Dell Computer, Gateway 2000, Lands' End, and Viking Office Products. When new retail distribution channels have been created in the past, new companies have capitalized on these changes: Consider telephone-based mail order (LL Bean), discount superstores (Wal-Mart), television mail-order (QVC), and direct-marketing membership (CUC).

◆ **Internet retail companies may be high-growth, but may not be high-tech or high-margin. Valuations should reflect this over time.** While the best-of-the-best direct-marketing companies can trade at price-to-sales ratios (market capitalization to last 12-months' sales) in excess of 1.0 (for example, CUC trades at 4.2, Dell trades at 2.3, Viking Office Products trades at 1.0, and Gateway 2000 trades at 1.0), the average for our group of public direct marketers, excluding the aforementioned companies, is 0.4 times, and the average net margin is 1.0%. The tricks with valuing Internet retailers include factoring out the hype, determining normalized growth in a white-hot market, and determining the normalized financial model.

Table 1-1

Morgan Stanley Internet Retail Stock Portfolio and Proxies (Ranked by Market Capitalization)

Company	Ticker	Price (5/16/97)	Mkt Cap	Description
Portfolio				
Microsoft	MSFT	\$115	\$157B	Everything — could be portal to Internet
Dell	DELL	97	18.0B	PC vendor — Should be able to leverage direct-mail leadership to Web
Federal Express	FDX	53	6.1B	Logistics/shipping — could be leading virtual warehouse
America Online	AOL	48	5.5B	Member marketplace — high membership, brand name can be leveraged
Proxies				
CUC	CU	23	9.8B	Member marketplace — early leader, now follower could lead again
Barnes & Noble	BKS	40	1.4B	Book seller — these guys are serious about the Web
E*Trade	EGRP	15	526MM	Stock trading — company with momentum in market sweet spot
Amazon.com	AMZN	20	470MM	Internet book seller — so far, the longest track record

Source: Morgan Stanley Technology Research.

B = Billion.

Additional Thoughts on Our Portfolio

The selective portfolio approach we have recommended for investing in this emerging sector should be tempered with old and new companies that appear to be well-positioned for this new opportunity. We think the portfolio stocks in Table 1 capture a large percentage of the new market spectrum. Dell is using its highly successful direct-mail model and applying it to the latest in direct-marketing channels — the Web. It is very possible, we think, that Microsoft could simply become the portal many users open to get to the Web, providing Microsoft with key rent-producing real estate plus the opportunity for software sales to build the Internet infrastructure. With the potential growth in the number of purchases made online, someone will be taking a profit on getting the orders from warehouse to front door, and Federal Express is our favorite story to capture the increased demand for these services. As for AOL, if Tel-Save will pay \$100 million to have access to AOL's captive audience, other companies may be willing to pay up for real estate to gain access to AOL's customers.

Among the proxies, E*Trade looks well positioned to capture the efficiencies and rapid growth we expect to see in the demand for online financial services, though this market will no doubt remain quite competitive. With 66 million members, CUC also has a formidable audience for its message, though the Web may create a huge transition for the company. Amazon is the largest (in terms of sales) and most experienced online seller of books, while Barnes & Noble has a considerable brand and presence in the traditional market, as well as a serious plan to be the dominant bookseller.

There will likely be two or three major market share winners in the different sectors, who will catch that second wave and reap the benefits of market dominance; these should include the players in various forms of financial services (from Intuit to E*Trade to Charles Schwab to CNN), music (with the likes of Tower Records, CD Now, Columbia House, and possibly even Amazon in the mix), software (CNET, ZD Net, and others). Over all of these companies hang the specters of Microsoft, CUC, and AOL, which, due to their sheer weight, can enter a particular vertical market with (more than) a fighting chance.

Relative Company Valuations, In Time, Will Likely Move Down For Pure-Play Internet Retailers

In time, valuations for Internet retail companies should tend to move down the valuation curve, away from higher technology and high-growth company valuations toward lower, retail company valuations. Consider the following valuation differences between Morgan Stanley's universe of 134 domestic retail companies and universe of 300 technology companies: 1997 P/E to EPS growth (based on the I/B/E/S five-year mean estimate) for retail = 1.0, for technology = 1.2; market capitalization/LTM sales for retail = 0.7, for technology = 2.0; mean operating margin for retail = 5%, for technology = 14%. While valuation metrics are somewhat consistent across retail sectors, valuation and margin ratios vary sharply across technology sectors, with software and networking companies (including Internet companies) carrying the highest relative valuation and distribution and hardware-oriented companies carrying the lowest valuations.

It will always be important to ensure that company and industry business fundamentals justify company valuations.

If Internet retailing, in general, takes longer to build a meaningful sales base, valuation corrections may be significant. This occurred in the public markets for mail-order companies in the late 1980s and early 1990s and for TV shopping in 1994. In the early/middle stages of their market evolutions, many companies in these sectors didn't live up to the hype.

The Internet has given rise to a significant amount of excitement for investors, and Internet IPO volume has been significant. We mark August 8, 1995, when Netscape had its public market debut, as Day 1 of the Internet for public investors. But it's worth noting that as of May 16, 1997, 55 Internet IPOs had been filed since Netscape's IPO (see Appendix for details), and only 10 (or 18%) were trading above their offering price. The combined market capitalization depreciation (excluding Netscape) of all the offerings was \$1.7 billion. On the flip side, already established Internet-related companies have seen their market capitalizations rise significantly since Netscape's IPO: Microsoft's is

up \$98 billion, Cisco up \$24 billion, Ascend up \$4.2 billion, and America Online up \$2.6 billion.

Nearly all investors have had questions about the appropriate valuation methodology for Internet retailers, particularly since the companies' profitability may suffer from heavy early-stage investments in customer acquisition without sizable revenue offset. In contrast, many traditional retailers can absorb lots of costs against their store-wide revenue base. For all early-stage growth companies, the valuation today is determined by discounting future years' levels of profitability. Unfortunately, however, the risk is that today's hype overshadows an appropriate valuation. We note four issues: 1) the meaningful valuation differential today between tech and retail companies, and what that implies for the sustained valuation of a hybrid tech/retail company; 2) the severe multiple compression for once high-flying mail-order and TV shopping ventures; 3) low retail margins; and 4) an uncertain outlook for the long-term winners.

The Portfolio Companies

Microsoft (MSFT, \$115; Outperform, covered by Mary Meeker): *The 800 Giga-Byte Gorilla*

Price	52-Wk Rng	Div	Yld	Shs(MM)	EPS 96A	EPS 97E	P/E	EPS 98E	P/E	5-Yr Proj Growth
115	124 - 54	--	--	1362	\$1.70	\$2.62	44.1	\$3.15	36.6	25%

Microsoft's interest in online commerce and retailing lies primarily with leveraging its core software competencies, and being a traffic cop or portal to Web usage. Microsoft's early initiatives in building Web retailing communities include: Expedia, its award-winning online travel agency; Music Central, its online music store; Car-Point, its auto-shopping service; Investor, its personal investing site; and Sidewalk, its online personal guide to entertainment. All of these services are accessed through MSN (The Microsoft Network), which like AOL seeks to drive profit growth from a mix of transaction and advertising revenues. The real-estate analogy is one we find useful in comparing online and traditional retailing — retail may be low-margin, but high-traffic Web site owners should be able to collect premium rents, just as mall owners in prime

locations do. Microsoft has a substantial opportunity to control a vast amount of cyber-estate, and will likely, in time, be able to leverage this ownership into all kinds of revenue streams.

One of Microsoft's key advantages in the online retailing game will be its distribution channels, where it is making a **strong push to achieve ubiquity**, and where it will be able to effectively cross-market its products and services. We estimate that Windows is installed on more than 155 million Intel-based PCs, and as more and more of these computers are hooked up to the Internet, Microsoft's ability to deliver content and product to them should rise considerably. Microsoft is also making decent progress with MSN, its online service, which recently passed the 2.2 million

subscriber mark, and its MSNBC Cable venture, which now reaches 31 million homes. The recently proposed acquisition of WebTV Networks should also give Microsoft leverage in bringing the Internet to the mass market, where many consumers are unable to purchase a computer but can afford the substantially more inexpensive WebTV device. Microsoft has become increasingly focused on the trend toward digital television: It sees an opportunity to incorporate relatively low-cost (but high-margin) operating systems into the new digital televisions, so that they can handle Internet content (which MSFT will also supply).

There's the leverage that MSFT can gain from Internet ubiquity. Imagine MSFT's revenue opportunity in the year 2000, when there should be more than 150 million Internet

users, many using MSFT software. If advertisers pay \$1.5 million for 30 seconds of airtime during the Super Bowl to nab an estimated 100 million sets of eyeballs, why wouldn't they pay \$1.5 million for a spot of primetime business-PC turn-on time? And then think about Microsoft's power as a Web portal in helping route customers where it wants them to go. Just a few thoughts. . . .

A by-product of the evolution of the Internet should be continued growth in information technology spending by businesses, with total business spending on all forms of information technology (computers, telecommunications equipment, and the like) now up to 43% of inflation-adjusted business outlays on capital equipment). Microsoft should continue to benefit from this spending expansion.

**Dell (DELL, \$94; Outperform, covered by Mary Meeker, Gillian Munson):
Can Win With Net Revenue Plus Opex Savings**

Price	52-Wk Rng	Div	Yld	Shs(MM)	EPS 96A	EPS 97E	P/E	EPS 98E	P/E	5-Yr Proj Growth
94	110 - 20	--	--	184	\$2.77	\$4.53	20.8	\$5.60	16.8	25%

DELL should, in our opinion, be a primary beneficiary of the rapid growth in purchasing of PCs via the Internet. Dell has indicated that it is generating Web-based sales of \$1 million or more per day — up from zero a year ago. Dell's online customer mix is currently 45% individuals and 55% businesses. Currently, the company can transact credit-card-based sales over the Web and should soon be able to process purchase orders for large corporate customers. Dell believes a number of customers use the service to price product and then end up securing actual product over the phone. So actual Web-based sales may be low relative to actual use of the Web site. Dell surveys indicate that 70–80% of its Internet shoppers are new Dell customers.

In the PC space, we believe that Dell is the best-positioned company to benefit from Internet-based sales, owing to its direct-sales heritage. Dell is the leading direct PC vendor, with an estimated 25% share, compared with its 5% share of the overall PC unit market. Michael Dell is hyper-focused on this opportunity (given his days in his University of Texas dorm room with a telephone, the 32-year-old Dell has kind of “been there, done that”). And if our theory about the “Wal-Marting of the Web” is accu-

rate, Dell has the opportunity to nab more than 30% market share of Web-based sales, a market that could grow wicked fast. Michael believes more that half of Dell's revenue could come from Internet-based sales in the next two to four years, helping both top-line growth and margins.

Just as Dell tailors its current telephone-based selling efforts to specific market spaces (Individuals, Small and Medium Business, Large Corporate Accounts), **it plans to aggressively reach out to corporate customers with custom Internet-based selling solutions.** This is a very low-cost sales tool (read high-margin), and to date the mix of customers and revenue looks favorable: Configurations are richer, leads sourced from the Internet are “warmer,” (customers who call on the phone after having visited the Web site are significantly more likely to buy), the Internet aids in customer retention, and service and support costs are lower. Dell is measuring the cost of transactions and knows the efficiency the Internet delivers for them, yet it does become challenging to measure because all of Dell's business becomes intermixed so quickly.

From a competitive standpoint, **Gateway 2000 launched its Web site in May 1996** and has seen traffic grow from

25,000 visitors per day at the end of 2Q96, 35,000 at the end of 3Q96, 46,000 at the end of 4Q96, and 55,000 per day at the end of 1Q97. Gateway has indicated that in the first eight months of its Web site's existence (May-December 1996), it sold \$100 million of merchandise via the site. In general, GATE has found that purchasers of merchandise via its Web site order richer configurations

(more features like sound cards, additional memory, and so forth) and, though the company has not given specifics on margin impact, it did indicate that sales made via the Web required significantly less "talk time" for customer sales/support, which in turn reduces SG&A expenses per sale, thus improving the margins for online sales.

**Federal Express (FDX, \$53; Strong Buy, covered by Kevin Murphy):
Come On, An Internet Play?**

Price	52-Wk Rng	Div	Yld	Shs(MM)	EPS 96A	EPS 97E	P/E	EPS 98E	P/E	5-Yr Proj Growth
53	58 - 36	--	--	114.6	\$2.69	\$3.09	17.0	\$3.60	14.6	15%

Several market forces may be converging to position Federal Express as a beneficiary of the evolution of the Internet as a communications and transactional medium.

FedEx has spent years developing a **logistical infrastructure designed to place as much importance on tracking data and information as it does packages**. This may become increasingly important as internetworking expands locally and globally. From a technology standpoint, the company is designed to leverage this infrastructure in many ways, from straightforward shipping logistics to analyzing and sorting the enormous amount of customer feedback and usage data to better serve customers, introduce more efficient processes in its design, and achieve cost savings.

Air express companies (and other service-intensive companies) stand to achieve cost savings through implementation of Internet technologies in servicing customers. FedEx, for example, currently receives about 600,000 package tracks per month through its Web site, with over half a million tracks per day through some online method (Powership, FedEx Ship, or the Internet). The company estimates that, to date, it is already saving millions of dollars per year through tracking, drop-off locator, shipping software downloads, and invoice adjustments online, and we expect this trend to continue to grow over time.

Web-based businesses such as Amazon.com and CUC leverage the logistical abilities of companies like FedEx to offer a vast array of products, while simultaneously eliminating the need to stock massive amounts of inventory. In many instances, they essentially "drop-ship" products directly from vendors to consumers, replacing a distribution pipeline that would normally contain lots of expensive inventory.

In addition, companies like Dell Computer are finding that an effective direct-sales model also melds well with this "virtual warehouse" concept. The efficiencies this creates are more than economically compelling enough to warrant ceding some small margin to FedEx in exchange for providing the logistical infrastructure that enables the process. We believe this dynamic will continue to increase in scale for more and more businesses over time, as they look to trim or eliminate their invoicing, inventory management, order fulfillment, and shipping operations, and focus on marketing and customer service.

Rapid growth (from a base of zero) of the Internet as a retailing conduit, should, in time, increase the shipment volume of packages by air carriers. We estimate that FedEx has experienced an incremental boost to revenue in each of the last few years due to growth in the mail-order business. We believe that with both mail-order and Web-based shopping, consumers have a fast-in, fast-out attitude.

America Online (AOL, \$49; Outperform, covered by Mary Meeker):***Amassing the Masses***

Price	52-Wk Rng	Div	Yld	Shs(MM)	EPS 96A	EPS 97E	P/E	EPS 98E	P/E	5-Yr Proj Growth
49	57 - 22	--	--	114	\$0.54	\$(0.29)	NM	\$1.00	49	--

AOL is the world's leading online service, with more than 8 million members, and has demonstrated its prowess in bringing mainstream consumers online. AOL estimates that 1Q97 **gross product sales through its service were \$98 million**, up 13% quarter-to-quarter and up from \$42 million a year earlier. AOL gets a cut of each of these transactions. The best-selling products are in the classifieds, CDs, software and hardware, and books categories. AOL has made it clear that the future profitability of its business will lie mainly with non-subscription revenue streams like transaction fees and advertising. We believe that its large, broad-based customer base will give it an edge in continuing to attract top-notch merchants and advertisers.

At the end of 1Q, AOL had 58 online stores on its Marketplace channel, up from 16 a little over a year ago.

Key stores (anchor tenants) include CUC's Shoppers Ad-

vantage, Tower Records, @Once (for downloading computer software), 1-800-Flowers, Eddie Bauer, JC Penny, Starbucks, Omaha Steaks, and Barnes & Noble.

In addition to increasing the number of traditional retailers on its Marketplace channel, AOL has added lots of merchants to other channels, most notably the Personal Finance channels' Banking Center, Mutual Fund Center, and Brokerage Center. Revenue is generated to AOL from these sites through up-front payment for screen positioning, cuts of transactions, advertising, and referral fees from brokers. Participating financial institutions include Bank of America, Wells Fargo, Citibank, Chase Manhattan Bank, First Union, E*Trade, PC Financial Network, Merrill Lynch, Charles Schwab, Fidelity Investments, Vanguard, T. Rowe Price, The Kaufmann Funds, and Dreyfus.

AOL's greatest risks, in our view, relate to Web competition and the need to become cash flow positive.

The Proxy Companies**CUC International (CU, \$24; Outperform, covered by Mary Meeker):*****Building on Core Competencies***

Price	52-Wk Rng	Div	Yld	Shs(MM)	EPS 96A	EPS 97E	P/E	EPS 98E	P/E	5-Yr Proj Growth
24	28 - 19	--	--	415	\$0.53	\$0.70	34.1	\$0.87	27.4	--

With more than 66 million members worldwide, CUC is **the leading provider of membership-based consumer services (primarily served through telephone efforts)**. Financially, we don't expect CU's Web efforts to drive upside earnings surprises for the company anytime soon, but in time, if the company is successful here, top-line growth outlook should be more secure and operating margins should improve — and we are in this camp. On the flip side, the Web could prove to be more of a transition than an opportunity for CU; we will be monitoring this closely.

The company reported brisk online and Web-related sales (more than 75% were online-based) in November and \$90 million in gross sales of various products, and it indicated sales could reach in excess of \$400 million for 1996. November traffic was busy, with over 60,000 transactions, representing a sales gain of over 100% in each category. This implies a hefty average purchase price of \$1,500, thanks in large part to sales of cars through AutoVantage.

The top-selling categories, by total dollar amount, were cars (a \$25,000 average selling price really helps drive CU's online revenue), travel, phones, VCRs, TVs, stereos, exercise equipment, consumer software and video games, books, and cameras. On a per member basis, the average dollar amount spent (excluding cars) increased 61% year-over-year. On an annualized basis, **CUC is ramping to well over \$1 billion in gross sales**, seasonally adjusted. In June/July, CUC plans to launch NetMarket, an online "mega-mall" for membership-based Web shopping that will include many of its traditional services. CUC notes that to date, its interactive-shopping members spend approximately twice as much money as phone-based members.

From a revenue perspective, CUC has indicated that it plans to continue to pursue a membership model with its new online service. Therefore, the model should roughly mirror the model of breaking even in year one and generating cash in subsequent years that CUC has followed throughout its history. Revenue will be a function of how quickly CUC can attract new members to the service and how much the company can get customers to pay for the service. So far, **CUC has found that online members are cheaper to acquire (though it's our bet that CUC must ramp its advertising spending which will offset a chunk of this benefit), and easier to retain than the company's traditional membership base.**

With NetMarket, CUC is aspiring to create something like a membership-based, truly interactive version of QVC for the Web. And with its current base of about 66 million phone-based members, we feel the company is in a strong position both to lever/convert a portion of its user base to lower-cost Web-based services and to capitalize on its experience with consumer databases and product distribution.

In our view, the compelling things about CUC's site are:

Variety (including travel, personal finance, hardware, cars, music, books, apparel, consumer products, local discounts, and more).

Value (advertised prices that are 10–50% below manufacturers suggested retail prices) — thanks to its membership model, CUC is able to price products near cost.

Various shopping venues — the ability to sort/shop by product brand, best values of the day, auction, flea market, or store type (like travel or books).

Search and index capabilities that are impressive — want a camera? Type "camera" into the search function.

In addition, the service will have enhanced features like *3-D, chat, profiling, and agenting*.

The service will be membership-based (e.g., \$59 for a one-year membership), but *many members will "save" the membership fee on their first purchase*. As in its core business, CU will allow partners to overtake the NetMarket interface and offer the product as if it belonged to them.

CU will augment marketing of its site by *bundling* a CD-ROM-based advertisement with all Davidson and Sierra software titles.

CU will introduce "*reward dollars*," which members receive when they make purchases online. These can either be redeemed for cash, used as a dollar-for-dollar credit off of goods and services, or actually multiplied in areas such as the flea market. Note that www.riddler.com also utilizes a reward-type system, and its site consistently demonstrates much higher-than-average usage times per member.

Barnes & Noble (BKS, \$40; Strong Buy, covered by Bruce Missett):

A Lower-Risk Way to Play the Internet

Price	52-Wk Rng	Div	Yld	Shs(MM)	EPS 96A	EPS 97E	P/E	EPS 98E	P/E	5-Yr Proj Growth
40	44 - 26	--	--	36	\$1.48	\$1.85	21.6	\$2.30	17.4	25%

An investment in Barnes & Noble provides investors with a lower-risk way (versus pure Internet plays) to play Internet growth. Barnes & Noble intends to be a dominant player in

online books sales, and has recently opened its sites on America Online (Keyword: Barnes and Noble) and the Web (www.barnesandnoble.com). These sites offer over one

million titles and are discounting 30% off the retail price for all in-stock hardcover titles and 20% off all in-stock paperback titles. Barnes & Noble indicates that it currently has 100,000 titles available for next-day delivery (which should grow to 400,000 by year-end 1997), and that online sales are ramping nicely.

The good news for investors in BKS includes:

Dominant Market Position — BKS has increased market share, a strong brand franchise through an aggressive store opening program, and is the largest retail bookseller in the world, with 13% of current U.S. market share, a core strength that should provide a solid foundation for Internet expansion.

Well-Known Brand — In its quest to acquire significant share of both current and future Web buyers, BKS's strong brand presence among consumers (not to mention its sizeable sales and marketing budget) should serve the company well.

Increased Market Share Opportunity — Though in the short term we do not expect the Internet to have any impact

on BKS' traditional retail sales, we do believe that the increased "storefront" the Web affords the company, combined with its strong brand, excellent strategic relationships (it has exclusive agreements with AOL and *The New York Times*), and significant investment to data may allow BKS to capture a higher share of a fast-growing online market.

However, there are several issues that bear close monitoring, especially:

Fierce Competition — The traditional book superstore segment is dominated by two fierce competitors (BKS and Borders), and the online segment may well see several major players in the near term, including BKS, Borders (though it has not yet launched its site), Amazon.com and CUC. Intensified competition — in terms of real estate, pricing, and advertising — could put pressure on results.

Potential Cannibalization of Sales — In the mid- to long-term, it remains to be seen how much same store sales are affected by Internet-based sales in general, or perhaps even BKS' own Web-based sales in particular, though the company has indicated it is not yet overly anxious about this prospect.

E*Trade (EGRP, \$16; Not Rated)

A Great Start, But A Competitive Market Lies Ahead

Price	52-Wk Rng	Div	Yld	Shs(MM)	EPS 96A	EPS 97E	P/E	EPS 98E	P/E	5-Yr Proj Growth
16	27 - 8	--	--	29.6	\$(0.03)	\$0.34	46.9	\$0.51	31.1	80%

E = First Call estimates.

E*Trade is an electronic financial services company that, through its subsidiary E*Trade Securities, is a **leading provider of online investing services**. E*Trade offers independent investors the convenience and control of online access to securities markets and access to value-added information, such as new charts and fundamental data, along with attractive commission rates on trades. The company provides access to brokerage services through the Internet, online services (such as AOL and CompuServe), touch-tone telephone, and direct modem connection. The company also offers automated order placement, portfolio tracking, market information and news, and other information services 24 hours a day, seven days a week.

Revenues for 1Q97 were \$32 million, up 208% year-over-year and 29% quarter-to-quarter. New account growth, up 29% sequentially and 173% year-over-year in 1Q97, has for the past year grown consistently between 8% and 10% per month, with more than 145,000 active accounts at the end of March 1997, versus 53,000 a year earlier.

E*Trade has also reported an impressive 96% annualized customer retention rate — the company says that 0.3% of active accounts are closed or moved elsewhere each month. EGRP indicated that it is processing about 14,283 transactions per day, up 175% year-over-year — and roughly 50% of these trades are being made via the Internet service, which began in February 1996 (other transactions are made via touch-tone phone or by calling the customer service

reps). Given current trading volumes, E*Trade believes it handles a whopping 0.7% of all trading on the NYSE and NASDAQ.

E*Trade's greatest risks, in our view, relate simply to competition (especially Charles Schwab) and the need to expand service offerings.

Amazon.com (AMZN, \$21; Not Rated) *The Best of the New Wave*

Price	52-Wk Rng	Div	Yld	Shs(MM)	EPS 96A	EPS 97E	P/E	EPS 98E	P/E	5-Yr Proj Growth
21	30 - 16	--	--	23.9	NA	NA	--	NA	--	NA

E = First Call estimates.

Amazon.com is the leading bookstore on the Web, providing users with the ability to easily (and quickly) search through its database of over 2.5 million books.

Amazon has a wad of key ingredients that have made for a successful company — a large and rapidly growing market opportunity; first-mover advantage; a great brand name and product; leading market share on the Web; happy customers that spread the message through “word-of-mouth”; and an impressive management team.

Based on mind share, traffic and revenue growth, Amazon, to date, is a clear leader in Internet-based retailing. First-quarter 1Q revenues of \$16 million rose 89% quarter-to-quarter, from \$8 million in 4Q. This rate of sequential growth is especially impressive given historical seasonal sales trends for the book industry: 4Q is typically the strongest seasonal quarter for book sellers, and 1Q is typically the weakest. By way of comparison, Amazon's 1Q annual revenue run rate of \$64 million is more than two times higher than the revenue forecast of \$27 million for Barnes & Noble's entire mail-order business in F1998 (January) — though based on first-month returns, Barnes & Noble's AOL revenue run rate is at 70% of its mail-order revenue level.

Amazon.com is one of the highest profile Web commerce success stories, and the revenue and usage data are impressive: Through March 1997, Amazon had cumulative (five quarter) sales of more than \$32 million to approximately 340,000 customers in over 100 countries. Daily customer visits have gone from around 2,200 in December 1995 to approximately 80,000 in March 1997, and average revenue per customer was an impressive \$47 in 1Q97. Amazon.com has indicated that a substantial 40% or more of its customers are repeat buyers.

Among the biggest issues for Amazon, are that **the company hasn't yet demonstrated that it's a money maker** and the book business is a low-margin business — Barnes & Noble and Borders (\$2 billion-plus annual revenue players in the book retailing business) both support net margins of 2–3%. While Amazon has structural margin advantages, in that it doesn't have capital investments related to storefronts and operating expenses for salespeople, it has structural margin disadvantages — it doesn't have purchasing power because it's not yet a scale player in a scale business. Barnes & Noble, especially, views Amazon as a very serious competitor and has aggressively launched its Web site (two years later than Amazon's), so competition in the form of aggressive pricing and marketing is sure to rise. **For investors, the biggest question is — how does one value an Internet retailer?**

Chapter 2: An Update on Internet Usage Trends/Forecasts

Summary

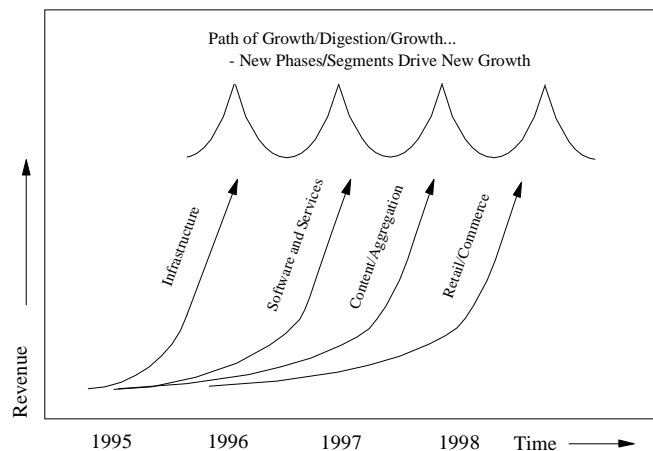
- ◆ **The Internet is growing at an unprecedented pace**, and, for now, we believe most market data are suspect. There are numbers that seem solid, like the 8-million-plus America Online users (largely consumers) and the over 50 million users of Netscape Navigator (although Netscape believes that 80% of those users are Intranet users, and frequency of usage “beyond the firewall” is tough to predict).
- ◆ We believe there are **35 million Internet users (our point estimate for the end of 1996 was 28 million)**. This strikes us as especially impressive since we estimate there were only about 9 million users at the end of 1995. These users are a mix of both business and consumer users.
- ◆ We project **compounded annual growth in Internet users for the next four years of 54%**, and we believe that **more than 150 million people will use the Internet by the year 2000** — in fact, this assumption may be conservative, since there are already 230 million PC users worldwide.
- ◆ Given the early stage of Internet growth, **non-North American usage is at a higher rate of adoption than any other new technology** — using the number of Internet hosts as a proxy, while North America still dominates (with about 67% share), its share has fallen as the rest of the world catches up. In the last two years, Europe (with 22% share) has grown 222%, and Asia (which has doubled its share from 3% to 6%) has seen 550% growth.

A Perspective on the Evolution of the Internet

The Internet continues to evolve in stages with the **infrastructure** build in full swing (per the latest stats at www.thelist.com, there are 5,184 Internet service providers); the foundation for **software and services** has been built through the efforts of Netscape and Microsoft with lots more to come; leadership positions are being established in the **content and aggregation** space by the likes of AOL, CNET, Microsoft and many others; and lastly **retailing and commerce** are just beginning. In our view, it was kicked off in a Wall Street sense by the successful IPO of Web-based book retailer, Amazon.com, on May 15, 1997.

Since 1995, in large part thanks to the rapid deployment of the Netscape Web browser, Internet growth has been nearly unbroken. However, we do expect some fits and starts here...in Figure 2-1 we have illustrated a typical cycle of growth followed by slowdown/digestion followed by renewed growth driven by new uses of the Web followed by slowdown/digestion.

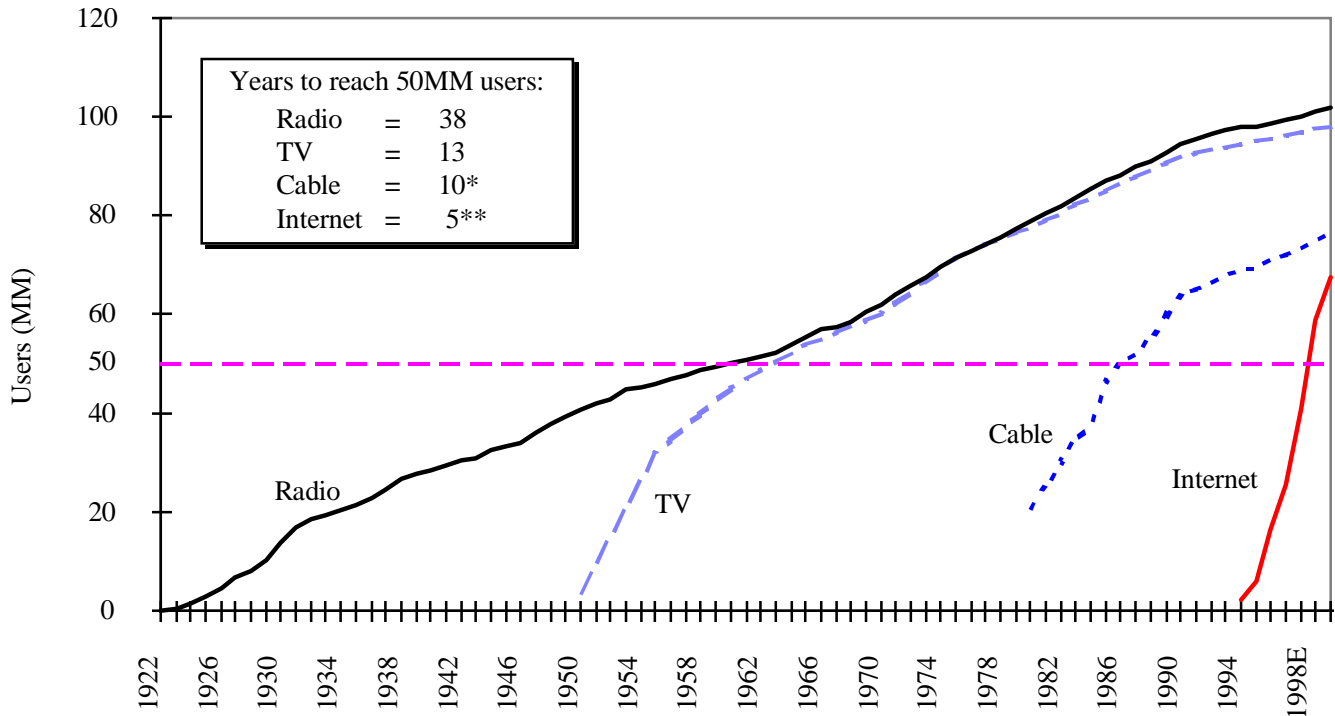
Figure 2-1
**Timing and Development
Of Internet Market Segments**



Source: Morgan Stanley Technology Research.

Figure 2-2

Adoption Curves for Various Media — The Web Is Ramping Fast



Source: Morgan Stanley Technology Research. E = Morgan Stanley Research Estimate. Data are for U.S. media adoption.

* We use the launch of HBO in 1976 as our estimate for the beginning of cable as an entertainment/advertising medium. Though cable technology was developed in the late 1940's, its initial use was primarily for the improvement of reception in remote areas. It was not until HBO began to distribute its pay-TV movie service via satellite in 1976 that the medium became a distinct content and advertising alternative to broadcast television.

** Morgan Stanley Technology Research Estimate.

Internet Adoption is Happening Faster Than In Other Media

We continue to believe that the **Internet is the next mass medium**, and one of the functions media provide is a forum through which companies gain access to potential customers and attempt to generate sales through marketing, advertising, and other selling techniques. To get a handle on the possibilities for the Internet as a new medium for retailing, we begin by taking a pass at the size of the customer base that could potentially be accessed online (both now and over the next several years) by looking at the size and

rate of user adoption and comparing them with other media. Figure 2-2 shows the adoption curves for several of these key media (radio, TV, cable, and the Internet). Although these numbers are not adjusted for population growth, it is clear to us that the adoption rates for new media have accelerated over time — TV was faster than radio, cable came on even faster (despite the new infrastructure it required that previous broadcast media did not), and we believe that the Internet has surpassed all of these in its rate of adoption. See Chapter 1 for further details and the latest data on the current state of Internet usage.

Table 2-1
Worldwide Connectivity Market 1996–2000E

(Millions)	1996	1997E	1998E	1999E	2000E
Users of:					
PCs	167	191	219	246	269
E-Mail	60	80	130	180	200
Internet/Web	28	46	82	134	157
Online/Hybrid	13	18	23	27	30

Source: Morgan Stanley Technology Research.
 E = Morgan Stanley Research Estimate.

Internet Market Size — Big and Bigger

The Internet continues to grow at an unprecedented pace (Figure 2-2), creating enormous opportunities for investment and wealth creation (as well as massive capital losses), in our view. At the same time, because of this rapid growth, it can be difficult to gather accurate market data and make informed business decisions. As we discussed in *The Internet Report*, back in December 1995, **such fast growth should inevitably lead to breakage and dislocations in the Internet market.**

Internet Usage Growth Should Remain Quite High

Currently, Internet measurement seems somewhat analogous to Heisenberg’s uncertainty principle — in that it’s nearly impossible to determine exactly where the Internet is and where it is going at the same time. We believe there **are currently 30-35 million Internet users (our point estimate for the end of 1996 was 28 million).** This is especially impressive, in our view, since we estimate there were only about 9 million users at the end of 1995. These users are a mix of both business people and consumers. We project **compounded annual growth in Internet users for the next four years of 54%,** and we believe that **more than 150 million people will use the Internet by the year 2000** — in fact, this assumption may be conservative, since there are already 230 million PC users worldwide.

Corporate America Moves Online

IDC estimates that the number of Fortune 500 companies with a Web presence increased from 175 at the beginning of 1996 to nearly 400 at the beginning of 1997 (an increase

from 35% to 80% penetration) — an important barometer for how quickly the Web is becoming a mainstream channel for major corporations’ marketing, communications, and business transactions.

Internet Domain Growth Remains High

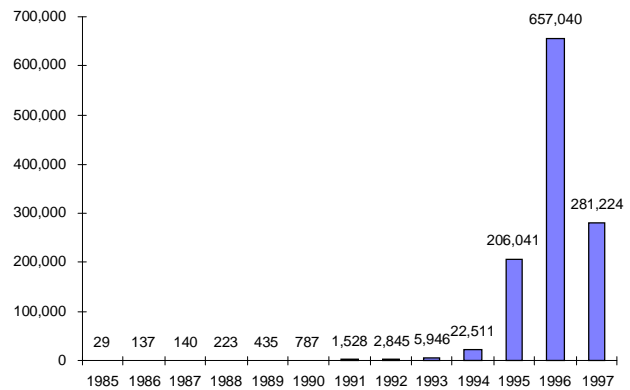
InterNIC reports that, through March 1997, there were 1,178,886 registered Internet domains — these are the unique names, such as microsoft.com, that identify an Internet site — 74% of which were created in the last 12 months. Of the total sample, 1,040,089 (or 88%) were commercial (“.com”) domains. *At its ever-increasing pace, the Web is adding well over 3,000 new domains daily, or almost 100,000 per month. That’s real growth!*

Table 2-2
Internet Domain Share through March 1997

Domain	Number	Share
.com	1,040,089	88%
.org	69,764	6%
.net	64,684	5%
.edu	3,558	<1%
.gov	585	<1%
Other	206	<1%
Total	1,178,886	100%

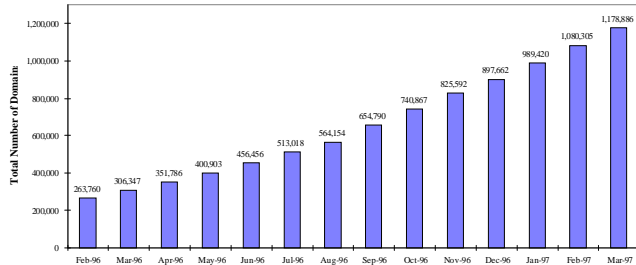
.com = commercial; .org = organization; .net = network; .edu = education; .gov = government. Source: InterNIC.

Figure 2-3
Internet Domain Name Registrations, 1985–1997 Year-to-Date*



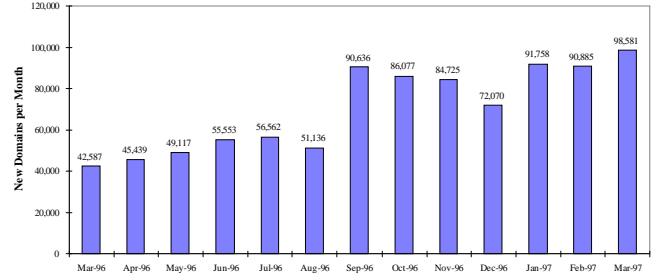
* Data through March 1997.
 Source: InterNIC, Internet.org.

Figure 2-4
Monthly Total Internet Domain Growth, February 1996 through March 1997



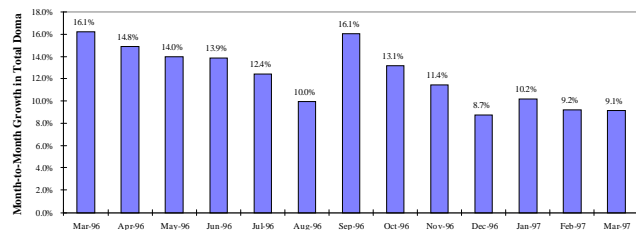
Source: InterNIC

Figure 2-5
Monthly New Internet Domain Growth, February 1996 through March 1997



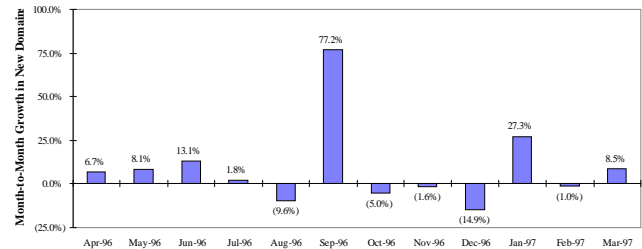
Source: InterNIC

Figure 2-6
Month-to-Month Change in Number of Internet Domains, February 1996 through March 1997



Source: InterNIC

Figure 2-7
Month-to-Month Change in Number of New Internet Domains, February 1996 through March 1997



Source: InterNIC

Table 2-3
Monthly Trends by Internet Domain Type, February 1996 through March 1997

Month	.com		.org		.net		.edu		.gov		Other		Total	
	Number	Share	Number	Share	Number	Share	Number	Share	Number	Share	Number	Share	Number	Share
Feb-96	232,004	88.0%	17,775	6.7%	10,890	4.1%	2,463	0.9%	460	0.2%	168	0.1%	263,760	100%
Mar-96	270,612	88.3	20,321	6.6	12,242	4.0	2,536	0.8	465	0.2	171	< 0.1	306,347	100
Apr-96	312,208	88.7	22,757	6.5	13,565	3.9	2,613	0.7	468	0.1	175	< 0.1	351,786	100
May-96	357,088	89.1	25,363	6.3	15,113	3.8	2,683	0.7	479	0.1	177	< 0.1	400,903	100
Jun-96	408,349	89.5	28,013	6.1	16,670	3.7	2,755	0.6	491	0.1	178	< 0.1	456,456	100
Jul-96	460,077	89.7	30,803	6.0	18,590	3.6	2,858	0.6	511	0.1	179	< 0.1	513,018	100
Aug-96	506,472	89.8	33,989	6.0	19,971	3.5	2,843	0.5	458	0.1	421*	0.1	563,733	100
Sep-96	586,998	89.6	38,863	5.9	25,189	3.8	3,018	0.5	533	0.1	189	< 0.1	654,790	100
Oct-96	662,731	89.5	43,966	5.9	30,264	4.1	3,171	0.4	541	0.1	194	< 0.1	740,867	100
Nov-96	734,707	89.0	48,123	5.8	38,774	4.7	3,251	0.4	543	0.1	194	< 0.1	825,592	100
Dec-96	796,039	88.7	53,141	5.9	44,431	4.9	3,309	0.4	548	0.1	194	< 0.1	897,662	100
Jan-97	875,907	88.5	58,148	5.9	51,214	5.2	3,395	0.3	559	0.1	197	< 0.1	989,420	100
Feb-97	954,139	88.3	63,807	5.9	58,099	5.4	3,482	0.3	578	0.1	200	0.0	1,080,305	100
Mar-97	1,040,089	88.2%	69,764	5.9%	64,684	5.5%	3,558	0.3%	585	0.0%	206	0.0%	1,178,886	100

* August 1996 was the one month in which InterNIC included ".US" as a domain type, which has been included in Other here but which likely was counted in several domain types in all other months.

Source: InterNIC.

Table 2-4
**Monthly Trends by Domain,
 February 1996 through March 1997**

Month	New Domains	Total Domains	M/M Growth in Number of New Domains	M/M Growth in Number of Total Domains
Feb-96	--	263,760	--	--
Mar-96	42,587	306,347	--	16.1%
Apr-96	45,439	351,786	6.7%	14.8
May-96	49,117	400,903	8.1	14.0
Jun-96	55,553	456,456	13.1	13.9
Jul-96	56,562	513,018	1.8	12.4
Aug-96	51,136	564,154	(9.6)	10.0
Sep-96	90,636	654,790	77.2	16.1
Oct-96	86,077	740,867	(5.0)	13.1
Nov-96	84,725	825,592	(1.6)	11.4
Dec-96	72,070	897,662	(14.9)	8.7
Jan-97	91,758	989,420	27.3	10.2
Feb-97	90,885	1,080,305	(1.0)	9.2
Mar-97	98,581	1,178,886	8.5	9.1

Source: InterNIC

Yet Another Cut at Domain Growth and Distribution

In the accompanying figures and tables, we provide further details on the monthly growth and distribution of Internet domains. It is unclear whether recent fluctuations in the number of new domains and the month-to-month change in domain growth is perhaps a function of a relative slowing of total domain growth, or maybe a function of the ability of the organizations involved in domain registration to handle demand. Regardless, the data are interesting to track, though one should be careful not to draw conclusions — at some point, the laws of large numbers simply have to take effect on Internet growth, and this may be as much a function of the transition to a focus on building out intranets (which are internet networks under a particular domain, usually in-house, browser-based corporate networks) as anything else.

Internet Host Growth Is Impressive

The number of Internet hosts (a host, simply defined, is any computer whose services are available to other computers on the Internet), tracked by Network Wizards, has shown similarly explosive growth (Figures 2-7 and 2-8).

A note on the technical difficulties of Internet measurement

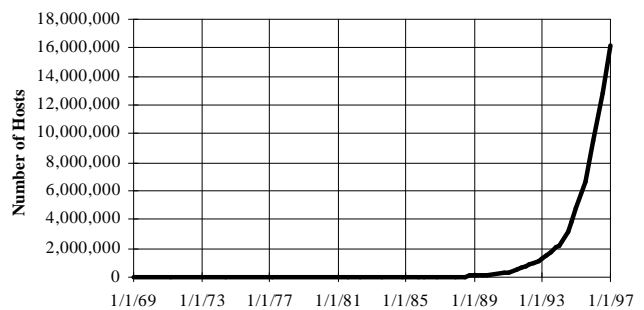
There are several fundamental technical difficulties faced in accurately measuring total Internet users, which we note here to clear up any misconceptions about the feasibility of true Internet measurement:

1) There is not necessarily any correlation between a host domain name and where it is physically located. A host

with a .UK domain name could easily be located in the U.S. or in any other country.

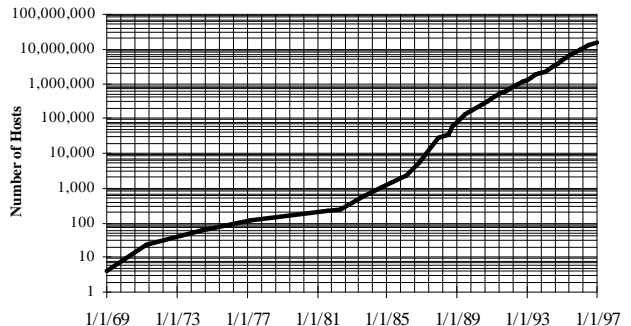
2) Hosts under the .edu, .org, .net, .com, or .int domains are assumed to be in the U.S. in our analysis of the geographic distribution of Internet hosts late in this section (a reasonably fair assumption), though they in fact could be located anywhere.

Figure 2-8
**Internet Host Growth (Normal Scale),
 1969 through January 1997**



Source: Network Wizards (data updated each July and December and available at www.nw.com).

Figure 2-9
**Internet Host Growth (Semi-Log Scale),
 1969 Through January 1997**



Source: Network Wizards (data updated each July and December and available at www.nw.com).

3) There is also not necessarily any correlation between a network number and a domain name (a single network number could span many countries, and a single domain may have hosts on multiple network numbers). A host used to be defined as a single machine on the Internet; however, the definition of a host has changed in recent years due to “virtual hosting,” where a single machine acts like multiple systems and has multiple domain names and IP addresses. Ideally, a virtual host will act and look exactly like a regular host, so Network Wizards has treated them equally.

Finally, 4) it is impossible to tell if there are hosts or domains that could not be located. In summary, a safe rule of thumb is that it is not possible to measure the exact number of Internet hosts, where hosts are located, or how many users there are.

PC Growth Should Remain High at 15-20% Annually

We estimate there were 167 million PC users worldwide by the end of 1996 (Table 2-5), and we expect about 84 million PCs to ship in 1997. PC shipments are expected to pass TV shipments in the next year or two. Moreover, rec-

ord-high sales of modems and networking equipment imply that PC connectivity is on the rise. All of this lends credibility to the idea that the Internet as a medium for delivering information and entertainment content may become a significant alternative to TV. Coopers & Lybrand recently reported that 58% of Internet users indicated that their online time comes at the expense of watching television. **We estimate that, at the end of 1996, 28 million PC users, or 17% of total PC users, had Web access. We believe it's conservative to estimate that 157 million PC users may have Web access by the year 2000.**

Table 2-5

Base Case Estimates for PC, E-Mail, and Internet Users, 1984-2000E

Software Events						Windows 3.0		Web		Windows NT 4.0							
Hardware Events	286		386			486/CPQ LTE Portable		Pentium Pentium Pro		Merced							
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997E	1998E	1999E	2000E
Worldwide																	
PC Unit Shipments (MM)	9	9	10	12	14	16	19	24	31	41	50	60	71	84	98	114	130
YY Growth	--	2%	12%	17%	17%	14%	19%	26%	29%	32%	22%	20%	19%	18%	17%	16%	15%
PC Lifetime Shipments (MM)	23	32	42	54	68	84	103	127	158	199	249	309	380	464	563	677	807
PCs in Use (MM) (a)	23	28	35	40	45	52	61	73	90	115	146	182	222	265	313	367	426
Pct. with Two PCs (b)	2%	2%	3%	5%	6%	7%	8%	10%	15%	20%	22%	23%	25%	28%	30%	33%	37%
Actual # of PC Users (MM)	23	27	34	38	43	49	56	66	77	92	114	140	167	191	219	246	269
YY Growth	--	22%	24%	13%	11%	14%	16%	17%	16%	20%	24%	23%	19%	15%	15%	12%	9%
U.S.																	
PC Unit Shipments (MM)	6	6	6	7	7	7	8	9	12	16	19	23	26	30	35	40	46
YY Growth	--	-6%	3%	8%	6%	0%	12%	18%	31%	31%	23%	17%	15%	16%	16%	14%	15%
U.S. Pct. of PC Unit Shipments	70%	65%	60%	55%	50%	44%	41%	38%	39%	38%	39%	38%	37%	36%	36%	35%	35%
PC Lifetime Shipments (MM)	16	21	25	30	34	37	42	49	61	77	97	117	140	169	201	240	286
PCs in Use (MM) (a)	16	18	21	22	23	23	25	28	35	44	57	69	82	96	112	130	151
Pct. with Two PCs (b)	5%	6%	7%	8%	10%	15%	20%	22%	23%	25%	28%	30%	33%	37%	42%	48%	50%
Actual # of PC Users (MM)	15	17	20	20	20	19	20	22	27	33	41	48	55	61	65	68	76
YY Growth	--	12%	14%	5%	0%	-5%	3%	9%	23%	24%	23%	18%	14%	11%	7%	4%	12%
Worldwide Connectivity Estimates																	
# of PC Users (MM)	23	27	34	38	43	49	56	66	77	92	114	140	167	191	219	246	269
# E-Mail Users (MM) (c)	1	1	2	3	4	5	6	8	12	18	25	35	60	80	130	180	200
Pct. PCs with E-Mail Access	4%	4%	6%	8%	9%	10%	11%	12%	16%	20%	22%	25%	36%	42%	59%	73%	74%
# Internet/Web Users (MM)	<1	<1	<1	<1	<1	<1	<1	<1	1	1	3	9	28	46	82	134	157
Pct. PCs with Internet Access	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	3%	7%	17%	24%	38%	55%	58%
# Online/Hybrid Users (MM)	<1	<1	<1	<1	<1	<1	<1	1	2	3	5	8	13	18	23	27	30
Pct. PCs with Online/Hybrid Access	1%	1%	1%	1%	1%	1%	1%	2%	3%	3%	4%	6%	8%	9%	10%	11%	11%
Windows Installed Base (MM) (d)	<1	<1	<1	<1	<1	<1	3	8	23	44	77	115	--	--	--	--	--

(a) Assumes that PCs have an average useful life of four years. (b) Estimated number of PC users that use second PCs: home, office, and portables.

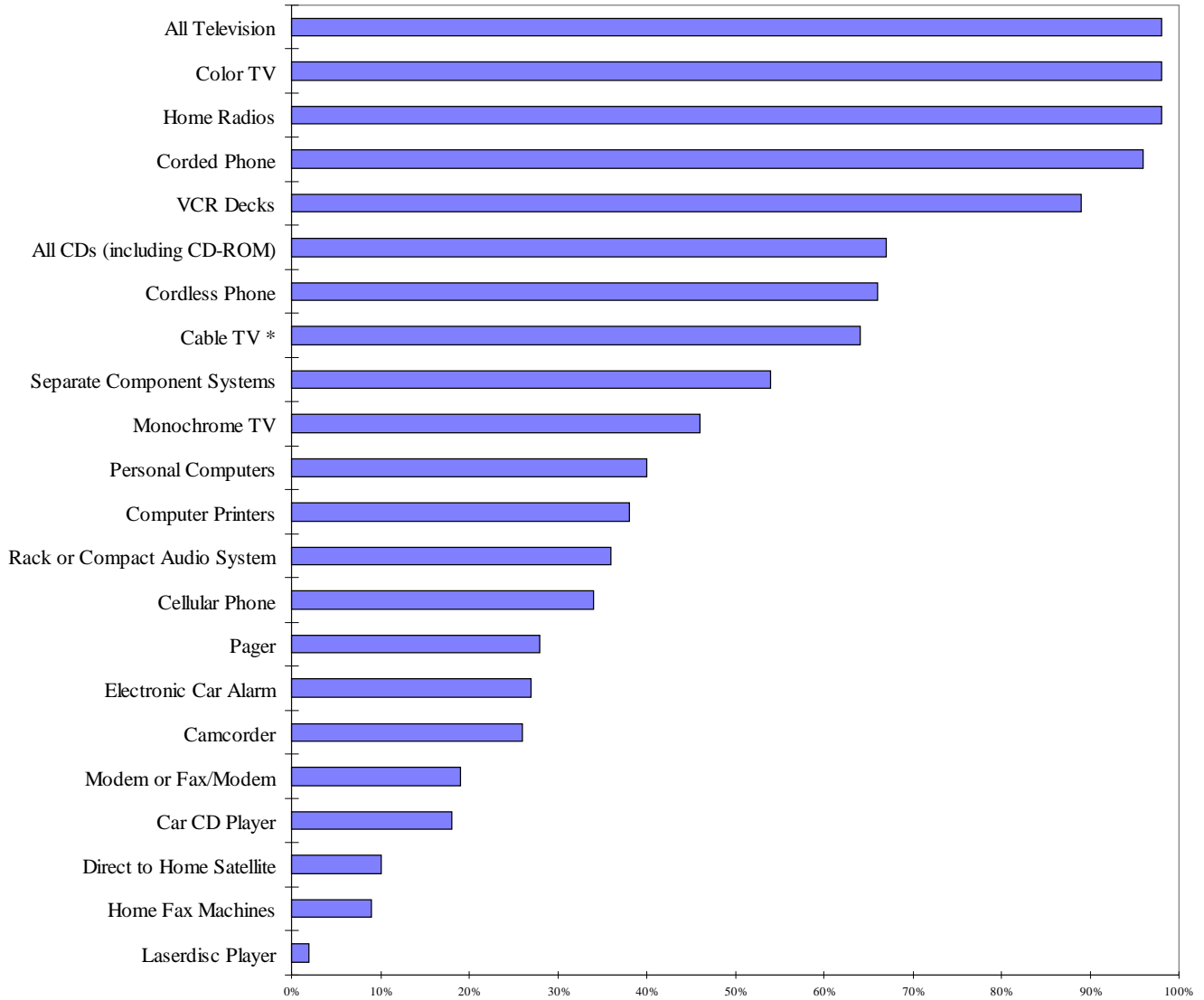
(c) Estimates of all e-mail accounts. We estimate that 50% of 1995 e-mail users could be connected to the Internet. (d) Estimated legal (non-pirated/copied) shipments of Microsoft Windows. Arrows added to compare Windows ramp with Internet ramp.

Source: Morgan Stanley Technology Research.

E = Morgan Stanley Technology Research Estimate.

Figure 2-10

U.S. Household Penetration of Selected Consumer Electronics Products, January 1997



* Morgan Stanley Research Estimate.
 Source: Consumer Electronics Manufacturers Association.

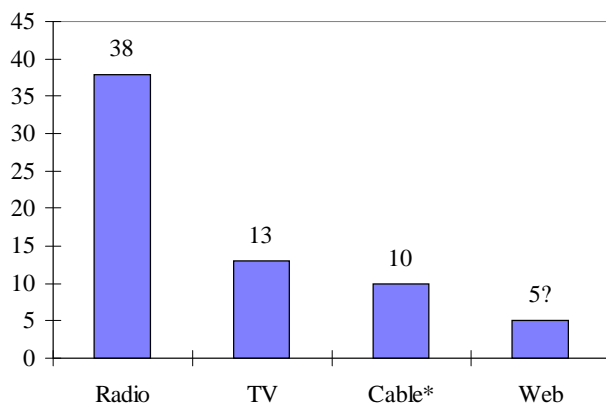
Table 2-6

U.S. Household Penetration of Selected Consumer Electronics Products

	January 1995	June 1995	January 1996	June 1996	January 1997
Video Products					
All Television	98%	98%	98%	98%	98%
Color TV	97	97	98	98	98
VCR Decks	85	87	88	88	89
Cable TV *	61	62	63	63	64
Monochrome TV	47	47	46	46	46
Camcorder	20	22	23	25	26
Laserdisc Player	1	2	2	2	2
Direct to Home Satellite	4	4	6	8	10
Mobile Electronics					
Electronic Car Alarm	24%	25%	25%	26%	27%
Cellular Phone	20	24	28	32	34
Pager	8	14	19	25	28
Car CD Player	11	13	15	17	18
Home Office Products					
Corded Phone	96%	96%	96%	96%	96%
All CDs (including CD-ROM)	N/A	65	66	67	67
Telephone Answering Device	54	57	60	63	65
Cordless Phone	52	55	59	64	66
Personal Computers	33	36	38	40	40
Computer Printers	30	33	36	38	38
Modem or Fax/Modem	10	16	16	18	19
Home Fax Machines	6	8	8	9	9
Caller ID Equipment	6	8	10	12	14
Audio Products					
Home Radios	98%	98%	98%	98%	98%
Separate Component Systems	53	53	53	54	54
Home CD Players	44	47	48	49	49
Rack or Compact Audio System	29	31	34	35	36
Personal Portable CD Player	N/A	18	18	19	20

Source: Consumer Electronics Manufacturers Association. * Morgan Stanley Research Estimate.

Figure 2-11

Number of Years for New Media To Reach 50 Million U.S. Homes

Source: McCann-Erickson, Paul Kagan Associates, and Morgan Stanley Technology Research. * We use the launch of HBO in 1976 as our estimate for the beginning of cable as an entertainment/advertising medium.

Figure 2-10 and Table 2-6 show the U.S. household penetration of various consumer electronics products. Given the growth in modem penetration, coupled with the likelihood that, soon, more PCs than televisions will ship in the U.S., and the expected rapid growth in Internet-enabled non-PC devices (such as TV set-top boxes that access the Internet through dial-up connections, like WebTV, or via cable modems) in the near future, we believe that **the percentage of Internet-enabled households will continue to ramp over the next several years.** We expect people and businesses to continue to spend more on personal computers and computer-related devices, as they have in the past, **and the Web to continue to reach penetration of the consumer sector faster than any other medium before it.**

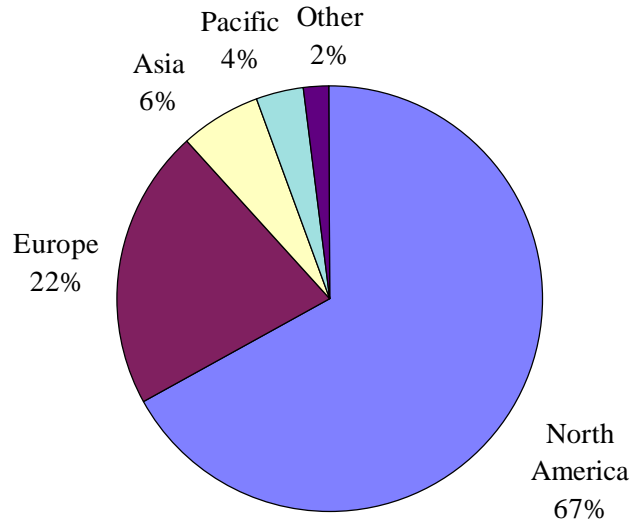
Given the Early Stage in Internet Growth, Non-North American Usage Is at a Higher Rate of Adoption Than Any New Technology Ever

In determining the worldwide distribution of Internet usage, we believe the best proxy to use is the distribution of Internet hosts, as tracked by Network Wizards (www.nw.com). Despite the inherent technical issues connected with Internet measurement (detailed earlier in the chapter), using some basic assumptions it is possible, we believe, to paint a reasonable picture of the current geographic distribution of Internet usage. We use the host proxy for geographic distribution at each point in time, but not for usage growth over time, which we believe far outpaces the growth in the number of hosts.

North America still dominates, with 67% of hosts in January 1996 (down from 70% in January 1995), and growth of 219% over the past two years. The U.S. currently contains about 63% of the total number of hosts. Europe, the second largest region, has grown from 20% of total hosts in January 1995 to 22% in January 1997, and saw 222% absolute host growth. **Asia has had the most impressive growth in hosts, however** (550% over the course of the two years), **and has captured the most in terms of relative market share** (doubling from 3% to 6%).

We maintain that, though all regions should continue their rapid growth in hosts and usage, **regions outside the U.S. and North America will continue to capture share.** We roughly estimate that U.S./non-U.S. usage will reach parity around the turn of the century.

Figure 2-12
Regional Distribution of Internet Hosts, Jan. 1997



Source: Network Wizards (data updated each July and December and available at www.nw.com).

Table 2-7
Regional Distribution of Internet Hosts, January 1995 to January 1997

Region	Number of Domains January 1995	% of Total Domains January 1995	Number of Domains January 1997	% of Total Domains January 1997	% Growth from January 1995 to January 1997
North America	3,372,551	70%	10,746,088	67%	219%
United States	NA	--	10,110,908	63	--
Canada	NA	--	603,325	4	--
Mexico	NA	--	29,840	< 1	--
Other North America	NA	--	2,015	< 1	--
Europe	1,085,317	20	3,495,269	22	222
Asia	151,773	3	985,792	6	550
Pacific	192,390	4	599,747	4	212
Latin America	NA *	--	134,267	1	--
Africa	27,130	1	105,428	1	289
Middle East	13,776	< 1	58,681	< 1	326
Other	NA	--	21,088	< 1	--
Total	4,851,873	100%	16,146,360	100%	233%

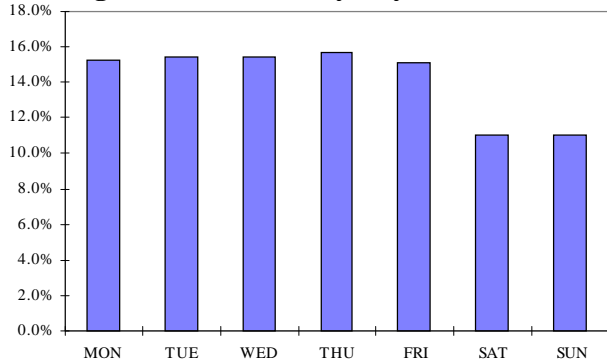
* Accurate Latin American results were not obtained. NA = Not Available.
Source: Network Wizards (Data updated each June and December and available at www.nw.com).

Web Usage — Noontime, During the Week

Although the amount of Web traffic is rapidly increasing, Web usage patterns remain fairly stable. In a recent study, I/PRO found that daily traffic, which has a heavy business-user bias, is highest on weekdays (Figure 2-13), and that

Figure 2-13

Percentage of Web Traffic by Day of Week



Source: I/PRO Research.

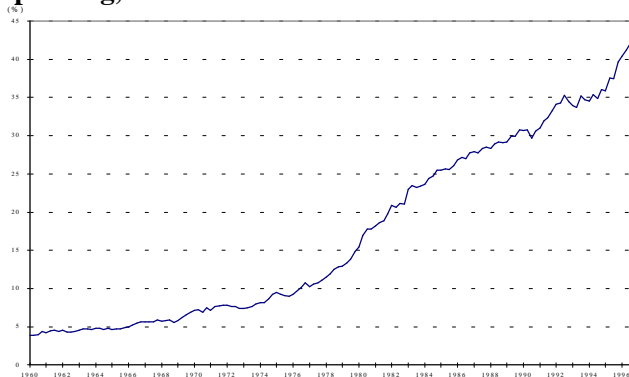
Computer Spending — High and Higher?

Computer spending has sustained solid growth in the past, as a result of both business and individual spending, and growth in spending on Internet technologies by both groups should extend this trend.

According to Steve Roach, chief economist at Morgan Stanley, with total business spending on all forms of information technology (computers, telecommunications equipment, and the like) now up to 43% of inflation-adjusted business outlays on capital equipment — easily the largest

Figure 2-15

U.S.-based Information Technology Spending As a Share of Business Capital Equipment Spending, 1960–96

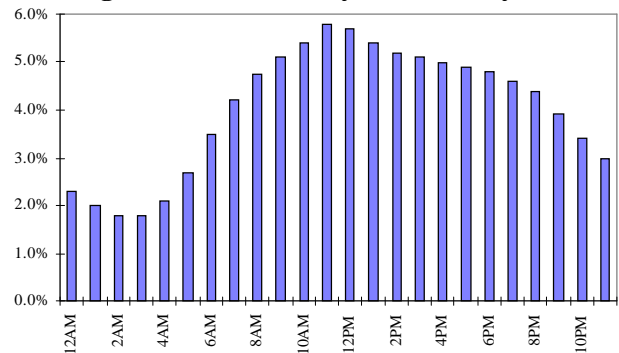


Source: U.S. Department of Commerce

about 60% of all traffic occurs during the nine-hour work-day (9 a.m. to 6 p.m.), as recorded by each server in its time zone; the highest traffic level is around noon (Figure 2-14). America Online, unlike the Web, experiences a traffic surge during the prime-time evening hours.

Figure 2-14

Percentage of Web Traffic by Time of Day



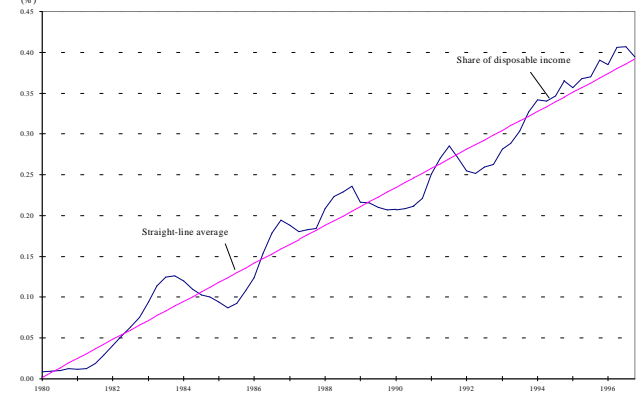
Source: I/PRO Research.

line item in corporate capital spending budgets — there can be no mistaking the commitment to the productivity bet related to technology purchases (Figure 2-15).

If past is prologue, we believe that businesses should continue to invest in technology in the effort to maintain and to enhance competitive advantage. Similarly, the share of disposable income individuals are spending on technology, specifically personal computers, has been consistently increasing since 1980 (Figure 2-16).

Figure 2-16

U.S.-based Nominal Computer Expenditures As a Share of Personal Disposable Income, 1980–96



Source: U.S. Department of Commerce

Chapter 3: The Internet's Potential as a Retailing Channel

Summary

- ◆ With an estimated **35 million Web users today**, and our forecast of **150 million or more by the year 2000**, we continue to believe that the Internet may be the next mass medium. The Internet has the potential to become a powerful new **distribution channel** for retailers. History has taught us that **changes in the distribution of goods and services can create substantial business opportunities for deft companies**. Though most Internet-based retailers will likely fail, the strongest companies should survive.
- ◆ The Internet provides great **one-to-one tailored marketing** — we believe that a vendor's ability to interact with users at the point where they view a site's ads and content may prove to be a key facet of Internet retailing.
- ◆ **The biggest retail market opportunities on the Internet will likely coincide with mail-order opportunities**. In our view, the markets for goods and services that have the best potential for Web retailing are as follows: insurance/financial services; computer software/hardware; travel; books; magazines; music/video; flowers/gifts; and autos. Specific retail categories that we believe may take longer to develop (or may never develop fully) include: groceries/food; apparel; sporting goods; tools/home repair; and toys.
- ◆ The **convenience of online shopping is key** — given the increasing time constraints placed on the average consumer, the ability to “purchase time” by buying online should be an attractive alternative to many.
- ◆ **Web demographics are compelling for marketers and retailers**. **Favorable teenage demographics** over the next ten years could act as a **catalyst for Internet shopping**.
- ◆ A **variety of shopping formats** will likely be successful on the Internet.
- ◆ **Our Internet team thinks first-mover advantage for Web retailers may be important**: Barriers to entry may rise in certain segments as established Web merchants (and powerful, focused traditional retailers of the Barnes & Noble ilk) gain solid brand positions. **The retail group, by contrast, doesn't think being first matters much, since barriers to entry will likely remain low on the Web**.
- ◆ Strong **brand-name recognition** should be a critical success variable. We expect this branding element to result in a couple of companies in each sector dominating mind share and profits (what we call the “Wal-Marting” of the Web), while the rest struggle, with varying degrees of success.
- ◆ **Inventory risk** and who carries it, and who has **scale**, are key issues for Internet retailers.
- ◆ **Pricing benefits** for Web shoppers may, in many instances, be **offset by shipping costs**, though certain retailing categories (especially in mid-to-high-priced commodity-oriented products) should experience lower pricing in general. It also remains to be seen how much traditional retailers who experience margin expansion due to Internet-induced shipping/handling/inventory savings will use this advantage in lowering prices further.
- ◆ There will likely be **heavy price and marketing competition as retailers try to dominate the various retailing categories** on the Web. And **revenue growth should be easier to nab than profits**.
- ◆ Over the last few decades, several **new retail concepts** — category-killer retail stores, catalog companies, and home/TV shopping — were each expected to significantly alter the traditional retail landscape and adjust market shares; category-

killer stores did, while home/TV shopping and mail order didn't. This chapter includes some lessons from the history of the mail-order industry.

◆ We believe that key criteria for successful retailing on the Internet will include: 1) pursuing a **viable market opportunity**; 2) possessing/creating a **leading Web brand**; 3) having a **low cost structure** with economies of scale to offset gross margin pressure; 4) superior database/fulfillment/distribution capabilities; 5) knowing how to **leverage technology** (and interactivity and databases) while **maintaining creativity**; 6) creating a sense of **community/membership** among customers; and 7) understanding how to **drive profits in addition to revenue**. Finally, retailers should provide customers with a **broad selection, competitive prices, and great service, as well as ease-of-use and speedy delivery**.

Web Usage Growth and Demographics Are Compelling

According to our estimates, there are an estimated **35 million Web users** today, and there should be at least 150 million by the year 2000. We estimate that 15% of Web users have purchased an item over the past 12 months. So far, the product bias has been skewed toward the youngish, affluent male, who accounts for a disproportionate percentage of those Web users. Over the next five years, the rapid expansion of the channel should increase consumers' propensity to spend on the Web and rebalance today's gender bias.

In considering how much the Internet audience is worth to advertisers, it is useful to highlight the makeup of the market into which they are selling. Information about the demographics and purchasing patterns of Internet users is emerging, and current data offer what we think is compelling evidence for advertisers to consider the Internet as a viable option for branding, promoting, and selling products and services.

Contrary to some popular perceptions, Internet users are not young, poverty-stricken nerds — in fact, the average Internet/online age has been placed by various studies at between 35 and 40 years. A study by GVV (Georgia Tech's Graphics, Visualization, and Usability Center) from October 1996 indicated that 69% of Web users are male, 56% have a college or advanced degree, 88% are Caucasian, and the average mean income is \$60,800.

A recent IDC study places the mean income number for online subscribers (which probably excludes some lower-income college students) at about \$76,000. The IDC study also indicated that in 49% of online households, women are active online users — which clearly shows higher female participation than the GVV data above. IDC indicated that

in 75% of households, men are active online. While there is clearly a range in the numbers, there is definite directional significance here, in our view.

For many advertisers, these are attractive demographics, which we believe will mean an increased willingness among advertisers and retailers to spend, or spend more, for Internet exposure and to generate Web-based sales.

In addition, **strong teenage demographics** over the next ten years could act as a catalyst for Internet shopping. The advent of catalogers came at a time when the number of busy, dual-income families of the 1970s and 1980s was on the rise. The rollout of Internet retail is timed with extremely favorable teenage demographics. This is also the sector of the population that is most PC-literate — it's hard to find a middle-to-upper-income kid without an e-mail address. The surge of teenage consumers over the next ten years could meaningfully change and expand the viability of Internet retail sectors that are considered marginal today.

The Internet Is a New Distribution Channel

We believe the Internet has the potential to become a powerful new **distribution channel** for retailers. Many traditional retailers will likely adapt their businesses to take advantage of this channel. Catalogers have been among the first to build a Web presence, given their existing direct-marketing mindset and infrastructure. Many pure-play Internet retailers have emerged; however, we think the challenge will be to build scale, rather than simply niches. We expect most Internet-based retailers to fail, with only the strongest companies surviving — as the saying goes, "Retailing is a tough business."

Biggest Retail Market Opportunities on the Internet Will Likely Coincide with Mail-Order Opportunities

In order to determine which retailing segments might ramp fastest on the Web, we looked at the highest-volume areas in the mail-order market. Our summary chart (Figure 3-2) divides retail into a handful of subsegments. We compare fragmented markets, where selection, information, convenience, and price are especially critical shopper variables, and where shoppers may prefer to do their own legwork if it's easy to do, with the revenue/market opportunity for Web-based revenue. In our view, the markets for goods and services that have the best potential for Web retailing are **insurance/financial services, computer software/hardware, travel, books, magazines, music/video, flowers/gifts, and autos.**

In general, we believe certain types of products should do well in terms of Internet sales: commodities/durable goods; products with a good brand name and consumer recognition; new, innovative, or technically superior products; products where the consumer believes that pricing varies widely and that it's hard to get the best deal (e.g., cars or airplane tickets); and hard-to-find, specialty items.

We think specific retail categories that may take longer to develop, or may never fully develop, include groceries/food,

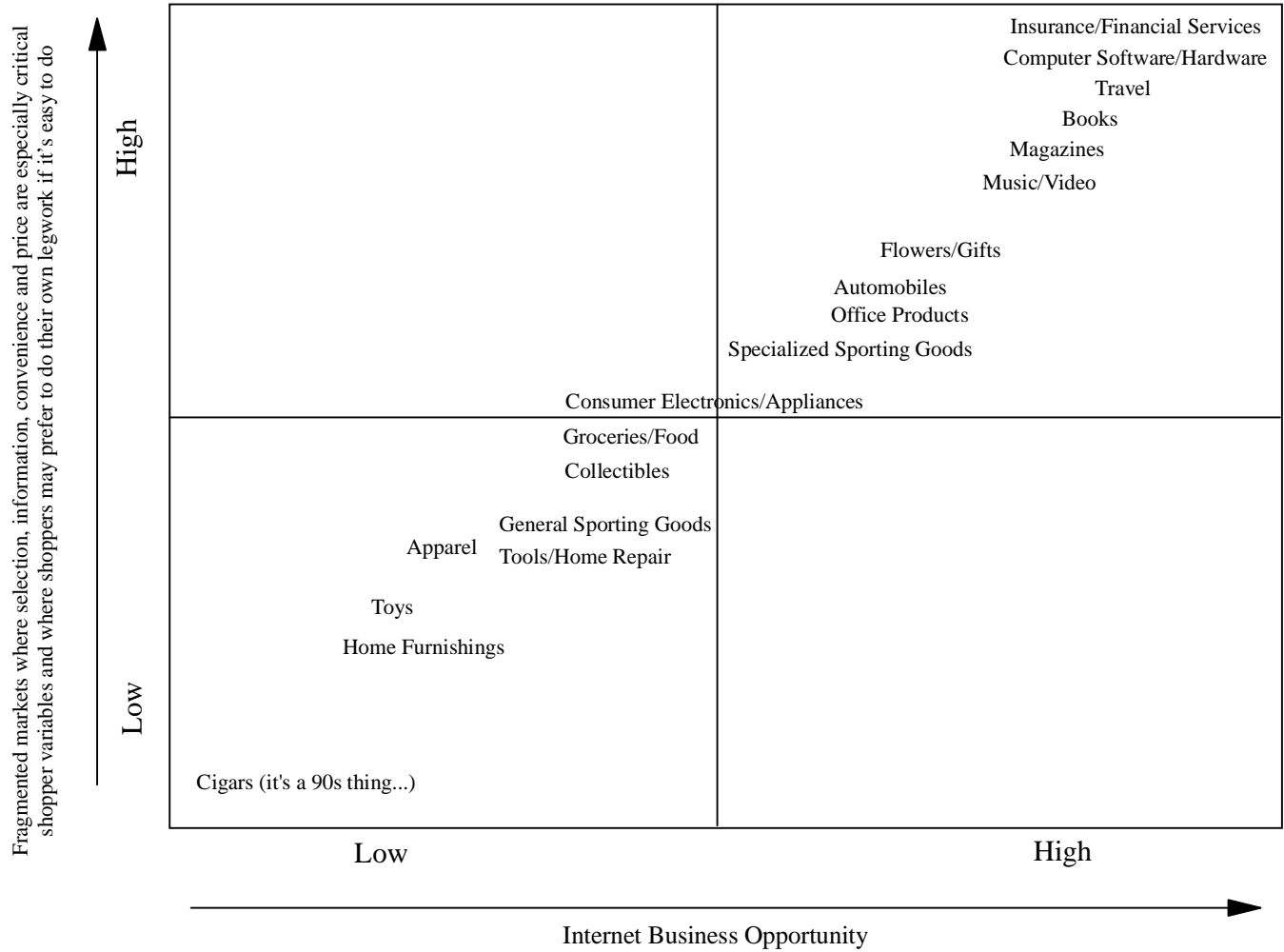
apparel, general sporting goods, tools/home repair, and toys.

Over the next several years, Internet retailing will likely pose the greatest challenge to traditional mail-order retailers whose product areas overlap with the faster-growing Internet sectors, such as PCs, books, or music. Current male dominance on the Internet may adversely affect store sales of these kinds of products. Here, those retailers will probably need to develop a viable Internet strategy, as CompUSA, Barnes & Noble, and Tower Records (to name a few) have already done.

Currently, we see some significant challenges to selling products that appeal to women on the Internet. Easy replenishment items (cosmetics and personal care) are low-priced and cannot be distributed profitably due to the high shipping costs. Other issues for these kinds of products include: apparel looks poor online due to technology limitations; impulse component of shopping is lost online; and long-term, Internet retailing could adversely affect the growth of the catalog industry, as women's participation in Internet shopping increases and technological issues are resolved. Again, for catalogers today, the strategy should clearly be to build a strong Internet presence and eventually shift capital investments to the Internet rather than traditional cataloging.

Figure 3-2

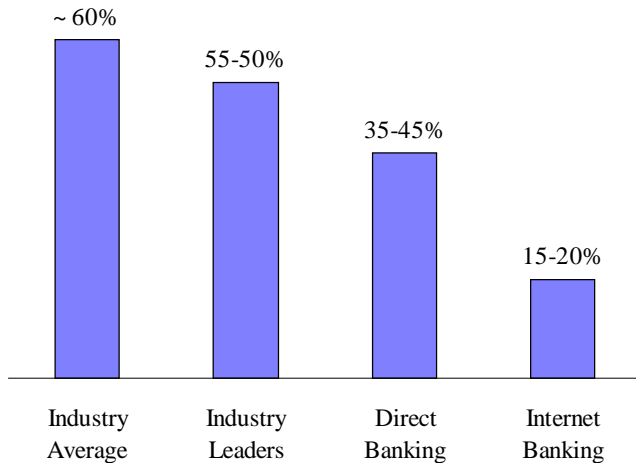
Internet Opportunities for Various Retail Categories



Source: Morgan Stanley Equity Research

Figure 3-3

Traditional Bank Expense Ratios Compared to Estimated Internet Banking Expense Ratios



Source: Booz-Allen & Hamilton, Inc.

Internet-Based Financial Services — A True Sweet Spot

One area that is likely a true “sweet spot” for Internet retail is in the insurance and financial services industries.

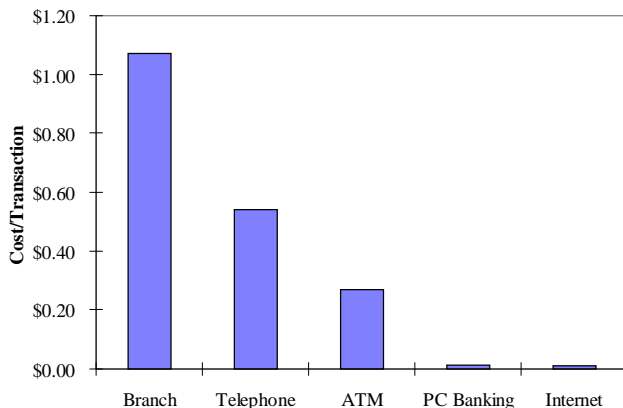
Clearly, the Internet offers the opportunity for significantly decreased transaction costs, coupled with increased savings and convenience for customers.

Lower Operating Expenses

In July 1996, Booz-Allen Hamilton conducted a study of Internet-based banking, including a survey of 285 bank-

Figure 3-4

Internet Transactions Cost Far Less Than Those in Traditional Branches



Source: Booz-Allen & Hamilton, Inc.

sponsored Internet sites (commercial banks, credit unions, savings banks, and thrifts). The results confirm that Internet-based banking offers an improved cost structure: Figure 3-3 shows Booz-Allen’s estimate for expense ratios for Internet banking of 15–20%, versus the industry average of about 60%. For financial services organizations, moving customers online can mean reduced headcount, lower transaction costs, improved service hours (24x7), reduced exposure to fraud, better data integrity, and increased information about customer activity, which translates into a greater opportunity to sell more product.

Reduced Cost-per-Transaction

Taking another pass at savings from a cost-per-transaction perspective, Booz-Allen also estimated that **Web-based transactions would cost over 100 times less than traditional branch-based transactions**, and would even be more than 25 times cheaper than ATM transactions (Figure 3-4 and Table 3-1).

Reduction of Dependence on Bricks and Mortar

The ubiquity of Internet-based business is especially relevant for banks, which have had to spend a great deal of capital to open and maintain many branches to provide the convenience that customers have demanded. Online banking provides the opportunity to centralize costs in one “super-branch,” creating huge leverage and reducing the need to maintain as many branches. Though Figure 3-5 is a bit extreme (banks will, of course, not be able to abandon 500 branches for a single Internet site anytime soon), the concept of efficient centralization of customer contact through a virtual channel will become increasingly important for financial services organizations.

Table 3-1

Internet Transactions Cost Far Less Than Those in Traditional Branches

Channel	Cost/Transaction	
Branch	Full Service	\$1.07
Telephone	Average	\$0.54
ATM	Full Service	\$0.27
PC Banking	3rd Party Software	\$0.02
Internet	World Wide Web	\$0.01

Source: Booz-Allen & Hamilton, Inc.

Many Web Shopping Formats Should Do Well

While it's way too early to tell, we believe that cyber-shopping will likely mimic traditional shopping, with multiple channels of distribution.

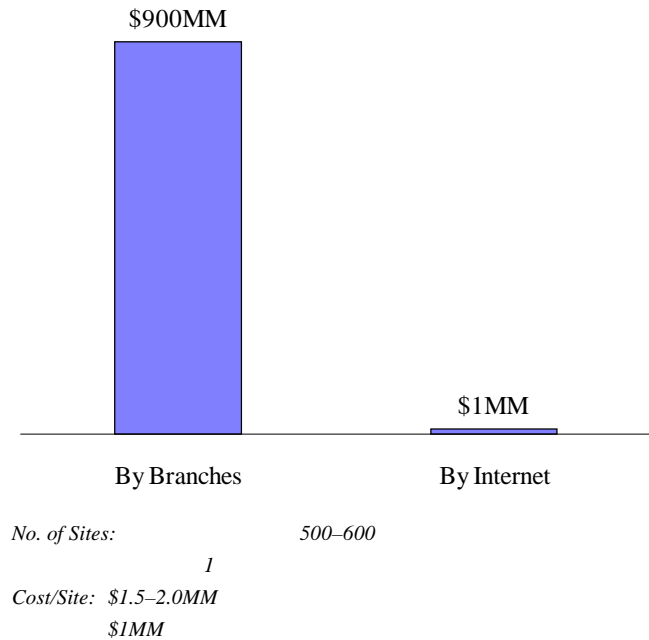
If one looks at a continuum of retailing types from broad-line to speciality retailing (Figure 3-6), the Web looks like the traditional world: Shopping malls with branded products and stores (like the Stanford Mall in Palo Alto, Calif., and AOL Marketplace) at one end, and micro-niche stores that carry only specific products (like The Gap) at the other end.

A **variety of shopping formats** will likely be successful on the Internet. Just as traditional retailing has developed to offer a myriad of different ways to sell to the consumer, Internet retailing will likely do the same. We should have the membership form of shopping (CUC), the shopping mall (America Online), discounters (Wal-Mart), pure-play category-killers (Amazon and Barnes & Noble), niche specialty plays (1-800-Flowers), new mega-brands (Microsoft), and supermarkets and drug stores (Peapod).

We believe that the pace of retailing on the Internet, and the rapid development of new technologies, will force retailers to actively improve and restructure their online stores. In the bricks-and-mortar world, retailers must continually remodel stores to keep them fresh and attractive to customers. On the Web, we think retailers will have to

Figure 3-5

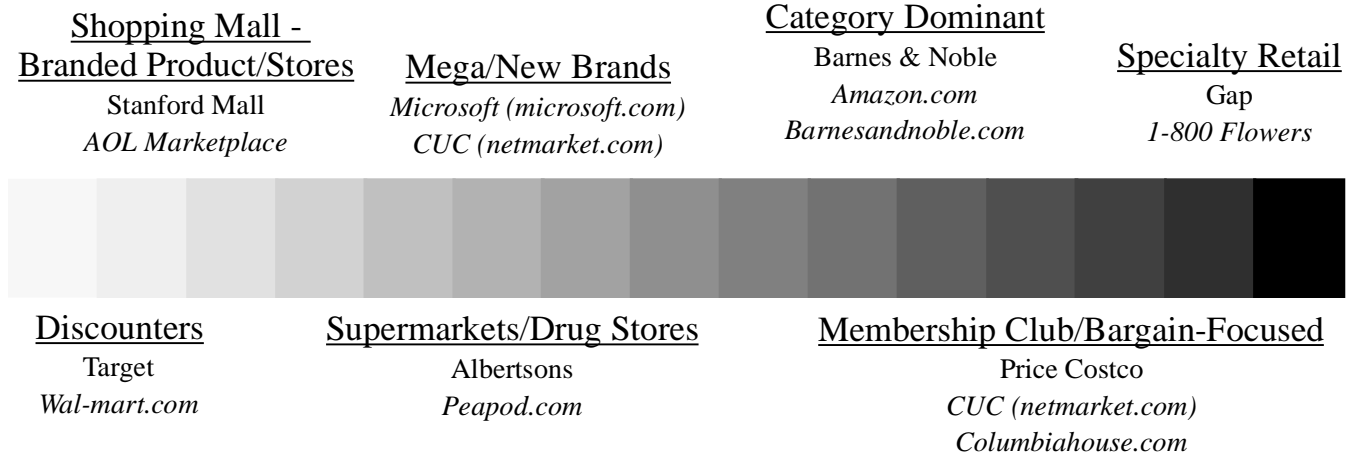
Estimated Investment Cost to Reach a Market Area With 10 Million Potential Customers



Source: Booz-Allen & Hamilton, Inc.

work harder to keep sites fresh. The rapid pace of technological change should make it easy for an upstart to hit the net with the latest technology. While we don't think such upstarts will be able to win market share on technology alone, it should still force the established players to work harder to keep their sites up-to-date.

Figure 3-6

Retail Cyber-Shopping Will Likely Mimic ‘Concrete’ Shopping, but With More Market Share Concentration**Broadline Retail** —————> **Specialty Retail***Italics indicate Web-based companies.**Source: Morgan Stanley Equity Research.***Barriers to Entry — Low or High?**

While Web retailing barriers to entry are even lower than in traditional retail, **our Internet team believes that barriers to entry for Web retailers have been very low but are rising quickly.** Our team also thinks we are close to “game over” for Internet retail start-ups, and that traditional retailers may have about 12 months to aggressively ramp their Web sites before the going gets tougher for new entrants on a sector-by-sector basis. Traditional vendors with the most powerful brands, combined with powerful advertising and compelling cross-marketing capability (especially TV-based; both CNN and QVC have been very successful at driving traffic to their Web sites by using their TV reach), should have the most upside for share gains in their respective retailing sectors.

Our retail team believes that Web retailing barriers to entry will remain low. In traditional retail, almost anyone can and does open stores or start up catalogs. On the Web, shoppers are only a click away from trying a new store that they believe may offer better products, selection, service, or technology. When these new stores are being promoted by established retailers with lots of marketing dollars and brand recognition, driving new visits should be relatively easy.

Increasingly though, as the larger dollar sectors of retail become more mature and, we expect, become dominated by just a couple of powerful retailers, new market entrants should find themselves in smaller and smaller niches. In traditional retail, we’ve gone from Wal-Mart’s market entry 35 years ago, which transformed the entire retail landscape, to today, where we have seen the debuts of many more niche-oriented retailers — for example, the pet-store category killers.

As always, sustained competitive advantage and sustained market share growth and profitability should be elusive and shared by just a few.

In the near term, online market fragmentation and clutter should ultimately gravitate to market concentration, much as we have seen in the traditional retail world. Note that there are currently more than 10,000 consumer bookstores in the U.S., and, even at the Internet’s early stages of growth, already more than 500 Internet booksellers. This has always been the way of retail. The perceived attractiveness of a marketplace draws multiple competitors. This results in highly competitive prices and, eventually, the emergence of two or three dominant players. In the traditional retail book business, we believe this will be Barnes &

Noble and Borders, primarily. On the Web, perhaps there will be three or four: Barnes & Noble, Borders, Amazon, and CUC's Book Stacks.

Brand-Name Recognition Should Be Key

In Internet retailing, as in traditional retailing, strong **brand-name recognition** should be a critical success variable. This branding element likely will result, as it usually does, in a couple of companies in each sector dominating mind share and profits, with the rest struggling to achieve varying degrees of success. The opportunity for retailers to gain market share by optimizing the Internet as a new channel may be significant — already, Barnes & Noble's AOL revenue run rate is at 70% the pace of its mail-order business, and it just launched on AOL a month ago. And it is notable that Charles Schwab had five times more online accounts than E*Trade at the end of 1Q.

Cyberbrands or Traditional Brands? Some of Each Will Likely Be Winners

We believe that on the Web, there will be a few super-cyberbrands in each category that garner the lion's share of the market. So far, we have seen it in a number of online categories, such as: search, where Yahoo!, AOL, and Excite are battling it out for the top slot, currently held by Yahoo! (Figure 3-7); software, with Netscape and Microsoft; technology news, with CNET and Ziff-Davis; books, with Amazon.com, and now Barnes & Noble; sports news and information, with ESPNET SportsZone and CBS SportsLine; and travel, with AMR/Sabre's Travelocity and Microsoft's Expedia.

One thing that's really tough to determine is whether new brands created on the Web, like Yahoo!, Amazon.com, or E*Trade, will win or whether traditional brands that are migrating to the Web, like Barnes & Noble, Charles Schwab, and Intuit will win. Time will tell, or course. But it's our sense that the winners will be a combination of both sets of players, with success being determined by the best brand names accompanied by great infrastructure, economies of scale, and quality of experience. Those companies that don't create a significant Web presence in the next two years may have a tough go of it when they get there (e.g., see our discussion below of Yahoo!'s market-share battle).

Web studies have shown that users prefer to go to a small number of sites (via bookmarks) once they have become

accustomed to Web usage. This argues for a few leading brands in each category of Web usage. Typically when retailing market share has been fragmented, it has usually been related, in part, to geographic limitations of store fronts.

The Big Dogs Tend to Win in Media

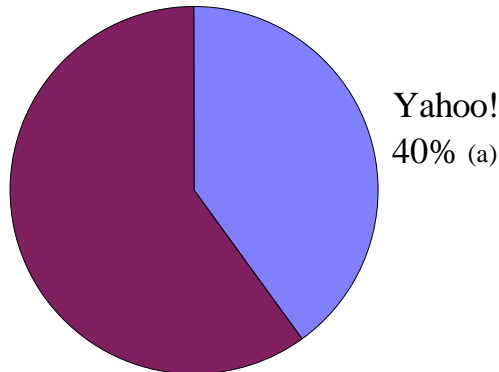
Since we believe the Internet will emerge as the next mass medium, it is significant to note that media tend to be ruled by oligopolies. Scale is important, and being No. 1 in a market is far more lucrative than being No. 2. In newspapers, there is typically one leading paper in each major city. Time Inc. magazines receive about one-third of all magazine advertising. In each of the top 50 radio markets, the top three operators control an average 65% of revenues. Furthermore, the top five radio operators in the U.S. control 20% of the \$12-billion-plus in industry revenue, and the top 15 control over one-third (34%). In broadcast TV, ABC, CBS, NBC, and Fox rule. In cable television, there is usually one leading brand per category — for example, MTV owns music, ESPN owns sports, and CNN owns news. In the online world, AOL is winning today based on total subscribers.

In media, a few brands typically lead each category of "programming," but a few companies tend to own leading brands across media. At first, relatively low barriers to entry for creating Internet-related businesses will likely allow for many players to compete in the same market. However, given the power that a strong brand (combined with key cross-marketing efforts) affords the companies which have one (and the prohibitive cash burn of many of the Internet content providers to date), we expect eventual consolidation of properties and brands for Internet companies as well.

Real estate, location, and distribution channels will remain important assets on the Internet. In the bricks-and-mortar retailing world, location is just about everything. Consumers shop in places that are convenient. Retailers duke it out to capture the best real estate in any given market. On the Web, retail location is still important, but takes the form of banner advertisements and site links on frequently trafficked locations. On the Web, we have seen quite a bit of jockeying for prime real estate on high-traffic areas like Netscape, Yahoo!, AOL, and MSN (note Barnes & Noble's recent agreement with *The New York Times* to lock up ac-

Figure 3-7

Web Brands — A Lesson Learned from Yahoo! (Search Engine Market Share)



(a) Market share in pages delivered per day.
Source: Morgan Stanley Equity Research.

C2Q96 — Top four search engines (Yahoo!, Excite, Lycos, Infoseek) complete IPOs. Uncertainty about concept/viability of Web search engines is high, and stocks volatile. But Yahoo! (\$32) is share/reach leader.

C2Q97 — Yahoo! still the leader, and its stock market valuation is up \$675 million (to about \$1 billion) since its IPO. Competitors agonize over how to compete — others, arguably, have worked harder and smarter but can't beat the leading search brand, Yahoo! The ability of a non-Web brand to knock Yahoo! out of its leadership position is nearly nil, in our view. Best prospects probably belong to AOL, Microsoft, and Excite.

cess to *The New York Time Book Reviews* as a prime example of this phenomenon.)

Scale, Scale, Scale

Inventory risk and who carries it, and who has scale, are key issues for Internet retailers. There are a few retail sectors where Internet companies can take advantage of a very well developed wholesale/distribution network. This is true of the book industry, where Amazon's claim of carrying 2.5 million titles is only possible because other manufacturers/distributors carry most of the inventory risk — note that many of these books are out-of-print. However, for most other retail sectors, it is the retailer, not the manufacturer/distributor, that bears the inventory risk. Therefore the ability to carry a dominant assortment of

product and have real scale requires a powerful capital structure in many cases. This would mean that the scale advantage could go to a Home Depot, a Circuit City, a Toys R Us, or a Wal-Mart almost every time, since the Internet start-up can rarely offer that dominant an assortment of products.

There May Be Lower Inventory Costs Online

However, thanks in part to the massive streamlining of communications that can be offered by the Internet (from consumer to vendor to distributor to manufacturer to air courier), the amount of inventory that needs to be carried by retailers may be reduced in many instances — this is clearly CUC's expectation.

At a minimum, Internet retailers should be able to eliminate the duplicative inventory that bricks-and-mortar retailers use to display offerings in each store. At a maximum, Internet retailers should be able to eliminate inventories all together, by relying on wholesalers (e.g., CUC, Amazon.com). As a point of comparison, Amazon.com had 1996 inventory turns of 42, compared to Barnes & Noble's 1996 turns of 2.1. But retailers who rely solely on wholesalers pay a hefty price in terms of lower gross margins. In comparing Barnes & Noble and Amazon.com (noting that Amazon has yet to hit scale), we estimate this gross margin penalty at about 600–800 basis points. The lesson learned by bricks-and-mortar retailers over the years is that there is a point of scale and volume where it no longer makes sense to rely on wholesalers, because customers won't pay the price premium.

Internet Retailing Should Require Less Overhead

Internet retailing's relatively low overhead provides it with inherent cost advantages compared to bricks-and-mortar book retailing. First and foremost, the need for most physical selling assets is eliminated, such as the stores, the fixtures and cash registers in them, and the sales associates. The Web site becomes the store in which the customer browses, and it's cheaper to maintain a single Web site than a multi-location store front.

Internet retailing is also highly automated, and the use of human staffers can be more efficient and effective. In addition, advertising is currently cheaper on the Web than in traditional advertising mediums, such as television, radio, and newspapers, though this may change as the Web ma-

tures as an advertising medium (and cross-marketing requirements grow). Customized service can be provided much more economically on the Internet as well. And the Internet retailers will have the ability to customize their sites to customers' needs and, in part, shape demand. We do believe, though, that total advertising costs and the costs of customer acquisition for Web retailers may well continue to rise, as competition increases and traditional players come online with big brands, big pocketbooks, and a willingness to invest heavily in building a customer base.

Competitive Dynamics — Is It All About Price? Not Quite, but Close

A challenge for the development of Web retailing is that transformation in retail has only occurred historically when retailers were able to offer consumers meaningfully better value. On the Web today, the perception is that Internet retail will offer tremendous product selection, 24-hour shopping (read: great convenience), and, above all, lower prices.

In the bricks-and-mortar world, retailers generally compete on price, convenience/location, product selection, and customer service/ambiance. The basic competitive framework shouldn't change on the Net, but the dynamics of competition within each of these categories should be different.

All else being equal, consumers would prefer to pay less for any particular item. Some customers are very price-sensitive, and will perform time-intensive cost comparisons. Others are less sensitive and will not spend time shopping around. On the Internet, we think pricing will become even more important than it is in bricks-and-mortar retailing, due to the ease with which consumers can compare prices. Shoppers will literally be able to compare prices within seconds by switching from Web site to Web site (or by having intelligent agents do it for them). Provided that shipping services are equal, there will be little incentive to order from the higher-price provider.

However, it's notable that when the cost of shipping and handling — charged to the consumer — is included in the total price, in many instances the apparent price gap becomes a wash with traditional retail prices. Our retail team believes that the lack of major price benefits in many categories may govern retail growth over the Internet. Instead, the Net may share similar characteristics to catalogs: Mail

order grew substantially, but it never forced substantially lower prices across the board for mail-order companies or traditional retailers.

One aspect of traditional retailing that customers have been willing to pay proportionally for is service/convenience. On the Web, technology has a substantial opportunity to change the way service is provided and how much it costs, through the use of automated customer support tools and intelligent shopping agents. This is clearly an area where thrifty customers will be able learn much more about products and services than they have in the past, while paying substantially lower prices. Financial services (Charles Schwab, E*Trade, Intuit) are leading the way here.

We believe that product selection will be less of a differentiator on the Internet because it will be relatively easier and less expensive for retailers to showcase complete selections of products. On the Web, the cost of retail display space is not an issue, and the possibility of virtual inventories makes it even cheaper. We would also lump distribution issues into the product selection dynamic. In the bricks-and-mortar world, a retailer's decision to carry an item also depends on how well it believes it can distribute the item. Does the implied gross margin cover the costs and provide enough return?

Competition Should Be Fierce — Revenue Growth Should Be Easier to Nab Than Profits

Given the size of the potential Internet audience and the opportunity to thereby increase distribution and simultaneously cut costs, combined with the relatively low barriers to entry in retail markets in general and on the Internet specifically, there will no doubt be heavy competition to dominate the various retailing categories.

On the flip side, one might argue that the vendor community could resist undermining the current structure, but significant demand will likely be met by supply from smaller vendors or new entrants in the market, with potential market share losses for the non-participating vendors.

On the Web, the prospect of potentially smaller margins and less profit for these smaller vendors should not outweigh the potential upside to gaining market share, shifting consumer loyalties, and establishing brand. The result may well be an increase in overall demand, but a decrease in profit levels due to the pricing power and choice that the

Table 3-2

Average Operating Statistics of Selected Retail Categories and Companies, as a Percentage of Total Revenue

	Mall-Based Apparel, Specialty	Apparel, Strip-Center/ Off-Price	Dept. Stores/ Mass Merchants	Discount Stores	Direct Marketers	Hardlines	Niche Retailers	Barnes & Noble (BKS)	Borders (BGP)	Amazon
Net Sales	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Gross Margin	36	27	34	22	34	28	34	37	27	22
Operating Expenses	24	21	25	17	30	21	28	32	22	50
Operating Margin	11	6	9	5	4	6	6	5	5	(28%)
Net Income	7	4	4	3	2	4	3	2	3	(27%)

Note: Category margins are computed from a market-capitalization-weighted sample of selected companies in that category.

Sources: Morgan Stanley Equity Research, company reports.

Web affords consumers. In addition, customer acquisition costs for Web vendors should pressure profit levels.

Note the operating statistics for selected retail categories and companies in Table 3-2.

Thoughts on New Retailing Concepts

Over the last few decades, some **new retail concepts have emerged: category-killer retail stores, catalog companies, and home/TV shopping. The latter two were expected to significantly alter the traditional retail landscape and adjust market shares — although category killer stores did just that, home/TV shopping and mail order didn't.**

Category-killer retail formats (like Barnes & Noble and Bed, Bath and Beyond) transformed the retail landscape, significantly shifted market shares, and forced many retailers to substantially change the way they did business in order to compete with these new players.

The catalog industry and home/TV shopping were launched with lots of hype and expectations that these formats would nab lots of share from traditional retailers. In the end, catalogs simply created just another distribution channel, and did not force many retailers to fundamentally change the way they did business.

It's too early to call which direction Internet retailing will take. History has it that fundamental market share changes occurred in retail when new concepts or channels offered consumers meaningfully lower prices, a better selection, and an improved shopping experience.

Originally, catalogers were positioned as a retail sector that would offer lower prices, broader assortments, no sales tax, tremendous convenience, with the opportunity for high-quality customer support. In the end, the only advantage catalogers have is convenience — shopping from home with a trusted brand name. The catalog cost structure (related to paper and mail costs) has proven to be higher than anticipated. In time, customer response rates moved lower. Catalogers carry inventory, so product assortments remain somewhat limited. Prices are comparable, and, in time, sales tax became an issue (see our sidebar on Internet tax issues in the Appendix). As a result, for catalogers, convenience alone was not enough to transform the retail landscape as many initially thought.

And the Winners Will Be Determined by . . .

We think the key criteria for successful retailing on the Internet will include: pursuing a **viable market opportunity**; possessing/creating a **leading Web brand**; having a **low cost structure**, with economies of scale to offset gross margin pressure; superior database/fulfillment/distribution capabilities; knowing how to **leverage technology** (and interactivity and databases) while **maintaining creativity**; creating a sense of **community/membership** among customers; and understanding how to **drive profits in addition to revenue**. Finally, it should be essential for retailers to provide customers with a **broad selection, competitive prices, and great service, defined as ease of use and speed of delivery**.

The Wal-Marting of the Web?

We call our Web market-share consolidation view the “Wal-Marting of the Web.” Of course, time may prove us wrong, and the ability for just about anyone to set up a storefront on the Web may lead to huge market share fragmentation (rather than aggregation). But, put simply, we believe that companies with brand name, scale, efficient distribution, and competitive prices will be the bookmarks of choice for Web users, and that, indeed, market share aggregation will occur.

Wal-Mart’s “small-town/low prices” strategy has been successful because it is supported by an extremely efficient and low-cost distribution system. The efficient distribution systems, low prices to customers, market share, and profitability could be viewed as a continuous loop. Wal-Mart’s system allows it to offer low prices profitably, letting it win market share and leading, in turn, to greater economies of scale and even lower cost distribution. Any retailer can make short-term market share gains by offering competitive pricing. However, sustainable market share gains, and ultimately shareholder value, are created only when efficient systems are at the foundation of the pricing strategy.

The history of Wal-Mart (Figure 3-8) demonstrates what the Web may someday bring.

If T. Boone Pickens was the corporate raider of Wall Street during the 1980s, Wal-Mart was the retail raider of Main Street. The story is well known: Sam Walton opened his first Wal-Mart store in Rodgers, Ark., in 1962, which was also the year that K-Mart, Target, and Woolworth’s Woolco opened. Within five years, K-Mart had 250 stores and annual revenue of \$800 million, while Wal-Mart had only 19 stores and revenue of approximately \$9 million. Today, K-Mart has 2,429 stores and had \$31 billion in revenues for 1996, compared to Wal-Mart’s 3,055 stores and \$105 billion in 1996 revenues.

Wal-Mart went public on October 1, 1970, at a split-adjusted price of \$0.01658 — total appreciation from the IPO is 174,000%, implying a 33% CAGR.

Wal-Mart began its super-aggressive growth plans in 1970 when the company went public, as it was able to more aggressively finance store openings.

Table 3-3

Wal-Mart: Store and Sales Growth, 1970–80

(\$ Millions)	Stores	Sales
1970	32	\$31
1972	51	\$78
1974	78	\$168
1976	125	\$340
1978	195	\$678
1980	276	\$1,200
CAGR	24%	44%
1996	3,055	\$105,000

Sources: Company reports, “Made in America” (Sam Walton & John Huey).

One of Wal-Mart’s key store-opening strategies was related to real estate — the company would find inexpensive land with a large amount of space, but with good traffic flow, and would then rely on word of mouth and low prices to drive lots of traffic. And then Wal-Mart would offer consumers its nearly unparalleled shopping convenience, huge product selection, and low prices.

The Web Creates One, Big Small Town

A large part of Wal-Mart’s success came from its ability to make its formula work in small towns. While competitors like K-Mart wouldn’t open stores in towns smaller than 50,000, Wal-Mart was able to successfully target towns with populations even below 5,000, and this provided a large number of opportunities. While malls in general have had a massive market share aggregation impact on shopping in many mid-size communities, Wal-Mart is a great case study on the impact of market share aggregation on traditional retailers in small-to-mid-size towns in America.

Wal-Mart proceeded to gain lots of share in the retailing space, primarily at the expense of small-town retailers.

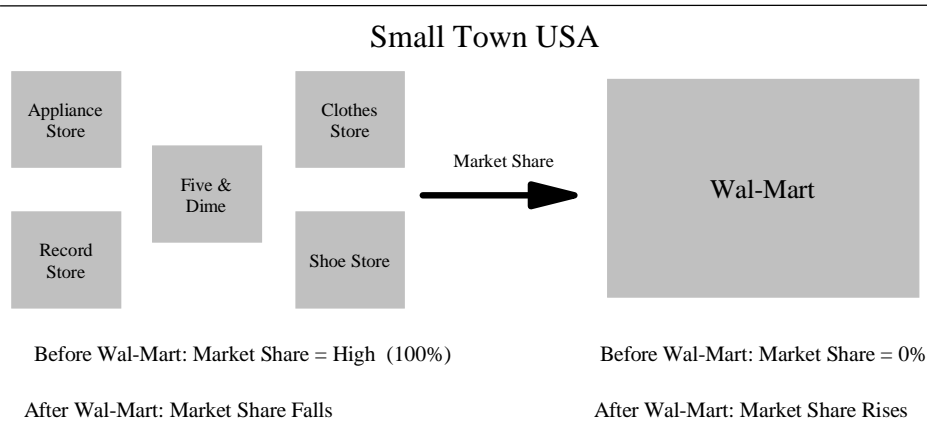
An interesting element of the Web is that it provides consumers with the ability to shop from their desktops with compelling convenience, huge product selection (only in a few categories for now), and low prices (again, in selected categories for now). The Web, in effect, creates one, big small town. And we may see just a few leading retailers in each retailing category.

Figures 3-8 and 3-9 illustrate the market share changes caused by Wal-Mart, as well as the hypothetical market shares on the Web for the book industry.

Figure 3-8

Wal-Marting of the Web — Part I

- Wal-Mart Strategy - Move into small town with average of distinct types of retail store per 1,000 people.
- Within 3 years, Wal-Mart obtains a significant portion of retail spending in the community. Why? Convenience, price, product breadth...



Source: Morgan Stanley Equity Research

Figure 3-9

Wal-Marting of the Web — Part II

- The Web is one, big small town. Whether a user is in Shanghai, Peoria, or New York City, they shop at the same virtual store.
- Within five years, Web shopping should obtain 1–4% of global retail spending. Why? Convenience, price, product breadth.
- We should see super-consolidation, with a few winners— who needs thousands of bookstores?

Bricks-and-Mortar World		Hypothetical Virtual World*	
Amazon.com	0 stores (0% market share)	Amazon.com	1 Store (20% market share)
Books.com	0 stores (0% market share)	Books.com	1 Store (15% market share)
Barnes & Noble	1,009 stores (13% market share)	Barnes & Noble	1 Store (40% market share)
Borders	1,118 stores (11% market share)	Borders	Soon: 1 Store (15% market share)

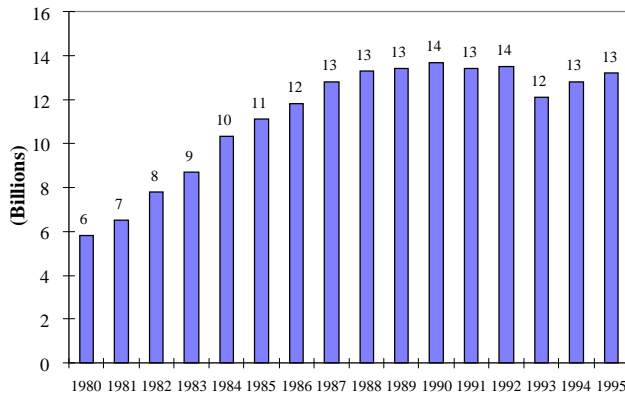
In the bricks-and-mortar market, share is restricted by physical location/distribution and thus share is highly fragmented.

Source: Morgan Stanley Research. * Morgan Stanley Research Estimate.

Lessons From the History of Mail Order in the 1980s: Though Opportunities Were Significant, Expectations Got Out of Control, And Too Many Players Spoiled a Lot of the Fun and Profits

Figure 3-10

Estimated Catalogs Mailed per Year in U.S.



Source: DMA/USPS

Early Mail-Order Growth Was Driven by Demographic Trends and Superior Profit Dynamics

During the early to mid-1980s, the mail-order industry experienced tremendous growth. Between 1980 and 1985, consumer mail-order sales grew 43% (using our midpoint estimates), versus a 37% increase for overall retail sales. Catalog distribution in the U.S. more than doubled, from 6 billion catalogs mailed in 1980, to 11 billion in 1985 (Figure 3-10).

Mail-order success was paced by the growth of dual income and non-family households during the 1970s and 1980s, and a rising percentage of women in the work force — these trends led to an increase in disposable income and a need for more convenient shopping formats. Rising gasoline prices during the early 1980s also created an additional incentive to shop by mail, rather than drive to the mall. Mail order seemingly provided the solution for a population with rising disposable income and less time to spend it. As time passed, technological advances (like faster delivery services, credit card processing by mail, and 1-800 phone numbers) enhanced the convenience that mail-order companies could offer consumers, and consequently, consumers' comfort with shopping by mail.

From the retailers' point of view, mail order offered the appeal of higher profit margins and a convenient way to target a specific niche audience or to build brand awareness. Ac-

ording to Maxwell Sroge, from 1980–83 mail-order companies supported operating margins that were three times higher than those of traditional retailers.

High relative profits were supported by: 1) high initial response rates related to the novelty of mail order; 2) relatively few vendors — in the early days — chasing fast-growing demand; 3) stable and historically low paper and postage costs; and 4) the perceived better value of catalog shopping due to the lack of sales tax.

These profit dynamics attracted many non-retailers to the industry, and a steadily rising number of the estimated 5,000 to 8,000 catalogers were acquired by corporate giants, such as ITT, Beatrice Foods, and W.R. Grace. In these earlier days of mail order, it was not uncommon for these companies to achieve a return on equity (ROE) of 20% or more, compared with 10–15% for major retailers. Other corporations, such as Armstrong Cork, RCA, CBS, and Xerox, developed mail-order divisions. The mood surrounding these initial corporate forays into mail order is summarized in this quote from the *San Diego Union Tribune*, November 14, 1984: “When it comes to doing business by mail, the future looks as bright as sunrise over Fort Knox.”

And Along Came the Mail-Order Glut and Shakeout

Time and again the adage is proven, “Nature abhors a vacuum.” This seems to hold especially true in the case of an untapped or semi-untapped opportunity for profits. Mail-order companies were achieving more than twice the rates of sales growth of traditional retailers — and subsequently super high mail-order revenue/profit growth predictions became common place, as did portents of doom to retailers that did not jump on the mail-order bandwagon:

- In 1982, industry pundit Maxwell Sroge stated that “U.S. managers of retail stores, in ignoring the growth of mail-order sales, are in danger of falling into the same trap General Motors, Chrysler, and Ford did in the early days of the Japanese car invasion.”
- Harold Schwartz, president of Hanover Industries, claimed in 1982 that “by 1995, 50% of all consumer shopping in the United States will be done by mail....” Today,

(according to Sroge) mail order represents merely 6% of all consumer retailing, or 8% excluding autos.

- By 1990, according to a survey of leading retail executives conducted by the newspaper advertising bureau, it was estimated that mail order's share of consumer expenditures for department store goods would grow by five times in short order.

The number of catalogs mailed in the U.S. continued to grow at a rapid clip, from 10 billion in 1984 to slightly over 13 billion in 1988, before stabilizing at that level. Between 1980 and 1988, 34 companies with mail-order divisions went public, and 14 of these had mail order as the primary business. Mail-order consulting firms sprouted up, to guide would-be catalogers through the process of developing a business. Just for kicks, go to your favorite bookseller's Web site and search for "mail order," and you'll be inundated with get-rich-quick books. Compounding this glut was the fact that many catalogers were mailing to the same lists of people, and therefore over-flooding a single name base. Although there was not yet the perception of a finite market for mail-order buyers, prospecting efforts recovered the same territory, and therefore left no opportunity to expand the market.

Mail-order companies were quickly impacted by the increased competition. Several major catalogers, such as L.L. Bean and Williams-Sonoma, showed below-plan sales or profits for Christmas 1983. In 1984, revenue growth slowed from the 11% achieved in 1983 to 9%. Hanover Industries' Harold Schwartz noted that as more and more catalogs were launched, "customers were spreading their purchases across 200 catalogs instead of 50." Moreover, although sales growth continued to be achieved, profit margins were squeezed. For example, Montgomery Ward generated \$1.3 billion in catalog sales in 1984, but lost about \$50 million per year since 1980. We think that Internet retailing will likely play out the same way.

The increasingly competitive environment was also reflected in the performance of catalog company stocks: In 1985, Wall Street retail analysts indicated that, over the preceding four quarters, the median publicly held non-store retailer generated a year-over-year sales gain of 2% and an earnings decline of 49%, versus sales growth of 14% and earnings growth of 21% for the median publicly held retailer. Many of the fastest-growing catalogs were too small to invest in, or to consider going public.

Despite these early warning signals, industry experts justified the continued entrance of new participants: Maxwell

Sroge stated, "If a household doesn't get an average of seven catalogs a week this fall, or about 70 in all...it's because they aren't regarded as prime mail order buyers. Seventy catalogs might sound like a lot, but when you consider the number of retail stores to which the family is exposed, it really isn't that many." Major catalogers continued to expand, even as others (e.g., Esprit de Corps, Pier 1 Imports, and Montgomery Ward) closed operations, cut back on circulation, or eliminated certain books.

The competitive spirit was well-captured in an article in *Fortune* magazine, dated July 9, 1984: "Several big outfits are still pumping out more catalogs than ever, and newcomers are still leaping into the business. Sears, the largest presence in mail order, is forging ahead with specialty catalogs as well as its giant Wish Book. Hanover House, which doubled mailings last year to 220 million catalogs, will up the number again this year by almost 25%." As Harold Schwartz put it: "Rather than pull back, we intend to force competitors out as quickly as we can."

In order to increase sales and preserve profit margins in the increasingly competitive environment, many catalogers developed a more specialized focus, and a plethora of niche catalogs sprang up catering to a variety of hobbies and selling everything from food to collectibles. Others catalogers, such as Bloomingdales "By Mail," accepted advertisements (e.g., for cigarettes and liquor). Some mail-order companies even opened retail stores to build name recognition. Companies also moved away from the traditional "shotgun" approach to prospecting, and developed more targeted mailing strategies to contain costs.

And Along Came Teleshopping

Another major source of competition arose in the mid-1980s in the form of teleshopping, the principal players of which were Home Shopping Network (HSN) and QVC. During the early boom in the industry in the late 1980s and early 1990s, these players achieved impressive annual sales growth (HSN saw compounded annual growth of 58% from 1986 through 1990, and QVC saw compounded annual growth of 57% from 1987 through 1992), before sales more or less flattened at slightly over \$1 billion apiece, with approximately \$3 billion in total for the industry.

Much of the initial excitement surrounding teleshopping was driven by the prospect of tremendous expansion in the cable industry, specifically the ideas of "500" channels and interactive television. Secondary to this was the cost advantage obtained by bypassing the print medium. As was the case during the early stages of the catalog boom, industry experts

predicted the replacement of other forms of retailing by tele-shopping within 5 to 10 years. Also, as with the mail-order industry, the promise of powerful profitability and growth potential led to a rush of entrants, which, in turn, when the supply of cable space did not expand at the forecast rate, caused the cost of existing "air space" to rise sharply, and made the financial prospects of the new sector less appealing.

Moreover, as the industry matured, it became apparent that the market for this retail format was limited to a certain consumer base (mostly middle-aged women) and was most successful in selling a narrow range of products (like apparel and jewelry). Attempts to expand the market, such as MTV's "The Goods" (aimed at a younger, more upscale audience) and QVC's "Q2" (which targeted a more upscale customer, later converted into a "greatest hits of QVC channel") met with little success.

Hello, Recession —

The Mail-Order Reality Check of the Early 1990s

The "reality check" for the mail-order business was precipitated by the recession of 1990–91, when the combination of a weaker economy, the shift in consumer sentiment from the chic of the late 1980s to a value orientation, and a major postal rate increase drove mail-order companies into a period of cost-cutting and consolidation. Catalogers eliminated books, shifted to lower-grade paper, reduced book size and page count, refined mailing lists, and pared back prospecting.

As the economy emerged from the recession and consumer demand rose, catalogers once again began to add pages and increase circulation. However, just as a cyclical recovery should have occurred, the catalog industry was confronted by a series of surges in paper prices. This resulted in another cycle of cost-cutting measures. In January 1993, another of the original "big four" general merchandise catalogs, the Sears catalog, closed after more than a hundred years of operation. In 1995, catalogers were again hit by postal rate increases, the largest yet, and more than 60% of the 23 domestic catalog companies surveyed by *Catalog Age* in 1995 had depressed or negative earnings.

The DMA predicts that the 7% revenue growth achieved by catalogers since 1990 will likely continue for the rest of the decade. A few catalogs have done well, especially those that have been aggressive in their marketing efforts. But over time, profitability levels for the industry have fallen significantly — the average net margin for the 12 public direct-marketing companies in Morgan Stanley's retail stock uni-

verse is 0.8%, with CUC supporting the highest net margin of 7% and Hanover Direct supporting the lowest net margin of -15%.

Business-to-Business Mail-Order Trends:

A Better Place to be in Recent Years

In the 1980s, business-to-business mail-order companies grew rapidly (18% CAGR since 1980, according to Maxwell Sroge). Fueling the growth of this market were both the increasing trend of office automation among small businesses and the relative cost advantages of direct mail versus a direct sales call. According to *Direct Marketing News* (1990), the average cost of making personal on-site calls rose from \$178 per call in 1981 to \$250 in 1989.

As with the consumer catalog industry, the business-to-business mail-order sector experienced "growing pains" during the mid-Eighties. Issues facing catalogers included increased competition and production costs, list fatigue, and slower-than-forecast growth in the computer supplies market. In addition, business-to-business catalogers faced greater difficulty than did consumer catalogs in getting the catalog into the hands of the person responsible for purchase decisions. The challenge of obtaining the correct name, title, and address of a company's buyer was compounded by high turnover in many industries, which limited business-to-business catalogers' abilities to test new product concepts, build accurate client databases, and cross-sell effectively. The degree to which the lack of a sophisticated database held back these companies is expressed in this quote from Bernice Grossman, president of Direct Marketing Resource Services, in 1986: "(Business-to-business mail-order companies) still cannot answer the questions of how much their prospects spend for their products, how often they spend, and what kind of businesses their prospects and customers are. They don't know yet what the factors are that can be correlated to bring in a sale for a reasonable cost."

As with consumer catalogs, responses to the increasing commoditization of the business included list refinement and more targeted marketing efforts, specialization of catalogs, and competition based on price and service levels. In addition, some companies turned to traditional magazine advertising to build brand awareness.

The early 1990s brought competition from off-price office product superstore chains (e.g., Staples, Office Depot) and computer superstores — which in turn put downward pressure on margins — as well as the increasing production costs faced by consumer mail-order companies. However, several factors enabled business-to-business catalogers to overcome

these challenges better than their consumer counterparts: 1) Business-to-business catalog purchases are based on need rather than discretion (as with consumer catalog purchases), and purchases are paid for by “the boss,” rather than the individual’s disposable income. 2) Business-to-business catalogs generally use lighter paper stock and less sophisticated graphics than consumer catalogs, and therefore have lower production costs — a 1994 survey conducted by W.A. Dean and Associates indicated that printing and production accounted for 12–14% of sales for typical business-to-business catalogs, versus 21–22% for consumer catalogs. 3) Business-to-business catalogers can better defray increased paper and postal costs by raising the price to vendors of co-op advertising space. And 4) strength was seen in the computer, telecommunications, and office supplies industries, both absolutely and relative to the retailing industry.

Lessons for Web Retailers from Mail-Order Retailers

Prognostications Are What They Are — In the mail-order industry, early rosy predictions proved wildly exaggerated. The catalog industry began with lots of hype about the damage it would do to traditional retail, but it became just another distribution channel, which did not force any retailers to alter, fundamentally, the way they did business.

Genuine Opportunities Exist, but Expectations Rapidly Get Out of Hand — Initially, mail order and teleshopping represented low cost ways for retailers to access new audiences or delve deeper into their existing ones. In the initial years, sales growth for both industries substantially outpaced that of store retailers. However, industry players and experts have a dangerous tendency toward euphoria, in our opinion, and their sweeping predictions frequently come to pass only in a very modified form.

It’s worth noting here that Internet retailers have substantial cost advantages over mail-order retailers and home shopping channels, and some have the added convenience of enabling

consumers to make purchases online rather than through a separate procedure.

The moral of this story is this: If you build it, they may come. But when, how many, and at what cost are critical variables that bear close monitoring. The *explosion of a new market by a deluge of new entrants can significantly change the financial dynamics of the business*. Key to success will be a company’s ability to monitor turning points in the trend, and execute ahead of the tide.

Differentiation and Brand are Key — These will become even more important for Internet retailers who depend on customers deliberately turning to their Web sites. Companies must develop brand franchises and a sense of trust through other marketing vehicles. In addition, a different style of marketing may be required, since Internet companies will, at least initially, be targeting an audience that is largely male, versus the majority of traditional mail-order consumers, who are female.

No Single Form of Retailing Will Replace All Others — Despite what may be said at the time, history has shown that although new forms of retailing arise, traditional store retailing still is used for the bulk of consumer shopping. Although significant cost advantages may exist for Internet retailers who can figure out how to manage the supply chain, it is likely that this too will prove to appeal to a limited segment of the population, only. And, hey, many people like to go shopping — it’s not only a necessary chore but also a popular pastime.

Fundamental Market Share Shifts in Retail Have Occurred Only When the Pricing Structure Is Much Lower — Discount stores, off-price retail, and category killers all forced significant market-share shifts because of their ability to offer consumers meaningfully lower prices. While catalogers may offer a broader assortment and brand-name recognition, the differentiation provided by greater convenience alone has not proven sufficient to upset the traditional market structure.

Chapter 4: Potential Size of the Internet Retail Market

Summary

Sizing the market for Internet retailing seems a bit like, “pick a number, any number...” When you do simple stuff like include online/Web assisted auto sales in Internet retailing data, Internet retail numbers get very big very fast.

◆ In this chapter we look at four different ways of sizing the market: 1) Using mail order as an analog; 2) Morgan Stanley forecasts using Web usage growth and estimated transactions per user; 3) International Data Corporation (IDC) forecasts; and Forrester Research forecasts. Using these sources, we arrive at a wide range of market size estimates for the year 2000 (from a base of sub-\$1 billion in market revenue in C1996E) — note the ubiquitous nature of the Web, these are all worldwide market size estimates (except for Forrester, which is U.S. only).

◆ Respective year 2000 Internet estimated retail market sizes are: 1) Mail order analog — **\$115 billion in annual consumer sales plus \$260 billion in business sales within 5-8 years (rather than the 20 years it took mail order)**; 2) Morgan Stanley — **\$21-57 billion, with a midpoint estimate of about \$35 billion in sales in C2000E**; these forecasts are focused on the consumer market and if past is prologue, the business-to-business market could be 2-2.5 times larger; 3) IDC — **\$100 billion in online commerce revenue in C2000E** (including both consumer and business-to-business commerce); and 4) Forrester Research — **\$7 billion in U.S. online shopping revenue in C2000E**, with business-to-business commerce growing to \$66 billion in the same year.

◆ Clearly these C2000E market sizes for Internet retail vary widely, but one thing appears clear — **there will be compelling market growth**. Simply, it’s too early to responsibly predict how large the Internet retailing market for consumers and businesses may be, but we do believe that we have laid out appropriate frameworks for gauging/forecasting market growth. And we look forward to obtaining market evidence that allows Morgan Stanley and others to corral, then fine-tune market growth estimates.

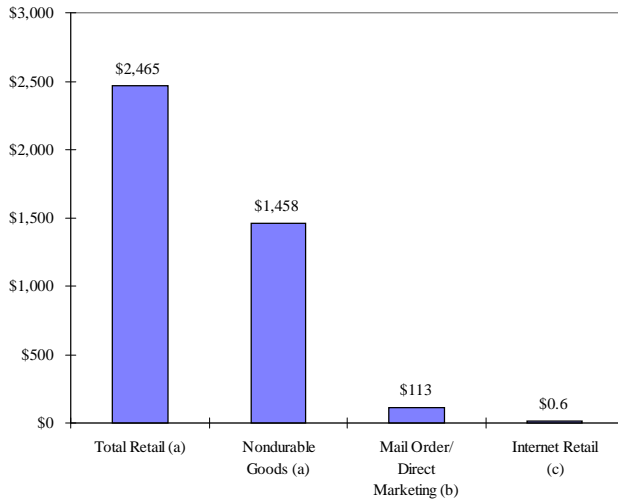
◆ When new things like the Internet come along it’s easy to make bold predictions about how the world will change — **but as they say, the more things change the more they stay the same...** When mail order shopping began to hit its stride in the early 1980s and 800-numbers were launched by most cataloguers in the late 1980s (and also when TV-shopping, thanks to QVC and HSN, was aired for the first time), prognosticators did their thing and said people would stop going to stores and purchase everything from home and/or business. Remember the wealthy Texan in David Byrne’s movie *True Stories* — she lived in her bed, shopped from her bed, got married in her bed? Well, it’s 1997, and we aren’t all living from our beds and traditional retailing in most sectors is alive and well. And, hey, traditional retailing is a form of entertainment...and entertainment never goes away...

◆ But **Internet retail should evolve and should be accepted more rapidly than mail order retail was**. Simply, the Internet is being deployed more rapidly than any new technology ever — call it velocity — there are 220 million PCs in use worldwide (and 35 million Internet users) — all of these PCs (and more) should be Internet-enabled within five years. And then there’s the annual run rate of 100 million TV sets (and hope for cable modems), yes, Bill Gates, Larry Ellison and Marc Andreessen want those too...One can find and acquire millions of goods and services and in the not too distant future one will be able to do this consistently, quickly, interactively and in an entertaining way. By our math, the Web is ramping at a rate 3-5 times faster than the PC industry did...so using a little extrapolation...**it took the domestic mail order/direct marketing industry 20 years to rise from next-to-nil to roughly \$371 billion in revenue (for both consumer and business-to-business), with consumer reaching 5% of total retail sales and business-to-business 11% of total wholesale sales. One could extrapolate that Internet retailing could get to the same level in 5-8 years.**

Figure 4-1

U.S. Revenue for Various Retail Categories, 1996

(\$ Billions)



Sources: (a) WEFA, (b) midpoint of WEFA/Maxwell Sroge data, as per Table 4-1, (c) Morgan Stanley Equity Research.

The Size of the Internet Retail Market — Pick a Number. . .

Sizing the market for Internet retailing seems a bit like, “pick a number, any number....” Adding in simple stuff like online/Web-assisted auto sales in Internet retailing data, and Internet retail numbers get very big, very fast.

For example, in November, CUC indicated it hit a \$1 billion revenue run rate for sales of goods and services through its online and Internet efforts (sales of \$25,000 cars through AutoVantage has a lot to do with the high number). Auto-By-Tel indicated that it assisted in the sale of 61,250 cars through its network of more than 1,200 dealers in 1Q, or almost 2% of all cars sold in the U.S. in the quarter.

In addition, Michael Dell has indicated that half of Dell’s revenue in two to three years may be generated via Internet-based transactions (this alone could be \$9–10 billion of Dell’s sales).

The data for high-priced goods and services can drive the numbers up quickly, and make Amazon’s impressive 1Q annual revenue run-rate of \$64 million pale in comparison.

Four Approaches to Sizing the Internet Retail Market

1) Mail-Order Market as an Internet Analog

According to WEFA, total U.S. retail sales were \$2.5 trillion in 1996, up 5% from 1995, and have supported a compound average growth rate (CAGR) of 6% since 1980. U.S. consumer mail-order/direct marketing has supported higher sales growth, with a CAGR of 10% since 1980 (Table 4-1), and supported sales of \$113 billion in 1996 (or 5% of total retail sales). These estimates were derived by taking the midpoint of Maxwell Sroge’s estimated data and the WEFA non-store retail sales data.

As for business-to-business sales, WEFA estimates total U.S. wholesale sales were \$2.4 trillion in 1996, up 6.8% from 1995, and have had a CAGR of 5% since 1980. U.S. business-to-business mail-order/direct marketing has also outstripped overall industry growth, according to Maxwell Sroge, and has had compounded annual growth of 18% since 1980 (Table 4-2), with sales of \$258 billion in 1996 (or 11% of total wholesale sales).

We believe that the revenue ramp for Internet retailing can occur 3–5 times faster than the mail-order ramp did — this is based on the logic that the number of Web users is growing very rapidly and on our view that transacting on the Web is much easier and more efficient (though not true for many cases, yet) than ordering from a catalog.

Using this methodology, we think Internet-based retailing can grow from an estimated \$600 million in revenue in 1996 to **an estimated \$115 billion in consumer sales, plus \$260 billion in business sales, annually within five to eight years** (Table 4-3).

The Backup on Retail Market Statistics

We have relied heavily on retail market size data from several sources (especially WEFA and Maxwell Sroge Co.) — and the data varies by source. Descriptions of the sources and data follow.

The WEFA Group was formed in 1987 through the merger of two leading consulting firms: Wharton Economic Forecasting Associates and Chase Econometrics. It aggregates data from various sources, with most retail data collected by the U.S. Census Bureau. Maxwell Sroge Co. is a consulting firm specializing in mail-order and catalog consulting.

Total retail sales, generated by WEFA and collected by the U.S. Census Bureau, represent total sales and receipts from all establishments primarily engaged in retail trade net of refunds. It does not include sales at the retail level by manufacturers, wholesalers, service establishments, and others whose primary activity is other than retail trade.

Non-store retail sales, generated by WEFA and collected by the U.S. Census Bureau, are strictly for companies that sell through catalogs, mailings, and by operating catalog stores that carry little stock other than display items (i.e., strictly collected by SIC code). These companies receive most of their orders by phone or mail and fulfill most of their orders by mail. Thus, the data do not include direct-marketing/mail-order sales from many market segments, including department stores, insurance/financial services companies, auto clubs, educational services, prescription orders, and photofinishing.

Wholesale sales, generated by WEFA and collected by the U.S. Census Bureau, are the sales of all establishments engaged in selling to retailers, jobbers, or businesses rather than to consumers.

Consumer mail-order/direct-marketing sales, generated by Maxwell Sroge, incorporate all types of direct sales to consumers, including those made through catalogs, direct mail, telemarketing, television, and any other form of direct marketing. It includes direct sales made by companies whose primary business is not necessarily direct marketing, such as department stores who also sell via catalogs. It includes data for many of the industries and companies that the SIC-code-based WEFA data do not.

However, as we believe Sroge's methodology in estimating these sales is fairly aggressive, we thought it reasonable to estimate U.S. consumer retail mail-order/direct-marketing sales by taking the midpoint of these two data sets (WEFA and Sroge), which we show in Table 4-1 (Sroge refers to this as simply mail order, but it implies much more than simply ordering via mail, so we believe appending "direct marketing" is more accurate).

Business-to-business mail-order/direct-marketing sales, much the same as consumer mail-order/direct marketing, are also generated by Maxwell Sroge and incorporate all types of direct sales to business (this is sales of merchandise or services to retailers, other wholesalers, or industrial, commercial, institutional, farm, construction contractors, or professional business users; as well as companies acting as agents or brokers in buying or selling merchandise to other companies). These data include sales made through catalogs, direct mail, telemarketing, television, and any other form of direct marketing.

2) Morgan Stanley Forecast Using Various Assumptions

Using our own instincts and experiences to make reasonable assumptions, and using the methodology employed in *The Internet Advertising Report*, we believe that Internet retailing may grow from a \$600 million business in 1996 to **\$21–57 billion — with a mid-point estimate of about \$35 billion — in 2000**. We know this is a huge range, but our wits tell us to be nimble. We use the following assumptions: 28 million Web users worldwide in 1996, rising to

157 million in 2000, and the estimated percentage of these users completing a transaction rises from 14% in 1996 to 45% in 2000. Furthermore, the mid-case annual value of transactions per customer per year rises from \$150 in 1996 to \$500 in 2000 — by way of comparison, the average mail-order shopper in the U.S. purchases about \$1,000 in mail-order products per year — these data are clearly skewed by the purchase of high-priced items.

These forecasts are focused on the consumer market, and if past is prologue, the business-to-business market could be 2.0–2.5 times larger.

3) International Data Corporation (IDC) Forecast

IDC uses a methodology that is similar to ours, which forecasts a big ramp in Internet usage globally, accompanied by an increase in the number of users buying and selling online. The result of these two waves of growth will be a dovetail that drives **worldwide online commerce to an annualized run rate of \$117 billion in December of 2000 (both consumer and business-to-business).**

Using IDC's estimate for the share of this commerce that will be conducted from devices in the home, and using our own assumption that this is a rough proxy for the amount of consumer-oriented commerce (i.e., we assume the amount of home-generated commerce for business use will wash out with the amount of consumer purchases made from devices in business locations), **this equates to about \$37 billion in consumer online commerce in 2000** (Table 4-4).

In addition, IDC has estimated that the amount of commerce conducted over the Internet in 1996 was around \$3 billion. IDC here defines Internet commerce as purchasing goods and services via the Web, and though transactions do not have to be completed over the Web (e.g., telephone or fax completion is acceptable), the transaction must be initiated from the Web. These data exclude, however, funds transfer and home banking (except activity charges), stock trading (except fees, if any, for the privilege of trading over the Internet), and charges for basic Internet access.

IDC's assumptions include:

Web-enabled devices (defined as any device that access the Web, including PCs, terminals, video games, TV set-top boxes, and other Internet appliances) numbered almost 13 million worldwide at the end of 1995, growing to 233 million by the end of 2000.

Web users will increase from more than 16 million at year-end 1995 (versus our estimate of 9 million) to 163 million at year-end 2000 (versus our estimate of 157 million-plus). These data differ from Web-enabled device estimates in

Table 4-1

U.S. Total Retail Sales:

Maxwell Sroge Estimate for U.S. Consumer Mail-Order/Direct-Marketing Sales, WEFA Estimate of U.S. Non-Store Retail Sales, and Average of Estimated U.S. Mail-Order/Direct-Marketing Sales

Year	Total Retail Sales (a)			Consumer Direct Marketing Sales (b)			Non-Store Retail Sales (a)			Avg. of WEFA/Sroge Estimates for Mail Order/Direct Marketing Sales		
	Annual Sales	Y/Y Growth		Annual Sales	Y/Y Growth	% of Total Retail	Annual Sales	Y/Y Growth	% of Total Retail	Annual Sales	Y/Y Growth	% of Total Retail
1980	\$957,350	--		\$28,750	--	3.0%	\$22,786	--	2.4%	\$25,768	--	2.7%
1981	1,038,698	8.5%		31,560	9.8%	3.0	23,555	3.4%	2.3	27,558	6.9%	2.7
1982	1,070,747	3.1		34,070	8.0	3.2	23,819	1.1	2.2	28,945	5.0	2.7
1983	1,170,163	9.3		37,430	9.9	3.2	25,298	6.2	2.2	31,364	8.4	2.7
1984	1,286,914	10.0		41,420	10.7	3.2	27,810	9.9	2.2	34,615	10.4	2.7
1985	1,375,027	6.8		45,300	9.4	3.3	28,275	1.7	2.1	36,788	6.3	2.7
1986	1,449,636	5.4		49,700	9.7	3.4	30,283	7.1	2.1	39,992	8.7	2.8
1987	1,541,299	6.3		54,200	9.1	3.5	35,913	18.6	2.3	45,057	12.7	2.9
1988	1,656,202	7.5		63,500	17.2	3.8	40,476	12.7	2.4	51,988	15.4	3.1
1989	1,758,971	6.2		73,000	15.0	4.2	43,637	7.8	2.5	58,319	12.2	3.3
1990	1,844,611	4.9		81,700	11.9	4.4	45,632	4.6	2.5	63,666	9.2	3.5
1991	1,855,937	0.6		91,500	12.0	4.9	49,066	7.5	2.6	70,283	10.4	3.8
1992	1,951,589	5.2		100,600	9.9	5.2	55,183	12.5	2.8	77,892	10.8	4.0
1993	2,075,083	6.3		112,670	12.0	5.4	58,415	5.9	2.8	85,543	9.8	4.1
1994	2,231,233	7.5		126,200	12.0	5.7	64,031	9.6	2.9	95,116	11.2	4.3
1995	2,340,817	4.9		138,800	10.0	5.9	69,770	9.0	3.0	104,285	9.6	4.5
1996	2,465,409	5.3		155,480	12.0	6.3	71,048	1.8	2.9	113,264	8.6	4.6
CAGR												
1980-96	6.1%			11.1%			7.4%			9.7%		

Sources: (a) WEFA, (b) Maxwell Sroge Company.

that users may share or use multiple devices — in fact (as these estimates demonstrate), IDC believes the ratio of devices to users will rise over time as more Internet-enabled devices enter the home (extra PCs, video games, Web TVs, and the like).

- Growth of users and devices outside the U.S. should be even more substantial than growth within the U.S. — IDC believes that the percentage of total Web users in the U.S. will drop from 77% at the end of 1995 to 50% by the end of 2000.
- The percentage of users buying goods and services on-line will rise from 24% at the end of 1995 to 28% by the end of 2000, with some dampening as a result of the influx of international users. IDC expects the percentage of users in the U.S. who are “buyers” to grow from 29% to 45% in the same period.
- This increase in the number of Web buyers and the average transaction size will combine to create a rapid increase in the amount of commerce conducted over the Web — from \$318 million during 1995 to \$95 billion during 2000. IDC estimates a December 1995 Internet commerce revenue run-rate of \$1 billion, and predicts it will be \$117 billion in December 2000.
- IDC’s primary research indicates that already one-third of Web transactions are completed over the Web (as opposed to by fax or phone). By 2000, that fraction should be much greater than two-thirds.

4) Forrester Forecast

In a super low-ball, likely inaccurate (in our view) forecast, Forrester Research has projected revenues from U.S. online consumer shopping to rise from \$530 million in 1996 to **\$7 billion by 2000E** (Table 4-5). Forrester has also estimated total business-to-business commerce will grow from an estimated \$600 million in 1996 to \$66 billion in 2000.

Table 4-2

U.S. Total Retail Sales: Maxwell Sroge Estimate for U.S. Consumer Mail-Order/Direct-Marketing Sales

Year	Total Wholesale Sales (a)		Business-to-Business Mail Order/Direct Marketing (b)		
	Annual Sales	Y/Y Growth	Annual Sales	Y/Y Growth	% of Wholesale
	1980	\$1,117,187	--	\$17,580	
1981	1,214,156	8.7%	18,680	6.3%	1.5
1982	1,142,535	(5.9)	19,770	5.8	1.7
1983	1,190,705	4.2	23,120	16.9	1.9
1984	1,346,392	13.1	27,500	18.9	2.0
1985	1,361,507	1.1	31,050	12.9	2.3
1986	1,379,514	1.3	34,910	12.4	2.5
1987	1,475,613	7.0	43,090	23.4	2.9
1988	1,614,249	9.4	53,220	23.5	3.3
1989	1,725,123	6.9	64,900	21.9	3.8
1990	1,794,072	4.0	73,630	13.5	4.1
1991	1,779,673	(0.8)	89,160	21.1	5.0
1992	1,849,798	3.9	109,740	23.1	5.9
1993	1,940,175	4.9	139,700	27.3	7.2
1994	2,075,678	7.0	172,980	23.8	8.3
1995	2,265,732	9.2	210,070	21.4	9.3
1996	2,420,679	6.8	257,740	22.7	10.6
CAGR 1980-96	5.0%		18.3%		

Sources: (a) WEFA, (b) Maxwell Sroge Company.

Table 4-3

Morgan Stanley — Estimated Web Users vs. Transaction/Goods and Service Revenue; Market Data Focused on Consumer Market, 1995–2000

	1995	1996	1997E	1998E	1999E	2000E
Estimated Web Users (MM)	9	28	46	82	134	157
Estimated Pct. of Users Transacting	10%	14%	20%	30%	35%	45%
Estimated Web Users Transacting (MM)	0.9	4	9	25	47	71
Annual Transaction/Goods & Service Spending per User Transacting (\$)						
- Low Case	\$50	\$150	\$200	\$225	\$250	\$300
- Mid-Case	50	150	250	300	400	500
- High Case	50	150	300	400	600	800
Total Annual Transaction/Goods & Service Spending (\$MM)						
- Low Case	\$45	\$601	\$1,840	\$5,535	\$11,725	\$21,195
- Mid-Case	45	601	2,300	7,380	18,760	35,325
- High Case	45	601	2,760	9,840	28,140	56,520

E = Morgan Stanley Equity Research.

Table 4-4

IDC — Worldwide Internet Commerce Estimates, 1995–2000E

	December						1995 - 2000 CAGR (%)
	1995	1996	1997	1998	1999	2000	
World Wide Web devices (MM) (1)	13	30	66	106	168	233	79%
% of installed base (2)	6%	12%	22%	30%	41%	48%	--
World Wide Web users (MM) (3)	16	35	69	95	129	163	59
World Wide Web buyers (MM) (4)	4	9	18	25	35	46	64
Web buyers / Web users	24%	26%	26%	26%	27%	28%	--
Run rate (\$/year/buyer) (5)	284	599	1,157	1,593	2,033	2,558	55
Commerce run rate (\$B) (6)	1	5	21	40	71	117	154
Commerce by Segment (\$B) (7)							
Home	0.5	2	8	15	25	37	139
% of total	44%	40%	39%	37%	35%	32%	--
Business (8)	0.6	3	13	25	46	79	164
% of total	56%	60%	61%	63%	65%	68%	--
World Wide Web pages (MM) (9)	18	72	268	502	805	1,142	19

(1) The number of devices accessing the Web at least quarterly. (2) The percentage of total PC and Internet access device installed base accessing the Web. (3) The numbers of users accessing the Web (users may share or use multiple devices). (4) The number of users actually buying goods and services via the Web (funds transfer and stock trading are excluded.) (5) Annualized amount spent per buyer in December of year. (6) Annualized commerce in December of year. (7) Commerce by segment are IDC estimates of commerce taking place at home versus commerce conducted at various places of business. This is not IDC's estimate of consumer versus business-to-business commerce (as users purchasing from home may do so for business reasons and users may make consumer purchases from work). (8) Business segment includes all size businesses, federal, state, and local government, and education. (9) The total number of URLs on the Web.

Source: International Data Corporation.

Among the various consumer retail categories that Forrester focused on, computer products, travel, and entertainment capture 70% of estimated total spending in 2000 (Figure 4-2). Forrester's estimates of consumer-based sales do not include information, banking, investing, or financial products.

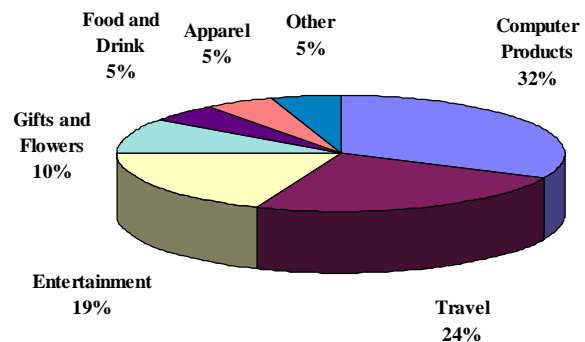
Table 4-5

Forrester's View of U.S. Online Consumer Shopping Revenues, 1996–2000E

(\$ Millions)	1996E	1997E	1998E	1999E	2000E
Computer Products	\$140	\$323	\$701	\$1,228	\$2,105
Travel	126	276	572	961	1,579
Entertainment	85	194	420	733	1,250
Gifts and Flowers	45	103	222	386	658
Food and Drink	39	78	149	227	336
Apparel	46	89	163	234	322
Other	37	75	144	221	329
Total	\$518	\$1,138	\$2,371	\$3,990	\$6,579

Note: This data does not include online fees from intermediaries, which Forrester has estimated at \$10 million in 1996 and \$590 million in 2000, bringing total estimated U.S. online consumer shopping revenues in 2000 to \$7.1 billion. Source: Forrester Research, October 1996.

Figure 4-2

Forrester's View of U.S. Online Shopping Revenues By Category in 2000E

Source: Forrester Research.

Chapter 5: Where Do Users Spend Their Time Online?

Summary

- ◆ According to PC Meter's February survey, **the most popular Web sites based on reach were the Excite Group, AOL, Yahoo!, Netscape, and Microsoft** — we believe the highly trafficked Web sites are the Internet equivalent of Madison Avenue real estate.
 - ◆ From July 1996 through February 1997, **those categories of Web sites that saw the greatest growth in reach** included **Travel and Tourism** sites like Travelocity and American Airlines (up 93%, to 16% reach), **Shopping-specific** sites like Amazon.com and Shareware.com (up 54%, to 31% reach), and **Marketing and Corporate** sites like Netscape and Real Audio (up 49%, to 66% reach).
 - ◆ Shopping and shopping-related activities are becoming increasingly popular online — a recent CommerceNet survey indicated that **approximately 73% of Web-using respondents spent some percentage of their online time searching for information about specific products or services**. Of this group, 53% went on to make an actual purchase (either online or offline), and 15% actually made a purchase online.
 - ◆ **Of those Web users who have made a purchase (either online or offline)** as a result of looking at a Web site, 37% spent less than \$100, while 31% spent \$500 or more. **Convenience is clearly an important factor stimulating online shopping**, as 69% of the respondents who have purchased products or services on the Web in the past, or believe they are likely to do so in the future, cite convenience as a major factor.
-

Where Do Users Spend Their Time Online?

Given the difficulty of Web measurement in these first few years, a great deal of Internet data remain somewhat suspect. For data on consumer traffic across Internet sites, we think the best current proxy are the data on audience "reach" collected by PC Meter. PC Meter tracks online consumer traffic (no business users are included) via software it has installed on PCs in roughly 9,000–10,000 homes. PC Meter ranks the top sites based on a measurement called "reach," which is defined as the percentage of the total available audience in a given time period that makes a request at that site. (PC Meter data are strictly a consumer measurement, and therefore can be somewhat skewed based on the method of selection for the user sample).

According to PC Meter's February survey, the five most popular Web sites based on reach (Table 5-1) were the Excite Group (with a reach of 44.3), AOL (43.5), Yahoo! (38.4), Netscape (36.1), and Microsoft (21.9). Note that the Excite Group is composed of Excite (www.excite.com), WebCrawler (www.webcrawler.com), and Magellan (www.mckinley.com).

PC Meter also tracks the popularity of various Web categories. We have listed the top 10 sites in the "shopping" category in Table 5-2, through we discuss reach data for online shopping sites in particular in much greater detail in our later chapter on emerging and traditional retailers. Keep in mind that these sites are devoted primarily to shopping, and that many sites with shopping components do not neatly fall into these categories (e.g., Dell's site, www.dell.com).

Table 5-1

Top 25 Web Sites Based on Reach, February 1997

Rank	Site	URL(s)	Reach (%)
1	Excite Group	(1)	44.3
2	AOL	www.aol.com	43.5
3	Yahoo! Sites	(2)	38.4
4	Netscape	netscape.com	36.1
5	Microsoft	microsoft.com	21.9
6	GeoCities	geocities.com	18.0
7	Lycos	(3)	17.6
8	Infoseek	infoseek.com	17.0
9	Microsoft Network	msn.com	15.3
10	AltaVista	digital.com	14.5
11	CNET	(4)	11.8
15	ZD Net	(5)	10.5
12	Prodigy	prodigy.com	10.3
13	Compuserve	compuserve.com	9.7
14	Four11	four11.com	8.0
16	AT&T World Net	att.net	7.6
17	Pathfinder	pathfinder.com	7.4
18	Switchboard	switchboard.com	7.0
19	Earthlink	earthlink.net	7.0
20	Netcom	netcom.com	6.8
21	Tripod	tripod.com	5.8
22	PSINet	inter.net	5.7
23	Concentric Network	concentric.net	5.6
24	Disney	disney.com	5.6
25	Angelfire	angelfire.com	5.5

(1) Excite Group consists of www.excite.com, www.webcrawler.com, www.mckinley.com, and www.city.net.

(2) Yahoo! sample includes www.yahoo.com, www.yahoo.co.uk, www.yahoo.jp.co, www.yahooligans.com, www.yil.com, www.bguide.com, and www.unfurled.com.

(3) Lycos sample includes www.lycos.com, www.newsalert.com, www.pointcom.com, and www.topnews.com.

(4) CNET sample includes www.cnet.com, www.gamecenter.com, www.search.com, www.shareware.com, www.download.com, www.news.com, www.activex.com, and www.mediadome.com.

(5) Ziff-Davis sample includes www.anchordesk.com, www.cdrom.com, www.cieurope.com, www.cobb.com, www.compint.com, www.complife.com, www.computerlife.com, www.cshopper.com, www.downloadnow.com, www.egm2.com, www.egmmag.com, www.cdrom.com, www.familypc.com, www.gamespot.com, www.hotfiles.com, www.interactive-week.com, www.macuser.com, www.macweek.com, www.netbuyer.com, www.nuke.com, www.pccomp.com, www.pccomputing.com, www.pcmag.com, www.pcmagazine.com, www.pcmagcd.com, www.pcweek.com, www.pview.com, www.techlocator.com, www.thesite.com, www.topfive.com, www.transfusion.com, www.underground-online.com, www.videogamespot.com, www.wsources.com, www.yahoocomputing.com, www.yil.com, www.zd.com, www.zdbop.com, www.zdil.com, www.zdimag.com, www.zdlabs.com, www.zdnet.com, www.zdtv.com, www.zdu.com, www.ziff-davis.com, and www.ziff.com.

Source: PC Meter.

Table 5-2

Top 10 Shopping-Specific Sites Based on Reach, February 1996

Shopping Domain	Reach (%)	Rank
shareware.com	4.1	1
download.com	4.0	2
columbiahouse.com	3.7	3
amazon.com	2.9	4
hotfiles.com	2.7	5
surplusdirect.com	2.4	6
freeride.com	1.7	7
jumbo.com	1.5	8
gw2k.com	1.4	9
bluemountainarts.com	1.3	10

Source: PC Meter.

Shopping Use Is Rising Steadily on the Web

Shopping (which we specifically define as the seeking of information about a product or service one is considering buying) appears to be rapidly becoming one of the most popular online activities. Just as browsing through the local mall can be considered shopping (even if no purchases are made), so can browsing on the Web.

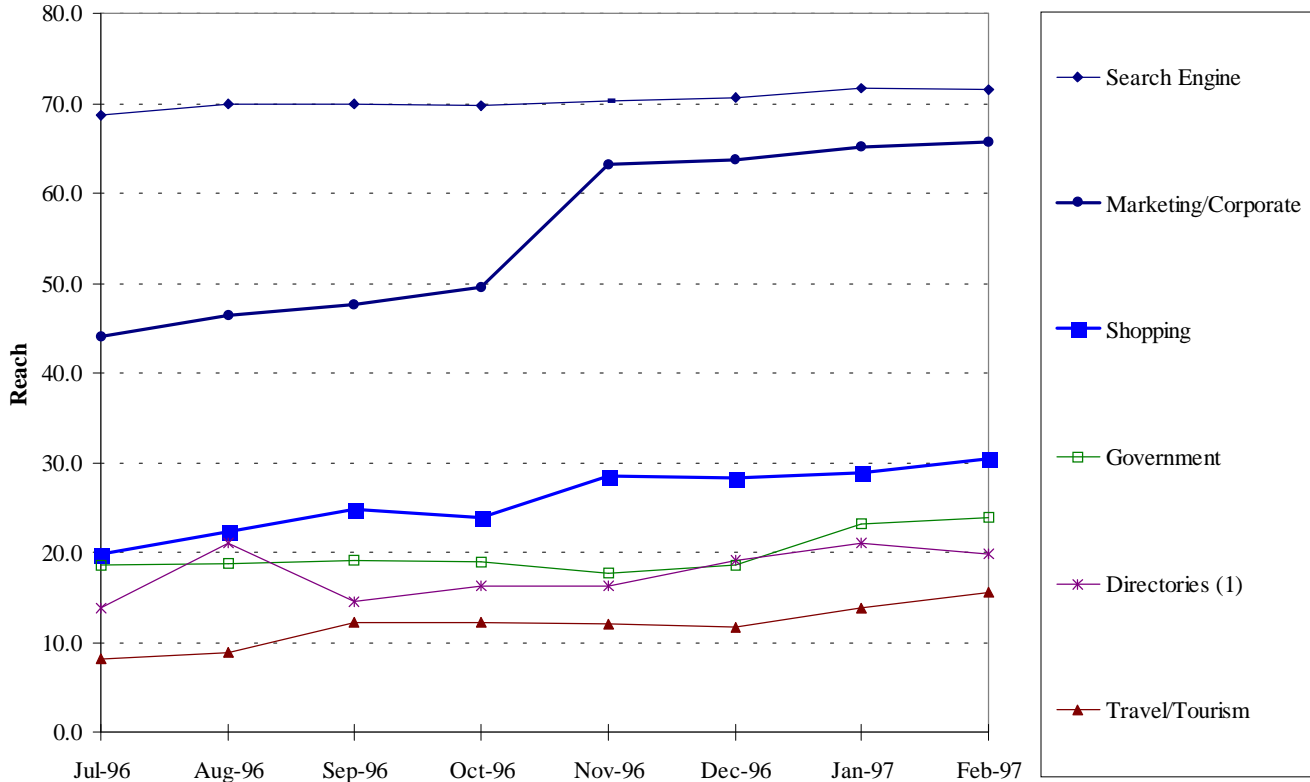
An important part of the purchasing process for many consumers is gathering product, pricing, and service information before making a purchase, and we think the Web provides an efficient and effective means for doing so.

While the rate of growth of such information search-and-retrieval is likely growing at a much quicker pace than actual online transactions (i.e., *shopping* online is definitely more popular than *buying* online), we believe that, as more efficient, reliable payment methods evolve and become more widely available (and consumer confidence in the security of these transactions increases), transactions will also begin to ramp.

And the Surveys Say... Many Users Are Already Shopping

A recent CommerceNet/Nielsen survey revealed what we believe are some interesting insights into the current state of online shopping and buying (we include these data for their directional significance, not necessarily as exact estimates; Web measurement remains an inexact science). The survey indicates that approximately 73% of Web-using respondents spent some percentage of their online time searching for information about specific products or services. Of this group, 53% went on to make an actual purchase (either online or offline) and 15% actually made a purchase online.

Figure 5-1
Trended Reach (%) for Various Web Site Categories*



(1) August 1996 included att.net in directory classification.

* Reach data tracked by PC Meter.

The survey also focused on demographics, and found that: 1) the majority of online shoppers surveyed were males aged 25 to 49; 2) males were more likely to search for product information online than females (80% versus 63%), and were more likely to do so prior to making an actual purchase (58% versus 43%); and 3) adults aged 25 to 49 were most likely to search for product information, compared with both older and younger respondents (81% versus 63%). The survey's results showed that women comprised only 38% of the respondents who had used the Web in the past six months, and indicated that for these women, the Web had not yet provided as compelling a shopping experience as it does for men. Only 8% of female Web users had made an online purchase, compared with 18% of male Web users.

According to PC Meter, which tracks the Web surfing habits of a consumer sample of about 9,000–10,000 households, the percentage of its consumer-based sample of the

Web audience that visits shopping-specific sites has been rising (Figure 5-2 and Table 5-3). In February, 1997, **shopping-specific sites as a category had a reach (defined as the percentage of the user sample that visited a shopping-related site) of 31% among the U.S.-based consumers surveyed and ranked 8 times among the 12 most used categories of Web service.** This means that 31% of PC Meter's user sample visits sites that are *exclusively* for shopping and buying — the real percentage of users “shopping” online, using our definition above, is much higher, as many of the sites where shoppers go (such as Dell, Cisco, Microsoft, American Airlines, Yahoo!, or AOL Marketplace's 1-800-Flowers or Tower Records areas) are not limited to shopping and are thus are not categorized by PC Meter in its shopping category.

From July 1996 through February 1997, the categories of Web sites that saw the greatest change in their reach were as follows:

- *Travel/tourism sites* (e.g., Travelocity, American Airlines) saw reach grow 93% over the seven months, or 13% per month, from 8% reach in July 1996 to 16% in February 1997.

- *Shopping-specific sites* (e.g., Shareware.com, Amazon.com) expanded their reach 54%, or 8% per month, from 20% in July 1996 to a reach of 31% in February 1997.

- *Marketing/corporate sites* (e.g., Netscape, Real Audio), saw reach grow 49%, or 7% per month, from 44% reach in July 1996 to 66% in February 1997.

Although these shopping-specific and travel/tourism sites have a relatively low reach compared with search engines, marketing/corporate sites (many of which offer product and service information for shoppers), and news/information/entertainment sites, we view the upward trend in the share of Web users that visit these sites as very positive.

Table 5-3

Trended Reach for Selected Web Site Categories:**(Ranked by Average Monthly Percentage Change in Consumer Audience Reach, July 1996 – February 1997)**

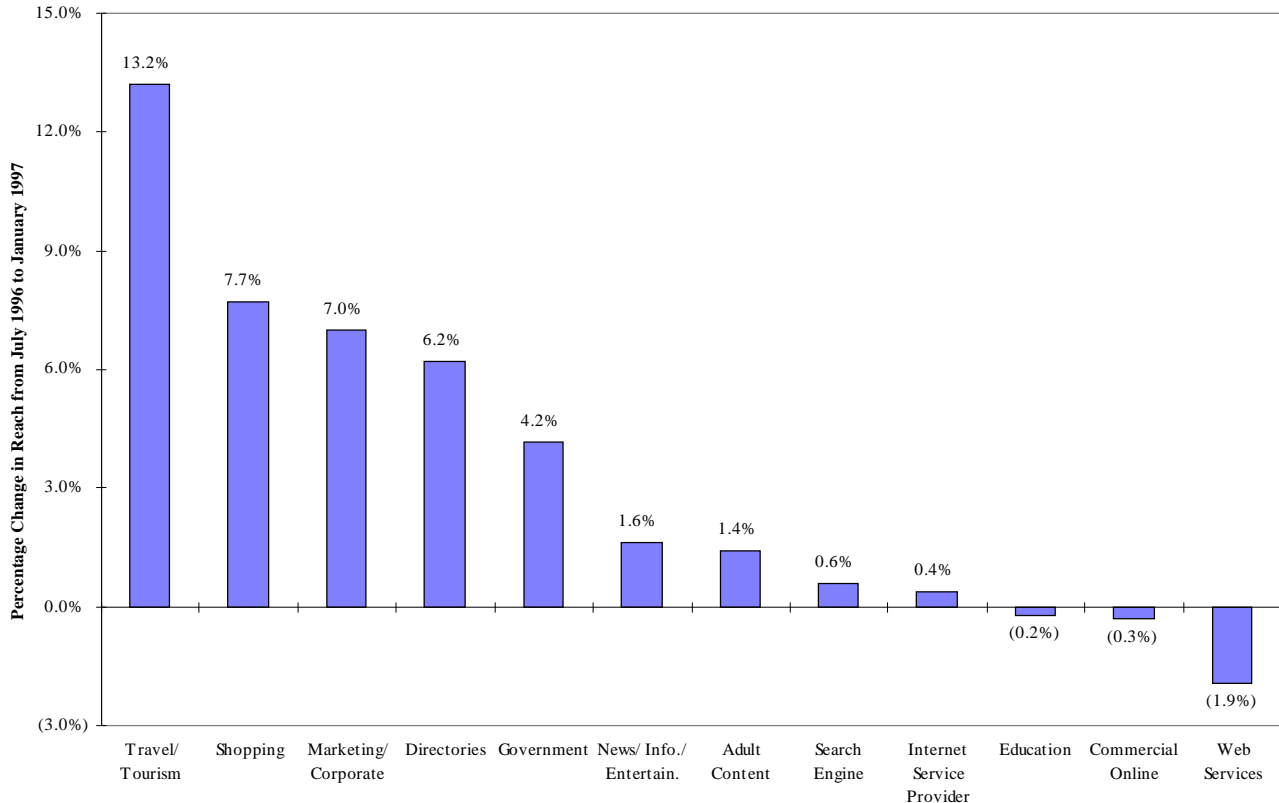
Web Classification	Reach (%)								Change from 7/96 to 2/97	Avg. Monthly Change from 7/96 to 2/97
	Jul-96	Aug-96	Sep-96	Oct-96	Nov-96	Dec-96	Jan-97	Feb-97		
Travel/ Tourism	8.1	8.8	12.3	12.3	12.1	11.6	13.8	15.6	93%	13.2%
Shopping	19.8	22.3	24.8	23.9	28.5	28.4	28.8	30.5	54	7.7
Marketing/ Corporate	44.0	46.4	47.6	49.5	63.1	63.8	65.2	65.6	49	7.0
Directories	13.8	21.0	14.6	16.3	16.3	19.1	21.0	19.8	43	6.2
Government	18.5	18.7	19.1	19.0	17.7	18.5	23.1	23.9	29	4.2
News/ Info./ Entertain.	54.0	54.8	56.3	55.0	57.6	58.8	60.5	60.1	11	1.6
Adult Content	23.0	23.0	24.3	25.8	24.5	26.8	26.5	25.3	10	1.4
Search Engine	68.7	69.9	70.0	69.8	70.2	70.6	71.7	71.5	4	0.6
Internet Service Provider	56.9	57.4	59.1	58.2	58.0	58.1	57.8	58.4	3	0.4
Education	46.3	45.6	46.4	46.2	45.0	44.9	45.7	45.6	(2)	(0.2)
Commercial Online	61.9	62.2	61.5	61.5	61.9	63.0	62.3	60.6	(2)	(0.3)
Web Services	62.5	61.7	62.2	62.2	53.1	53.2	54.5	54.0	(14)	(1.9)

Reach for a Web site is defined here as the percentage of the user sample that visited a specific site in a given month.

Source: PC Meter

Figure 5-2

Average Monthly Percentage Change in Consumer Audience Reach for Selected Web Site Categories July 1996 to February 1997



Reach for a Web site is defined here as the percentage of the user sample that visited a specific site in a given month.
Source: PC Meter

User Buying Habits

Of the 15% of respondents in the Commerce Net/Nielsen survey who have made a purchase online, most (68%) spent less than \$100 on their latest purchase, while a sizable number (7%) spent over \$500. Of those Web users who have searched for information online and then made either an online or offline purchase, 37% spent less than \$100, while 31% spent \$500 or more. Also, 79% of respondents expressed satisfaction with their online purchases (though the survey provided no comparable offline purchase satisfaction data). Of the satisfied group, 51% indicated that convenience was their primary cause for satisfaction.

Convenience seems to be the most significant driver of online purchases — in fact, 69% of respondents who have purchased products or services on the Web in the past, or believe they are likely to do so in the future, cite convenience as a major factor for doing so.

As for what users are buying, the survey respondents' top three categories of merchandise for online and offline purchases (Figures 5-3 and 5-4), ranked computer hardware and software as the most popular, followed by cars and auto parts and home electronics. This confirms much of the anecdotal data we have gathered from retail sites (and maps well to many of the sites we profile in our earlier chapter profiling some of the latest and greatest Internet retailing brands) and correlates well with many of the highly ranked shopping sites in PC Meter's survey.

The survey also indicates that categories such as cars and home electronics are very popular with those seeking out information, but are not the type of items that are actually purchased online. While computer hardware and software still ranks first overall, other categories, such as books, magazines, and newspapers, as well as clothing, do much better in terms of those items actually purchased online.

Figure 5-3

Commerce Net/Nielsen Survey — Respondents’ Top 3 Categories of Merchandise For Online and Offline Purchases, in Aggregate and by Gender and Age

	Total	Male				Female			
		16-24	25-34	35-49	50+	16-24	25-34	35-49	50+
Computer Hardware & Software	1	1	1	1	1	3	1	2	1
Cars & Auto Parts	2		2	2	2		2	1	
Home Electronics	3	3	3	3				3	
Clothing & Personal Items						1			2
Entertainment & Recreation		2							
Books, Magazines & Newspapers						2			3
Travel					3				
Music							3		
Sports Tickets & Miscellaneous									
Financial									
Household Furnishings & Items									
Food & Drink									

1 = Most popular category
2 = 2nd most popular category
3 = 3rd most popular category

Source: CommerceNet/Nielsen Media Research

Figure 5-4

Commerce Net/Nielsen Survey — Respondents’ Top 3 Categories of Merchandise For (Strictly) Online Purchases, in Aggregate and by Gender and Age

	Total	Male				Female			
		16-24	25-34	35-49	50+	16-24	25-34	35-49	50+
Computer Hardware & Software	1	1	1	1	1			1	2
Cars & Auto Parts									
Home Electronics									
Clothing & Personal Items	3	3		2	3	2	2		3
Entertainment & Recreation		2							
Books, Magazines & Newspapers	2		2	3	2	1	1	2	1
Travel									
Music									
Sports Tickets & Miscellaneous						3			
Financial			3						
Household Furnishings & Items								3	
Food & Drink							3		

1 = Most popular category
2 = 2nd most popular category
3 = 3rd most popular category

Source: CommerceNet/Nielsen Media Research