The Effects of Technology on Retail Sales, Commercial Property Values and Percentage Rents

John S. Baen
Professor
FIREL Department
PO Box 310410
Denton, TX 76203-0410
Phone: 940-565-3071
Fax: 940-565-4234
E-mail: baen@unt.edu
URL: www.coba.unt.edu/firel/baen

ABSTRACT

This study examines the impact of E-Commerce and the effect of technology on traditional retail sales, commercial property values and percentage rents. This study analyzes standard retail leases and seek evidence of retailers shifting on-site sales to off-site E-Commerce and catalog operations. The results indicate that of those surveyed, most shopping center owners, managers and leases contain no provisions for these sales which have value implications to owners. In addition, this study presents both theoretical concepts and empirical results that suggest commercial leases need to be altered to account for on-line and catalog sales. Alternative uses for vacant bank buildings and retail spaces are suggested as well as specific recommendations to owners / tenants to reduce the threat of E-Commerce to retail centers.

INTRODUCTION

E-Commerce is causing a leakage of retail sales at traditional retail locations. That is, many E-Commerce sales are occurring at traditional retail locations and are recorded as catalog sales or computer sales for next day pickup or delivery directly to customers' homes. The sales information is often logged off site at the tenant's national data center, although the physical retail center was the procuring cause or point of contact for the sale. The results are loss of on-site sales information, reduced tabulation of gross sales per square foot reported to the property management company / owners and potential loss of percentage rents.

The potential effects of E-Commerce on traditional retail property values could, eventually be profound and be a result of two (2) primary aspects:

1. More off-site retail sales resulting in less foot traffic, lower impulse sales by non-anchor tenants, lower profit margins due to comparative web shopping, greater competition, lower profit margins for tenants, and eventually higher vacancies.

2. More on-site retail sales that are accounted for as off-site or catalog sales or computer orders.

It can be assumed that every Internet sale equates to a loss of gross sales revenue reported to or attributed to traditional retail property and/or a reduction of catalog sales. This assumes that at any given time, there is only a finite amount of retail sales or catalog sales and disposable income per household and that traditional retail sales can only be maintained if the economy expands at an increasing rate, faster than the growth of E-Commerce.

Review of Literature

The implications of technology and the predicted downsizing of the various commercial and residential real estate professions (Baen and Guttery 1997) have not noticeably occurred except in the lending / banking and title insurance areas (Power 1998). Mergers and technological efficiencies have contributed greatly to increasing vacant branch bank facilities either within malls or on pad sites within the immediate area of major retail properties. Alternative uses of vacant retail centers and bank buildings have become common topics in the main stream press (Brown 1998) and has become a priority topic for funded research (ICSC Priority Research Topic 1999).

Major national retailers are either closing stores and moving to the Internet (Tandy / Halkias 1999) or major moves to begin or expand on-line sales within existing retail operations (J.C. Penney, Wal-mart, Radio Shack, etc.).

While the trend is occurring faster than the traditional academic journal articles can be published, the main stream press is full of references that are causing real concern to shopping center owners, retail leasing agents and property managers. Examples are as follows:

"REIT Interest - Will the Internet Kill All the Shopping Centers?" (Martinez 1999 / Wall Street Journal)

"Rural Residents Find Internet Closer Than Malls." (Associated Press 1998)

"PRICE WAR! Dozens of new web sites want to help on-line shoppers compare prices - much to the irritation of retails." (Woolley 1998)

"Why Real Estate Should Fear the Future." (Reifenberg 1997)

The countless similar main stream press references have added significant anxiety to traditional retailers and property owners. Prestigious real estate and E-Commerce consultants however are monitoring profits and cost savings for clients and finding major changes in the perception of the traditional sticks and bricks approach to retailing / marketing.

"There's oodles and oodles of business-to-business success stories, however," says Steven Johnson, Director of E-commerce at Anderson Consulting in Chicago. "Our studies show that companies such as Dell Computer, Charles Schwab and Cisco Systems, companies that have moved aggressively towards E-commerce models, are enhancing revenues [generally by 10 to 20 per cent], cutting costs [20 to 45 per cent] and reducing working capital and physical infrastructure requirements [20 to 60 per cent]." *Calgary Herald*, November 10, 1998

The E-Commerce battle is not just between retailers and landlords but major manufacturers are also going on-line and bypassing distributors, wholesalers, and retailers.

"Chaotic Battle Looming - If various merchants can't separate themselves from the pack, they are likely to transform most on-line markets into low-margin commodity businesses. Price cuts will become the main weapon in a chaotic battle for market share" *(Wall Street Journal*, July 29, 1998).

Historical and Contemporary Overview

The traditional retail center or mall is made up of five (5) major components of which the physical real estate itself (the sticks and bricks) is but one [See Exhibit 1: "The Retail Center Concept Under Fire by Technology"]. The sword of technology and the retail property [See Exhibit 2] has clouded the real estate analyst's vision to project future rents, percentage rents and therefore property values. Percentage rents have traditionally been a hedge against inflation and often form the upside potential for negotiating higher base rents at the end of a lease term.

In the past, retail center planners, investors and financing firms have concerned themselves with buildings that would:

- Lease to tenants with the value added upside and inflation hedge of percentage rents based on gross sales at the point of purchase.
- Offer a tenant mix and design that enhanced both destination and impulse buying.

- Offer visitors a pleasant and entertaining activities to create the atmosphere of a visit to the retail center as an event rather than an errand or occurrence.
- Offer easy and safe access, parking and pleasant shopping experiences.
- Cash flow and appreciation of the sticks and bricks through property management, facilities maintenance, marketing of the retail center, and upside prospects of rents (contract and percentage).

These basic objectives of retailing evolved from central city locations and migrated to the suburbs of most U.S. metropolitan areas over the last sixty years [Exhibit 3]. The blossoming of the suburban retail centers has most often been at the expense of inter-city retail tenants, property owners and loss of tax base for the central cities.

More recently, suburban regional malls have overbuilt with multiple malls within one region competing for a finite amount of disposable income dollars within that region. The battle of the bigger, better, newer, greater number of tenants mega malls have also been met with a discount malls and discount retailers' war with Wal-mart, Sam's Discount Stores, etc., etc. The American shopper and mall developers have been confronted with high dollar demographics / location / prices vs. discount warehouse retailing.

The evolution of retail sales to E-Commerce has added a third dimension to competitive product viewing and retailing that goes far beyond the physical and locational factors of the traditional retail location [See Exhibits 3 & 4] combined with a downward movement of prices to a single world price for many items, accompanied with smaller profit margins. There are new threats to retail property values as a result of technology (See Exhibit 4).

Early indications are that the following tenant profiles have been most affected by E-Commerce giving them technological efficiencies that will change the potential tenant mix and profitability from traditional spaces leased to this type of retailers. Tenants, retailers and service providers that have been seriously affected to date by technology and therefore their profitability and ability or willingness to pay rents:

  - Bookstores - Amazon.com
  - Travel Agencies - Sabor / American Airlines / Southwest Airlines
  - Record, Tapes and CD Stores
  - Automobile Dealerships
  - Banks - Non-Banks (branch closings due to mergers, ATM machines, etc.)
  - Stock Brokerage and Investment Firms (E-trades)
  - Computer Stores (Dell Computer)

- Flower Shops
- Up and Comers
  - Grocery Stores
  - Drug Stores and Pharmacies
  - Electronic Stores / Radio Shacks, etc.

Retail real estate owners must be on guard not to underestimate the effects of E-Commerce on traditional retailing. Potential short term value and commercial real estate professional's employment implications using conservative E-Commerce gross sales figures appear to be significant (See Exhibit 5). Typical deadly retail owner perceptions collected from recent interviews with members of the International Council of Shopping Centers (ICSC, November 1998):

- "Technology is no threat to my portfolio. It's my tenant's problem."
- "The web will never replace the need for human contact."
- "Excellent customer service and property management will protect my centers from the 'threat' of technology."
- "My retail center's web page will maintain a fresh flow of visitors to our mall and our retail tenants."
- "My retail tenants would never make electronic purchases for customers that would register sales 'off the books' to avoid percentage rents."

<u>EXHIBIT A - SURVEY OF DATA: RETAIL PROPERTY MANAGERS, LEASING AGENTS, DEVELOPERS, AND INVESTORS</u>

Approximately 111 commercial retail professionals and owners that attended an International Council of Shopping Centers (ICSC) meeting in November 1998 on the subject of "The Future of Retailing" completed the attached questionnaire [See Exhibit 6]. The results [see Exhibit 6] were both interesting and important in terms of the attitudes of those persons perhaps closest to ground zero of the implications of E-Commerce on retail property.

The results are attached with both statistical and written comments offered. Their perceptions and retail center technology levels are apparent. (See Exhibit 7) Their conclusions as to the future of shopping centers as investments at prevailing CAP rates are startling. It should be noted that 58% of the respondents were retail property managers and leasing agents (24% and 34%, respectively) with 24% being developers and only 3% being investors / owners.

<u>LONG TERM VALUE IMPLICATIONS: A THEORETICAL ILLUSTRATION</u>

The following work by Cruickshank and Baen (1999) involves simple assumptions but drives home the point that the present value of a theoretical retail center losing either percentage rents and/or retail rental increases due to E-Commerce, technologies, etc., is substantial.

"Based on the projections of future Internet commerce previously mentioned, this example provides a fairly conservative estimate on how retail real estate values could be affected by a changing retail industry. Using the underwriting assumptions for each prospective case, a dramatic change in value is calculated. In Case 1, normal underwriting standards of today are used to calculate the value of the shopping center. Using these general policies, a value of $10,373,634 is calculated. In Case 2, the potential affects of online shopping are introduced, larger vacancy rates and reduced rent growth, indicating a value of $7,799,103. Therefore, under these general assumptions, the current value of the shopping center is reduced by 25%.

Are these projections and calculations on the effect of online shopping a real threat to the retail real estate industry? In observing what has already happened to the stock brokerage, travel, and banking industries due to Internet communications, the answer is yes, it is only a matter of time. The primary holdback to online shopping today is consumer's fears about transmitting credit card information between computer terminals. Industry participants are attempting to reduce these fears by emphasizing the safety of online transfers in comparison to the accepted method of verbally furnishing credit card information over the telephone. It is assumed that new technology and security devices will help ease these fears, however, it will take some time before the majority of the Internet population feels comfortable giving credit card information online.

This example (See Table 1) is for presentation purposes to estimate the potential effects online shopping could have on the underlying value of a general shopping center. It assumes a fully occupied 100,000 square foot shopping center with current lease rates of $10.00 per square foot net. Expenses are assumed to be $3.00 per square foot growing at a projected inflation rate of 3.0% annually. No capital expenses or tenant turnover are assumed. The analysis estimates the value of the center by discounting back the estimated future cash flows at a discount rate of 11.0%. The property is assumed to sell at the end of the tenth year at a 9.0% cap rate on year 11's net operating income.

Case 1: Traditional Underwriting Assumptions

Rental Rate: $10.00 psf increasing at 3.0% annually

Vacancy Rate: 7% of gross potential revenue

Case 2: Potential Underwriting Assumptions with Affect of Online Shopping

Rental Rate: $10.00 psf remaining flat throughout the term due to loss of rental increases and/or percentage rents due to growth of E-Commerce.

Vacancy Rate: 15% of gross potential revenue. Vacancies increase due to a theoretical 8% loss of tenants due to E-Commerce, travel agencies, bookstores, music stores, etc."

<u>OBSERVATIONS / AREAS OF CONCERN / AND RECOMMENDATIONS</u>

1. On-line sales and ordering are occurring at physical retail centers that are the procuring cause of the sale. Owners must restructure leases to capture some portion of these sales and at the least, the gross sales information. On-line sales are also occurring in shopper's homes after being viewed in retail centers. It would be difficult if not impossible to capture income from these home E-Commerce sales that were showcased in malls unless entrance fees were charged or leases were also based on numbers of shoppers entering the facilities.

2. The convenience, selection of goods, downward movement of prices and faster home delivery systems available through on-line sales to consumers will increasingly compete with traditional retail sales.

3. Customer service at traditional malls has been dwindling over recent years. The quality, vitality and enthusiasm of sales clerks has been declining due to low pay, high U.S. employment rates, and lack of training. Many sales

clerks are order takers at best and many actually offend shoppers with poor manners and service. Landlords and retailers need to form alliances to improve customer service throughout the retail center through new training and incentive based sales programs. However, with falling profit margins (due to E-Commerce comparative shopping services) this may prove uneconomical.

4. Malls need to become more family oriented with free computer rooms for games and/or homework rooms for children of shopping parents. Perhaps the commuters might not be connected to the Internet to eliminate comparative shopping or ordering on-line!

5. Improvement in customer service and information desks need to be accomplished through better, faster, more efficient information:

a. sales (actual sales)

b. community information

c. community demographics

d. special services for mall visitors

6. Posted prices in traditional retail stores are becoming negotiable by shoppers carrying on-line comparative price lists by competitive store or E-site by name and location. Store managers often match the lowest price on the list (McIntyre 1999). At least one major retailer (Barnes & Noble) is practicing this E-Commerce leakage technique. This may turn American retail centers into oversized Mexican markets or Middle Eastern bazaars where everything is negotiable. Gross sales figures and percentage rents may increase while tenants go bankrupt due to super competitive E-Commerce pricing and crashing merchant profit margin. Wireless, customer hand-held comparative price shoppers are currently being tested on the East Coast.

"When she's in the market for a bestseller, she searches online book sites like Amazon.com, prints up the best price and then marches into Barnes & Noble to get them to match it. If a salesperson balks, not to worry. She asks to see the store manager, who invariably okays the deal. "The cashiers are often amazed," muses the 43-year-old McIntyre. "They'll say, 'I had no idea we did that!'" (McIntyre 1999).

CONCLUSIONS AND RECOMMENDATION

Traditional malls and retailing are being challenged by E-Commerce. Their continued viability, profitability and values as investment grade real estate will require careful research, monitoring and innovations. Retail tenant leases should include or capture some percentage of catalog and/or E-Commerce sales.

Additional research is needed in the areas of monitoring gross sales, on-site E-Commerce sales, profit margins of retail tenants and improvements in mall activities / customer service. If efforts of retail center owners and their tenants are not successful in countering Internet sales, while maintaining profitability and rents, major research in the area of alternative uses of retail shopping centers will be the hot research topic of the future.

REFERENCES

Associated Press, "Rural Residents Find the Internet's Closer Than Malls." *Dallas Morning News*, December 20, 1998, p. H3.

Baen, J.S. and R.S. Guttery, "The Coming Downsizing of Real Estate: Implications of Technology." *Journal of Real Estate Portfolio Management*, Vol. 3 No.1, 1997, p. 1.

Brown, S., "Vacant Center to Be Reported As Office Complex." *Dallas Morning News*, November 2, 1998, p. B1.

Calgary Herald, "Move to Making Money Thru Web Site." *Calgary Herald*, November 10, 1998, p. A1.

Cruickshank, B., and J.S. Baen, "Essay and Observations of E-Commerce and Retail Properties." Unpublished working paper University of North Texas, 1998.

Goldstein, Allen, "E-Commerce May Soar to $380 Billion - 1999's Holiday Shopping Expected to Triple from '98." *The Dallas Morning News*, October 13, 1999, p.1.

Halkias, M., "Tandy Leather's Stores Related Operations Closing - Sales to Continue Via Internet." *Dallas Morning News*, January 9, 1999, p. B1.

Martinez, B., "Will the Internet Kill All the Shopping Centers." *The Wall Street Journal*,February 17, 1999, p. B11.

McIntyre, C., "The Negotiator." *Smart Money - The Wall Street Magazine of Personal Business*, April 1999, p. 102.

Power, S., "Banks to Close 59 Dallas, Tarrant Sites." *Dallas Morning News*, November 4, 1998, p. D1.

REEF, "Strategic Outlook - On-line Retailing and Its Potential Impact on Shopping Center Sales", Number 23, August 1999.

Reifenberg, "Why Real Estate Industry Should Fear the Future." *Wall Street Journal (Southwest Edition)*, September 3, 1997, p. B2.

Wall Street Journal, "Chaotic Battle Looming." *The Wall Street Journal*, July 29, 1998,p. B4.

Woolley, S., "Price War!" *Forbes Magazine*, December 4, 1998, p.182.

Table 1: LONG TERM VALUE IMPLICATIONS: A THEORETICAL ILLUSTRATION

CASE 1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11
Rental Income	1,000,000	1,030,000	1,060,900	1,092,727	1,125,509	1,159,274	1,194,052	1,229,874	1,266,770	1,304,773	1,343,916
Expense Reimbursement	300,000	309,000	318,270	327,818	337,653	347,782	358,216	368,962	380,031	391,432	403,175
Potential Gross Rental Revenue	1,300,000	1,339,000	1,379,170	1,420,545	1,463,162	1,507,056	1,552,268	1,598,836	1,646,801	1,696,205	1,747,091
Vacancy	91,000	93,730	96,542	99,438	102,421	105,494	108,659	1,119,119	115,276	118,734	122,296
Effective Gross Rental Revenue	1,209,000	1,245,270	1,282,628	1,321,107	1,360,741	1,401,562	1,443,609	1,486,917	1,531,525	1,577,471	1,624,795
Expenses	300,000	309,000	318,270	327,818	337,653	347,782	358,216	368,962	380,031	391,432	403,175
Net Operating Income	909,000	936,270	964,358	993,289	1,023,088	1,053,780	1,085,393	1,117,955	1,151,494	1,186,039	1,121,620
Sale Price in Yr. 10 @ 9.0% cap.										12,462,444	
Present Value of Cash Flow @ 11.00%	$818,919	$759,898	$705,130	$654,310	$607,153	$563,394	$522,789	$485,110	$450,148	$4,806,784	
INDICATED VALUE: $10,373.634											

CASE 2	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11

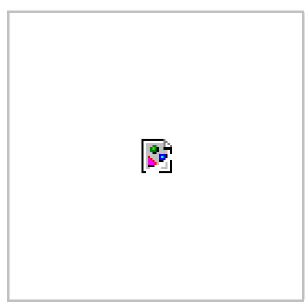
Rental Income	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Expense Reimbursement	300,000	309,000	318,270	327,818	337,653	347,782	358,216	368,962	380,031	391,432	403,175
Potential Gross Rental Revenue	1,300,000	1,309,000	1,318,270	1,327,818	1,337,653	1,347,782	1,358,216	1,368,962	1,380,031	1,391,432	1,403,175
Vacancy	195,000	196,350	197,740	199,173	200,648	202,167	203,732	205,344	207,005	208,715	210,476
Effective Gross Rental Revenue	1,105,000	1,112,650	1,120,530	1,128,645	1,137,005	1,145,615	1,154,484	1,163,618	1,173,026	1,182,717	1,192,699
Expenses	300,000	309,000	318,270	327,818	337,653	347,782	358,216	368,962	380,031	391,432	403,175
Net Operating Income	805,000	803,650	802,260	800,827	799,352	797,833	796,268	794,656	792,995	791,285	789,524
Sale Price in Yr. 10 @ 9.0% cap.										8,772,449	
Present Value of Cash Flow @ 11.00%	$725,225	$652,260	$586,606	$527,530	$474,377	$426,554	$383,529	$344,822	$310,001	$3,368,198	

INDICATED VALUE: $7,799,103

Exhibit 1: **The Retail Center / Mall Concept**

Under Fire by Technology

1. <u>Physical Retail Center</u>



2. <u>Center Anchor Tenants</u>

-Shift to E-Commerce and catalog onsite sales in stores.

-Target for other new E-Commerce firms and virtual discount malls.

3. <u>Property Managers and Leasing Agents</u>

-At risk to competition of on-line leasing / marketing / brokerage web sites.

4. <u>Center / Major Profit Sources: Smaller Tenants</u>

-At risk to less foot traffic.

-Customer shift to competing off-site E-Commerce.

-Declining quality of customer service and sales clerks due to low unemployment rates and low pay.

-Fewer clerks on commission.

5. <u>Shoppers - Consumers</u>

-Targeted for E-

-Increasing total square footage managed per manager due to technological efficiencies.

-At risk to lower leasing commission, brokerage fees and performance-based management fees due to potential decrease in retail center annual revenues and percentages rents.

Commerce sales and catalog sales at their homes and offices.

-Computer based comparative shopping for major items will divert mall foot traffic to other locations with lower rents, operating costs, etc.

-The drive to lower prices and home delivery convenience.

-Large improvements and efficiencies in off-site deliveries (Fed EX, U.S. Mail, UPS, etc.).

Source: John S. Baen, Ph.D., University of North Texas

Presented at the ICSC Conference, Dallas, Texas, November 1998.

Exhibit 2: TECHNOLOGY AND THE RETAIL PROPERTY: The Good, The Bad and The Ugly

Rents

% Rents

Property Value

The Good	The Bad
Efficiency in Transactions and Manufacturing	Layoffs, Fewer Employees, Fewer foot traffic Shoppers
More Informed Shoppers - Quality - Price	Lower Profit Margins and Profits to Tenants
E-Commerce has lower overhead and requires less and less expensive Real Estate.	Gross sales will be reduced, and demand may drop for traditional space.
Exploding Computer Literacy in the U.S.	Decrease in traditional marketing at retail centers?
More On-line Shopping	Faceless Buyers / Sellers and No Customer Service
More Home Based Businesses and Employment	Further displacement of Urban concept and locational factors.

No Salesperson Pressure for Consumer

No Customer Service or chance for add-on sales.

The Ugly

Retail, Catalog and E-Commerce are merging.

Downward Spiral of Prices

Increasing Competition

Enhancement of Distribution

Robotic Order Filling is here.

Exhibit 3: CHANGING RETAIL PERSPECTIVES

1880 - 1980's - Historical Retail Perspectives

Location - Central Cities - Superior Market

Location - Central Cities - Suburban Mix

Location - Suburban - Superior Market

1990 - 1999 - Contemporary Retail Perspectives

Battle of the bigger, better, greater number of tenants largest regional malls vs. Wal-mart, Sam's Discount Stores, etc., for:

Demographics / Location vs. Price-Dominate Regional Mall

Demographics / Location vs. Price-Multiple Malls in One Region

Demographics / Location vs. Price-Super Malls and Freeway Outlet Malls

2000 + Beyond - Future Retail Perspectives

Product viewing locations with product web site ordering address on every product. Web Site Location & 1 World Price, Fed Ex, UPS, etc.

Malls

Airports

Consumers / Users (walking ads)

Media (TV, radio, print, etc.)

Traditional retail locations become places to pick up, return and receive repair service for products ordered on the web.

More traditional retail space dedicated to storage, warehouse, repair areas, and customer service.

Exhibit 4: THREATS TO RETAIL VALUES

A. TRADITIONAL THREATS TO RETAIL VALUES

- Recession
- High Interest Rates / Credit Cards
- Unemployment
- Competing Centers
- Reduction in Consumer Spending
- Changing Neighborhoods / Demographics / Crime / Etc.
- Building Obsolete / Refurbishment
- Lack of Available Financing
- Major Vacancies in a Center (Bank, Branches, Anchors, Etc.)

B. TECHNOLOGY

- Telemarketing / Call Centers in Other States
- E-Commerce
- Consumer Auctions
- Efficient Delivery Systems of Products

- Absolute Lowest Price Information

EXHIBIT 5: SHORT TERM VALUE AND EMPLOYMENT IMPLICATIONS

Implications of E-Commerce on Retail Center Values, Rents, Professionals for the Year 1998 and 2003. (Author's Analysis)

							1999 Estimate[3]	2003 Estimate[3]
1 Estimated E-Commerce Sales 1998	$6,600,000,000[1]	13 Billion[2a]	11 Billion[2b]	7.9 Billion[2c]	12.4 Billion[2d]	11.5 Billion[2e]	31.2 Billion	380 Billion
(2% percentage rents lost or loss of increased rents due to reduced demand for traditional sticks and bricks)	x .02							
Lost Rents (NOI)	$132,000,000	$260,000,000	$220,000,000	$158,000,000	$248,000,000	$230,000,000	$624,000,000	$7.6 Billion
2 PV of Lost Value CAP @ 8% NOI / CAP = Value	<1,650,000,000>	<3,250,000,000>	<2,750,000,000>	<1,975,000,000>	<3,100,000,000>	<2,875,000>	<7,800,000>	95 Billion
NOI Loss =	$132,000,000							
Prevailing CAP =	.08							
3 Lost Rents Due to E-Commerce in 2000	$132,000,000							
Lost Property Managers Fees and/or Leasing Commission @ 5%	x .05							
Lost in Fees	$6,600,000	13,000,000	11,000,000	7,900,000	12,400,000	11,500,000	31,200,000	19 Billion
Lost Fees / Avg. Property Manager Salary Per Year	$6,600,000 / 60,000	13,000,000 / 60,000	11,000,000 / 60,000	7,900,000 / 60,000	12,400,000 / 60,000	11,500,000 / 60,000	31,200,000 / 60,000	19 Billion / 60,000
Fewer Professional Managers and/or Leasing Agents	= <110>	<217>	<183>	<132>	<200>	<192>	<520>	<316,000>
4 Lost Values of Shopping Center Sales (from #2)		<$1,650,000,000>						
Lost Real Estate Sales Commissions @ 3%	.03							
Lost in Commissions	<$49,500,000>	<$97.5 Million>	<$82.5 Million>	<$59.2 Million>	$1,033 Million	$93 Million	$234 Million	$2.85 Billion
5 Lost in Commission / Estimated Average Annual Income of Commercial Brokers	$49,500,000 / 100,000 per year							
Reduction in Commercial Real Estate Agents in the U.S.	= <495>	<975>	<825>	<592>	<1,033>	<930>	<2,340>	<28,500>

Source

1. Forrester Research Projections 1995 Estimates
2. REEF Funds Strategic Outlook Report Numbers, August 1999, Survey of 1998 E-Commerce for Products by Company.

2a. Boston Consulting Group - REEF

2b. Cyber Dialogue - REEF

2c. Forrester Research - REEF

2d. International Data Corp. - REEF

2e. Yankee Group - REEF

3. Goldstein, Alan: "E-Commerce may soar to $380 billion - 1999's holiday shopping expected to triple form '98". Source: (Dataquest, Inc., Lake Buena Vista, Florida)

Dallas Morning News, October 13, 1999, World-wide Estimates

Exhibit 6: Questionnaire

Research with ICSC Members

International Council of Shopping Centers

1998 South Central Idea Exchange

Westin Galleria Hotel, Dallas, Texas November 12-13, 1998

Please complete the attached survey anonymously to assist in further research of the topic:

"The Effects of Technology on Retail Sales, Commercial Property Values and Percentage Rents" by John S. Baen, Ph.D.

Would you like a copy of the survey results? Yes______ No______

(If yes, please provide a copy of your business card to me.)

What is your primary position: (check one)

_____Property Manager _____Leasing Agent _____Developer

_____Investor _____Financing _____Other:____________________(please write in)

How long have you been in commercial real estate? ________ years

What is your annual income per year? __________________

- Please state your opinion of the topic as a research area:

0 1 2 3 4 5

Worthless Important

- Is the threat to retail cash flows:

0 1 2 3 4 5

Overstated Potentially Important

- Do your retail leases contain provisions for on-site (at the store) sales via computer to a central warehouse? Yes_____No_______Don't know_______ Is there a way to audit these sales? Yes_____No_______Don't know______
- Do your individual shopping centers have a web page? Yes______No_______. If so, what type of things are on the web page?
  - -____
  - -____
  - -____
  - -____
  - -____

Do any of your leases include clauses for:

a. Catalog sales? Yes______ No_____ Don't Know______

b. E Commerce sales? Yes_____ No_____ Don't Know______

Do you monitor the number of hits per month? Yes_____No______ Don't Know_____

How many hits do you have per month: Total_______ Average Per Center_______

Can people order items from your web site? Yes_____No______ Don't Know_______

How often is your center's web page updated? ___________________

Do you believe these retail center web pages are a waste of time and over-valued? Yes_______No_______

- Please offer suggestions to shopping center owners and managers to protect and/or enhance the traditional shopping center cash flows.

____

____

____

____

- How can owners and managers be certain that all sales on-site are reported and that off-site E-Commerce is not being conducted form your retail locations? (Please be specific.) ____

____

____

____Please offer suggestions for alternative uses of vacant bank buildings that are pad sites at or near your shopping centers:

  - -____ ________
  - -____ ________
  - -____ ________
  - -____ ________

(Please indicate with a check mark if actual alternative use implements.)

- Do you think that E or web leasing of retail space via bidding will ever actually occur? Yes_____ No______ Don't Know______
- Do you think that E or web commercial real estate brokerage or traders will become a significant part of

acquisition and disposition of shopping centers?

- Do you think that more complete market information available on the web will increase the liquidity of commercial real estate? Yes____ No______ Don't Know______
- Do you think that more complete market information available on the web will decrease the risk of shopping center investments? Yes____ No______ Don't Know______
- Would you currently invest your grandmother's savings in a shopping center at the current prevailing CAP rates? Yes____ No____ Don't know_____

Exhibit 7: RESULTS OF SURVEY

Research with ICSC Members

International Council of Shopping Centers

1998 South Central Idea Exchange

Westin Galleria Hotel, Dallas, Texas

November 12-13, 1998

Please complete the attached survey anonymously to assist in further research of the topic:

"The Effects of Technology on Retail Sales, Commercial Property Values and Percentage Rents"

by John S. Baen, Ph.D.

	Yes	No	# of Responses	Mean		St. Dev.
Would you like a copy of the survey results? (If yes, please provide a copy of your business card to me.)	**70**	**41**	**111**	**1.36**		**.482**

What is your primary position: (check one)

	Resondents	% of Total	Median Income of Respondents
111 Responses	**Property Managers**	**24%**	**$81k**
	Leasing Agents	**34%**	**$106k**
	Developer	**24%**	**$171k**
	Investor	**3%**	**$135k**
	Financing	**2%**	**$82k**
	[see list]	**13%**	**$118k**
		100%	

	# of Responses	Mean	Median	St. Dev.
How long have you been in commercial real estate? ________ years	**102**	**14.6 yrs**	**14.5 yrs**	**8.116**
What is your annual income per year? __________________	**62**	**$117,920**	**$100,000**	**68.28**

1. Please state your opinion of the topic as a research area:

0 1 2 3 4 5 Worthless Important	109	4.61	5	0.593
2. Is the threat to retail cash flows:				
0 1 2 3 4 5 Overstated Potentially Important	105	4.27	4	0.871
3. Do your retail leases contain provisions for on-site (at the store) sales via computer to a central warehouse?				
Yes 1 No 97 Don't Know 8	**106**	**2.06**	**2.0 N**	**0.285**
Is there a way to audit these sales?				
Yes 10 No 60 Don't Know 35	**105**	**2034**	**2.0 N**	**0.6127**
4. Do your individual shopping centers have a web page?				
Yes 18 No 77	**95**	**1.76**	**2 N**	**0.424**

If so, what type of things are on the web page?

-Links to their pages	-Store listing-5	-Gift suggestions
-Texas Real Estate Law	-Request for information	-New projects
-Description of products	-Customer service listings	-Rate
-Sale information	-Cost service/phone numbers	-Promotion calendar
-List of retailers	-Contacts-4	-Location/address-2
-Employment profiles/Job listings	-Virtual tour of center	-Directions/events-2
-Map	-Search engine for products	-List of properties and contacts with properties-2
-Special events/Special offers-2	-Tourism information	-Stock information
-Management and leasing contacts-3	-GAP	-Demographic information-2
-Space for lease-2	-Partnering with local chamber	-Overall information size, etc.
-Explains tenants and availability of space-3	-Planning for future	-Layout
-Individual store photos-information listing	-Interior/exterior pictures/Pictures of center-3	

				# of Responses	**Mean**	**Median**	**St. Dev.**
Do any of your leases include clauses for:							
a. Catalog sales?	**Yes 19**	**No 73**	**Don't Know 8**	**100**	**1.89**	**2 N**	**0.51**
b. E-Commerce sales?	**Yes 2**	**No 90**	**Don't Know 5**	**97**			
c. Do you monitor the number of hits per month?	**Yes 10**	**No 61**	**Don't Know 14**	**85**	**2.05**	**2 N**	**0.532**
d. How many hits do you have per month: Total_______ Average Per Center_______				**2 !**	**52 #**	**52 #**	
e. Can people order items from your web site?	**Yes 6**	**No 37**	**Don't Know 5**	**48**	**1.97**	**2 N**	**0.483**

f. How often is your center's web page updated?

______________________		12 !	70 days	225 days	N/A
g. Do you believe these retail center web pages are a waste of time and over-valued?	**No** **Yes 4 58**	**62**	**1.94**	**2 N**	**0.248**

5. Please offer suggestions to shopping center owners and managers to protect and/or enhance the traditional shopping center cash flows.

-Customer service-8

-Collect from e-mail and catalog sales-4

-Motivate employees

-Computer team work onsite

-Tighten lease language-3

-Add clauses to leases

-Percentage of sales clause which includes all off-site sales from all sources

-Require tenant to invest more of his/her $ in the center

-Stay constantly informed on change

-Deliver goods to homes

-Cash register/computer

-Occupancy costs in landlord leases

-Understanding computers

-Offer more interactive and exciting programs inside the shopping center. Maybe the shopping area is a place where you have to go to

get the experience.

-Evaluate lease document and make changes work with retailers on happy medium

-More tangible service-target non-internet, lower income

-Include in leases a percent of web sales

-Make center destinations

-Reward sales people-2

-Go high tech with computer centers

-Improve facilities/safety and attitudes among all people working in any part of the center-2

-Entertainment

-I believe town center (like Southlake) will diversify synergy and increase density with office/retail/service

(driver's license, post office, etc.).

-Good marketing program

-Price-2

-Communication maintained with customers-2

-Lease space to hair salons-2

-Service oriented tenants

-Move away from percent rent and work with stated rent bumps

6. How can owners and managers be certain that all sales on-site are reported and that off-site E-Commerce is not being conducted from your retail locations? (Please be specific.)

-Audit language in lease-7

-Audit bank and sales tax filings for each tenant

-See if there is a program that would allow an owner to minister hits and sales over the net

-Add lease clause

-Sales clauses

-Make lease requirement and audit-2

-Interview appropriate personnel

-Require in leases that each tenants computers come through a central shopping center computer / tracking sales with steep penalties

for cheaters.

-Zip code of purchasers

-At minimum put sanction in lease

-State everything from store, must go through DOS system

-With all this technology, there must be a way to look in with store/catalog/computer sales

-Make sales less prohelute in sales reporting structure

-Do not allow e-mail transactions at off-premise locations

-Own the store!

-Practically speaking, base rent will need to be raised to cover the estimated benefit to retailers

-There must be some unalterable software program that can be audited by owner

-Inventory tracking reports

7. Please offer suggestions for alternative uses of vacant bank buildings that are pad sites at or near your shopping centers:

(Please indicate with a check mark if actual alternative use implements.)

-Restaurants-12

-Einsteins Bagel,

-Child Day Care-9

-Medical and Social Services

-Resident with built in bomb shelter

-Veterinarian hospital

-Fast food-6

-Offices/office spaces-4

-Pharmacy-drive thru-4

-Antiques

-Governmental

-Credit Union

-Home improvement contractor

-Entertainment centers

-Adult Day Care-3

-drive thru coffee (Starbucks)-2

-Beverage sales

-Dinner theater (Grenanda)

				# of Responses	Mean	Median	St. Dev.
8. Do you think that E or web leasing of retail space via bidding will ever actually occur?	**Yes 79**	**No 2**	**Don't Know 15**	**96**	**1.33**	**1.00 Y**	**0.735**
9. Do you think that E or web commercial real estate			**Don't**				

brokerage or traders will become a significant part of acquisition and disposition of shopping centers?	**Yes 63**	**No 6**	**Know 1 (added)**	**70**	**1.11**	**1.00 Y**	**0.363**
10. Do you think that more complete market information available on the web will increase the liquidity of commercial real estate?	**Yes 76**	**No 8**	**Don't Know 11**	**95**	**1.32**	**1.00 Y**	**0.673**
11. Do you think that more complete market information available on the web will decrease the risk of shopping center investments?	**Yes 36**	**No 39**	**Don't Know 21**	**96**	**1.84**	**2.00 N**	**0.756**
12. Would you currently invest your grandmother's savings in a shopping center at the current prevailing CAP rates?	**Yes 15**	**No 71**	**Don't Know 7**	**93**	**1.91**	**2.00 N**	**0.481**