REVIEW OF THE RADIO INDUSTRY, 2007

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EXECUTIVE SUMMARY

On February 8, 1996, President Clinton signed into law the Telecommunications Act of 1996. Section 202 of the 1996 Act abolished the limits the FCC had previously placed on the number of radio stations a single entity could own nationally. It also significantly relaxed limits the FCC had placed on ownership of radio stations in a local market. On March 7, 1996, the FCC implemented these provisions of the 1996 Act by revising Section 73.3555 of its Rules (47 C.F.R. §73.3555) to eliminate the national multiple radio ownership rule and relax the local ownership rule.

This is the fifth Review of the Radio Industry examining industry trends since the Act was implemented in 1996.[1] Clearly, the 1996 radio ownership rules revisions have had a substantial impact on radio market structure and performance. Prior reports indicated a trend toward consolidation of radio station ownership, resulting in fewer owners at both the national and local levels. This report updates the picture through March 2007. After a brief overview in Section 1, Section 2 summarizes changes in the radio industry at the national level, and Section 3 provides a local view. Section 4 reviews radio industry financial performance and Section 5 provides some information on radio listeners and advertising rates.

Overall, there has been a 6.8 percent increase in the number of commercial radio stations between March 1996 and March 2007.[2] The number of radio owners declined, however, by 39 percent during this eleven-year period, with most of the decline occurring during the first few years after the 1996 Act. Over the same period, there has also been an increase in the size of the largest radio group owners. In 1996, the two largest radio group owners owned 62 and 53 stations, respectively. By March 2007, the leading radio group, Clear Channel Communications, owned over 1,100 radio stations. The second largest group owner, Cumulus Broadcasting Inc., had just over 300 stations.[3]

At the local level, the downward trend in the number of radio station owners in Arbitron

[1] We have released previous versions of this report in March 1998, January 2001, September 2001, and September 2002.

[2] See Appendix A.

[3] See Appendix B.

Metro markets, described in previous reports, has also leveled off. Further, the increase in the revenue share of the top owners in each Metro market has generally leveled off. The largest firm in each radio Metro market has, on average, 46 percent of the market's total radio advertising revenue. The largest two firms in each radio market have, on average, 74 percent of the market's radio advertising revenue.[4] Overall, the variety of radio formats available to consumers has held steady. However, in recent years the average number of formats appears to have declined slightly for some of the large markets, while increasing slightly for most of the smaller ones.

Most of the financial-market trends reported in previous *Radio Reviews* continue to hold through the fourth quarter of 2006. The analysis of publicly traded companies where radio broadcasting is the primary business continues to reflect strong earnings. Publicly traded radio companies, however, still carry heavy debt loads, which contributes to the high volatility observed in their earnings. Also, the high debt loads of these publicly traded radio companies contribute to the volatility of their stock market valuations. Through much of the period before 2000, the valuations of these radio companies outperformed the broad market of publicly traded companies, as reflected in Standard and Poor's 500 (S&P 500) index returns. After 2000, however, the returns of radio companies, on average, have fallen slightly below the S&P index returns.

The report also notes that radio listening has continued to decline since 1998. In addition, radio advertising rates have nearly doubled since 1996.

[4] See Appendices D and F.

1. Overview

This is the Commission's fifth review of the radio industry. It presents data on changes in the industry since passage of the 1996 Telecom Act. Previous reports documented a trend of consolidation of radio station ownership, resulting in fewer owners at both the national and local levels. In the current report, Section 2 examines changes in the radio industry from a national viewpoint, *i.e.*, broad changes to the radio industry focusing on the number of owners and the number of stations held by the largest group owners. Section 3 examines changes in the radio industry at the local level, specifically examining various indices of diversity and concentration in each of the areas that Arbitron identifies as a local radio market. Section 4 compares the financial performance of a number of publicly traded radio companies to firms in the S&P 500. Section 5 examines trends in radio's listening audience and in radio advertising rates. Information about data sources is discussed in the Technical Appendix.

The 1996 Act required significant changes to ownership rules. First, the Commission was required to eliminate its national radio ownership limit.[5] Second, Congress specified a sliding scale for local market radio station ownership limits. [6] Specifically:

- In a radio market with 45 or more commercial radio stations, an entity would be allowed to own, operate, or control up to eight stations, with not more than five in the same service (*i.e.*, AM or FM);
- In a radio market with between 30 and 44 commercial radio stations, an entity would be allowed to own, operate, or control up to seven stations, with not more than four in the same service;
- In a radio market with between 15 and 29 commercial radio stations, an entity would be allowed to own, operate, or control up to six stations, with not more than four in the same service;

[5] Previously, one firm could own up to 20 AM and 20 FM stations nationwide, as well as an additional three AM and three FM stations, provided that these stations were controlled by small businesses or minorities.

[6] Prior to the 1996 Act, the Commission's local radio rules permitted one firm to own up to two AM and two FM commercial radio stations in markets with at least 15 commercial radio stations, as long as the combined audience share of the co-owned stations did not exceed 25 percent. In addition, one firm could own up to 3 commercial radio stations in markets with 14 or fewer commercial radio stations, with no more than two radio stations in the same service, as long as the combination did not exceed 50 percent or more of the stations in the market.

- In a radio market with 14 or fewer commercial radio stations, an entity would be allowed to own, operate, or control up to five stations with not more than three in the same service, subject to the limitation that no entity be allowed to own, operate, or control more than 50 percent of the stations in these markets.

In the 2002 Biennial Review Order, the Commission examined comprehensively its media ownership rules and revised several rules, including the local radio ownership rule. The Commission retained the numerical local radio ownership limits adopted in the 1996 Act. To measure competition in the local radio marketplace more accurately, however, the Commission modified its local radio ownership rule by replacing the contour-overlap methodology used to define a market with the radio market definition used by Arbitron.[7]

On September 3, 2003, the United States Court of Appeals for the Third Circuit stayed the effective date of the Commission's new ownership rules and ordered that the prior ownership rules remain in effect pending judicial review. On September 3, 2004, in response to a request for rehearing filed by the Commission, the Third Circuit partially lifted the stay, permitting the Commission to (1) implement the Arbitron-defined radio market definition, (2) include noncommercial stations in determining the size of a radio market, (3) attribute certain radio JSAs, and (4) impose certain transfer restrictions on grandfathered combinations.

Congress also passed legislation to change the frequency of the FCC's periodic review from biennial to quadrennial. The 2006 Quadrennial Review, now in progress, includes 10 special studies, including this report.

2. Changes in the Radio Industry - A National View

[7] *2002 Biennial Regulatory Review – Review of the Commission's Broadcast Ownership Rules and Other Rules Adopted Pursuant to Section 202 of the Telecommunications Act of 1996*, 18 FCC Rcd 13620, 13724 ¶ 274 (2003), *aff'd in part and remanded in part, Prometheus Radio Project, et al. v. F.C.C.*, 373 F.3d 372 (2004), *stay modified on rehearing*, No. 03-3388 (3d Cir. Sept. 3, 2004), *cert. denied*, 73 U.S.L.W. 3466 (U.S. June 13, 2005) (Nos. 04-1020, 04-1033, 04-1036, 04-1045, 04-1168, and 04-1177). The Commission initiated a rulemaking to define local radio markets in areas where Arbitron metros were not defined. *Id*. at 13729 ¶ 283. While the Radio Market proceeding is pending, the Commission is applying a modified contour-overlap methodology in areas outside of Arbitron metros. The modified rule excludes from the total number of stations in the market any station that is commonly owned with stations in the numerator. In addition, the definition excludes from the total number of stations in the market any radio station whose transmitter site is more than 92 kilometers (58 miles) from the perimeter of the mutual overlap area. *Id*. at 13729 ¶ 285.

The trends in the radio industry documented in previous reports have continued through March 2007.[8] The number of commercial radio stations has increased about 6.8 percent since March 1996. As of March 2007, there were 10,956 commercial radio stations in the United States. Of these, about 58 percent (6,315) are FM stations and 42 percent (4,641) are AM stations. From March 1996 to March 2007, the number of owners declined from 5,133 to 3,121, a decline of 39 percent.[9]

The decline in the number of owners reflects a continuation of the consolidation of the commercial radio industry that has occurred since the passage of the Telecom Act in 1996. However, most of the consolidation occurred in the years immediately following the Act in 1996. From 1996 to 2000, 18.5 percent of radio stations, on average, changed hands each year. However, from 2001 to 2006, this average annual percentage fell to 7.8 percent. The charts and tables presented in this section also reflect this slowing consolidation. For example, from 1996 to 2002, the number of radio station owners with 20 or more stations doubled from 25 to 50. In the last five years that figure has increased to 60, a change of only 20 percent. Also, we note that the two largest radio group owners in 1996 owned fewer than 65 radio stations each. In March 2002, we reported that the two largest radio group owners owned 1,156 and 251 radio stations, while the third, fourth, and fifth largest held 206, 184, and 100, respectively, representing a substantial shift in consolidation. As of March 2007, the two largest radio group owners consisted of 1,134 and 302 radio stations, while the third, fourth and fifth largest held 226, 159, and 110, respectively.[10] Thus, while the decline in the number of owners of radio stations nationally reflects mergers or acquisitions between existing owners that has resulted in larger radio group owners and more group-owned stations, consolidation has increased only slightly since 2002.

3. Changes in the Radio Industry - A Local View

This section of the report provides information about commercial radio stations that are

[8] A discussion of the databases underlying the analyses in this and the following sections as well as certain assumptions used in the analysis is included in the Technical Appendix.

[9] See Appendix A.

[10] Recently, Clear Channel Communications, the largest group owner, reported plans to restructure itself and sell 448 stations. "Clear Channel Sale to End Era," *Washington Post*, November 16, 2006.

assigned to Arbitron Metro markets. Arbitron, a nationally recognized radio audience research firm, has delineated 299 different local geographic areas, or Metros, to reflect the audiences reached by local radio stations. Arbitron Metros generally correspond to Metropolitan Statistical Areas as defined by the U.S. Government.[11] About 60 percent of all commercial radio stations are licensed to communities in the 299 markets. The 299 radio markets consist of more than 1000 counties, representing more than one-third of all counties in the United States, plus Puerto Rico. More than three-fourths of the U.S. population of at least 12 years of age resides in the 299 radio markets. This delineation of a local radio market, as defined by Arbitron, is widely used by buyers and sellers of radio advertising and generally reflects market data as determined by surveys of listeners. All charts appear at the end of the Report. All figures displayed in Charts I through IV represent "smooth" lines rather than the actual data.[12]

3.1 Changes in the Revenue Share Earned by the Metro's Top Owners

Chart I depicts the current state of concentration in the industry, showing the one-firm (CR1), two-firm (CR2) and four-firm (CR4) concentration ratios.[13] The concentration ratios used in this report are the percentage of market revenue held by the largest firm(s) in the market (one, two, or four).[14] For example, the four-firm (CR4) concentration ratio is calculated by dividing the sum of the revenue for the top four firms in a market by the sum of the revenue for

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[11] The Office of Management and Budget designates and defines MSAs. *See* 55 Fed. Reg. 12154-12160 (1990). Generally, a Metropolitan Statistical Area consists of one or more counties that contain a city of 50,000 or more inhabitants, or contain a Census Bureau-defined urbanized area with a total population of at least 100,000.

[12] The technique of "smoothing" the data is discussed in the Technical Appendix. The data for these charts on concentration and formats are derived from BIA data. BIA is a publicly available commercial database that provides a wide range of radio station specific data, including the market, owner, revenue, and format of each station.

[13] For March 2001, March 2002, and March 2007, the Metro market revenue is equated to the sum of the station revenue for stations assigned to each Metro market. In previous years, BIA's measure of Metro market revenue was used. This is a slightly different basis for calculating market shares, since BIA's measure of Metro market revenue may include some revenue earned in the market by out-of-market stations, and some in-market stations may earn some of their advertising revenues from outside their Metro markets. However, these differences generally are small.

[14] In this case, largest refers to the firm(s) with the highest revenue.

all firms in that market.[15] This measure of market concentration is frequently used because of its ease of calculation and interpretation.[16] The smoothed lines reveal the extent of concentration in the markets. There is a clear tendency for the smaller markets to be more concentrated, which is not surprising since smaller markets have fewer stations. Nonetheless, even the larger markets appear to be somewhat concentrated. In the 50 largest markets, on average, the top firm holds 34 percent of market revenue, the second firm holds 24 percent, and firms three and four split the next 26 percent. For the 100 smallest markets, on average, the first firm holds 54 percent, the second firm holds 30 percent, and the next two firms split 13 percent.[17] Overall, in 189 of the 299 Arbitron radio markets (over 60 percent of the markets), one entity controls 40 percent or more of the market's total radio advertising revenue, and in 111 of these markets the top two entities control at least 80 percent of market revenue.[18]

Historical perspective for the four-firm concentration ratio is provided in Chart II. This trend of fewer owners generally earning a larger percentage of market revenue is further emphasized by looking at the revenue share of the top four owners in the Metro market. The data suggest that this trend has substantially tapered off over time. The large increase in concentration that occurred from March 1996 to November 1998 can be largely attributed to the relaxation of the local radio ownership rules required by the 1996 Telecom Act, as can the smaller increase that occurred from November 1998 to March 2002. The four-firm concentration ratio shows no substantial change between March 2002 and March 2007.

3.2 Changes in Ownership Diversity

Traditionally, the Commission has been concerned with encouraging diversity in the

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[15] In this study, we also multiply this ratio by 100. Markets with four or fewer firms would yield a CR4 of 100.

[16] Market concentration is a function of the number of firms in a market and their respective market shares. Concentration ratios are one of the various measures economists use to estimate market concentration. Market shares may be calculated as the firm(s)'s percent share of revenue, as is done here, or may be calculated as the firm(s)'s percent share of audience or capacity. These measures are also used by the Department of Justice and the Federal Trade Commission as an aid to the interpretation of market data and as an indicator of the likely potential competitive effect of a merger. *See*, *e.g.*, U.S. Department of Justice and the Federal Trade Commission, Horizontal Merger Guidelines, Revised, April 8, 1997; Carlton and Perloff, Modern Industrial Organization, Carlton and Perloff, 2nd edition, pp. 344-349; and Giles Burgess, The Economics of Regulation and Antitrust, pp. 310-312.

[17] See Appendix D and Appendix F for these percentages.

[18] The concentration ratios in each market for one, two, and four owners are shown in Appendix F.

ownership of broadcast stations in an attempt to foster a diversity of viewpoints in the programming presented over the airwaves. One measure of diversity that is of interest to the Commission is the number of independent owners of radio stations in a local Metro market. Chart III depicts changes in the number of owners by Metro market area. This chart reveals that the decline in the number of radio owners nationally reflects a general trend across Metro markets, and not simply consolidations in a few large or small Metro markets. In March 2007, the average number of owners across all Metro markets was 9.4, with a range of 6.5 in the smallest Metro markets (ranks 101-299) to a high of 23.9 in the top 10 Metro markets.[19] In March 1996, the average number of owners in a Metro market was 13.5.[20] Thus, from March 1996 to March 2007, there was a cumulative decline of about four in the average number of owners per market. This chart also illustrates that the number of owners declines as the market gets smaller.

3.3 Changes in Format Diversity

Chart IV shows the number of distinct radio formats for each Metro market and suggests that there generally continues to be no trend in either direction in the diversity of radio programming available to consumers.[21] The average number of radio formats available in a Metro market has been about 10 over the March 1996-March 2007 period. The smallest Metro markets have offered an average of nine formats, while the top 10 Metro markets have offered an average of 16 formats.[22] However, while the average number of formats nationwide has held steady, the chart suggests that the number of formats has declined slightly in some of the larger markets while increasing in most of the smaller ones. Finally, the chart illustrates that the number of formats declines as the market gets smaller. Our chosen measure of format, based on format categories in the BIA Radio Database, may not be the best proxy for capturing the

[19] Appendix D displays the average number of formats grouped according various market sizes.

[20] The 2006 data is taken from BIA's database in March 2006.

[21] The data on the number of different types of formats per market are based on information in the BIA Radio Database. BIA obtains specific format information from the radio stations it surveys, sorting their responses into broad format categories. The format categories we use for this report are Adult Contemporary, Album Oriented Rock/Classic Rock, Classical, Contemporary Hit Radio/Top 40, Country, Easy Listening/Beautiful Music, Ethnic, Jazz/New Age, Middle of the Road, Miscellaneous, News/Sports, Nostalgia/Big Band, Oldies, Religion, Rock, Spanish, Talk, Urban, Dark (not on air), No Reported Format.

diversity of programming. Recent empirical studies that have examined the effects of consolidation on diversity of music programming include the following: Steven T. Berry and Joel Waldfogel, Do Mergers Increase Product Variety? Evidence from Radio Broadcasting, *Quarterly Journal of Economics*, 2001; Williams, George, Keith Brown, and Peter Alexander, "Radio Market Structure and Music Diversity," Working Paper, Media Bureau, Federal Communications Commission, September 2002; and Sweeting, Andrew, "Uniting and Turning the Guns on the Enemy: A Micro Study of Station Ownership, Programming and Listenership in the Music Radio Industry," Working Paper, Department of Economics, Northwestern University, 2006.[23]

3.4 New Developments in Radio Service

Sirius Satellite Radio, Inc. and XM Satellite Radio Holdings have built a subscription radio service that provides national programming, each delivering over 100 channels of digital audio music, news, and entertainment directly from satellites to vehicles, homes, and portable radios in the United States. Each company holds one of the two licenses issued by the FCC to build, launch, and operate a national satellite radio system. Both companies launched their services in 2001. The growth in subscriptions for these two systems has been dramatic since our last report. As of April 2007, XM and Sirius served more than 14.5 million subscribers, exceeding a 100-fold increase over the figure noted in our 2002 report.[24]

On February 19, 2007, Sirius Satellite Radio and XM Satellite Radio announced plans to merge and create a single satellite radio system in the United Sates and Canada. The merger is currently under review by the FCC and the U.S. Department of Justice.[25]

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[22] See Appendix D.

[23] More discussion of these studies using different measures of diversity in radio can be found in Shiman, Daniel, Pedro Almoguera, Kenneth Lynch, and Craig Stroup, "FCC Media Ownership Study # 4 and Chipty, Tasneem, *FCC Media Ownership Study #5*.

[24] XM Satellite Radio's website, as of May 30, 2007, reports that it has exceeded 8 million subscribers. Sirius Radio, First Quarter Report ending March 31, 2007, reports Sirius with 6,581,045 subscribers. The Second Quarter Reports of XM and Sirius, each ending on June 30, 2002, indicate that XM and Sirius had 136,718 and 3,347 subscribers, respectively.

[25] On June 8, 2007, the FCC released Public Notice, MB Document 07-57, requesting comments on the proposed transfer of licenses of Sirius and XM Radio into a merged entity.

4. Radio Industry Financial Performance

We examine the financial performance of the radio industry in two ways. First, we compare the financial performance of the radio industry over different time periods. Second, we assess the financial performance of the radio industry, comparing its performance to the performance of the S&P 500 companies, to assess whether the industry can finance its future operations and growth.[26]

We focus first on the operating performance of radio companies (*i.e.,* EBIT and net profit margins). We then explore ratios that shed light on the financing of radio companies (*i.e.,* total debt as a percentage of total capital; fixed charge coverage after taxes; market to book ratio; and stock market returns).

4.1 EBIT Margins

The *earnings before interest and taxes margin* (EBIT Margin) is defined as the ratio of a firm's earnings (before subtracting out interest and taxes) to the firm's total sales.[27] This ratio reflects how efficiently the firm generates profits from its sales, or alternatively stated, how well the firm minimizes the operating, personnel, and administrative costs of its operations for a given level of sales. The ratio represents the "gross profit margin" of a company, that is, before netting out interest expenses and taxes. Chart V shows median EBIT Margins for the publicly traded radio companies and for the S&P 500 companies.

Chart V indicates that before 2001 the quarterly gross profit margins of the publicly traded radio broadcast companies were greater than the gross profit margins of the S&P 500 companies for 15 out of 21 quarters. While the median EBIT Margin for our sample of radio companies dipped below the median for S&P 500 companies during 2001, the radio companies have consistently outperformed the S&P 500 median since the first quarter of 2002.[28]

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[26] The radio figures are drawn from the Standard and Poor's Compustat database and consist of all 18 firms whose primary SIC code is radio broadcasting. Compustat includes in this category Sirius Satellite Radio and XM Satellite Radio, along with 16 terrestrial radio companies, and we simply utilize the Compustat data. The 16 terrestrial radio companies own a total of 2851 commercial radio stations.

[27] Compustat calculates the EBIT Margin as (((sales + other income) – (cost of goods sold + selling, general, and administrative expense + depreciation and amortization))/(sales + other income))x100.

[28] The Data Appendix discusses the sample of radio companies we examined for this section of the Report.

Throughout the graph, the gross margins of the radio companies appear to show a strong seasonality, with gross margins generally highest during the second and third quarters of the year. Overall, since 1996 the gross profit margins of the radio companies have shown very strong performance in comparison with the S&P 500 companies. The year 2001 is a notable exception, but since the beginning of 2002, radio company margins have been above those of the S&P in every quarter.

4.2 Net Profit Margins

The *Net Profit Margin* is defined as the ratio of a firm's net income to its sales. Thus, the Net Profit Margin reflects the operating performance of the firm after netting out interest and taxes from the EBIT Margin. A comparison of Chart V (EBIT Margins) with Chart VI (Net Profit Margins) suggests that while radio companies are realizing greater gross profits than the typical S&P 500 company, they are netting less than the benchmark S&P 500. As was the case for EBIT Margins displayed in Chart V, Net Profit Margins for radio companies remained substantially below those for the typical S&P company during 2001 and the first quarter of 2002. After the first quarter of 2002, the trend for Net Profit Margins for radio companies appears to have risen. The trend for Net Profit Margin for the median S&P 500 appears to have risen slightly. The overall pattern of radio companies realizing larger gross profits but netting less than the typical S&P firm suggests that radio companies are either paying more in taxes than other firms are, or they are paying more in interest than other firms (*e.g.*, use more debt to finance operations). In order to understand whether radio companies are paying more in taxes or more in interest, we examine the debt loads of radio companies.

4.3 Debt as a Percentage of Total Capital

Debt as a percentage of total capital represents a measure of a firm's debt load. We use the ratio of long-term debt to total capital because this is the typical measure of a firm's relative use of debt capital versus equity capital.[29] Quarterly data on debt as a percentage of total capital are presented in Chart VII. Chart VII also suggests that the publicly traded radio companies

[29] Short-term debt tends to be indicative of a firm's working capital policies, not its long-term financing

have generally used more debt than the typical S&P 500 company to finance operations and growth. Therefore, the radio companies' lower net profit margins result, at least in part, from the greater interest expense of these companies, which is then related to the higher debt loads of the radio companies, compared to the debt loads of the S&P 500 firms. Another effect of the greater debt loads (leverage) is the increase in the volatility of radio-sector earnings compared to the less-leveraged S&P 500 companies. This increase in volatility can be seen by comparing the variability of the radio-sector median EBIT Margin and net profit margin values with those of the S&P 500 firms in Charts V and VI, respectively.[30]

Chart VII also suggests that radio company debt as a percentage of capital declined over time until the third quarter of 2004, approaching the debt load of a typical S&P 500 company. However, since then, the ratio of debt to total capital has increased significantly and remains well above the S&P benchmark.

4.4 Fixed Charge Coverage After Taxes

Fixed charge coverage after taxes is a measure of a firm's ability to pay its interest expense (to bondholders and other creditors) out of its net income. This is measured as the ratio of quarterly net income (before extraordinary items) divided by interest expense, from which 1 is subtracted. Therefore, the ratio measures how many times the interest expense is "covered" by the radio company's net income, which provides a sense of the company's ability to manage its debt load. As Chart VIII shows, while not generating the same level of net income to interest expense as other companies, the publicly traded radio companies appear to be generating enough cash flow to meet their interest obligations. The chart shows that fixed charge coverage for radio companies remains positive for all quarters except the first and third quarters of 2001 and the

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policies.

[30] Recent research suggests that firms with a higher percentage of debt tend to charge higher prices and compete less vigorously than firms with a lower percentage of debt. *See* Judith A. Chevalier, "Capital Structure and Product-Market Competition: Empirical Evidence from the Supermarket Industry," *American Economic Review* 85: 415-435; Judith A. Chevalier, "Do LBO Supermarkets Charge More? An Empirical Analysis of the Effects of LBOs on Supermarket Pricing," *Journal of Finance* 50: 1095-1110. Further, research also suggests that an industry's general level of leverage is an indicator of its greater concentration and potentially less vigorous competition. *See, e.g.*, Gordon M. Phillips, "Increased Debt and Industry Product Markets: An Empirical Analysis," *Journal of Financial Economics* 37: 189-238.

first quarter of 2002. Chart VIII also shows that fixed charge coverage rose substantially after the first quarter of 2002 for the radio sample and after the first quarter of 2003 for the S&P 500.

4.5 Market to Book Ratio

Other indicators of a company's ability to finance its operations are its prospects for future growth and profitability. The *market to book ratio* is defined as the ratio of a firm's market value of equity to its book value of equity, which is the accounting value that remains out of a firm's assets after the firm pays off its creditors. The market to book ratio is a useful measure of the market's assessment of that firm's future prospects. The greater a firm's market to book ratio, the higher the market's assessment of that firm's future prospects.

From this perspective, Chart IX indicates that, until the year 2000, the market placed higher valuations on radio properties and operations than those of other companies, such as those reflected in the S&P 500 median market-to-book values. Chart IX shows that the market-to-book ratios of the radio companies exceeded those of the S&P 500 companies in all 17 quarters before 2000. However, in the first quarter of 2000, the median market to book ratio for our sample of radio companies dropped below that of the median S&P company, and has remained below the S&P level ever since. This seems to suggest that the market value of radio companies relative to book value has declined relative to the S&P 500.

4.6 Stock Market Returns

Quarterly stock market returns of the publicly traded radio and S&P 500 companies are calculated by including their cash dividends in the return calculation.[31] Therefore, the return measure reflects both stock price appreciation and the return of cash in the form of dividends to shareholders. Chart X reports the median quarterly stock returns of the two groups of companies. The chart suggests that, while the typical radio company's returns have varied more than those of the typical S&P 500 company, radio company stocks overall outperformed the

[31] Specifically, this ratio is computed as follows: {[(ending share price + dividends per share}/ (beginning share price)]-1} x 100, which is equal to price appreciation plus dividend yield.

broader market, as reflected in the S&P 500 median stock returns, in most quarters, until the year 2000. The greater volatility of the radio companies' stock market returns is related to the greater leverage of (greater use of debt by) these companies, as discussed above.

Chart X shows that stock returns for the radio companies declined sharply throughout 2000 and 2001. These lower returns undoubtedly depressed the market to book ratio for these quarters as shown in Chart IX. Chart X also shows that, beginning in 2002, radio companies' stock market returns bounced back relative to the S&P, even exceeding it in some quarters. Since 2004, the radio companies seem to have underperformed the S&P 500.

We noted in our previous report that the decline in stock returns in 2000 and 2001 was likely the result of the slowing economy during that time. Revenues in radio depend exclusively on advertising, and a firm's willingness to advertise is highly sensitive to how much consumers are buying. Chart XI shows that the percent change in retail sales and food services (adjusted for inflation**)** fell sharply beginning in the second quarter of 2000. Retail sales growth rates, while somewhat volatile, have rebounded from the 2001 trough, but have not reached the peak growth rates of 1999**.** Finally, we note that a possible source for radio's stock decline may be the slowing of the radio industry's consolidation. As opportunities for increased profit through radio acquisitions have dwindled, investors' have placed a lower value on the radio industry, depressing the value of the radio industry's stock.

5. Other Trends in the Radio Industry

This section examines two additional aspects of the contemporary commercial radio industry, namely (1) the audience for commercial radio broadcasting, and (2) rates for advertising on commercial radio stations.

5.1 Radio Listeners

Chart XII shows that the trend in the average number of listeners to radio per quarter hour has continued to fall since our 2002 report. From the fall of 1998 to the fall of 2006, Arbitron reports that the average number of listeners per quarter hour has fallen from

approximately 19.7 million to approximately 18.4 million, a drop of 6.6 percent.[32] Chart XII also indicates that while listenership declined slightly between the fall of 1998 and the fall of 2000, listener ratings held steady between the summer of 2000 and the early portion of 2005. During 2005, radio listenership appears to have taken another substantial dip. Between fall 1998 and fall 2006 the average annual decline in the average number of listeners per quarter hour is 0.82 percent.

Further analysis, which is beyond the scope of this report, is required to explain whether these changes in radio audience and industry concentration reflect any causal links. The causes of audience decline and industry consolidation may be varied. For example, declining audiences could be related to the availability of alternative products, such as satellite radio, Internet radio, and downloading of digital music.

5.2 Radio Advertising Rates

Radio companies obtain their revenue solely through selling advertising time on their stations. Advertising is sold in both local and national markets.[33] The radio consolidation discussed above may have an effect on radio advertising prices if advertisers have fewer radio owners to bargain with over prices. Consolidation in the radio industry may allow radio companies to exercise market power in local markets or possibly nationally.

Chart XIII shows that average radio advertising prices have increased since September 1996.[34] In our 2002 Report, we showed that radio advertising prices had increased steadily in excess of the Consumer Price Index from 1996 to 2002.[35] However, Chart XIII shows that radio advertising prices dipped between the years 2002 and 2004, before continuing to increase. This dip in prices was probably a lagged response to the sharp decline in growth in retail sales, shown

[32] Arbitron does not make this data freely available prior to the fall 1998. Also, the Arbitron data, which is the basis for Chart XII, does not include listeners to satellite radio, noncommercial radio stations, or low power FM radio stations.

[33] According to Radio Advertising Bureau, local advertising revenue comprised over two-thirds of Radio revenue in the first quarter of 2007.

[34] To smooth the graph, we use as points the average of the previous two quarters, the current quarter, and the next quarter. In addition, we take 1996 as a benchmark year (1996=100).

[35] The Bureau of Labor Statistics produces the Consumer Price Index (CPI) ("all items") to represent the prices paid by urban consumers for a representative basket of goods and services.

in Chart XI, between 2000 and 2002.[36] Overall, it appears that the cost of radio advertising has nearly doubled since the 1996 Act was passed. By contrast, the CPI, also displayed in Chart XIII, increased 29 percent during the same time period. In other words, the CPI increased approximately 3 percent per year during this time period, while the annual growth rate in radio prices was approximately 10 percent.

6. Conclusion

While the 1996 Act unleashed a wave of consolidation in the radio industry, it appears that the pace of consolidation has slowed. There has been a relative underperformance of stock returns for radio companies, relative to the median S&P 500, in recent years. Also, the increase in the revenue share of the top owners in each Metro market has generally leveled off. Overall, the variety of radio formats using our relatively simple classification of formats has held steady. The Report also notes that radio listening continued to decline since 1998, while radio advertising rates have nearly doubled since 1996.

[36] Note that while the decline in retail sales and food services, shown in Chart XI, began in 2000, the decrease in radio spot prices did not occur until 2002. This lagged response is consistent with the well-known "stickiness" of prices, or the slow response of prices to respond to declines in the quantity of good purchased.

Data Appendix

Data for National and Local View of Radio (Sections 2 and 3)

This report uses the BIA MasterAccess Database of radio stations. BIA regularly updates its database and continues to improve the data it reports. To improve comparability among the various time periods, we made certain changes in the March 1996, November 1997, November 1998, March 2000, March 2001, March 2002, and March 2007 databases. These changes are described below.

First, BIA presents the ownership data to reflect "pending" or "proposed" transactions. This means that when company "A" announces that it will purchase company "B", the owner of company B's radio stations is identified as "A." If the proposed transaction is not consummated, BIA readjusts the ownership data. We correct ownership data from BIA so that it reflects only transactions that have been completed.[37]

Second, BIA identifies the owners of stations subject to a local marketing agreement (LMA) separately. A local marketing agreement is an agreement in which one company agrees to operate a radio station or TV station owned by another licensee. Since the Commission's rules generally attribute an ownership interest to the brokering station, and the BIA data does not identify the brokering station, the BIA data were adjusted so that the ownership of stations subject to an LMA is attributed to the owner with the higher national revenues.[38]

Third, in previous databases there had been a format category “News/Sports,” which, in the March 2000 database, was split into two separate categories: “News” and “Sports.” To maintain compatibility of data across all time periods, we replaced each “News” or “Sports” entry with an entry for “News/Sports.”

Fourth, we note that the number of markets has increased again, from 285 in March 2002 to 299 in March 2007.[39] BIA from time to time reassigns various non-market radio stations as

[37] In the 1997, 1998, 2000, 2001, 2002, and 2007 data, BIA identifies which transactions are pending, thus making it possible to reassign the stations to the "previous" owner. However, BIA did not do this in the 1996 data.

[38] That is, we are assuming that the brokering station is the station whose owner has the higher national revenues.

[39] While the number of markets used in our analysis has increased, we note that the percentage of stations assigned to markets is relatively stable at approximately 60 percent.

market stations.[40]

Fifth, BIA estimates revenue data annually for approximately 44 percent of radio stations. Most of the radio stations with missing revenue estimates are not assigned to Metro markets and are, therefore, not included in our local analysis. Arbtiron assigns each station to a market based on the station's decision to participate in Arbitron's information gathering process, which includes station ratings. BIA generally does not have revenue information on non-market stations and therefore we do not include it in our analysis, which uses station revenue.[41] The radio stations with missing revenue estimates that are assigned to Metro markets are usually the low-rated stations in the market, and they earn a small share of the market's advertising revenues. In order to include these stations in the analysis, zero values were assigned to the missing data.

We also note, as we described in prior reports, that BIA increased the number of radio stations identified as noncommercial in the time between our 2001 and 2002 radio reports. Thus, the total number of commercial radio stations was reduced as some commercial radio stations were reclassified as noncommercial. The tables in the Appendices, therefore, will reflect this change in status of commercial stations for the years after this change, but not for the previous years.

Finally, the data displayed in Charts I through IV represent "smooth" lines rather than the actual data. Smoothing is a statistical technique used to illustrate or reveal trends in the data. A line representing the actual data would be filled with jagged ups and downs, much like the representation of an earthquake on a seismograph. Such a representation would make it extremely difficult to discern a trend in the data. On the other hand, a smooth line uses averaging to blunt the jagged ups and downs of the actual data and to reveal any underlying trends. A point on a smooth line represents a weighted average of the actual data in an interval around that point.[42] The difference in the lines represents general changes in the radio industry.

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[40] Non-market stations are radio stations not assigned to one of the Metro markets defined by Arbitron.

[41] An exception is Appendix A, where we do use data that include non-market stations. No station revenue, however, is required in that table.

[42] For market 100, for example, the smoothed line will show a weighted average of the actual data in markets 90 to 110. The data from market 100 get the most weight, data from markets 99 and 101 get the next most weight, and so forth. The particular smoothing method employed is called "loess" and is described in William S. Cleveland, The Elements of Graphing Data (Hobart Press, 1994). The specific implementation is from the "loess" command in the statistical package "S-PLUS 2000," with the smoothing parameter set equal to 0.5.

Because the points on the lines are averages, the reader should not attempt to use these figures to make specific market to market comparisons.

Data for the Analysis of Financial Performance (Section 4)

We use Standard & Poor's Compustat database to obtain all publicly traded companies whose primary SIC code, or industry classification, was radio broadcasting (SIC 4832).[43] As a result, publicly traded companies whose revenues are generally derived from their non-radio holdings are excluded from the analysis. Most of the companies included in the analysis are larger station-group owners, and our analysis therefore may not reflect the performance of smaller owners. Comparable data for companies that are not publicly traded and that would include many of the smaller radio companies are not available through public data sources.

To give perspective to the calculated financial ratios, this report also calculates similar ratios for the S&P 500 companies.[44] The median value of the calculated financial ratios for the publicly traded radio companies is then compared to the median value of the same ratios for the S&P 500 companies. We use the median, rather than the average (arithmetic mean), as a summary statistic, since financial ratios are rarely normally distributed, and outliers (*i.e.*, unusually high or low values) could distort comparisons. The S&P 500 companies are used to create the benchmark financial ratios, because the S&P 500 is typically thought of as representing the broad "market" of U.S. companies.[45] Thus, the use of the S&P 500 companies to create benchmark ratios reflects an effort to create benchmarks based upon a broad swath of

[43] Standard & Poor's has produced an electronic database of financial information on over 20,000 public companies for over 20 years. SIC denotes Standard Industrial Classification. This is a coding scheme for classifying firms according to industry that was developed and maintained by the U.S. Department of Commerce. Since the Census replaced the SIC system with the North American Industry Classification System (NAICS), NAICS will be used in the future. Data obtained from the Compustat database are subject to revision, however, as Compustat updates its data. The radio figures consist of all 18 firms whose primary SIC code is 4832. Compustat includes in this category Sirius Satellite Radio and XM Satellite Radio, and we simply utilize the Compustat data. The 16 terrestrial radio companies own a total of 2851 commercial radio stations.

[44] S&P chooses 500 of the largest publicly traded companies which are intended to represent a broad index of common stocks covering most sectors of the U.S. economy. The performance of the S&P 500 companies is a good measure of overall stock market performance. It is similar to, but has a broader selection of companies than, the Dow Jones Industrial Average.

[45] Because financial ratios are typically ratios of dollars, they are unitless and are difficult to interpret except in comparison to some benchmark ratio. Consequently the choice of a benchmark is an important choice in financial analysis.

publicly traded companies.[46]

Data for Radio Listenership and Advertising Prices (Section 5)

For radio ratings, we examine the average number of listeners to radio per quarter hour according to Arbitron.[47] We include all the formats listed on Arbitron's website: Adult Contemporary, Adult Hits, Alternative, Contemporary Hits Radio, Classical, Country, Adult Standards, New AC/Smooth Jazz, News/Talk/Information, Oldies, Religious, Rock, Spanish, Urban, and Remaining Formats.[48]

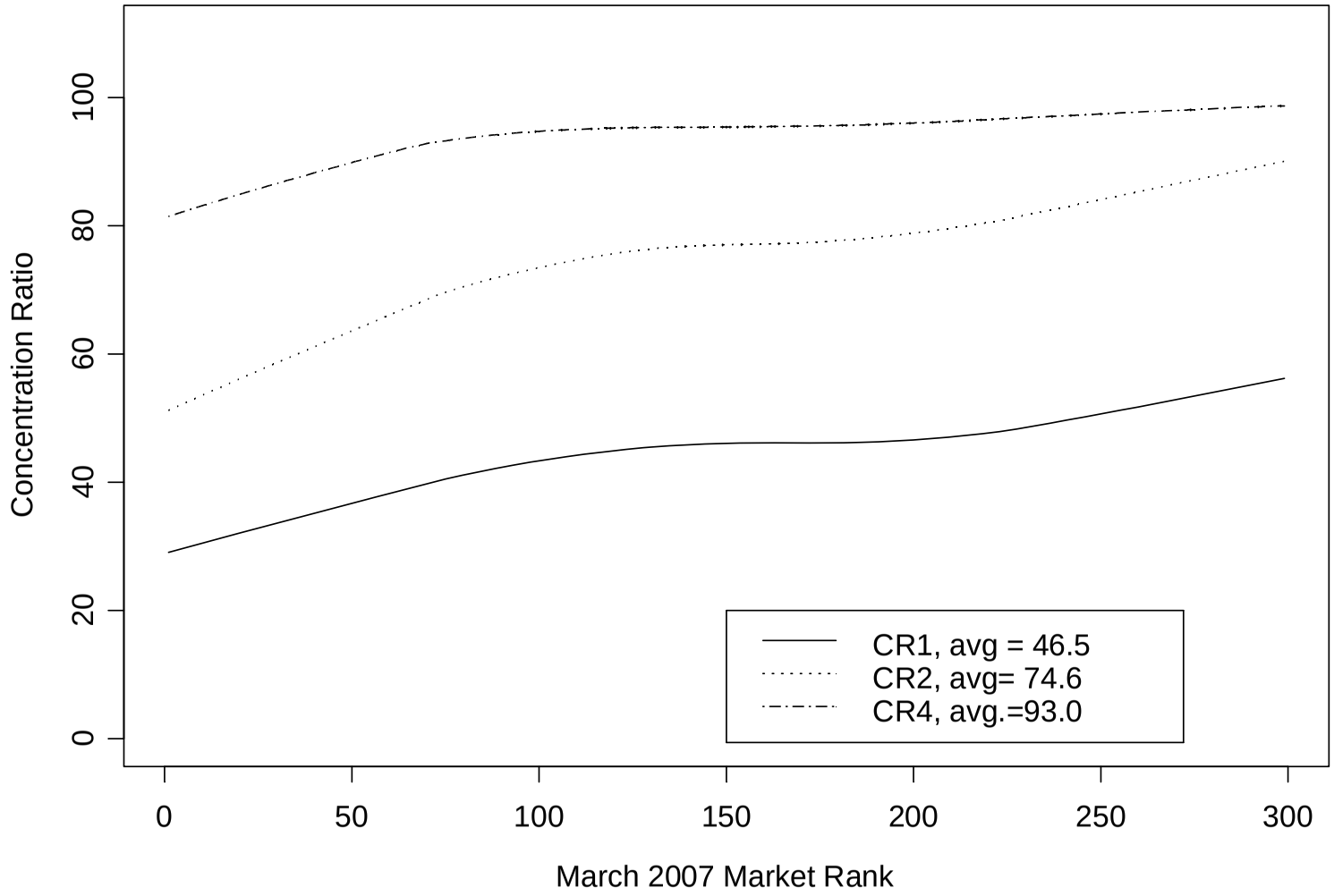
To estimate the change in radio advertising rates since 1996, we use as our source for radio advertising data the Service Quality Analytics Data (SQAD). The SQAD data derives from participating national and regional advertisers, who report the price of their local advertising buys for a given radio market. The prices for each local buy for each local market are then averaged together, giving a single advertising price for each radio market. SQAD advertising rates represent actual rates paid by advertisers for spots on local radio stations in each market. For our purposes, we take SQAD CPMs (cost of reaching 1,000 listeners aged 18-49 with a 30-second advertisement) averaged across all markets from 1996 to the first quarter of 2007.

[46] Typically, when analysts refer to movements in the stock market, they use information on movement in the stock prices of the S&P 500 companies. Thus, the S&P 500 represents firms doing business in just about every segment of private enterprise.

[47] These data on radio listeners were obtained from Arbitron's Format Trends and reported on its website. These data do not reflect radio listeners of noncommercial radio, satellite radio, or low power FM stations.

[48] These formats are chosen by Arbitron to display information on trends in radio listeners in their Format Trends report.

Chart I: Market Concentration - March 2007



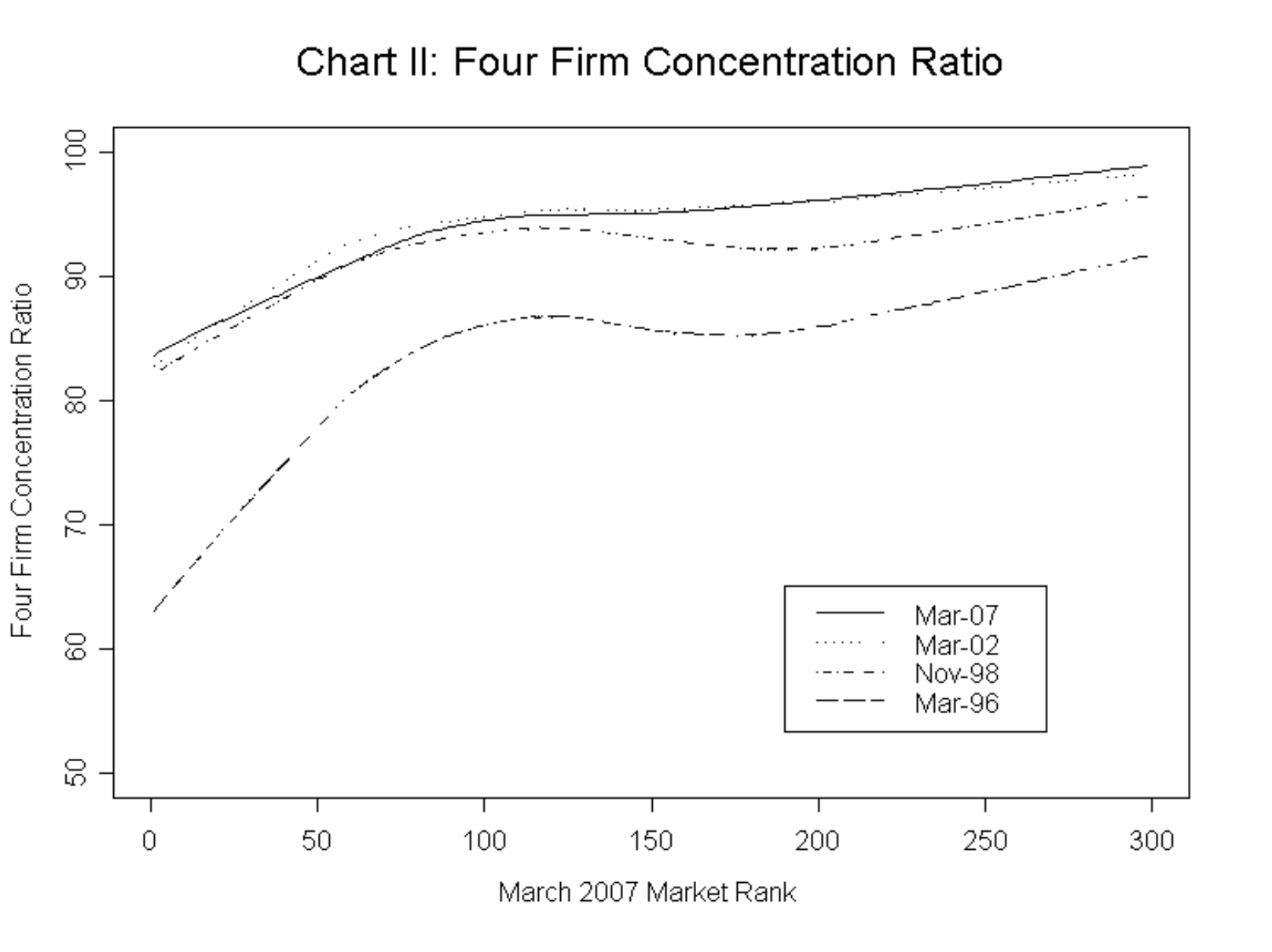


Chart II: Four Firm Concentration Ratio
Four Firm Concentration Ratio
50
60
70
80
90
100
0
50
100
150
200
250
300
March 2007 Market Rank
Mar-07
Mar-02
Nov-98
Mar-96

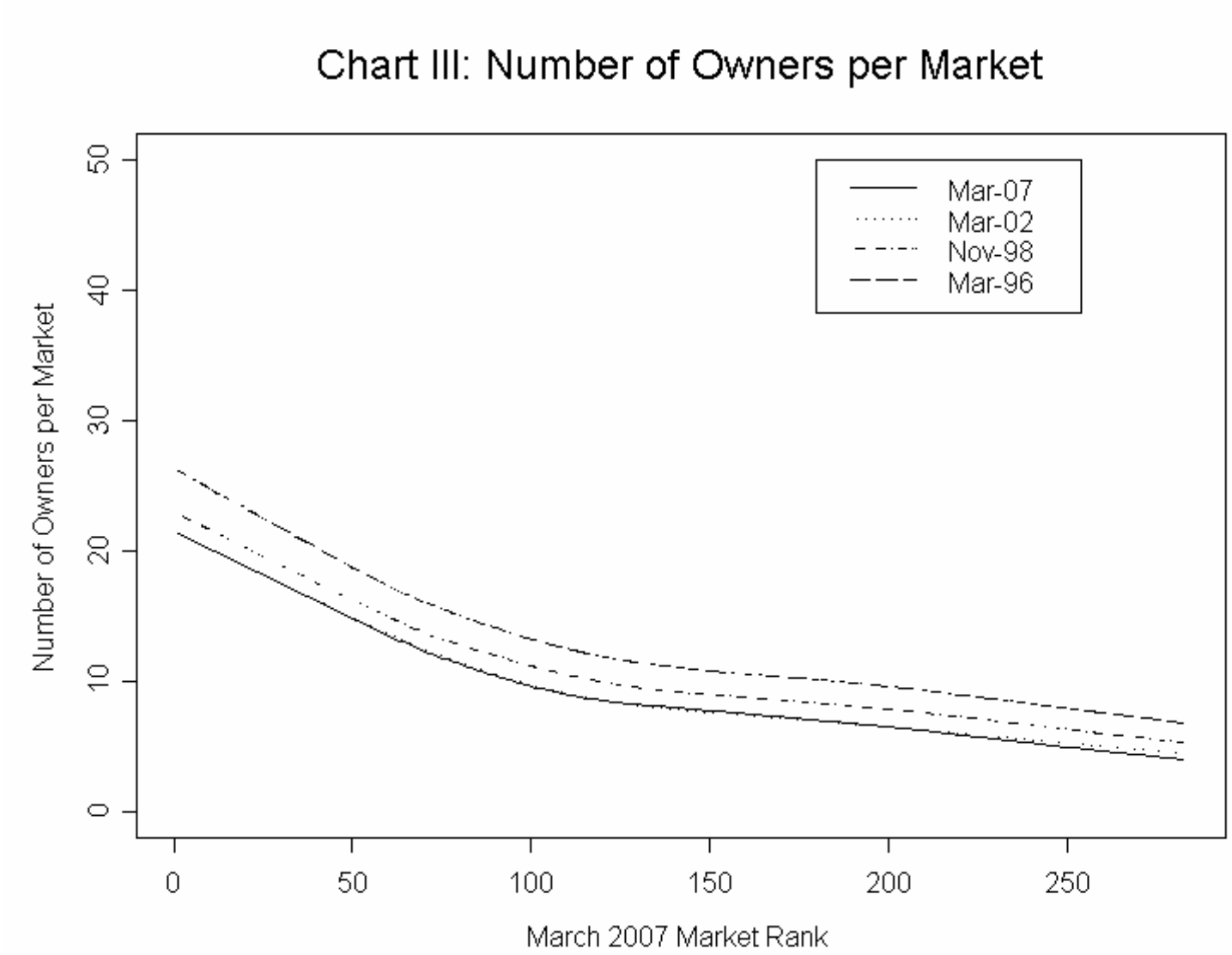


Chart III: Number of Owners per Market
Mar-07
Mar-02
Nov-98
Mar-96
Number of Owners per Market
0
10
20
30
40
50
0
50
100
150
200
250
March 2007 Market Rank

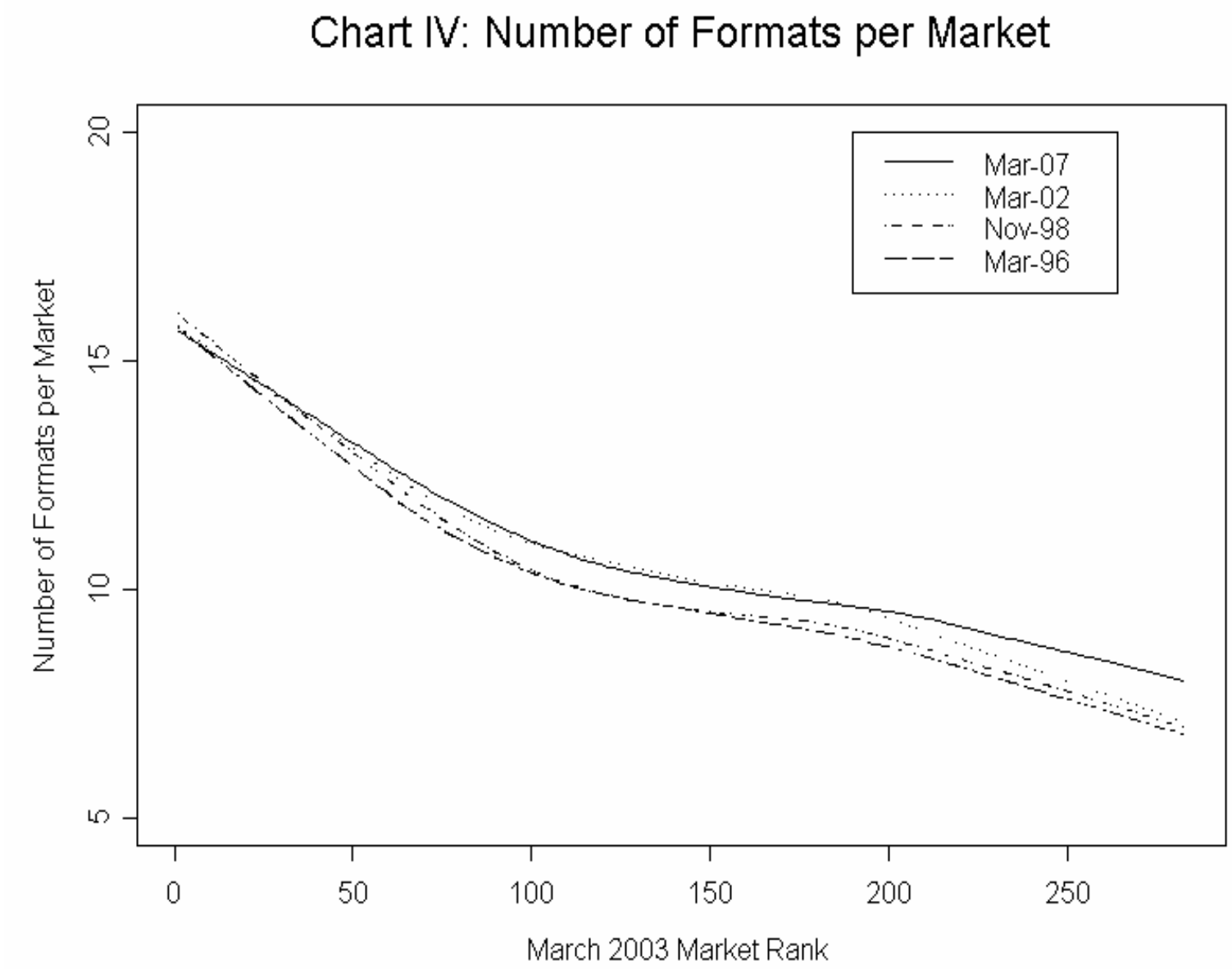


Chart IV: Number of Formats per Market
Mar-07
Mar-02
Nov-98
Mar-96
Number of Formats per Market
5
10
15
20
0
50
100
150
200
250
March 2003 Market Rank

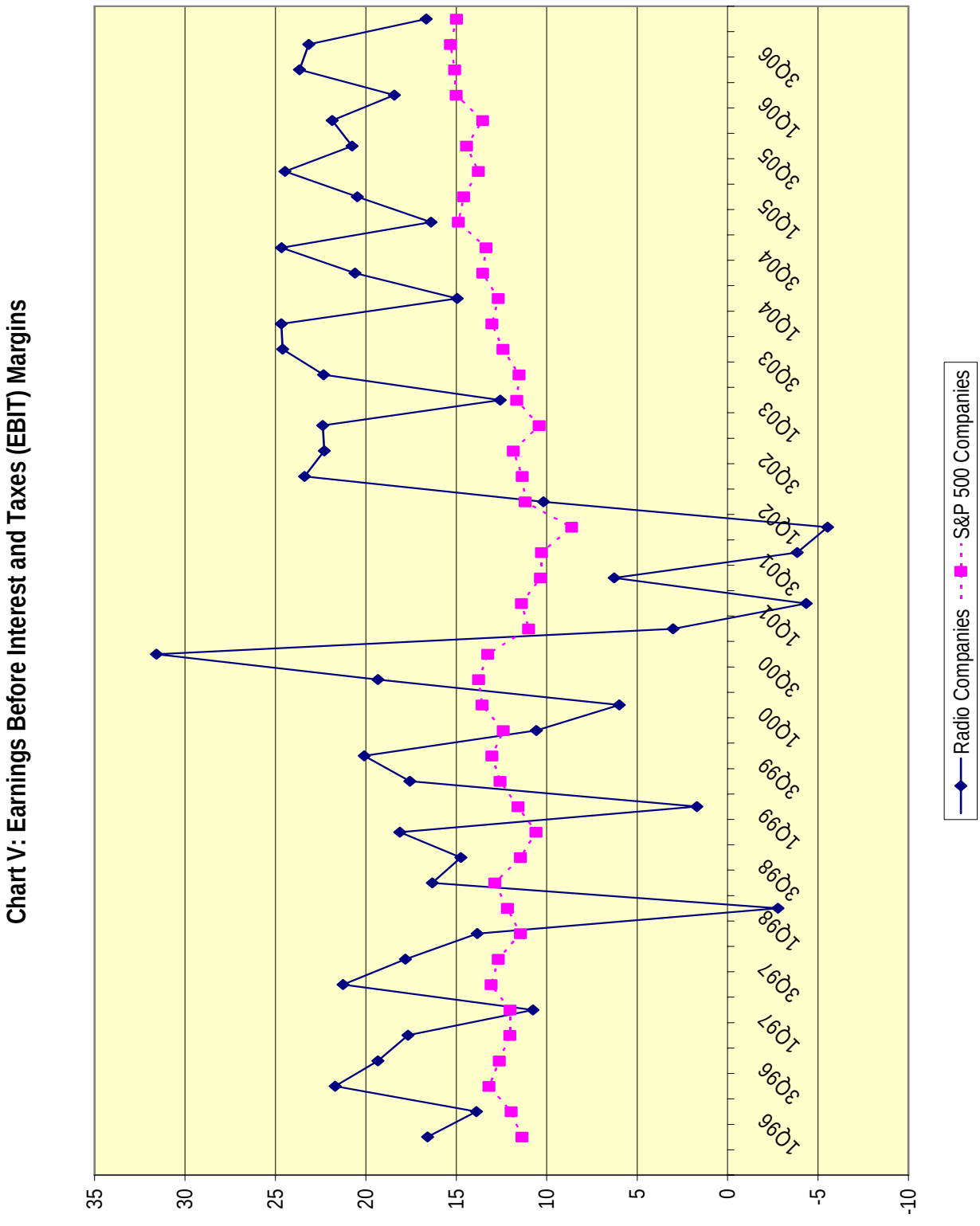
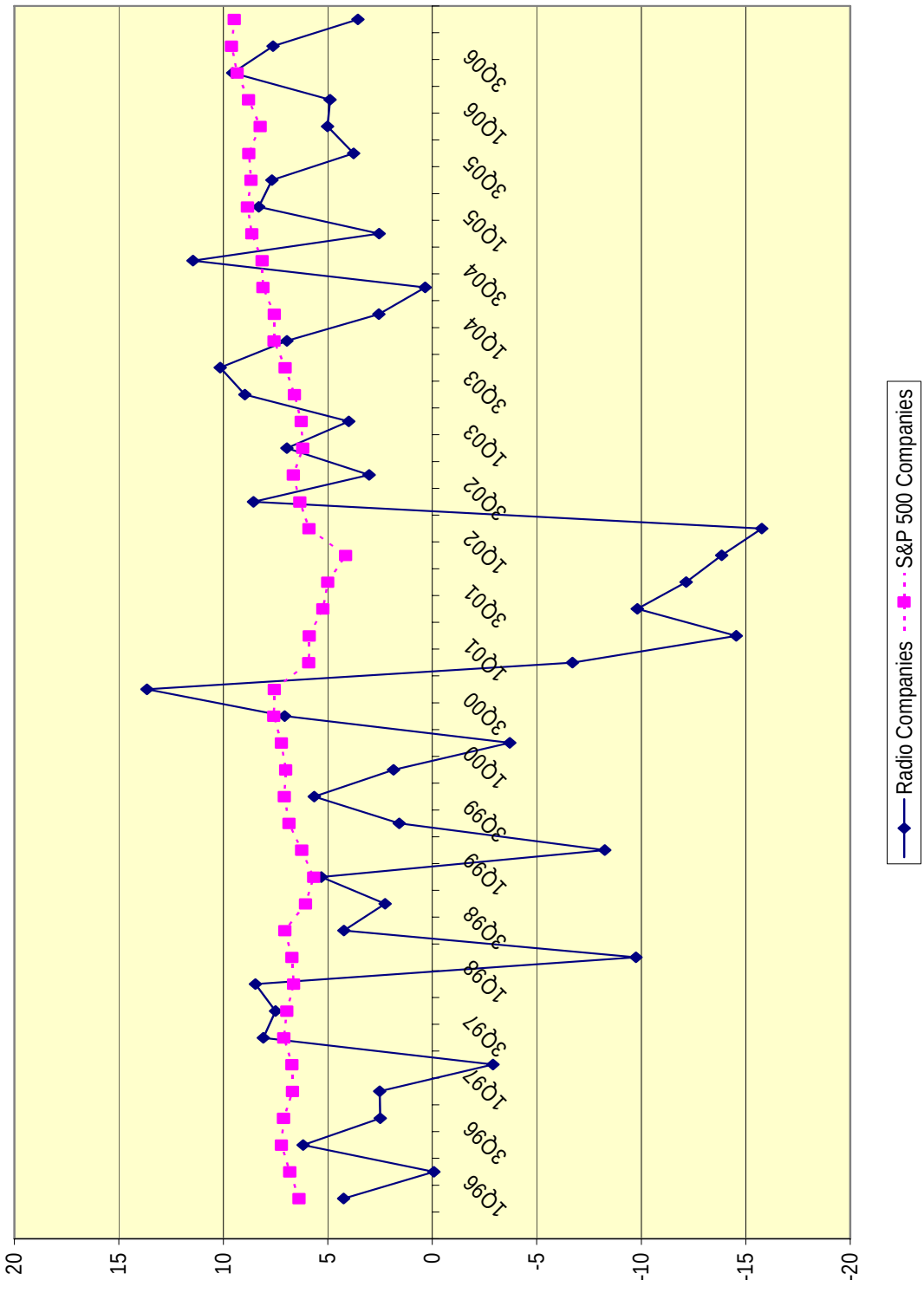


Chart V: Earnings Before Interest and Taxes (EBIT) Margins
35
30
25
20
15
10
5
0
-5
-10
1Q96
3Q96
1Q97
3Q97
1Q98
3Q98
1Q99
3Q99
1Q00
3Q00
1Q01
3Q01
1Q02
3Q02
1Q03
3Q03
1Q04
3Q04
1Q05
3Q05
1Q06
3Q06
Radio Companies
S&P 500 Companies

Chart VI: Net Profit Margin



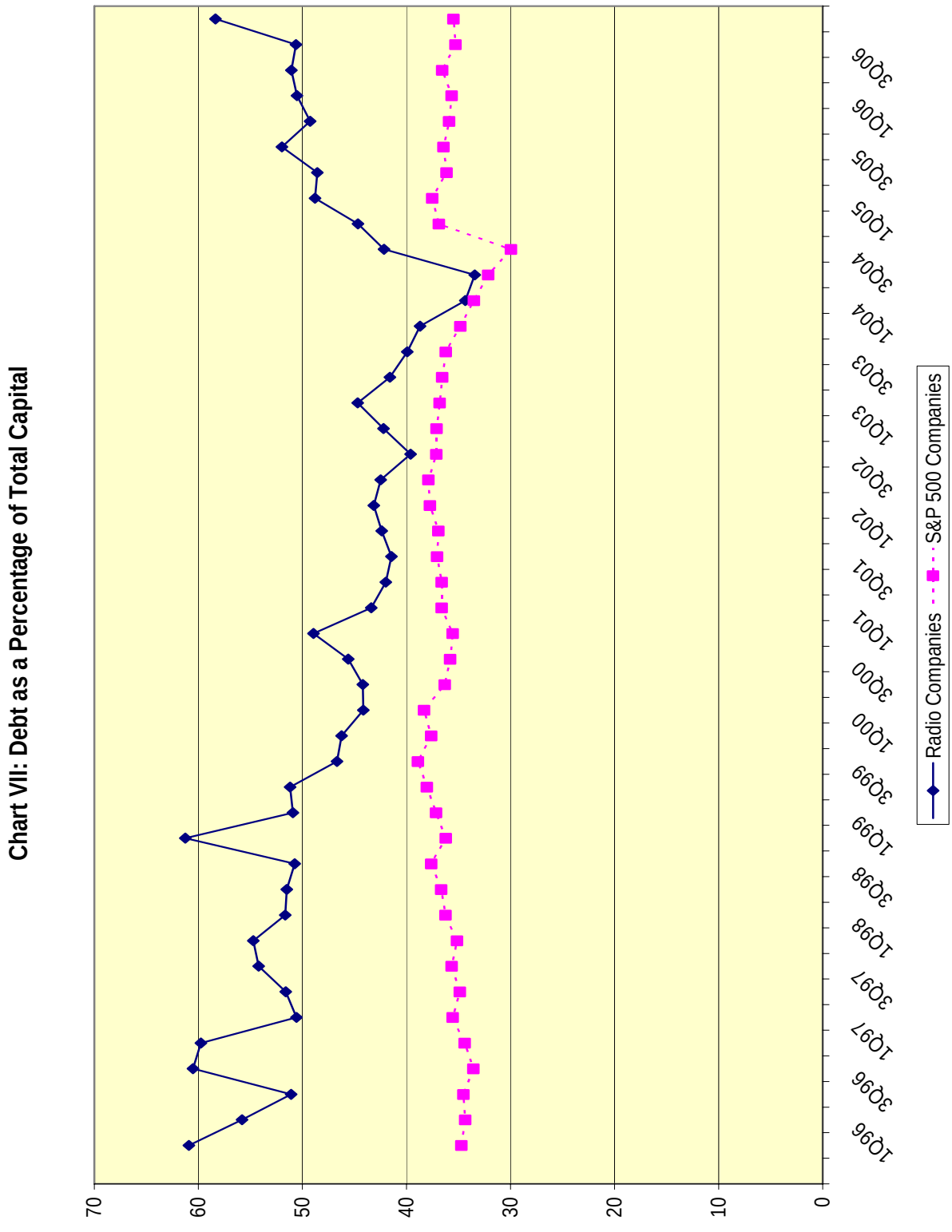


Chart VII: Debt as a Percentage of Total Capital
70
60
50
40
30
20
10
0
1Q96
3Q96
1Q97
3Q97
1Q98
3Q98
1Q99
3Q99
1Q00
3Q00
1Q01
3Q01
1Q02
3Q02
1Q03
3Q03
1Q04
3Q04
1Q05
3Q05
1Q06
3Q06
Radio Companies
S&P 500 Companies

Chart VIII: Fixed Charge Coverage

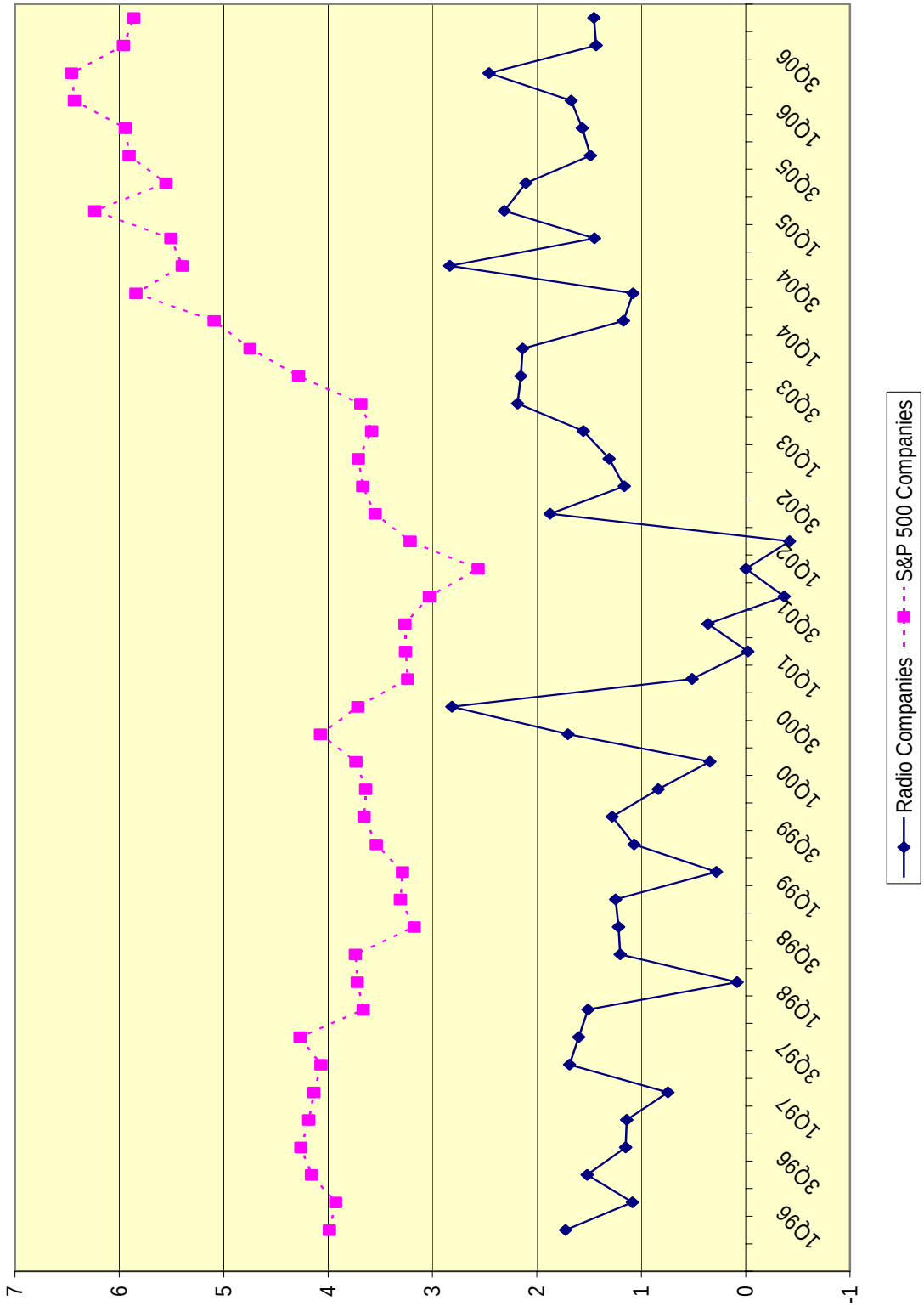
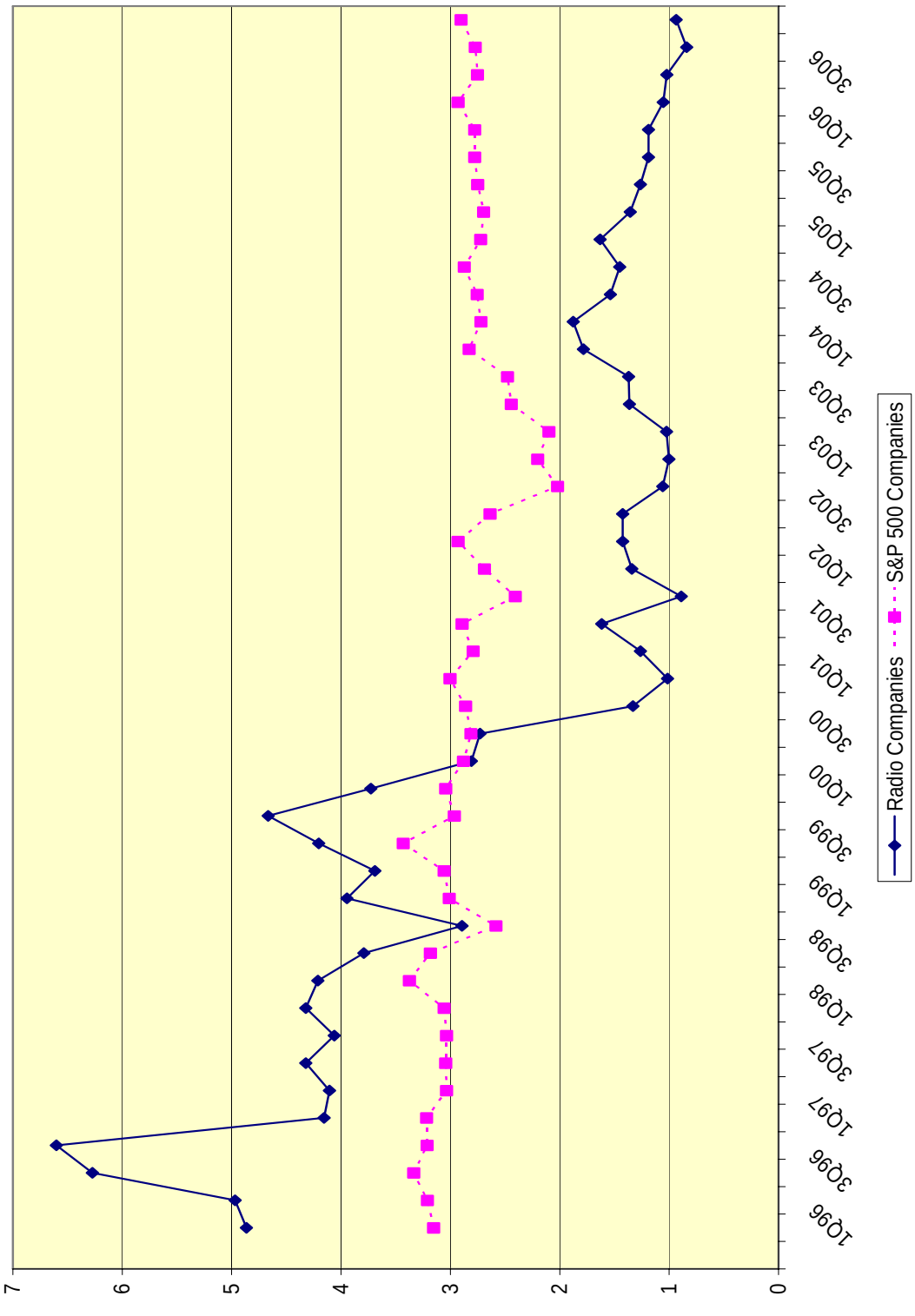


Chart IX: Market to Book Ratio



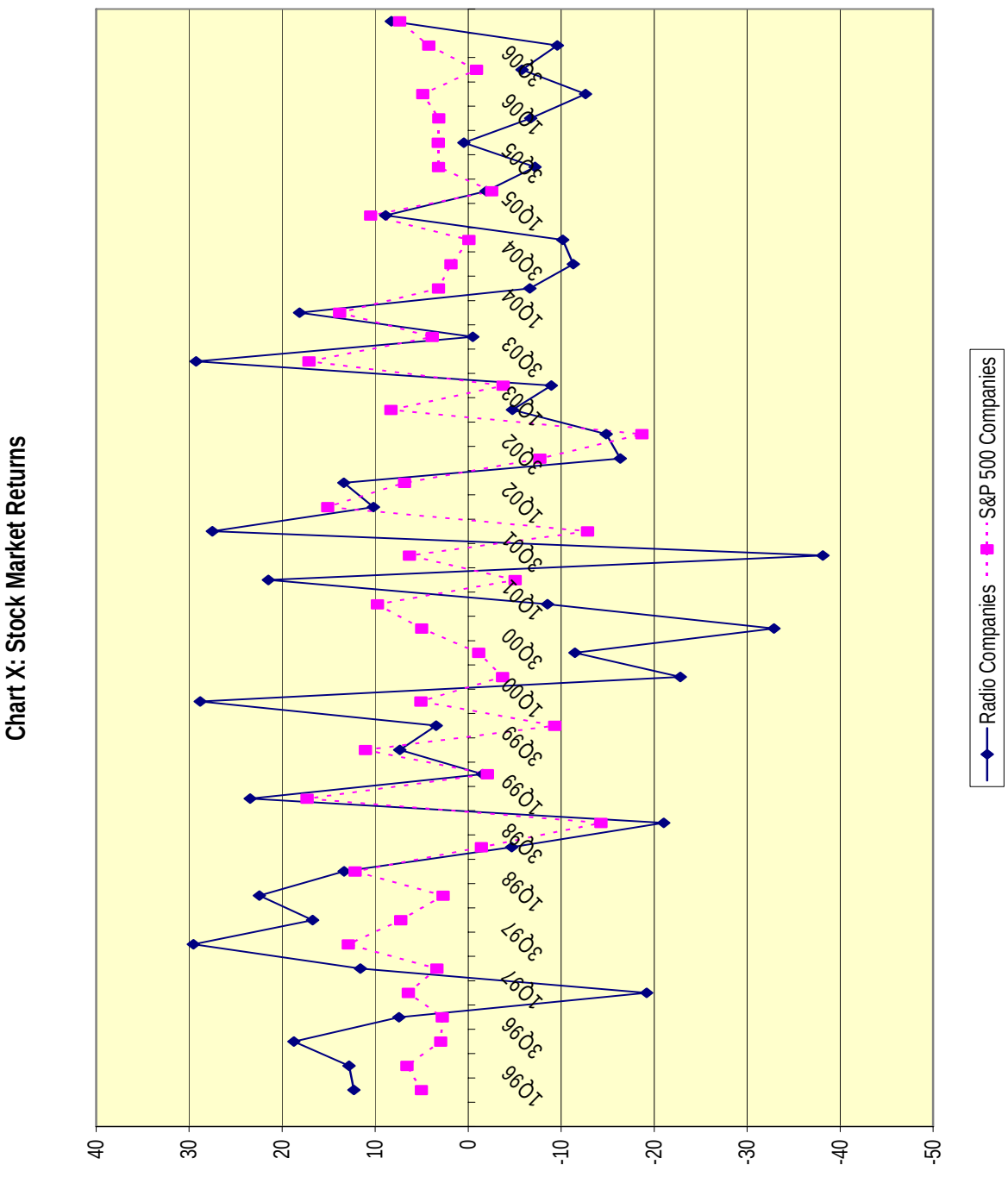
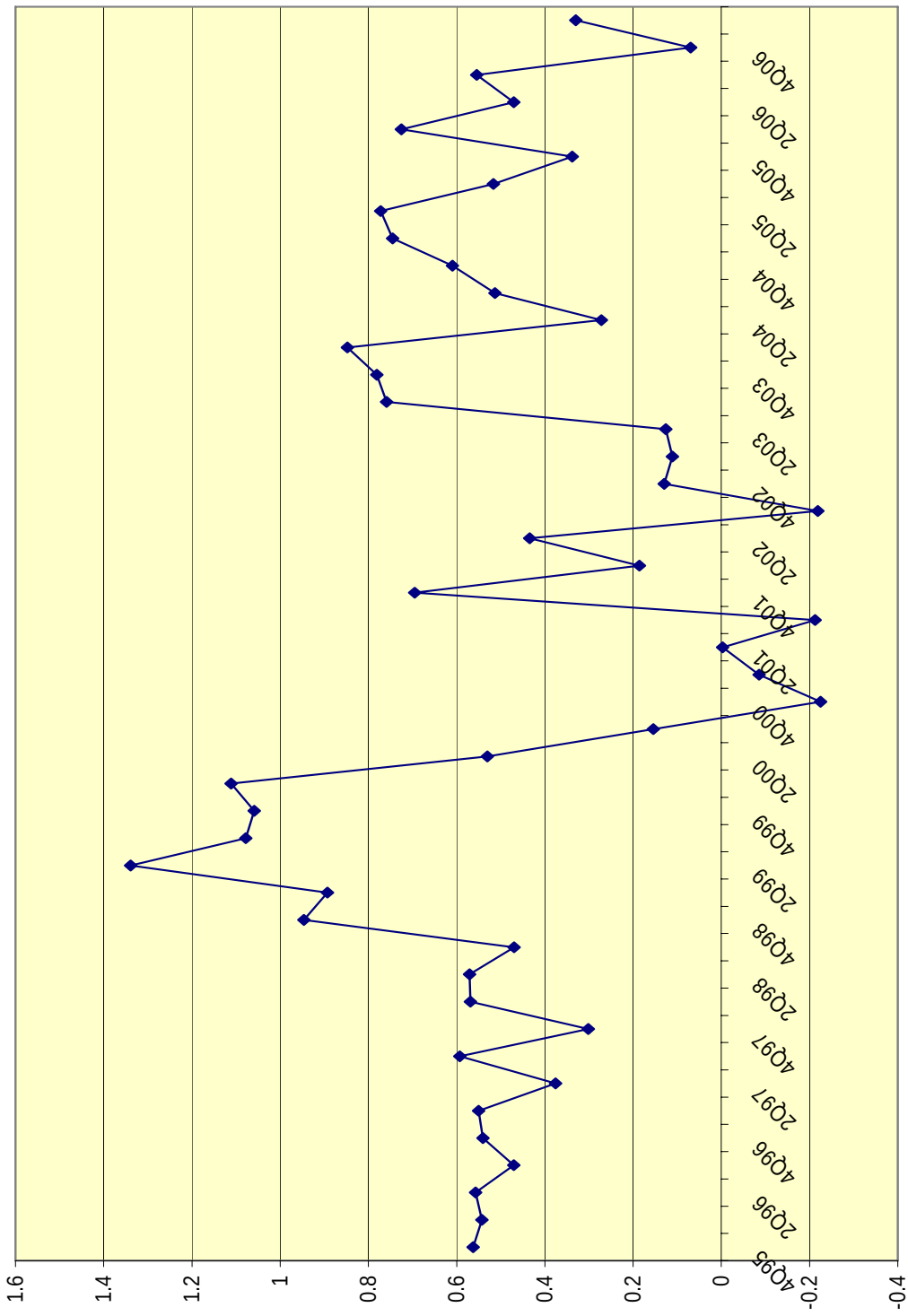


Chart X: Stock Market Returns
40
30
20
10
0
-10
-20
-30
-40
-50
1Q96
3Q96
1Q97
3Q97
1Q98
3Q98
1Q99
3Q99
1Q00
3Q00
1Q01
3Q01
1Q02
3Q02
1Q03
3Q03
1Q04
3Q04
1Q05
3Q05
1Q06
3Q06
Radio Companies
S&P 500 Companies

Chart XI: Percent Change in Retail Sales and Food Services



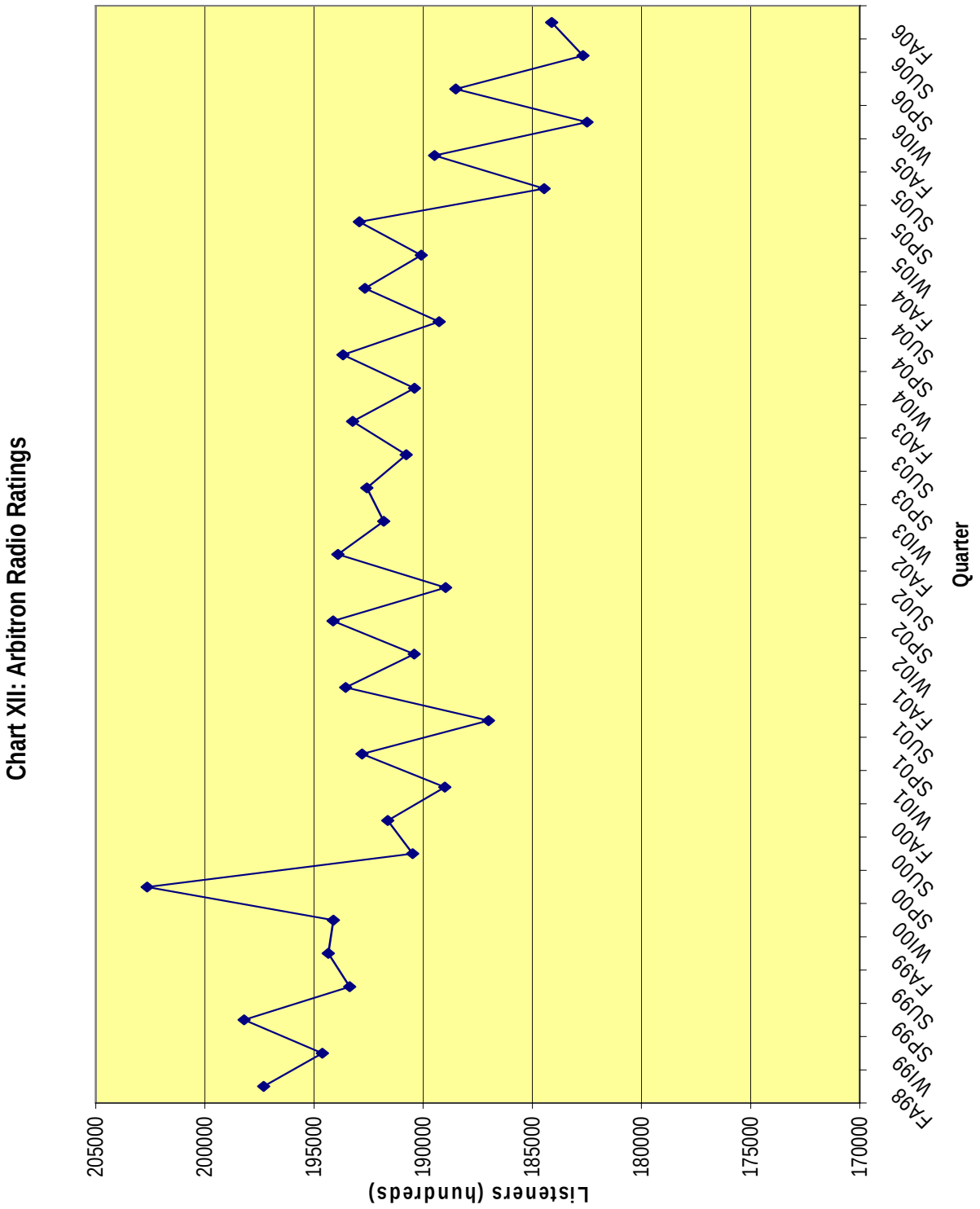


Chart XII: Arbitron Radio Ratings
Listeners (hundreds)
205000
200000
195000
190000
185000
180000
175000
170000
FA98
WI99
SP99
SU99
FA99
WI00
SP00
SU00
FA00
WI01
SP01
SU01
FA01
WI02
SP02
SU02
FA02
WI03
SP03
SU03
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FA04
WI05
SP05
SU05
FA05
WI06
SP06
SU06
FA06
Quarter

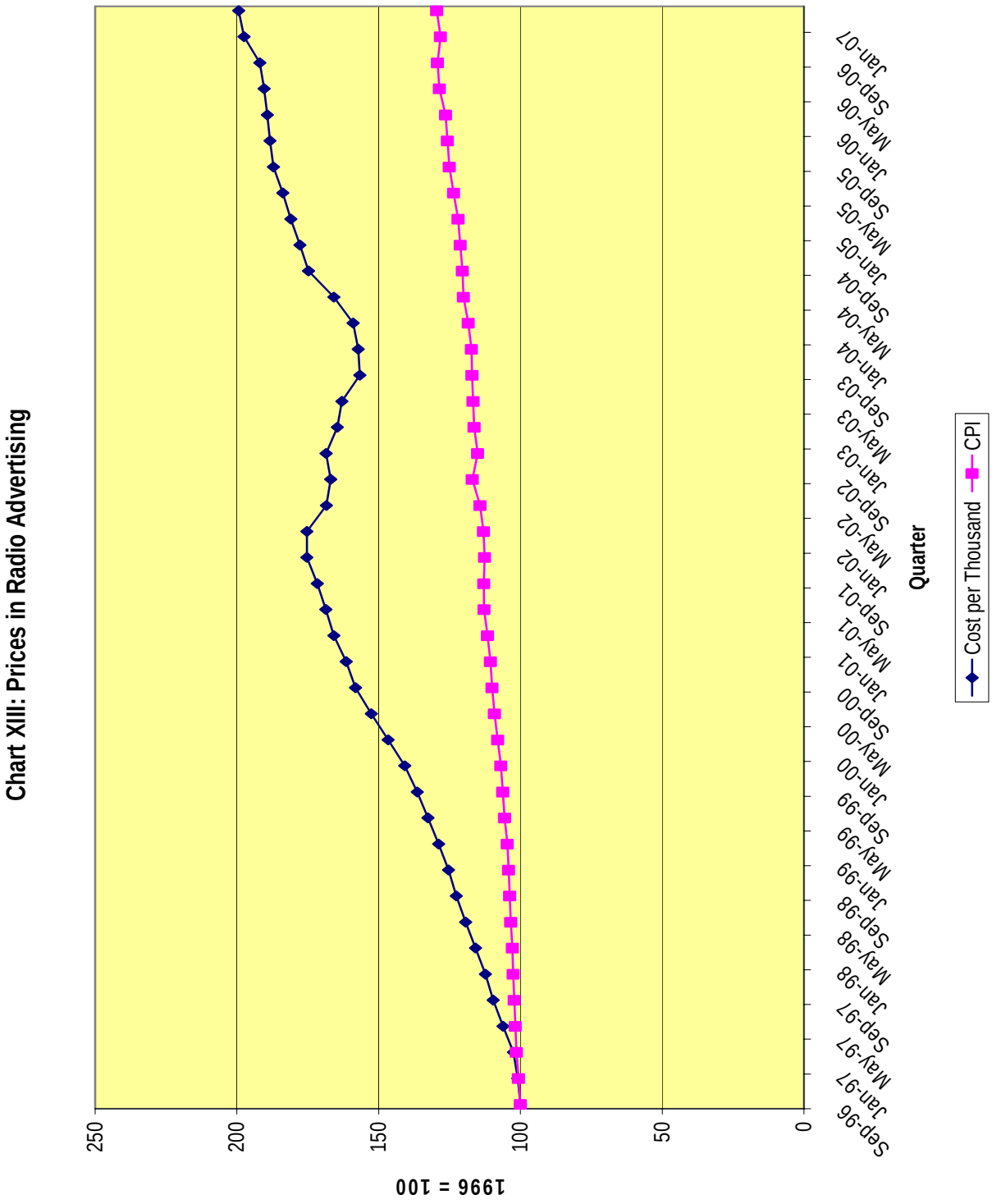
Chart XIII: Prices in Radio Advertising
1996 = 100
250
200
150
100
50
0
Sep-96
Jan-97
May-97
Sep-97
Jan-98
May-98
Sep-98
Jan-99
May-99
Sep-99
Jan-00
May-00
Sep-00
Jan-01
May-01
Sep-01
Jan-02
May-02
Sep-02
Jan-03
May-03
Sep-03
Jan-04
May-04
Sep-04
Jan-05
May-05
Sep-05
Jan-06
May-06
Sep-06
Jan-07
Quarter
Cost per Thousand
CPI