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An Examination of Auditor Concentration in the Savings and Loan Industry

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The views expressed in this article are arrived at independently and are those of the authors, and do not necessarily reflect the views of the Federal Home Loan Bank Board.

Overview

The purpose of this investigation is to consider the relationship auditor concentration has on the production of financial information within the savings and loan industry. This study uses audit information on all Federal Home Loan Bank districts, except Districts Two and Six, from 1976 to 1980. Audit statistics show a high concentration of audit engagements by the top four accounting firms within each district. However, on an industry-wide basis, a four-firm concentration ratio by size of assets audited indicates variation in the selection of auditor for S&L engagements among districts. The results show that firms operating within a district may establish a reputation for serving the S&L industry within a region of the country, but not for the United States at large. Differences among districts due to size and number of S&L institutions make it difficult for a few audit firms to dominate the market for accounting services. The data across time on concentration by size of institution and fees charged per auditor does not change appreciably. This suggests that accounting firms performing S&L audits provide service on a long-term basis to their clients within the savings and loan industry and maintain stable rates for such services.

Audit Services Within the Savings and Loan Industry

Production of audit services for S&Ls may be effected by changes in regulatory standards and the competitiveness of the accounting industry providing audit information. Expansion of S&L services, consolidation of associations through merger, and the transfer of some S&Ls from mutual to stock ownership have given rise to new audit standards from the Federal Home Loan Bank Board and the Office of Examinations and Supervision. Information generated by accountants is used by the Bank Board in regulating S&Ls and by members of the public in evaluating the soundness of their savings institution. Savings decisions by individual investors may be determined by studying the financial statements of firms in which they have an actual or potential interest. Economic agents operating within the financial markets depend upon information acquired from the annual statements attested to by certified accountants. The independent auditor provides a service to the financial community and the government by lending credibility to an S&L's financial reports. The purpose of this article is to analyze the role of audit firms in the production of financial information and to determine the effect auditor competition might have on financial reporting for S&Ls among Federal Home Loan Bank districts.

Literature on the Production of Audit Information

Previous studies on the generation of audit reports by accountants deal with the quality and quantity of financial information on publicly traded firms.[1] These investigations show that data contained in pub-

1. Ray Ball and Phillip Brown, "Empirical Evaluation of Accounting Income Numbers," *The Journal of Accounting Research*, 1968, Vol. VI(2), pp. 159-178; Edgar M. Barrett, "Financial Reporting Practices: Disclosure and Comprehensiveness in an International Setting," *The Journal of Accounting Research*, 1976, Vol. XIV(1), pp. 10-26; J. S. Demski, "Information Improvement Bounds," *The Journal of Accounting Research*, 1972, Vol. X(1), pp. 58-76; Nicholas J. Gonedes, Nicholas Dupuch, and Stephen H. Penman, "Disclosure Rules, Information-Production and Capital Market Equilibrium: The Case of Forecast Disclosure Rules," *The Journal of Accounting Research*, 1976, Vol. XIV(1), pp. 89-137.

Table 1.—Concentration Figures for New York and American Stock Exchange Companies Audited by Big Eight Firms

Audited Item	Percentage of Firms Audited for Each Item	
	New York Exchange	American Exchange
	(percent)	(percent)
Sales	94	67
Profits	94	67
Income taxes paid	90	66
All assets owned	94	73

Source: US Congress, Senate Committee on Government Operations, *The Accounting Establishment*, a staff study prepared by the Subcommittee on Reports, Accounting and Management, 94th Congress, 2nd Session, December 1976.

Table 2.—Concentration by Audited Sales and Client Representation by the Big 8 and Top 20 Auditors for the 6,581 Largest Firms

Auditors	Total Sales Audited	Concentration Ratio-Sales	Total Firms Audited	Concentration Ratio-Clients
	(millions)	(percent)		(percent)
Top 5	$1,604,596	69.72	3,578	54.37
Big 8	2,207,725	95.93	5,390	81.90
Top 20	2,273,925	98.81	6,264	95.18

Source: Spencer Harris, *Who Audits America*, 4th ed., (Menlo Park, California: Data Financial Press, 1979).

lished accounting reports help investors make informed investment decisions about the companies. For instance, one study demonstrates how special accounting items on the annual report may lead to a more accurate appraisal of firm value.[2] Another investigation, comparing national equity markets in various countries, found a correlation between the quality of financial reporting practices and market efficiency.[3] Recent contributions on financial disclosure tend to qualify the informational benefits of public audit reports depending on the existence of disclosure regulations. One study claims, on the basis of empirical evidence, that there may be differences in the quality of information given to investors based on public disclosure requirements. The research supports the view that disclosure regulation increases the quantity and quality of audit information.[4]

Regardless of informational differences, the investigators all agree on the importance of either voluntary or mandatory public financial disclosure in contributing to an efficient capital and securities market. As yet, no study has been made to determine the size and influence public accounting firms have on the dissemination of financial information within the S&L industry.

According to the US Senate Committee on Government Operations, CPA firms performing audit services for public corporations earn an estimated $2 billion annually. The "Big Eight" accounting firms represent 80 percent of this market. Testimony during recent congressional investigations indicates that these eight firms consist of 11 or 12 percent of the CPAs in the United States and audit 85 percent of the companies listed on the New York and American Stock Exchanges.[5] Table 1 gives the measurements of auditor concentration according to size of companies engaging "Big Eight" firms. Table 2 presents concentration ratios based on sales and client representation by the top 20 auditors for the 6,581 largest public companies in 1978. The data indicate that the five largest "Big Eight" auditors comprise over 50 percent of the client market and account for nearly 70 percent of audited sales. These figures indicate that the auditor market may be dominated by as few as five inde-

2. Nicholas J. Gonedes, "Risk, Information and the Effects of Special Accounting Items on Capital Market Equilibrium," *The Journal of Accounting Research*, 1975, Vol. XIII(2) pp. 220–256.

3. Edgar Barrett, *op. cit.*, pp. 10–26.

4. Eugene A. Imhoff, "The Representativeness of Management Earnings Forecasts," *Accounting Review*, 1978, Vol. XXIII(4), pp. 837–850.

5. US Congress, Senate Committee on Government Operations, *The Accounting Establishment*, a staff study prepared by the Subcommittee on Reports, Accounting, and Management, 94th Congress, 2nd Session, December 1976.

Table 3.—Auditor Concentration Ratios for the Savings and Loan Industry (1976)

	Concentration Ratios			
District	One-Firm	Two-Firm	Three-Firm	Four-Firm
1	.5400	.6548	.7375	.8089
3	.1737	.3340	.4141	.4631
4	.3618	.5292	.5738	.6095
5	.2830	.4586	.5229	.5748
7	.4914	.7931	.8173	.8357
8	.4560	.5581	.6377	.6985
9	.2242	.3382	.3877	.4291
10	.1933	.3699	.4989	.5917
11	.3093	.5097	.6955	.7781
12	.3187	.5164	.6310	.6994
Industry	.2307	.3311	.4139	.4807

Table 4.—Auditor Concentration Ratios for the Savings and Loan Industry (1977)

	Concentration Ratios			
District	One-Firm	Two-Firm	Three-Firm	Four-Firm
1	.5978	.7102	.7923	.8480
3	.1963	.3572	.4310	.4803
4	.3671	.5515	.5957	.6312
5	.2978	.4671	.5443	.5978
7	.4860	.7903	.8190	.8352
8	.4583	.5504	.6364	.7012
9	.2138	.3250	.3700	.4115
10	.2231	.4095	.5399	.6036
11	.3071	.5417	.7229	.8015
12	.3163	.5230	.6328	.6966
Industry	.2393	.3386	.4223	.4971

Table 5.—Auditor Concentration Ratios for the Savings and Loan Industry (1978)

	Concentration Ratios			
District	One-Firm	Two-Firm	Three-Firm	Four-Firm
1	.6005	.7068	.7880	.8458
3	.1886	.3589	.4329	.4839
4	.3923	.5688	.6188	.6590
5	.2892	.4623	.5450	.6023
7	.4880	.7973	.8246	.8448
8	.4537	.5446	.6322	.6977
9	.2422	.3655	.4095	.4493
10	.2372	.4211	.5547	.6157
11	.3039	.5425	.7287	.8027
12	.3249	.5216	.6324	.6915
Industry	.2396	.3435	.4300	.5050

Table 6.—Auditor Concentration Ratios for the Savings and Loan Industry (1979)

District	Concentration Ratios: One-Firm	Two-Firm	Three-Firm	Four-Firm
1	.6057	.7138	.8012	.8568
3	.1949	.3707	.4422	.4919
4	.4051	.5796	.6279	.6676
5	.3044	.4731	.5552	.6111
7	.4985	.8039	.8316	.8518
8	.4527	.5478	.6374	.7036
9	.2554	.3843	.4353	.4845
10	.2439	.4291	.5609	.6185
11	.2899	.5321	.7226	.7970
12	.2709	.4508	.5557	.6117
Industry	.2986	.4161	.5133	.5975

Table 7.—Savings and Loan Asset Concentration by District (1976 to 1980)

District	Percentage of Total Assets within the District: 1976	1977	1978	1979
1	2.02	1.89	1.79	1.66
2	10.43	10.03	9.87	9.63
3	4.41	4.36	4.26	4.09
4	17.96	17.79	17.81	17.67
5	8.35	8.43	8.36	8.28
6	4.72	4.62	4.61	4.47
7	10.64	10.64	10.55	10.31
8	6.68	6.49	6.42	6.25
9	7.63	7.79	8.22	8.93
10	4.26	4.22	4.21	4.24
11	18.67	19.32	19.31	19.85
12	4.24	4.41	4.57	4.63

pendent accounting firms. The results suggest that the market for accounting services to the S&L industry may be monopolistically competitive with product differentiation based on the professionalism of the auditor. The present study utilizes S&L audit log information and data from the semi-annual data base to determine the extent of auditor concentration in the savings and loan industry.

Results of an Audit Concentration Study of the S&L Industry

This investigation collected audit information from logs kept by ten district banks. Data concerning which accounting firms audit individual S&Ls were unavailable for Districts Two and Six. Therefore, these districts were excluded from the study. Once an auditor was linked to an S&L, data on institutional size and accounting fees were obtained from the semi-annual data base. Individual docket numbers were used in identifying an S&L and returning information from the data base for 1976 to 1980. The data were annualized and adjusted for mergers that took place over this period.

Although each new auditor was coded and included in the study, major auditors within the districts consisted of the Big Eight and five regional accounting organizations. The 13 firms most frequently represented among the districts were: Arthur Andersen & Company; Deloitte, Haskins & Sells; Coopers & Lybrand; Ernst and Whinney; Peat, Marwick, Mitchell & Company; Arthur Young and Company; Main Hurdman; Alexander Grant and Company; Fox and Company; Leventhol and Horwath; and Seidman and Seidman. The top four accounting firms, in terms of size of institutions audited and fee income generated for each district, were found to come from these audit companies.

Tables 3 through 6 present auditor concentration ratios by size of S&L assets audited from 1976 to 1980. The four-firm ratio ranges from a high of 85 percent to a low of 42 percent of assets audited for individual districts over the period. A possible explanation of the wide range in auditor concentration is the relative size of assets within individual districts. Districts having a greater proportion of industry assets may show higher audit concentration where one accounting firm audits a few large S&Ls. Table 7

Table 8.—Four-Firm Concentration Ratios Based on Fees Generated Per Auditor (1976 to 1980)

	Concentration Ratios			
District	1976	1977	1978	1979
1	.7649	.8016	.8069	.8249
3	.4416	.4691	.4393	.4471
4	.5309	.5769	.5799	.5817
5	.5625	.5875	.5541	.5616
7	.8123	.8093	.8015	.8149
8	.6789	.6655	.6631	.6818
9	.4267	.4079	.4353	.4485
10	.4856	.5276	.5032	.5211
11	.6304	.6763	.6460	.6579
12	.6802	.6505	.6397	.5892
Industry	.4514	.4705	.4602	.5405

provides data on the percentage of total S&L assets within the districts from 1976 to 1980. Of those districts studied, a high level of asset concentration is found in Districts 4, 11, 7, 9, and 5. However, according to Tables 3 through 6, districts exhibiting a high level of auditor concentration of S&L assets are Districts 1, 11, 12, 7, and 8. This result indicates that the relative size of a district may not be an important factor in explaining auditor concentration.

Another potential explanation of auditor concentration may be with the cost of performing accounting services. Complex accounting procedures, involving a high fee for service, may represent a case where there are barriers to entering the S&L market for audit services. Therefore, a few accounting firms within a district may specialize in serving the S&L community and cultivate a continuing audit relationship. High accounting fees may be representative of the sunk costs borne by the auditor in developing S&L accounting expertise. The difficulty in using accounting fees to assess audit complexity is that an auditor may charge on the basis of institutional size rather than billable hours. However, since auditor concentration due to relative size of assets held within a district appears insignificant, fees may be a suitable surrogate for audit complexity. Table 8 presents information on fees charged per auditor within the districts from 1976 to 1980. The fees charged by the top four auditors within each district do not appear to change significantly over time. Districts having the highest concentration of fee income generated for the top four auditors within each district are 1, 7, 8, 12, and 11. These districts coincide with the ones showing a high level of auditor concentration in Tables 3 through 6. Therefore, audit complexity as indicated through fees may explain the concentration of auditors among districts.

The data across time on concentration by size of institution and fees remain stable. This result suggests that accounting firms which audit S&Ls maintain market share within a district over time. The fee structure indicates that the complexity of S&L audits may require specialized knowledge of the industry. The expertise requirement may lead to a concentration of auditors within a district. Auditors in a particular region familiar with the S&Ls in the district may develop a good reputation for providing accounting services. At the industry level, auditor concentration is not significant over time. The ability of an accounting firm to cultivate S&L clients within a district does not appear to carry over to other districts. **J**