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## Large Life Insurance Companies in the National Mortgage Market

Life insurance companies are national lenders. This has implications about the kinds of mortgages they acquire, which in turn has implications for the usefulness and limitations of yield series covering life insurance company operations. Mortgages entering the national market at any one time carry a relatively narrow risk and yield dispersion. Hence although the companies represented in our series were not chosen according to principles of scientific sampling, their experience is broadly representative of life insurance companies generally.

As noted earlier, series covering life insurance companies are *not* representative of the residential market as a whole. The national market is, however, the most sensitive component of the residential market as a whole, since the lenders in the market have a wide range of alternative investment opportunities, and shift at the margin from one investment to another. Changes in the national market thus register tendencies operative in local markets, to a greater or lesser degree depending on the extent to which the local market is isolated from outside influences.

### Large Life Insurance Companies as National Lenders

National lenders are those that acquire the bulk of their loans outside of their local (home office) area. Table 5-1, drawn from a special survey conducted by the Federal Home Loan Bank Board, classifies a lender as national if 90 per cent or more of his loans in 1961 were outside the lender's local area;<sup>1</sup> otherwise the lender is classified as local. Loans are classified as national or local depending on whether they are made by national or local lenders. Using this definition, 74 per cent of the life insurance companies covered in the survey were classified as national, compared to 8 per cent of mortgage companies and

<sup>1</sup> "Local area" was left to the respondent to define.

TABLE 5-1  
 Distribution of Conventional Mortgage Loans on One-Family Homes  
 Approved by National and Local Lenders in 1961

	Life Insurance Companies		Mortgage Companies		Savings and Loan Associations		Commercial Banks		Mutual Savings Banks	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Total lenders	180	100	751	100	4,318	100	na		na	
national	134	74	66	8	0	0	na		na	
local	46	26	685	92	4,318	100	na		na	
Total loans	5,617	100	4,829	100	51,356	100	35,089	100	8,882	100
national	5,369	96	551	11	0	0	3,275	9	622	7
local	248	4	4,278	89	51,356	100	31,814	91	8,260	93

Note: Coverage was as follows: Life insurance companies holding at least \$2.5 million in conventional residential loans as reported in *Bests Life Insurance Reports, 1961*; mortgage companies that were members of the Mortgage Bankers Association or were FHA-approved mortgagees; FSLIC-insured savings and loan associations plus state-insured cooperative banks in Massachusetts; FDIC-insured commercial banks and mutual savings banks. Data cover the first nine months of 1961.

na=not available.

Source: Federal Home Loan Bank Board.

none of the savings and loan associations (data for commercial banks and mutual savings banks were not reported). The life insurance companies that were classified as local were small ones accounting for a very small proportion of total lending by life insurance companies. Thus, 96 per cent of total life insurance company loans in 1961 were accounted for by life insurance companies classified as national lenders, compared to 11 per cent for mortgage companies, 9 per cent for commercial banks, 7 per cent for mutual savings banks, and none for savings and loan associations. The four large companies in our survey would all be classified as national lenders.

Other measures of lender participation in the national market are shown in Tables 5-2 and 5-3, which are drawn from the 1960 Census of Residential Financing and classify outstanding loans in 1960 by whether they are inside or outside the region in which the lender's home office is located. (The traditional census nine-region breakdown is used for this classification.) Thus Table 5-2 indicates that in 1960, 17 per cent of all outstanding first mortgages on single-family homes were held by lenders located in a region different from that of the property. For life insurance companies, however, the figure was 56 per cent, and for all other lenders combined, 8 per cent. The life insurance companies accounted for 58 per cent of all "foreign-held" mortgages. Table 5-3 shows similar data for individual major metropolitan areas. In only one of the seventeen metropolitan areas was the life insurance company share of loans held by outsiders less than 50 per cent. The remainder of these loans was accounted for mainly by mutual savings banks, the Federal National Mortgage Association, and mortgage companies, which are only temporary holders selling most of their loans to life insurance companies and mutual savings banks.

Why are the life insurance companies national lenders? First, they are not subject to legal restrictions on the geographical scope of their mortgage lending, as are savings and loan associations, commercial banks, and (to a somewhat lesser extent) mutual savings banks.<sup>2</sup> Second, most of the larger companies are domiciled in the East where interest rates are generally low; hence, they are constrained to seek the higher interest rates available elsewhere. Third, the insurance side of their business tends to be nationwide, thus creating both internal and external pressures to maintain a broad base of mortgage lending.

<sup>2</sup> See Raymond J. Saulnier, *Urban Mortgage Lending by Life Insurance Companies*, NBER, New York, 1950, p. 24.

TABLE 5-2

First-Mortgage Loans on One-Family Homeowner Mortgaged Properties in 1960, by Type of Holder

	Per Cent of Mortgages on Properties in Different Region Than Holder						Life Insurance Company Share of All Mortgages, Held by Outsiders
	All Holders <sup>a</sup>	Life Insurance Companies	Mutual Savings Banks	Commercial Banks	Savings and Loan Assns.		
All first mortgages	17	56	28	4	2	58	
Properties inside SMA	19	57	29	6	2	60	
Properties outside SMA	11	50	20	2	2	53	
Conventional mortgages	6	40	0	1	1	68	
Properties inside SMA	7	44	0	1	b	77	
Properties outside SMA	5	22	0	1	2	23	
FHA mortgages	34	65	42	6	7	64	
Properties inside SMA	35	65	41	6	8	60	
Properties outside SMA	30	60	44	7	3	72	
VA mortgages	29	61	39	10	7	52	
Properties inside SMA	31	61	39	13	8	50	
Properties outside SMA	21	61	37	2	4	59	

<sup>a</sup>Includes other holders not shown separately.<sup>b</sup>Less than 0.5 per cent.Source: U.S. Census of Housing, 1960, Volume V, *Residential Finance*, Part 1, Homeowner Properties, pp. 15, 19, 23, 27.

TABLE 5-3

First-Mortgage Loans on One-Family Homeowner Mortgaged Properties  
in Selected Metropolitan Areas in 1960

Metropolitan Area	Life Insurance Company Share of All Mortgages Held by Outsiders	Per Cent of Mortgages on Properties in Different Region Than Holder	
		All Holders	Life Insurance Companies
Atlanta	54	40	68
Baltimore	50	13	60
Boston	100	1	35
Buffalo	58	1	10
Chicago	67	10	47
Cleveland	51	13	45
Dallas	73	46	74
Detroit	59	25	48
Los Angeles	54	23	59
Minneapolis	68	9	38
New York	19	1	4
Philadelphia	75	4	21
Pittsburgh	60	4	26
St. Louis	71	18	67
San Francisco	53	27	67
Seattle	69	27	73
Washington	55	39	68

Source: U.S. Census of Housing, 1960, Volume V, *Residential Finance*, Part 1, Homeowner Properties, Table 5.

Fourth, the assets of the industry are heavily concentrated among a relatively small number of large companies, which must cultivate a broad market in order to get their funds invested.<sup>3</sup>

### Instruments in the National Market

In general, mortgages entering the national market are obtainable in relatively large volume and have relatively small risk. Volume is important because the administrative machinery needed to acquire mort-

<sup>3</sup> For data on concentration of mortgage holdings by life insurance companies and other investors, see J. E. Morton, *Urban Mortgage Lending: Comparative Markets and Experience*, Princeton University Press for NBER, 1956, pp. 51-53.

gages, whether it is a system of branch offices or a network of local correspondents, is not economical unless it can generate some minimum volume of mortgages. High-risk mortgages do not enjoy a broad market because (1) the institutional lenders that comprise the national market have conservative investment objectives, and (2) these lenders usually are not able to make detailed investigations or maintain the close surveillance that is required on risky loans. The supply of high-risk mortgage loans is thus dominated by local lenders.<sup>4</sup>

These observations suggest the following specific characteristics of the instruments entering the national market. The volume aspect suggests that they are more likely to be secured by newly built houses in tract developments than by existing structures, and more likely to originate within metropolitan areas than outside. The risk aspect suggests that mortgages entering the national market are more likely to be federally underwritten than conventional and, if conventional, are likely to have characteristics considered desirable from the standpoint of risk, such as high borrower income.

These conjectures are broadly consistent with the characteristics of loans acquired by life insurance companies relative to those acquired by other lenders.

1. Mortgages secured by new construction are more likely to enter the national market than mortgages secured by existing structures because construction often generates a package of mortgages that is convenient for national lenders with substantial sums to invest.<sup>5</sup> As shown in Table 5-4, life insurance companies in 1960 had a larger proportion of their outstanding first-mortgage loans secured by new properties than any of the other major lender groups. The FHLBB survey covering first mortgage conventional loans authorized in eighteen metropolitan areas during the period May–December 1963 shows that loans on new properties accounted for about two-thirds of the total for life insurance companies and mortgage companies; one-third for mutual savings banks and savings and loan associations; and one-fourth for commercial banks. The proportion of loans on new properties is prob-

<sup>4</sup> This appears to be true generally, at least for small loans. See J. A. Bottomly, "The Premium for Risk as a Determinant of Interest Rates in Underdeveloped Rural Areas," *Quarterly Journal of Economics*, November 1963, pp. 642, 643.

<sup>5</sup> This applies to mortgages generated by tract operations; individual custom-built homes generate only a single mortgage and usually involve construction as well as permanent financing by the same lender. Life insurance companies do not find such loans especially attractive.

TABLE 5-4

First-Mortgage Loans on One-Family Homeowner Mortgaged Properties in 1960:  
Per Cent Held Inside Metropolitan Areas and Per Cent Secured  
by New Properties, by Type of Holder

	All Holders <sup>a</sup>	Life Insurance Companies	Mutual Savings Banks	Commercial Banks	Savings and Loan Assns.
<i>Per Cent Secured by New Homes<sup>b</sup></i>					
All first mortgages	43	56	52	39	42
Conventional	40	64	50	41	42
FHA	47	50	52	43	36
VA	48	55	54	28	45
<i>Per Cent Held Inside Metropolitan Areas</i>					
All first mortgages	72	80	87	63	72
Conventional	67	83	79	53	70
FHA	80	78	91	75	78
VA	78	82	91	72	81

<sup>a</sup>Includes other holders not shown separately.

<sup>b</sup>Refers to properties that had never been occupied before being acquired by the current owner-mortgagor.

Source: Same as Table 5-2.

ably higher for the large companies in our survey than for all life insurance companies.

2. Mortgages originated within metropolitan areas are more likely to enter the national market than those originated outside because mortgage credit demands in metropolitan areas are sufficiently large and concentrated to justify the machinery needed to transfer mortgages to the outside. For life insurance companies, this machinery comprises branch offices or correspondent relationships. Referring back to Table 5-2, 19 per cent of mortgages on properties inside metropolitan areas in 1960, but only 11 per cent of mortgages on properties outside metropolitan areas were held by lenders located in another region. Life insurance companies had a somewhat larger share of all mortgages held by outsiders in the case of loans on properties inside than in the case of loans on properties outside metropolitan areas (60 as compared to 53 per cent).

The distribution of total loans between metropolitan and nonmetro-



politan areas is, of course, affected by local as well as national lending. Table 5-4 shows that 80 per cent of residential loans held by life insurance companies and 87 per cent of those held by mutual savings banks were on properties in metropolitan areas, as compared to 72 per cent and 63 per cent for savings and loan associations and commercial banks, respectively. A larger proportion of local lending by savings banks is in metropolitan areas than is the case for life insurance companies.

3. Federally underwritten mortgages are more likely to enter the national market than conventional mortgages because federal underwriting implies lower risk and greater uniformity. Table 5-2 showed that 34 per cent of all FHA and 29 per cent of all VA mortgages in 1960 were held outside the region in which the property was located; for conventional mortgages, the figure was only 6 per cent.

Ratios of federally underwritten to total mortgages for individual lender groups, shown in Table 5-5, are affected by the extent of participation in national markets, but other factors are also involved. Commercial banks have higher ratios than savings and loan associations largely because they place a higher value on the greater liquidity of federally underwritten mortgages, while their maximum lending limits on conventional loans are more restrictive. The ratio is higher for mutual savings banks than for life insurance companies because the

TABLE 5-5

Per Cent of Outstanding Loans on One- to Four-Family Properties Federally Underwritten, Selected Years

	1950	1956	1960
Life insurance companies	67	63	66 <sup>b</sup>
Four lenders in NBER survey	84 <sup>a</sup>	80	75
Mutual savings banks	57	77	75 <sup>b</sup>
Commercial banks	54	52	54 <sup>b</sup>
Savings and loan associations	29	24	29 <sup>b</sup>

<sup>a</sup>Refers to 1951.

<sup>b</sup>One-unit properties only.

Source: Saul Klamman, *The Volume of Mortgage Debt in the Postwar Decade*, pp. 74-87; 1960 *Census of Residential Finance*, p. 12; National Bureau of Economic Research.

savings banks can lend in the national market *only* on an insured or guaranteed basis, whereas life insurance companies can lend in the national market on a conventional basis as well.

Table 5-5 indicates that in 1950, life insurance companies had the highest ratios of federally underwritten to total lending. At that time, mutual savings banks were largely local lenders, limited by law to mortgages in their own or adjoining states. In 1949 and 1950, however, statutes in leading mutual savings banks states were amended to allow these lenders to acquire FHA and VA (but not conventional) mortgages in nonadjoining states, which they did in very substantial volume; by 1956, the relative importance of federally underwritten mortgages in their portfolios exceeded that for life insurance companies.<sup>6</sup> Thus, the higher ratio of federally underwritten holdings for mutual savings banks reflects the fact that *all* nonlocal lending by these institutions is in federally underwritten mortgages (see Table 5-2). Life insurance companies, in contrast, also acquire nonlocal loans on a conventional basis when this is considered advantageous; in 1960, about one-fifth of their nonlocal loans were conventional. Moreover, life insurance companies accounted for two-thirds of all conventional loans held by outsiders.

4. Conventional mortgages entering the national market have characteristics considered favorable from the standpoint of risk. Although no data are available to check this directly, it can be verified indirectly from the characteristics of conventional loans made by life insurance companies. About two-fifths of the conventional loans held by life insurance companies in 1960 were on properties outside the holder's region, compared to negligible proportions for other lenders (Table 5-2). This should be reflected in the over-all characteristics of life insurance company conventional loans as compared to loans made by other lenders.

As indicated in the first three lines of Table 5-6, those who borrow from life insurance companies (on conventional first-mortgage loans) generally have higher incomes than those who borrow from other lenders, and fewer commit themselves to very heavy mortgage payments relative to their income. Life insurance company loans are also more "conventional" in the original meaning of the term. The percentage of borrowers over 65 years of age, not living in husband-wife households, or nonwhite, is lower for life insurance companies than for

<sup>6</sup> For further discussion of this episode, see Klamann, *The Postwar Residential Mortgage Market*, pp. 149-156.

TABLE 5-6

## Selected Characteristics of Conventional First Mortgages on One-Family Homeowner Mortgaged Properties, by Type of Lender, 1960

	Life Ins. Cos.	Mutual Savings Banks	Mortgage and Real Est. Cos.	Commercial Banks	Savings and Loan Assns.	Fed. and State Agencies	Individuals	Others	Total
Median income of borrower (\$)	9,700	7,400	5,200	6,400	6,600	7,000	5,400	5,000	6,500
Per cent of borrowers with income less than \$4,000	7.5	11.0	32.7	17.8	14.5	14.0	27.9	29.5	17.4
Per cent of borrowers with mortgage payments exceeding 30 per cent of income	2.8	2.1	7.1	5.7	5.1	4.9	8.7	11.9	5.6
Per cent of structures built before 1929	8.1	27.0	13.3	36.3	27.0	16.2	40.5	34.3	28.8
Per cent of borrowers 65 years of age and over	4.2	9.1	4.4	6.6	7.1	1.2	7.5	7.9	6.8
Per cent of households "Nonnormal" <sup>a</sup>	9.8	16.8	11.7	13.8	13.0	9.2	14.9	13.2	13.3
Per cent of borrowers nonwhite	1.8	2.6	13.1	3.5	4.6	2.4	10.3	11.0	5.4
Per cent of mortgages delinquent	2.5	2.8	16.1 <sup>b</sup>	3.7	9.3	5.5	9.0	2.8	7.8
Median interest rate (per cent)	5.0	5.1	6.1	6.0	6.0	4.1	6.0	6.0	5.6

<sup>a</sup>Households other than "male head, wife present, no nonrelatives."

<sup>b</sup>Mortgages inside SMAs only. Figure given for U.S. clearly is in error.

Source: 1960 Census of Housing, Volume V, *Residential Finance*, Part 1, Homeowner Properties.

other lenders. Also, a relatively small proportion are secured by properties built before 1929.

This tendency of life insurance companies to skim the "best" conventional mortgages is reflected in their refinancing experience. Mortgage borrowers whose credit position has improved through the passage of time often refinance with life insurance companies where their improved status is given recognition in the form of more favorable terms. Data on the purposes of refinancing from the 1950 Census of Residential Financing reveal that almost half of the conventional first mortgages on owner-occupied one-dwelling unit properties refinanced at life insurance companies were for the purpose of securing better terms, whereas this was true of only one-fourth of the refinanced loans of all lenders combined.<sup>7</sup> About three-fifths of the conventional first mortgages refinanced with life insurance companies were held originally by a lender other than the one doing the refinancing, whereas for all lenders combined, this was the case for only about one-third of refinanced mortgages.

### Implications for Mortgage-yield Structure

Because they tend to restrict their conventional lending to mortgages having relatively standard characteristics, at the lower end of the risk spectrum, life insurance company loans carry relatively low interest rates, and rate variance is small. Differentials in gross yield between life insurance companies and other lenders on new conventional loans in eighteen metropolitan areas during May–December 1963 are shown in Table 5-7.<sup>8</sup> These differentials are calculated from multiple regression equations in which the type of lender is entered as a dummy variable. The differential marked "adjusted" is calculated from equations which include the average loan-value ratio, property value, maturity, metropolitan area, and purpose of loan.<sup>9</sup> The first figure is

<sup>7</sup> 1950 Census of Housing, Volume IV, *Residential Financing*, Part I, U.S., p. 172. Data on purpose of refinancing were not obtained in the 1960 Census.

<sup>8</sup> The National Bureau's Survey of Urban Mortgage Finance shows that life insurance companies had lower contract rates on home mortgages than savings and loan associations and commercial banks throughout the period 1920–47. See Morton, p. 91.

<sup>9</sup> The interlender yield differentials calculated from regressions that include lender type as a dummy variable may be biased by intercorrelation between lender type and loan characteristics, if the relationship between yield and loan characteristics is not linear. As a check on this possibility, we calculated yield

TABLE 5-7

Differences in Gross Yield Between Life Insurance Companies and Other Major Institutional Lenders  
on Conventional First-Mortgage Loans Approved During May-December 1963  
(basis points — other lender less life insurance companies)

	Savings and Loan Associations	Commercial Banks	Mortgage Companies	Mutual Savings Banks	R <sup>2</sup>
East					
Simple	40 (39)	15 (14)	30 (28)	3 (2)	.23 (.51)
Adjusted	29 (20)	7 (10)	21 (13)	5 (2)	.55 (.89)
Midwest					
Simple	48 (47)	9 (9)	7 (5)	10 (9)	.25 (.74)
Adjusted	28 (17)	-5 (-4)	-1 (-1)	4 (1)	.45 (.85)
South					
Simple	65 (63)	62 (58)	10 (9)	—	.21 (.55)
Adjusted	47 (46)	24 (28)	8 (9)	—	.44 (.84)
West					
Simple	83 (81)	40 (40)	11 (11)	29 (28)	.27 (.66)
Adjusted	62 (58)	3 (23)	5 (9)	19 (22)	.49 (.79)
U.S.					
Simple	65 (63)	11 (11)	12 (11)	4 (-4)	.33 (.55)
Adjusted	45 (34)	10 (15)	13 (11)	16 (13)	.62 (.91)

## Notes to Table 5-7

*Note:* Rate differences are calculated from multiple regression equations (separately for each region) relating effective yield to type of lender and the following factors: purpose of loan (purchase of new house, purchase of previously occupied house, construction of new house), loan-value ratio, value of property, maturity, and metropolitan area location of property. The "adjusted" yield differences are calculated from equations including *all* the above factors. The simple yield differences are calculated from equations using only type of lender. Figures in parentheses refer to regressions covering pooled averages, each pertaining to a given month (8), type of lender (5), purpose of loan (3), and metropolitan area (18); each average is weighted by the number of cases in the cell.  $R^2$ s are adjusted for the reduction in degrees of freedom involved in this procedure. Regional groupings of metropolitan areas are as follows: *East:* Baltimore, Boston, New York, and Philadelphia; *Midwest:* Chicago, Cleveland, Detroit, and Minneapolis; *South:* Atlanta, Memphis, Miami, and New Orleans; *West:* Dallas, Denver, Houston, Los Angeles, San Francisco, and Seattle.

*Source:* Calculated from data provided by the Federal Home Loan Bank Board.

based on regressions covering individual loans, while the figure in parenthesis is based on regressions covering pooled observations. Life insurance company yields are the lowest of all five lender groups in the U.S. regression, and also in separate regressions covering the South, West, and East, although the differences are smaller after adjustment than before. In the Midwest, life insurance company yields after adjustment don't differ significantly from those of mutual savings banks, commercial banks, or mortgage companies, all of which fall below savings and loan associations.<sup>10</sup>

for each lender group from the regression equation covering that group alone, employing the average characteristics of all lenders. This procedure generated results similar to those shown in Table 5-7 (U.S., Adjusted), with one exception. Using the separate regressions, mutual savings banks had lower rates than life insurance companies. The mutual savings bank regression for the entire U.S., however, has very high standard errors and is not really comparable to the equations for other lenders because the savings banks are represented in only eight of the eighteen metropolitan areas. A more definitive comparison of savings banks with other lenders would be restricted to those eight metropolitan areas.

<sup>10</sup> Whether life insurance company loans actually perform better is not necessarily relevant, and the evidence is difficult to interpret. Census data, which are comparable as between lenders, show life insurance companies with relatively low delinquency rates on conventional mortgages in both 1950 and 1960. Census data are not well suited, however, for measuring such a potentially volatile and erratic characteristic as delinquency. The National Bureau Survey of Urban Mortgage Lending showed life insurance companies to have higher foreclosure rates than commercial banks or savings and loan associations on loans made during the 1920's, but the data are biased by the exclusion of banks and asso-

TABLE 5-8

Variability in Gross Yield on Conventional First Mortgages Approved During May-December 1963, by Type of Lender  
( $R^2$  and standard error of estimate as successive independent variables are added to regression)

Independent Variable	Life Insurance Companies		Mutual Savings Banks		Mortgages Companies		Commercial Banks		Savings and Loan Associations	
	$R^2$	SE	$R^2$	SE	$R^2$	SE	$R^2$	SE	$R^2$	SE
<i>Individual Cases</i>										
Maturity	.03	.210 <sup>a</sup>		.266 <sup>a</sup>		.284 <sup>a</sup>		.357 <sup>a</sup>		.444 <sup>a</sup>
Loan-value	.03	.207	.10	.252	.07	.274	.10	.339	.02	.439
Property value	.04	.206	.20	.239	.21	.252	.14	.330	.11	.420
Loan purpose (3)	.05	.205	.21	.238	.22	.251	.21	.317	.12	.417
SMSA (18)	.19	.189	.62	.237	.23	.250	.23	.313	.13	.414
				.164	.46	.209	.46	.262	.50	.315
<i>Pooled Observations<sup>b</sup></i>										
Maturity	.06	.136 <sup>a</sup>		.189 <sup>a</sup>		.190 <sup>a</sup>		.259 <sup>a</sup>		.264 <sup>a</sup>
Loan-value	.06	.132	.36	.151	.33	.155	.10	.246	.03	.260
Property value	.06	.132	.36	.151	.49	.136	.16	.238	.31	.220
Loan purpose (3)	.07	.131	.42	.144	.50	.134	.22	.229	.44	.200
SMSA (18)	.37	.108	.94	.047	.82	.081	.63	.157	.91	.078

<sup>a</sup>Standard deviation.

<sup>b</sup>See note to Table 5-7.

Source: Calculated from data provided by the Federal Home Loan Bank Board.

Not only do conventional loans by life insurance companies carry relatively low yields, but cross-section yield variability associated with differences in loan and property characteristics (including location), is also relatively small. Table 5-8 shows that yield variability on conventional loans, as measured by the standard deviation, is smaller for life insurance companies than for the four other major lender groups—it is less than half that of savings and loan associations (.21 compared to .44 per cent).

A relatively small proportion of total yield variability on life insurance company loans is explainable by differences in the loan and property characteristics for which data are readily available. Table 5-8 shows that loan maturity, loan-value ratio, property value, and loan purpose collectively account for only 5 per cent of the yield variability of individual life insurance company loans,<sup>11</sup> whereas for other lender groups, these factors account for 13 to 23 per cent of variability. In the pooled observations, the differences are even larger. Life insurance companies are the only major lender group for which the loan-value ratio is not a significant yield determinant.<sup>12</sup>

The quantitatively most important yield determinant for all lender groups in these regressions is the metropolitan area location of property. Again, however, yield variance associated with location is much less important for life insurance companies than for other lenders. The introduction of metropolitan area into the regression covering individual loans raises explained variance to only 19 per cent for life insurance companies compared to 46 to 62 per cent for the other lender groups (Table 5-8). Rate differences between metropolitan areas in the East and areas in the West were smaller in regressions covering life in-

ciations whose experience was so bad that they failed (see Morton, pp. 98-112). Actual loss ratios were lower for the life insurance companies. More recent time series data on life insurance company experience (the Earley manuscript, pp. 4-17 to 4-23), suffer from lack of comparability with data for other lenders, but do not *prima facie* contradict the presumption that life insurance company loans do better.

<sup>11</sup> Cross-section analysis of individual loans made by the companies in our survey, discussed in Appendix B, shows very similar results.

<sup>12</sup> Relatively high borrower income on life insurance company loans tends to reduce the importance of loan and property characteristics as determinants of risk. In most states, furthermore, life insurance companies are limited to a maximum loan-value ratio of 75 per cent, and in 1963, the companies did not consider this a very risky level. Hence, variability in loan-value ratios below the 75 per cent level on life insurance company loans did not carry much risk variability.



insurance company loans than for other lender groups.<sup>13</sup> For example, yield differences for three pairs of metropolitan areas, after taking account of differences in maturity, loan-value ratio, property value, and loan purpose, were as follows (in basis points):

	Life Insurance Companies	Commercial Banks	Savings and Loan Associations
San Francisco less Boston	40	69	103
Los Angeles less Baltimore	35	59	79
Detroit less Philadelphia	21	27	57

SOURCE: Same as Table 5-8.

### Implications for Yield Series

The fact that the yield dispersion on mortgages that enter the national market is considerably smaller than the dispersion on all residential mortgages implies much more limited scope for individual lender yield variability, associated with differences in lender policies, than would be true for other lender groups. Some indication of the order of magnitude of the differences that can arise is provided in Table 5-9, which shows the distribution of differences in average quarterly yields between two of the large companies in our survey, separately for conventional and FHA mortgages. The average difference (calculated without regard to sign) was 12.7 basis points for conventionals and 7.6 basis points for FHAs. These differences are larger than those that

<sup>13</sup> One reason for the smaller geographical spread for life insurance companies may be that high-rate areas generate a relatively large volume of high-risk mortgages which do not enter the national market (they are not acquired by life insurance companies), and which are not completely identified by the loan and property characteristics on which we have data. Assume, for example, that some mortgages have a characteristic X which makes them unacceptable to life insurance companies because of high risk, and that X mortgages are more common in high-rate areas. Then local markets for X mortgages will be insulated from national competition by life insurance companies and if there is imperfect competition in local markets, the geographical spread will be larger on X mortgages than on other mortgages. Thus, local lenders who acquire X mortgages will show a wider unadjusted geographical spread than life insurance companies that don't. If the X characteristic could be included in the regressions, the regression covering local lenders would show the same adjusted yield spread as the regression covering life insurance companies. But since X is not identified, its influence is picked up by the metropolitan area coefficient, resulting in a wider geographical yield spread for local lenders.

TABLE 5-9

Differences in Gross Yield  
Between Company 4 and  
Company 6, Quarterly, 1951-63

Yield Difference in Basis Points	Number of Quarters	
	Conventional	FHA
0-10	24	43
11-20	19	6
21-30	6	3
31-40	2	0
41-50	1	0

*Source:* National Bureau of Economic Research series.

would arise from sampling error on the assumption that both companies had similar policies,<sup>14</sup> but they are small in absolute terms. When averaged out over four lenders who account for one-third to two-fifths of all life insurance company loans, differences of this magnitude suggest that our series must be fairly representative of life insurance company experience generally.

A comparison of our conventional series with the new FHLBB series that covers over forty companies, during a thirteen-month period when the series overlap, supports this view. The maximum monthly difference between the series was seven basis points and the average for the thirteen months was only two basis points. (For a detailed discussion, see Chapter 9.)

<sup>14</sup> On this assumption, we would expect quarterly yield differences on conventional loans to be on the order of two basis points.

