

JAMES A. GRAASKAMP COLLECTION OF TEACHING MATERIALS

IX. MISCELLANEOUS PROJECTS AND CORRESPONDENCE WITH INDUSTRY

A. Computer Modeling

4. Proposal to Mortgage Guaranty Insurance Corporation to Build a Spread Sheet Model Utilizing Mortgage Portfolio Data, October 29, 1984

October 29, 1984

Mr. Norbert Nevid
Mortgage Guaranty Insurance Corporation
MGIC Plaza
P.O. Box 488
Milwaukee, WI 53201

Dear Norb:

Enclosed is a proposed draft of a letter to Mr. Matthew C. Mandt. Please call Dan or myself to indicate any amendments or corrections you may wish to propose, and then we will send the letter to Mr. Mandt.

Relative to fees, Dan and I would each require \$1,000, payable in advance to complete the following initial steps:

- Study of documents, Canadian model, etc.
- Discussions with Nevid and Ross
- Letter to Mr. Mandt
- Research design
- Meeting with insurance regulators to approve reserve ratio study plan

With the research design in place, we would provide you a firm estimate on the cost of building a spread sheet model which could utilize the mortgage portfolio data you already possess on an IBM-PC diskette. We would then simulate the impact on loss ratios and loss reserves as a function of the aging of mortgages, and loan-to-value ratios (LTV) in property type.

Following a review of preliminary data output with you, we would discuss the format desired for presentation and publication.

Both Professor Anderson and myself will work through Landmark Research, Inc., which will be the prime contractor. Our basic hourly charges are scheduled in Addenda A, but we would provide a fixed cost arrangement for Phases II and III as they become defined. Landmark Research, of course, carries the full

Mr. Norbert Nevid
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complement of liability insurance and Workman's Compensation.
If this letter of understanding is satisfactory, please sign
one copy and return it with your retainer check for \$2,000.

FOR LANDMARK RESEARCH, INC.

James A. Graaskamp, Ph.D., SREA, CRE
Urban Land Economist

(Acknowledgement of those items
referred to previously)

Date

Enclosure

cc: Dan Anderson

JAG/jc

October 29, 1984

Mr. Matthew C. Mandt
Wisconsin Insurance Department
P.O. Box 7873
Madison, WI 53707

Dear Mr. Mandt:

Proper reserving is a key component in maintaining the financial solidity of insurance organizations. Because of the large number of mortgage insurance company insolvencies in the 1930s, adequate reserving requirements were of particular concern when states again began authorizing the writing of mortgage guaranty insurance in the late 1950s.

For individual mortgage insurance products, all states require a contingency reserve be established equal to 50 percent of earned premiums. In addition, Wisconsin requires the contingency reserve to be equal to 0.125 percent of the outstanding loan balance if this amount is greater than 50 percent of earned premiums.

Mortgage insurance companies must also maintain a certain ratio between the total risk on insured mortgages and policyholders' position. Total risk on insured mortgages is determined by applying the policy coverages (20 to 25 percent) to the outstanding loan balance insured. Policyholders' position is defined as the sum of the contingency reserve and capital and surplus. The maximum permitted risk on insured mortgages to policyholders' position ratio is 25:1. Since only 20 to 25 percent of the outstanding mortgage balance is normally insured, this requirement allows a mortgage insurer to maintain a policyholders' position of \$0.80 to \$1 (depends on proportion of 20 percent and 25 percent coverages) for every \$100 in outstanding mortgage balances.

In the United States, no adjustments are made in the 25:1 requirement for the seasoning or aging of the insured mortgage portfolio. Newer insured mortgages (say one to five years) would be treated the same as older mortgages (over five years).

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Evidence exists which suggests that older or seasoned mortgages pose less of a default risk to the mortgage insurer than do newer mortgages.

For instance, the Canadian insurance regulators recently adopted a rule which would permit adjustments to be made in the 25:1 requirement as insured mortgages become older. These adjustments permitted by the Canadian system are included in Exhibit 1.

The general effect of these adjustments is to permit a relatively smaller policyholder position as mortgages age, based on the reasoning that these mortgages present less default risk. The adjustments in the Canadian system are based on a statistical study which showed that loss ratios have been inversely related to the age of the insured mortgages, i.e., loss ratios generally declined as the age of the mortgages increased.

Similar statistical evidence exists in the United States regarding insured mortgages which also suggests that the default risk decreases as an insured mortgage portfolio ages. For instance, the Mortgage Guaranty Insurance Corporation (MGIC) has developed statistics showing that the loss experience on their book of business generally decreases as mortgages get older (see Exhibit 2).

Based on this evidence and the Canadian experience, MGIC is asking for a revision of Wisconsin Administrative Code Ins. 3.09(5) to allow for the effect of the seasoning process on their insured mortgages. The proposed revisions are illustrated in Exhibit 3. In general, the proposed revisions would permit a smaller policyholder position as the insured mortgage portfolio ages. On its existing mortgage portfolio, MGIC roughly estimates that the effect of proposed revisions would increase the maximum permitted risk on mortgages insured to policyholders' position ratio to increase from 25:1 to about 30:1.

Before considering the proposed revision of the Administration code, Wisconsin insurance regulators would like to obtain further evidence that the proposed revisions are appropriate.

Mr. Matthew C. Mandt
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More specifically, a study is recommended to analyze whether any adverse effects would be produced in MGIC's financial solidity by the proposed revisions.

We have been commissioned by MGIC to conduct a study which would measure the effects of the proposed revisions on MGIC's financial solidity. In conducting the study we will rely on past studies on mortgage insurance companies' financial strength as well as an analysis of MGIC's historical loss experience.

MGIC would like to request a postponement of the final decision regarding the proposed revisions of Wisconsin Administrative Code Ins. 3.09(5) until the completion of the above mentioned study. We anticipated a Spring 1985 completion date for the study.

We would be happy to arrange a meeting with you to further discuss the study. We appreciate your consideration in this matter.

Sincerely,

James A. Graaskamp
Chairman, Real Estate and Urban Land Economics

Dan R. Anderson
Professor of Risk Management

Enclosures

EXHIBIT 1

MEMORANDUM
FOR
MORTGAGE INSURANCE COMPANIES
SOLVENCY STANDARDS

1. This memorandum replaces all existing memoranda on the subject of solvency standards for mortgage insurance policies on classes of loans defined in Section 3.

2. Definitions

In this memorandum,

"commercial loan" means a loan on a property used primarily for commercial purposes;

"conventional loan" means a loan where the ratio of the initial mortgage amount to the lower of the appraised value or the sale price as at the date of the loan does not exceed 75%;

"high-ratio loan" means a loan that is not a conventional loan;

"home-ownership loan" means a loan on a residential property with 1 to 4 units (inclusive) without any regard to owner occupation;

"industrial loan" means a loan on a property used primarily for industrial purposes;

"initial mortgage amount" in respect of a second mortgage, means the total amount of the outstanding balance of the first mortgage and the amount of the second mortgage at the date of commencement of risk under the policy;

"multiple residential loan" means a loan on a property with more than 4 units used primarily for residential purposes;

"variable payment mortgage" means a mortgage on which the payments to be made by the borrower increase in some pre-determined manner and which the Department has agreed may be included under this definition.

3. Classes of Loans

The following classes of loans are hereby defined:

<u>type of Property</u>	<u>1st mortgages</u>		<u>2nd mortgages</u>		<u>Variable Payment Mortgages</u>
	<u>Conventional</u>	<u>High Ratio</u>	<u>Conventional</u>	<u>High Ratio</u>	
Home-ownership	HC1	HH1	HC2	HH2	HV1
Multiple residential	MC1	MH1	MC2		
Commercial	CC1	CH1	CC2		
Industrial	IC1	IH1	IC2		

Note: The first letter denotes the type of property.
The second letter denotes the type of mortgage.
The suffix denotes the ranking of the mortgage.

4. Capital and Free Surplus

- (a) A company shall, in respect of its mortgage insurance business covered by this memorandum, maintain capital and free surplus as stipulated below, adjusted for various classes of mortgages by factors prescribed in paragraph (b) and further adjusted by the factor prescribed in paragraph (d).

<u>Completed Policy Duration in Years</u>	<u>Capital & Free Surplus per \$100 of initial mortgage amount</u>
0	\$1.10
1	1.10
2	1.07
3	.98
4	.87
5	.73
6	.54
7	.33
8	.10
9 -	nil

- (b) The following adjustment factors will apply to the required capital and free surplus for various classes of mortgages.

<u>Class</u>	<u>Factor</u>
HC1 Homeownership conventional 1st mortgages	.60
HH1 Homeownership high ratio 1st mortgages	1.00
HC2 Homeownership conventional 2nd mortgages	.54
HH2 Homeownership high ratio 2nd mortgages	.90
HV1 Homeownership variable payment mortgages	1.10
MC1 Multiple residential conventional 1st mortgages	1.00
MH1 Multiple residential high ratio 1st mortgages	1.50
MC2 Multiple residential conventional 2nd mortgages	1.00
CC1 Commercial conventional 1st mortgages	1.00
CH1 Commercial high ratio 1st mortgages	1.50
CC2 Commercial conventional 2nd mortgages	1.50
IC1 Industrial conventional 1st mortgages	1.00
IH1 Industrial high ratio 1st mortgages	1.50
IC2 Industrial conventional 2nd mortgages	1.50

- (c) Notwithstanding anything to the contrary stated in paragraph (b) above, the factor for policies issued prior to January 1, 1974 in respect of homeownership 1st mortgages (classes HC1 and HH1) will be zero.

- (d) The above requirements shall be adjusted by application of an investment income factor defined as under:

Investment income factor = $1 - 2.5(x - .05)$
 where x denotes the investment yield of the company per unit of assets during the previous 12 months. The investment income factor shall not be less than 0.875.

For the purposes of calculating the yield, the investment income will be calculated as on page 06, line 15, column 01 of the 1982 statement, while assets will be calculated as required for the purposes of the test of compliance with section 103 (1982 statement, page 10, line 15).

The investment yield calculated pursuant to this paragraph will not be the same as calculated for the purposes of the annual statement (1982 statement, page 15, line 12).

- (e) A company shall also maintain capital and free surplus on the bases prescribed herein in respect of commitments likely to result into policies in the following 60 days. As regards the balance of commitments, the company will have to satisfy the Superintendent that capital would be available at the time when policies are likely to be issued. Companies will be required to justify the factors used in the calculations.
- (f) Notwithstanding anything to the contrary stated herein, the capital and free surplus required pursuant to this section shall not be less than 1/4 of 1% of the initial mortgage amount on the total business of the company.
- (g) The amount of capital and free surplus available for the purposes of this section will equal A+B+C-D-E where
 - A = capital, surplus, amounts transferred from life branch and general and contingency reserves (1982 statement, page 03, line 35);
 - B = deferred income taxes (1982 statement, page 03, line 28);
 - C = income taxes pertaining to the calendar year ending prior to or concurrently with the valuation date (excluding deferred income taxes;
 - D = market value excess, if any;
 - E = deferred policy acquisition expenses (1982 statement, page 02, line 25).

(It is presumed that the company has made adequate provisions for reserves required by the Department under Exhibit 5, page 05).

5. Unearned Premium Reserves

A company shall maintain unearned premium reserves on the scales prescribed below.

- (a) Single Premium Policies issued for 5 years or less.

<u>Completed Policy Duration in Years</u>	<u>Unearned Premium Reserve — as per cent—of Single Premium</u>
0	100.0
½	100.0
1	75.0
1½	62.5
2	50.0
2½	40.0
3	30.0
3½	22.5
4	15.0
4½	7.5
5	0

(b) Single Premium Policies issued for terms exceeding 5 years up to 10 years.

<u>Completed Policy Duration in Years</u>	<u>Uncarned Premium Reserve as per cent of Single Premium</u>			
	<u>issued in 1979 or later</u>	<u>issued in 1978</u>	<u>issued in 1977</u>	<u>issued in 1976 or earlier</u>
0	100			
$\frac{1}{2}$	100			
1	88	88		
$1\frac{1}{2}$	78	82		
2	68	71.5	76	
$2\frac{1}{2}$	58	61	70	
3	48	50.5	58	74
$3\frac{1}{2}$	42	44	50.5	58
4	36	38	43.5	50
$4\frac{1}{2}$	34	35.5	41	47
5	32	33.5	38.5	42
$5\frac{1}{2}$	30	31.5	36	37
6	28	29.5	32	32
$6\frac{1}{2}$	26	27.5	28	28
7	24	24	24	24
$7\frac{1}{2}$	20	20	20	20
8	16	16	16	16
$8\frac{1}{2}$	12	12	12	12
9	8	8	8	8
$9\frac{1}{2}$	4	4	4	4
10	0	0	0	0

(c) Single Premium Policies issued for terms exceeding 10 years up to 15 years.

Unearned Premium Reserve as per cent of Single Premium

<u>Completed Policy Duration in Years</u>	<u>Policies issued 1979 or later</u>	<u>Policies issued in 1978</u>	<u>Policies issued in 1977</u>	<u>Policies issued in 1976</u>	<u>Policies issued in 1975 or earlier</u>
0	100				
1	100				
1 1/2	90	90			
2	79	85			
2 1/2	68	73	80		
3	58	62.5	75		
3 1/2	48	51.5	62	70	
4	42	45	54.5	65.5	
4 1/2	36	38.5	46.5	56	61
5	34	36.5	44	53	57
5 1/2	32	34.5	41.5	50	53
6	30	32.5	39	47	49.5
6 1/2	28	30	36	43.5	46
7	26	28	33.5	40.5	43
7 1/2	24	26	31	37.5	40
8	22	23.5	28.5	34.5	37
8 1/2	20	21.5	26	31	33.5
9	18.5	20	24	29	31
9 1/2	17	18.5	22	26.5	28.5
10	15.5	16.5	20	24	26
10 1/2	14	15	18	22	23.5
11	12.5	13.5	16	19.5	21
11 1/2	11	12	14	17	18.5
12	9.5	10	12	15	16
12 1/2	8	8.5	10.5	12.5	13.5
13	6.5	7	8.5	10	11
13 1/2	5	5.5	6.5	8	8.5
14	3.5	4	4.5	5.5	6
14 1/2	2	2	2.5	3	3.5
15	1	1	1.5	1.5	1.5
15	0	0	0	0	0

(d) Single Premium Policies issued for terms exceeding 15 years up to 20 years.

<u>Completed Policy Duration in Years</u>	<u>Unearned Premium Reserve as per cent of Single Premium</u>				
	<u>Policies issued 1979 or later</u>	<u>Policies issued 1978</u>	<u>Policies issued 1977</u>	<u>Policies issued 1976</u>	<u>Policies issued 1975 or earlier</u>
0	100				
½	100				
1	90	90			
1½	79	85			
2	68	73	80		
2½	58	62.5	75		
3	48	51.5	62	79	
3½	42	45	54.5	65.5	
4	36	38.5	46.5	56	61
4½	34.5	37	44.5	54	57
5	33	35.5	42.5	51.5	53
5½	31.5	34	40.5	49	49.5
6	30	32.5	39	46	46
6½	28.5	30.5	37	43	43
7	27	29	35	40	40
7½	25.5	28.5	34.5	37.5	37.5
8	24	26	31	35	35
8½	22.5	24	29	32.5	32.5
9	21	22.5	27	30	30
9½	19.5	21	25	27.5	27.5
10	18	19.5	23.5	25	25
10½	16.5	18	21.5	22.5	22.5
11	15	16	19.5	20	20
11½	13.5	14.5	17.5	17.5	17.5
12	12	13	15	15	15
12½	10.5	11.5	12.5	12.5	12.5
13	9	9.5	10	10	10
13½	7.5	8	8	8	8
14	6	6	6	6	6
14½	5.5	5.5	5.5	5.5	5.5
15	5	5	5	5	5
15½	4.5	4.5	4.5	4.5	4.5
16	4	4	4	4	4
16½	3.5	3.5	3.5	3.5	3.5
17	3	3	3	3	3
17½	2.5	2.5	2.5	2.5	2.5
18	2	2	2	2	2
18½	1.5	1.5	1.5	1.5	1.5
19	1	1	1	1	1
19½	0.5	0.5	0.5	0.5	0.5
20	-0	0	0	0	0

(e) Renewable policies subject to the first premium not less than 1 1/2% (1% for conventional loans) of the initial sum insured and a renewal premium of not less than 0.25% of the sum insured issued for an initial term (or a renewal term) not exceeding 5 years:

(i) The unearned premium reserve shall be maintained in accordance to paragraph 5(b)

(ii) The unearned premium in respect of any renewal premium shall be calculated pro-rata over the greater of the following periods:

- (a) the renewal period;
- (b) three years.

6. Additional Policy Reserves

A company shall maintain additional policy reserves as under:

(a) All policies issued after December 31, 1979.

Completed Duration of Policy in Years	Policy Reserve as per cent of Single Premium			
	Up to 5 years	Original term of the policy		
		Over 5 years to 10 years	Over 10 years to 15 years	Over 15 years to 20 years
1	-	-	-	-
2	10	-	-	-
3	20	6	5	5
4	27.5	12	9.5	9.5
5	35	14	11.5	11
6		18	13.5	12.5
7		20	15.5	14
8		20	17.5	15.5
9		15	17.5	17
10		0	5	5
11 - 19				2.5

(b) All policies except those described in (a) above.

Completed Duration of Policy in Years	Additional Policy Reserve as per cent of Single Premium			
	Up to 5 years	Original term of policy		
		Over 5 yrs. to 10 yrs.	Over 10 yrs.	Over 15 yrs. to 20 yrs.
1	-	-	-	-
2	10	-	-	-
3	20	6	5	5
4	30	12	9.5	9.5
5	37.5	17	13.5	13.5
6		22	17	17
7		20	20	20
8		20	22.5	22.5
9		15	17.5	17.5
10		0	5.0	5

Additional Policy Reserve as per cent of Single Premium

Completed Duration of Policy in Years	Original term of policy			
	Up to 5 years	Over 5 yrs. to 10 yrs.	Over 10 yrs. to 15 yrs.	Over 15 yrs. to 20 yrs.
11			0	2.5
12				2.5
13				2.5
14				2.5
15				2.5
16				2.5
17				2.5
18				2.5
19				2.5
20				2.5

Note: For the purposes of this paragraph, the term of a policy described in paragraph 5(c) shall be treated as 10 years.

7. Factors for calculating requirements of

- (a) capital and free surplus
- (b) unearned premium reserves
- (c) additional policy reserves

at policy durations other than those specified in this memorandum shall be obtained by simple interpolation.

8. Premium Deficiency Reserves

A company shall maintain premium deficiency reserves calculated as under on policies issued after April 30, 1980.

The premium deficiency reserve in respect of a policy shall be the excess, if any, of

- (a) the sum of the unearned premium reserve and the additional policy reserve (if any) based on a premium equal to 75% of the premium for the policy according to the scale of premiums of the company in force on April 30, 1980 (or on such subsequent date on which the provisions of this memorandum are made applicable in respect of a class of business),

over

- (b) the sum of the unearned premium reserve and the additional policy reserve (if any) based on the premium charged for the policy.

9. Optional Settlement Clause

All mortgage insurance policies on high-ratio loans must contain a clause limiting the liability of the company to not more than 25% of the amount which would otherwise be payable under the policy, if the claims were to be settled on the basis of the company taking over title to the mortgaged property.

10. Date of recognition of claim.- Provision for losses in respect of mortgages in default will be made on the earlier of:

- a. the date five months after the date of the first default,
- and
- b. the date when the claim is submitted to the company.

11. Policies under which premium credits for existing policies are given

For the purposes of this memorandum, the unearned premium reserve and additional policy reserves shall be maintained based on the premium ignoring credits, if any, allowed for an existing policy.

12. This memorandum does not apply to the business written by a company after the date of this memorandum in respect of a class of business not actively transacted by the company as at the date of this memorandum.
13. This memorandum comes into force with immediate effect.

March 4, 1983



R.M. Hammond
Superintendent of Insurance

DISCLAIMER: Any person who, in reliance on this memorandum, commits, or refrains from committing, any action does so at the person's own risk. The Office of the Superintendent of Financial Institution does not assume any liability on account of any loss, or damage by committing, or refraining from committing, any action in reliance on this memorandum.

EFFECT OF AGE OF POLICY ON LOSS RATIOS FOR THE YEARS 1980 TO 1983 - DIRECT BASIS
 FOR POLICIES WRITTEN IN THE TEN YEARS PRIOR TO YEAR-END (\$600'S)

Age of Policy	Direct Premiums Earned in year:					Direct Losses Incurred in Year					Loss Ratio in Year:				
	1980	1981	1982	1983	Total	1980	1981	1982	1983	Total	1980	1981	1982	1983	Total
1	13,135	14,781	15,650	34,020	77,586	888	1,521	2,705	2,680	7,794	6.76	10.29	17.28	7.88	10.05
2	32,702	26,475	25,496	32,272	116,945	7,342	8,115	17,532	32,471	65,460	22.45	30.65	68.76	100.62	55.96
3	25,783	23,850	19,098	19,407	88,138	6,942	12,059	17,630	41,797	78,428	26.92	50.56	92.31	215.37	89.93
4	18,903	23,370	22,040	18,017	82,330	3,286	7,094	16,083	26,781	53,244	17.38	30.36	72.97	148.64	64.67
5	10,268	16,295	20,691	20,195	67,449	1,119	2,375	9,266	20,358	33,618	10.90	17.64	44.78	100.81	49.84
6	6,682	8,793	14,152	18,509	48,136	843	1,067	4,161	10,211	16,282	12.62	12.13	29.40	55.17	33.82
7	5,147	5,799	7,668	12,607	31,221	659	407	1,584	3,735	6,385	12.80	7.02	20.66	29.63	20.45
8	6,739	4,418	5,096	6,786	23,039	379	403	732	1,166	2,680	5.62	9.12	14.36	17.18	11.63
9	4,186	5,676	3,879	4,508	18,249	103	315	563	590	1,571	2.46	5.55	14.51	13.09	8.61
10	866	3,528	4,966	3,478	12,838	(1)	125	624	401	1,149	-0.12	3.54	12.57	11.53	8.95
Total	124,411	132,985	138,736	169,799	565,931	21,560	33,981	70,880	140,190	266,611	17.33	25.55	51.09	82.56	47.11

Based on successive Claims Aging Reports reporting net change in cumulative earned premium and cumulative incurred losses year to year.

NEVID Total August 3, 1984

EXHIBIT 2

EFFECT OF AGE OF POLICY ON LOSS RATIOS FOR THE YEARS 1980 TO 1983 - DIRECT BASIS
 FOR POLICIES WRITTEN IN THE TEN YEARS PRIOR TO YEAR-END (\$000'S)
 (90% and under LTV)

Age of Policy	Direct Premiums Earned in Year:					Direct Losses Incurred in Year:					Loss Ratio In Year:				
	1980	1981	1982	1983	Total	1980	1981	1982	1983	Total	1980	1981	1982	1983	4-Year
1	8,109	8,714	8,953	17,891	43,667	386	643	1,295	1,035	3,359	4.76	7.38	14.46	5.79	7.69
2	21,724	16,167	14,789	17,643	70,323	3,346	3,819	8,704	17,628	33,497	15.40	23.62	58.85	99.91	47.63
3	16,568	15,240	11,297	10,768	53,873	3,469	5,792	9,281	20,794	39,336	20.94	38.01	82.15	193.11	73.02
4	11,995	14,882	14,056	10,532	51,465	1,501	3,630	9,132	14,210	28,473	12.51	24.39	64.97	134.92	55.32
5	6,614	10,385	13,277	12,870	43,146	457	1,686	5,063	11,769	18,975	6.91	16.23	38.13	91.45	43.98
6	3,938	5,678	9,047	11,879	30,542	302	628	2,409	5,762	9,101	7.67	11.06	26.63	48.51	29.80
7	3,085	3,419	4,992	8,093	19,589	321	305	870	1,940	3,436	10.41	8.92	17.43	23.97	17.54
8	3,662	2,656	3,018	4,442	13,718	130	222	444	781	1,577	3.61	8.36	14.71	17.58	11.50
9	2,477	2,058	2,331	2,684	10,550	23	239	281	325	868	0.93	7.82	12.05	12.11	3.23
10	798	2,080	2,667	2,082	7,627	(3)	114	302	215	628	-0.38	5.48	11.32	10.33	6.23
Total	78,910	82,279	84,427	98,884	344,500	9,932	17,078	37,781	74,459	139,250	12.59	20.76	44.75	75.30	40.42

Based on successive Claims Aging Reports reporting net change in cumulative earned premium and cumulative incurred losses year to year.

NEVID August 2, 1984

EFFECT OF AGE OF POLICY ON LOSS RATIOS FOR THE YEARS 1980 TO 1983 - DIRECT BASIS
FOR POLICIES WRITTEN IN THE TEN YEARS PRIOR TO YEAR-END (\$000'S)
(95% LTV)

Age of Policy	Direct Premiums Earned in Year:					Direct Losses Incurred in Year:					Loss Ratio In Year:				
	1980	1981	1982	1983	Total	1980	1981	1982	1983	Total	1980	1981	1982	1983	4-Year
1	5,026	6,067	6,697	16,129	33,919	502	878	1,410	1,645	4,435	9.99	14.47	21.05	10.20	13.06
2	10,978	10,308	10,707	14,629	46,622	3,996	4,296	8,828	14,843	31,963	36.40	41.68	82.45	101.46	68.56
3	9,215	8,610	7,801	8,639	34,265	3,473	6,267	8,349	21,003	39,092	37.69	72.79	107.02	243.12	114.09
4	6,908	8,488	7,984	7,485	30,865	1,785	3,464	6,951	12,571	24,771	25.84	40.81	87.06	167.95	80.26
5	3,654	5,910	7,414	7,325	24,303	662	1,189	4,203	8,589	14,643	18.12	20.12	56.65	117.26	60.25
6	2,744	3,115	5,105	6,630	17,594	541	439	1,752	4,449	7,181	19.72	14.09	34.32	67.10	40.82
7	2,062	2,380	2,676	4,514	11,632	338	102	714	1,795	2,949	16.39	4.29	26.68	39.77	25.35
8	3,137	1,762	2,078	2,344	9,321	249	181	288	385	1,103	7.94	10.27	13.86	16.42	11.83
9	1,709	2,618	1,548	1,824	7,699	80	76	282	265	703	4.68	2.90	18.22	14.53	9.13
10	68	1,448	2,299	1,396	5,211	2	11	322	186	521	2.94	0.76	14.01	13.32	10.00
Total	45,501	50,706	54,309	70,915	221,431	11,628	16,903	33,099	65,731	127,361	25.56	33.34	60.95	92.69	57.52

Based on successive Claims Aging Reports reporting net change in cumulative earned premium and cumulative incurred losses year to year.

NEVID August 2, 1984

Ins 3.09 Mortgage guaranty insurance.Add a new sub. (3) par. (1):

(1) "NON-TRADITIONAL LOAN" MEANS A LOAN WHICH IS NOT A TRADITIONAL LOAN AS DEFINED IN PAR. (p).

Reletter old par. (l), (m) and (n) to par. (m), (n) and (o).Insert a new par. (p):

(p) "TRADITIONAL LOAN" MEANS A LOAN WHICH AS TO A BORROWER: (1) HAS A FIXED INTEREST RATE AND (2) PROVIDES FOR FIXED PAYMENTS FOR THE TERM OF THE AMORTIZATION SCHEDULE OF THE TOTAL INDEBTEDNESS.

Amend sub. (5) as follows:

- (a) Same
- (b) Same

(c) If a policy of mortgage guaranty insurance insures individual TRADITIONAL loans with a percentage claim settlement option on such loans, a mortgage guaranty insurer shall maintain a policyholders position based on: each \$100 of the face amount of the mortgage; the percentage coverage; and the loan-to-value category. The minimum amount of policyholders position shall be calculated, SUBJECT TO THE ADJUSTMENT FACTOR IN PAR. (i), in the following manner:

- 1. Same
- 2. Same
- 3. Same

(d) If a policy of mortgage guaranty insurance provides coverage on a group of TRADITIONAL loans subject to an aggregate loss limit, the MINIMUM AMOUNT OF policyholders position shall be CALCULATED, SUBJECT TO THE ADJUSTMENT FACTOR IN PAR. (i), IN THE FOLLOWING MANNER:

- 1. Same
- 2. Same
- 3. Same

Insert new par. (i) and (j) in sub. (5) as follows:

(i) IN CALCULATING THE MINIMUM AMOUNT OF POLICYHOLDERS POSITION ON A PARTICULAR POLICY OF MORTGAGE GUARANTY INSURANCE AS REQUIRED BY PAR. (c) OR (d), THE ADJUSTMENT FACTOR, BASED ON THE POLICY YEAR IN WHICH A LOAN WAS INSURED, SHOWN IN THE SCHEDULE BELOW SHALL BE MULTIPLIED BY THE MINIMUM AMOUNT OF POLICYHOLDERS POSITION REQUIRED BY PAR. (c) OR (d):

<u>AGE OF INSURED LOAN BASED ON POLICY YEAR WRITTEN</u>	<u>ADJUSTMENT FACTOR</u>
1	100%
2	100
3	98
4	96
5	89
6	76
7	60
8	42
9	30
10	17
11	6
12 TO EXPIRY	4

THIS ADJUSTMENT FACTOR IS CALCULATED ON THE ASSUMPTION THAT ON THE AVERAGE A POLICY IS WRITTEN IN THE MIDDLE OF THE POLICY YEAR AND THAT THIS FACTOR IS APPLIED ANNUALLY TO THE MINIMUM AMOUNT OF POLICYHOLDERS POSITION REQUIRED ON POLICIES OF MORTGAGE GUARANTY INSURANCE OF THAT AGE.

(j) ~~POLICIES OF MORTGAGE GUARANTY INSURANCE PROVIDING COVERAGE FOR NON-TRADITIONAL LOANS SHALL REQUIRE A MINIMUM AMOUNT OF POLICYHOLDERS POSITION EQUAL TO 110% OF THE AMOUNT REQUIRED BY PAR. (c) OR (d) AS ADJUSTED BY PAR. (i).~~

Amend sub. (14) as follows:

Reletter old par. (c) to par. (b).

Insert a new par. (c) as follows:

(c) SUBJECT TO THE APPROVAL OF THE COMMISSIONER, INTERIM QUARTERLY WITHDRAWALS MAY BE MADE FROM

THE CONTINGENCY RESERVE IN AN AMOUNT EQUAL TO 75% OF THE AMOUNT BY WHICH INCURRED LOSSES IN THE PRECEDING TWELVE MONTHS EXCEEDED 35% OF THE NET EARNED PREMIUM OR 70% OF THE AMOUNT CONTRIBUTED TO THE CONTINGENCY RESERVE DURING THE SAME PERIOD OF TIME. FUNDS WITHDRAWN IN THIS MANNER SHALL BE ACCOUNTED FOR ON A FIRST-IN, FIRST-OUT BASIS AS PROVIDED IN SUB. (12) PAR. (g).

Amend par. (d) as follows:

(d) Subject to the approval of the commissioner, withdrawals may be made from the contingency reserve for incurred losses payments in any CALENDAR year exceeding the greater of 35% of the net earned premium or 70% of the amount contributed to the contingency reserve in that CALENDAR year. Funds used in this manner shall be accounted for on a first-in, first-out basis as provided in sub. (12) PAR. (g).

Amend par. (e) as follows:

(e) The computations required by ~~pars. (a) and (d)~~ THIS SUBSECTION shall be made ~~prior to increment or decrement because of contributions to the contingency reserve~~ IN THE CHRONOLOGICAL ORDER OF THE PARAGRAPHS IN THIS SUBSECTION.

Reletter old par. (b) to par. (f).