BURGLARY INSURANCE RATEMAKING

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INTRODUCTION

Burglary insurance is designed to reimburse an insured party for any losses which he may sustain arising from the burglary, robbery, or theft of his property and possessions and any damage thereto. The need for this type of insurance has been recognized for many centuries. The earliest recorded example may be found in France in the year 1161, when a fund was set up which received a special license by edict of Pope Alexander III.[1]

In more recent times, burglary insurance has become a highly specialized branch of the insurance industry, with its own sublines of coverage, rating systems, and ratemaking procedures. *Burglary,* as the general name for this area of insurance, is slightly misleading, since it seems to refer to only one of its several subdivisions. *Crime insurance* would be a preferable heading, relating to any wrongful taking of that which belongs to another, but the term encompasses employee (fidelity) dishonesty insurance as well as non-employee (burglary-theft) dishonesty insurance.[2] As may be witnessed by the title of this paper, the name of burglary insurance has come to be understood as the broad descriptive term for the entire line of non-employee dishonesty insurance.

There are three major subdivisions within the field of crime insurance: robbery, burglary, and theft. The distinctions among them provide the basis for differing areas of coverage within the insurance policy.

Robbery is the removal of the personal property of another, either from his person or in his presence, by an act of violence or the creation of fear of violence within him.

Burglary is the act of breaking into and entering another's premises with the intent to commit a felony.

Theft is the actual abstraction or seizure of another's goods, and in insurance contracts it is used interchangeably with *larceny,* which is defined as the removal of another's personal goods with a felonious attempt to steal.

All of these subdivisions are themselves divided into the major sub-

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[1] Long, J. D. and D. W. Gregg, *The Property and Liability Insurance Handbook* (Richard D. Irwin, Inc. 1965), p. 649.

[2] Magee, J. H. and D. L. Bickelhaupt, *General Insurance,* 7th rev. ed. (Richard D. Irwin, Inc. 1964), p. 493.

lines which are the primary concern of the ratemaker. The major sub-lines under these divisions are as follows:[3]

Robbery:	Mercantile Robbery, Inside and Outside Premises; Paymaster Robbery.
Burglary:	Mercantile Open Stock; Mercantile Safe.
Theft:	Broad Form Personal Theft, On Premises and Away From Premises.
Package Policies:	Money and Securities Broad Form, Inside and Outside;
	Storekeepers' Burglary and Robbery;
	Broad Form Storekeepers'.

Historically, burglary insurance has been grouped with the casualty lines despite its greater resemblance to the field of property insurance. Notwithstanding this traditional association, the ratemaking procedures for burglary insurance are more closely allied to those of the original fire ratemaking formula, although some modifications have been made in accord with ratemaking procedures in the casualty lines. In this sense, burglary ratemaking may be considered a hybrid form which spans these two disparate fields of insurance.

The similarities between burglary insurance and the property lines lie primarily in the fact that burglary is a two-party coverage in which the insurer and the insured are the only two parties involved in a claim. The basic concept common to all property insurance coverages is present here; i.e. the principle of indemnification for actual loss sustained. Payment made to the insured is bounded by the conditions and limits set forth in the policy or imposed by coinsurance requirements, and the cash value of the property at the time of the loss, to the extent of the insurable interest of the policyholder. This restricts the range of a possible loss to a clearly defined area, in which any settlement is concerned only with the loss of material objects whose value is readily determinable by appraisal. For the most part, burglary losses, like losses under other property insurance, are immediately evident, the amount is generally known, and so claims can be settled quickly.

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[3] A more detailed explanation of these sublines may be found in the Burglary Insurance Manual issued by the National Bureau of Casualty Underwriters, or the *Property and Liability Insurance Handbook* by Long and Gregg (especially Chapter 43).

This characteristic speed in the accurate assessment of burglary losses results in rapid settlement of claims. Amounts to be set aside as reserves for unpaid claims can be determined with accuracy and promptly paid. There is no reason to establish large reserves that may possibly be needed for the payment of claims, because there is seldom uncertainty as to a final determination of coverage. Therefore, burglary insurance ratemaking does not utilize a loss development factor. Burglary loss reserves are generally set up only for the short lapse of time necessary for the insurer to accomplish the routine procedures of appraisal and claim administration.

In liability insurance, the final cost of claims resulting from a particular accident is purely a matter of chance and is primarily dependent upon the nature of the injuries or damages sustained by the claimant. The results of any particular accident may range from minor bruises to multiple deaths. Therefore, no theoretical limitation may be placed upon the amount which the negligent party might have to pay.

If rate level changes for liability insurance were based upon total limits experience, the resulting rate level indications would be subject to the random influence of a small number of large claims, which might result in severe fluctuations of the manual rates from revision to revision. To remove this distortion, actuarial analyses are performed separately for basic limits experience and increased limits experience. The increased limits experience, which is particularly subject to the influence of random large losses, is analyzed on a much broader basis to stabilize the effect of these claims. Therefore, all losses are restricted to basic limits for purposes of liability ratemaking. However, the limitation of individual claims to basic limits for ratemaking purposes does not affect claim frequency, thus assuring the responsiveness of the rating structure to changes in the underlying loss-producing conditions.

Problems in burglary insurance ratemaking may not be split into loss frequency and severity components because of the unique nature of the exposures involved. The total loss resulting from a particular crime is not solely dependent upon chance factors. The amount of the loss is dependent upon the total value of the insured property, as well as the concentration of value in items that may be easily stolen and converted to cash. Thus a greater loss would result from the burglary of an appliance store than the burglary of a butcher shop. Similarly, it is probable that crimes against persons and property located in more exclusive neighborhoods produce greater monetary losses than the same crimes when committed in low-rent districts. For this reason rates are based upon the total value of the property, measured in units of $1,000.

Within a subline, different rates are used for the different classes of risk. Thus, on a countrywide basis, the appliance store might be rated at a $100 premium for the first $1,000 of coverage, while the butcher shop's premium for the same coverage would be only $50. In determining the final premium for a specific risk, the coinsurance requirements as well as the territorial multipliers for that particular area must be taken into account.

The general standard of insurance ratemaking as set forth in the NAIC model rate regulatory bill adopted in most states is that rates should be neither excessive, inadequate, nor unfairly discriminatory. To achieve these results it is evident that rates must be responsive to changes in the loss costs underlying the various coverages afforded. In an attempt to accomplish this purpose insurance companies periodically revise rates to offset inflationary economic trends and changes in the underlying loss-producing characteristics of the risks covered.

The initial step in any ratemaking procedure is the compilation and tabulation of statistics. Written premiums, paid and outstanding losses excluding loss adjustment expenses, and number of claims are reported separately for each state by territory and subline for each calendar accident year. The National Bureau of Casualty Underwriters serves as a statistical agent for the collection of this data, as well as a ratemaking organization. The ratemaking techniques to be discussed in this paper are those developed and currently used by the National Bureau.

The gathered statistics constitute the raw data from which the new rates will be determined. The following adjustments of the reported experience must be made to reflect the current underwriting climate and to convert the data to forms required by the ratemaking formula.

Premiums

Burglary insurance experience is reported on a unit transaction basis. The reports are submitted monthly and contain the full detail required by the burglary insurance statistical plan. The punch cards show the codes for policy form, term, territory, etc., as well as the written premium and paid losses.

In the determination of the overall statewide rate level change, incurred losses and all loss adjustment expenses will be related to earned premiums on present rate level. Earned premiums on present rate level

reflect the premiums that would have been earned by the exposures of the experience period had they been written at current manual rates. The reported written premiums are adjusted to obtain the earned premium at present rates as follows:

1. The portions of the written premiums of each policy year that are earned in that year, as well as the contribution to the earned premiums of subsequent years, are computed. This pro-rata distribution of earned premiums to calendar year is dependent upon the effective date and the term of each policy.

2. An on-level factor is introduced to adjust the actual earned premiums for each calendar year to reflect present rate levels. This factor closely parallels the "rate revision adjustment factor" defined by LeRoy J. Simon in his paper in the *Proceedings* of the Casualty Actuarial Society as "a number which, when multiplied by a set of collected premiums, will revise or correct these premiums to reflect a new or current set of rates."[4] Thus, for policies written prior to the effective date of a rate revision, that revision and all subsequent revisions should be reflected in the applicable on-level factor. Set forth below is a simple illustration of the calculation of an on-level factor:

Effective Date of Revised Rates	Percent Change	Rate Level Factor
7/1/60	+10%	1.10
6/1/65	+12%	1.12
Composite	+23%	1.23

Effective date of Policy	On-Level Factor
7/1/59	1.23
1/1/61	1.12
8/1/66	1.00

The importance of an on-level factor is underscored when it is acknoweledged that "any line of insurance which uses the loss ratio method in ratemaking relies very heavily on an accurate premium base. If exposure data were available, a pure premium method would most likely be used but in the absence of proper exposure data, the rate revision adjustment factor is vital to the determination of the premium base."[5]

It is interesting to note that the application of the on-level factor in burglary insurance ratemaking differs from techniques applied in both

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[4] Simon, L. J., "Rate Revision Adjustment Factors," *PCAS* Vol. XLV, p. 196.
[5] Ibid.

fire insurance and workmen's compensation insurance ratemaking. At one point[6] in the ratemaking procedures of both these lines of insurance it is necessary to adjust calendar year earned premiums to present rate level. Because there is no information available as to the months of inception of the policies which contributed earned premiums to the particular calendar year, it must be assumed that premiums have been written evenly throughout the year. The rate revision adjustment factor thus determined will be applied to the entire calendar year's earned premiums.

In the basic ratemaking data for burglary insurance, however, the month of issuance of all policies is retained. Thus it is only necessary to assume that policies are written evenly throughout the month, whereas when only the annual premium writings are known, the ratemaker must assume level writings throughout the entire year. This identification of the months of inception of all policies issued permits a more precise valuation of the earned premiums at present rates than is possible when only the years of issuance are identifiable. Of course, any possible distortions which might result from an unusual distribution of premiums written in a particular calendar year are counteracted through the inclusion of comparable data from another year computed using the same assumptions.

Losses

The following two adjustments of the reported total limits losses are made to obtain the incurred losses including all loss adjustment expense to be used in the ratemaking procedure:

1. The losses in burglary are reported excluding all loss adjustment expense, and adjustment must be made to supplement the data given under the statistical plan. A countrywide factor is calculated from the insurance expense exhibit data of National Bureau member companies. This factor is based upon the latest three years of experience and is determined by taking the ratio between the incurred losses including all loss adjustment expense and the incurred losses excluding all loss adjustment expense for all sublines combined. This enables the rate-maker to present the amount of the premium dollar expended by the companies directly on behalf of the insured.

2. The losses must also be adjusted to reflect present loss levels. If

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[6] For the procedure in workmen's compensation insurance ratemaking, see Marshall, R. M., *Workmen's Compensation Insurance Ratemaking* (1961), especially Exhibit VII.

For fire insurance ratemaking, see the Fire Insurance Research and Actuarial Association's *Recommended Procedure for Rating Bureau Review of the Overall Fire Rate Level by State,* revised March 1965.

loss costs remain relatively stable over a period of time, then use of the loss data available from the latest experience period under review would provide a reasonable indication of the loss levels anticipated during the period for which the rates will be effective. This, however, is not the case. For the past several years, loss costs have risen substantially throughout the country. This element must be recognized in the ratemaking procedure if the proposed rates are to meet the statutory requirements of adequacy.

Burglary trend factors are currently based upon countrywide average paid claim cost data for all major burglary sublines combined excluding residence coverages. The impact of the introduction of multiple line package policies on the sale of pure residence crime coverages has been a sharp reduction of business. Since these residence coverages normally produce a large volume of small claims, the inclusion of this diminishing quantity of small claims with the data for all other sublines combined would result in exaggerated trend indications. The experience of the residence coverage is excluded in order to remove the distortion which might result from the inclusion of that data.

The determination and application of the trend factors now used in burglary insurance parallels the procedure employed in most other casualty lines of business. For burglary insurance ratemaking, these trend factors must be based upon countrywide data to combat the lower credibility presented by any smaller bodies of data. The relatively small premium volume developed by burglary insurance operations often leads to the application of a greater degree of judgment on the part of the actuaries involved in the ratemaking process than is exercised in other casualty lines. For a complete discussion of this phase of the ratemaking process the student is referred to a paper by Philipp K. Stern, "Ratemaking Procedures in Automobile Liability Insurance".[7]

RATEMAKING

Statewide Rate Level Change—All Major Sublines Combined

The technique employed in the ratemaking procedure is the loss ratio method which draws a comparison between the total earned premiums at present level and the total incurred losses including all loss adjustment expenses for all major sublines combined. At this point it should be noted that the use of data from all sublines combined to determine the indicated overall statewide rate level change parallels the ratemaking procedures

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[7] Stern, P. K., "Ratemaking Procedures for Automobile Liability Insurance," *PCAS* Vol. LII, p. 139.

now generally used for property insurance, but conflicts with the standard ratemaking procedures developed for the liability lines of business. The ratemaking techniques employed for the liability lines are applied separately to each subline of coverage. In other words, the final rates for classes within each territory in a state are developed separately and independently for each subline. Thus the statewide rate level change for automobile commercial car bodily injury liability is based solely upon the data of that subline. The data from all burglary sublines is combined for purposes of determination of the statewide rate level change because their segregation would result in low credibility due to the small volume of burglary insurance business transacted.

Loss ratios (losses ÷ premiums) at present level are computed from the data of the latest available five calendar-accident years. Both a three-year and a two-year mean loss ratio are computed from the latest three years' and two years' loss ratios respectively, in order to reveal trends in loss levels and to permit responsiveness in the ratemaking formula. At the present time, if the five-year average, the three-year mean and the two-year mean loss ratios reflect a consistent uptrend, then the loss ratio upon which the revision of the rates will be based is the two-year mean loss ratio. However, if a consistent upward trend does not exist among these three loss ratios, then the loss ratio upon which revision of rates shall be based is the middle value of the five-year average, the two-year mean, and the expected loss ratio.

The expected loss ratio is that part of the premium dollar allotted for the payment of losses and loss adjustment expenses. The remaining portion of the premium dollar is set aside to provide for the expenses of conducting an insurance business and a provision for underwriting profit and contingencies. Set forth below is a comparison between the standard loss and expense provisions of burglary insurance and the standard provisions of automobile private passenger liability insurance.

	Automobile	Burglary
Total production cost allowance	20.0%	30.0%
Administration	5.5	11.0
Inspection and Bureau	1.0	2.5
Taxes, licenses, and fees	3.0	3.0
Underwriting profit and contingencies	5.0	5.0
	34.5	51.5
Expected loss and loss adjustment ratio	65.5	48.5
	100.0%	100.0%

The relatively higher burglary expense provisions are the consequence of the higher costs of conducting a burglary insurance business as compared with conducting an automobile liability insurance business. Since burglary premium volume is much smaller, and premiums per policy are lower, expenses in burglary insurance are a greater percent of the total cost of doing business.

Production costs are relatively greater in crime insurance because of the higher rate of agents' commissions. The justification underlying this high rate of commissions is that crime insurance is a product which must be sold to the public. Crime insurance is still regarded as a luxury by the general insurance-buying public, whereas in automobile liability insurance the public actively desires to purchase insurance due to compulsory insurance and financial responsibility laws. However, it is conceivable that increasing crime rates and greater news emphasis on the worsening situation would result in a greater awareness of crime insurance coverages by the general public.

The higher general administration and inspection provisions in the rates for crime insurance are necessary to provide the insurers with sufficient funds to exercise the high degree of underwriting selectivity required by the lack of homogeneity presented by crime insurance risks.

The indicated statewide rate level change is determined by a comparison between the loss ratio upon which the revision is to be based and the expected loss ratio (Selected Loss Ratio ÷ Expected Loss Ratio). This calculation determines the statewide percentage increase or decrease in the overall rate level which is then distributed by territory within each major subline.

Opposite is a numerical example which illustrates the determination of a statewide rate level change. The actual data were taken from a recent burglary rate filing. Notice that the effect of the statewide rate level change (Line 10), after distribution of the selected change by territory within each major subline, is lower than the selected statewide rate level change (Line 9). This is due to the limitation of the rate level change in any individual territory within a subline to $+33.3\%$.

Territory Rate Level Development

The procedure currently employed here is a straightforward formula approach which is applicable to each major subline and within each territory for that subline. The use of a numerical illustration (on the following page) will facilitate the explanation and understanding of the method

BURGLARY INSURANCE

Calculation of Statewide Rate Level Change
Experience of All Major Burglary Sublines Combined
All Companies Reporting to N.B.C.U.

(1)	(2)	(3)	(4)	(5)
Calendar Accident Year	Earned Premium on Present Rate Level	T/L Losses Including All Loss Adjustment*	Number of Claims	Loss and Loss Adjustment Ratio (3) ÷ (2)
1960	$1,736,712	$ 797,523	1,854	.459
1961	1,702,084	743,976	1,886	.437
1962	1,615,150	905,673	2,036	.561
1963	1,575,368	816,384	1,729	.518
1964	1,484,061	1,041,073	1,912	.702
Total	$8,113,375	$4,304,629	9,417	.531
1962-1964 Mean				.594
1963-1964 Mean				.610

(6) Loss and loss adjustment ratio upon which revised rate
    level is based   .610

(7) Expected loss and loss adjustment ratio   .483

(8) Indicated statewide rate level change for all major
    burglary sublines $|(6) \div (7)| - 1.00$ $+$ 26.3%

(9) Selected statewide rate level change for all major
    burglary sublines $+$ 20.0%

(10) Effect of statewide rate level change for all major
    sublines $+$ 19.1%

*Adjusted to reflect current loss levels

BURGLARY INSURANCE - MAJOR SUBLINES

Development of Rate Level Changes by Territory

(1) Coverage	(2) Rate Territory	(3) 1964 Earned Premium on Present Level	(4) 1960-1964 Number of Claims	(5) 1960-1964 Loss & Loss Adj. Ratio	(6) Credibility	(7) Formula 1960-64 Loss & Loss Adj. Ratio	(8) Col.(7) as Ratio to Avg. of Statewide All Major Sublines	(9) Formula Loss Ratio by Territory	(10) Col.(9) as Ratio to Statewide Average by Subline	(11) Rate Level Change (10) x 1.200 -1.00	(12) Present Multiplier	(13) Revised Multiplier
Broad Form Personal Theft-Inside	Terrs. 01, 02, 03	$ 9,777	168	.573	.40			.611	1.127	+33.3%*	.222	.296
	Remainder of State	49,116	802	.653	1.00			.653	1.204	+33.3%*	.238	.317
	Entire State	58,893	970	.637	1.00	.637	1.191	.646		+33.3%		
Broad Form Personal Theft - Outside	Terrs. 01, 02, 03	2,573	71	.592	.30			.524	1.027	+23.2%	.207	.255
	Remainder of State	9,102	257	.460	.60			.474	.929	+11.5%	.102	.114
	Entire State	11,675	328	.495	.60	.509	.951	.485		+14.1%		
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Statewide	All Major Sublines Combined	$1,484,061	9,417	.531		.535	1.000		1.000			

* All changes are limited to +33.3%.

employed. A simple explanation is sufficient for Columns 1 through 5, since the headings on these columns are almost self-explanatory.

Column 1 lists the major sublines and all major sublines combined.

Column 2 shows a breakdown of rating territories for each subline. The rating territories are not always the same for each subline since there are instances when two or more territories are combined because of the similarities between their experience.

Column 3 shows the total earned premium on present level of the latest year of the experience period for each rating territory. Column 4 exhibits the total number of claims for the five-year period for each territory. Column 5 exhibits the five-year average loss ratio for each territory.

Column 6 shows the credibility assigned to the experience in each territory. These credibility factors are based upon the number of claims, with full credibility (1.00) assigned to a volume of experience producing 683 claims or more.

The table of burglary credibility factors is similar to the table utilized in automobile liability ratemaking, except that the limits in each interval are relatively lower. It is the same table that is used in general liability ratemaking and is generated by the same formula.[8]

Column 7 is a weighted average of the statewide loss and loss adjustment ratio for each subline (in column 5) and the statewide loss and loss adjustment ratio for all major sublines combined (also in Column 5). The statewide loss and loss adjustment ratio for each subline is weighted to the extent of the credibility assigned to it, and the complement of the credibility is applied to the loss ratio for all major sublines combined. This calculation can be expressed by the following formula:

Column 7 = [Col. 5 × Col. 6] + [Total Col. 5 × (1.00 − Col. 6)]

Column 8 is the ratio of the statewide loss and loss adjustment ratio by subline appearing in Column 7 to the statewide loss and loss adjustment ratio for all major sublines combined also appearing in Column 7. The indices obtained by this calculation represent the indicated statewide changes by subline if no change in the statewide rate level were proposed.

The calculation of Column 9 is similar to that of Column 7. Within each subline, the territory loss and loss adjustment ratios are weighted with the comparable statewide loss and loss adjustment ratios appearing in Column 5. The formula for this calculation is as follows:

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[8] See Longley-Cook, L. H., "An Introduction to Credibility Theory," *PCAS* Vol. XLIX, p. 200. Also Lange, J. T., "General Liability Ratemaking," *PCAS* Vol. LIII (this volume).

Column 9 = [Col. 5 × Col. 6] + [Statewide Col. 5 × (1.00   Col. 6)]

The experience of territories without full credibility is recognized only to the extent of the credibility assigned to them, and is weighted with the statewide average experience to curtail the large fluctuations which would result because of the limited volume of experience.

It should be noted that the application of credibility factors at two points in the development of rate level changes by territory is unique to burglary insurance. This "double credibility" approach is essential in the burglary ratemaking procedure because the overall statewide rate level change is determined for all burglary sublines combined. Although this overall rate level change is distributed simultaneously to the sublines and the territorial divisions for each subline, credibility weightings still apply to both components, resulting in the double credibility approach. This approach is not found in automobile liability or general liability ratemaking procedures because statewide rate level changes are determined separately for each subline.

Column 10 is the ratio of the formula loss and loss adjustment ratio appearing in Column 9 by territory to the statewide loss and loss adjustment ratio within each subline (also appearing in Column 9), multiplied by the indices by subline appearing in Column 8. These new indices represent the indicated rate level change by territory within each subline assuming no change in the statewide rate level is proposed.

Column 11 shows the actual rate level change for each territory, limited to a maximum of +33.3%. It is calculated by applying the selected statewide rate level change (see page 321, calculation of statewide rate level change, Line 8) to each of the territorial indices set forth in Column 10 as follows:

Column 11 = [Col. 10 × (1.00 + Statewide rate level change)
                    - 1.00] × 100%

At present, the final schedule of burglary rates requires application of multipliers to a master table of rates for each subline which is applicable in all states.[9] Rate revisions only affect the territorial multipliers within

[9] The application of territorial multipliers to burglary master rate tables was instituted by the National Bureau in August of 1964. Prior to that date, a number of rate schedules were published for each subline, and territories were assigned to the schedules closest in line with their experience indications.

Territorial multipliers have been used in glass insurance for some time. The advantages of their use prompted their introduction into burglary insurance. The use of multipliers provided greater flexibility in the rating structure and allowed greater responsiveness to the experience indications.

each subline which are applied to the master rate table to establish actual rates. The relativities of the base rates for the various sublines embodied in the master rate table may be thought of as a set of countrywide differentials which reflect the underlying loss costs of the various sublines on a countrywide basis.

The master rate table sets forth rates per $1,000 of insurance except for the Broad Form Personal Theft and Mercantile Open Stock sublines which have graded rates. For these sublines the rate for each additional $1,000 of coverage is less than the rate for the first $1,000 of insurance.

Column 12 sets forth the present territorial multipliers which must be revised to reflect the rate level changes in each territory. The revised territorial multipliers appearing in Column 13 are obtained by a multiplication of the present territorial multipliers and the indicated territorial rate change in factor form.

THE CURRENT SITUATION

The continuing rise in the countrywide crime rate has resulted in a particularly adverse underwriting climate for burglary insurers. Underwriting results have been increasingly unfavorable in the past few years, as shown by the following exhibit of underwriting losses of National Bureau companies for 1961 through 1965. The underwriting losses for this five-year period amount to almost $15 million, representing 5.6% of the premiums earned for that period.

Burglary Insurance
Comparison of Premiums Earned and Underwriting Results†

Calendar Year	Premiums Earned	Amount of Net Gain From Underwriting*	Percent of Gain From Underwriting
1961	$ 53,586,546	$— 2,068,329	—3.9%
1962	53,784,027	— 1,259,727	—2.3%
1963	54,086,072	— 3,062,857	—5.7%
1964	52,622,559	— 4,022,722	—7.6%
1965	51,991,573	— 4,376,002	—8.4%
Total	$266,070,777	$—14,789,637	—5.6%

† Countrywide data of comparable companies based on 1966 members of the National Bureau.
* Minus (—) sign denotes loss.

The impact of inflation upon burglary loss settlement costs, as well as the increase in the number of burglaries and robberies during this period, have contributed substantially to this situation. The annual Uniform Crime Reports of the Federal Bureau of Investigation contain data on all types of crime in the United States. The following chart, taken from these reports, shows large increases in the number of all crimes, and specifically crimes against property, from 1961 to 1964.

Crime in the United States
Percentage Change (Increases by Year)

Calendar Years Compared	Total Offenses	Robbery	Burglary	Larceny $50 and Over
1961/1960	3.5%	3.0%	3.8%	4.9%
1962/1961	6.3	3.9	4.7	8.4
1963/1962	10.3	5.1	9.3	13.2
1964/1963	15.3	11.6	13.8	15.2
1964/1961	39.9%	25.6%	35.2%	48.4%

Note: The data included in this exhibit was obtained from the annual Uniform Crime Reports published by the Federal Bureau of Investigation. A direct correlation between the burglary insurance sublines and the F.B.I. breakdown does not exist. However, it is evident that crimes against property, which contribute to the majority of burglary insurance losses, are still increasing.

Another contributing factor has been the increasing popularity of multiple line package policies. The inclusion of crime coverages in these packages has resulted in the departure of the more desirable risks from the books of crime insurance underwriters to those of package policy underwriters. Since crime insurance rates are based upon broad averages for each class of business, the removal of the better-than-average risks from the insured population leaves the remaining book of business worse than the average risk contemplated by the rating structure. Thus the prevailing average rates become inadequate for the remaining risks, resulting in the undesirable underwriting picture described above.

One method available to the underwriter to help alleviate this situation would be greater use of mandatory deductibles on the insureds' policies. It has been pointed out that "from an underwriting standpoint, the risks which it is preferable to write on a deductible basis rather than on a full coverage basis are those with high [claim] frequency. Through writing such risks on a deductible basis, the assured is directly impressed with

the necessity for introducing [loss] prevention measures in order to reduce his own share of the incurred losses. Many risks of this nature which would produce very unfavorable experience for the insurance company if written on a full coverage basis prove to be satisfactory when written on a deductible coverage basis."[10]

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[10] Cahill, J. M., "Deductible and Excess Coverages," *PCAS*, Vol. XXIII, p. 34. This point has also been made with direct reference to burglary insurance coverages by Rodda, W. H., *Property and Liability Insurance* (Prentice-Hall, Inc. 1966) pp. 302-303.