

Report
of the
Society of Actuaries Task Force
on
Preferred Underwriting

September 1998



Society of Actuaries
475 N. Martingale Rd., Ste. 800
Schaumburg, IL 60173
Phone: 847-706-3500
Fax: 847-706-3599
Web site: <http://www.soa.org>

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The attached report presents the results of our survey on preferred risk underwriting practices on U.S. life insurance business, compiling data received from U.S. and Canadian life insurance companies. This is the second such survey completed by the Society of Actuaries Task Force on Preferred Underwriting. The first survey was based on practices in July, 1995 (the report being published in June, 1996) while this survey is based on practices as of April, 1997.

We asked for information related to ten-year level premium term life insurance products; a general question about differences by product type was also included. The 1995 survey was based on the most popular preferred risk class product for each company, which was typically a term product but not necessarily a ten-year level term product.

Sixty-one companies responded to our survey, up from 51 companies in the 1995 survey. Twenty-six of the companies completed both surveys. In the report, we have made comparisons between surveys, and where possible have made specific comparisons among this group of 26 companies. The report points out similarities and differences between the two surveys, including discussions of perceived trends in the data.

The Task Force believes that the results of this survey will be read by a diverse audience as the material is of interest to various disciplines. There may also be international interest in the results. With that in mind, the Task Force tried to keep the report simple, while still providing the needed detail. In addition to reporting on the results, the Task Force has offered explanations and perspectives to assist the reader.

The Task Force thanks all of the companies who participated in the survey. As the questions were diverse, it generally took at least two individuals at each company to answer the questions. The Task Force also thanks Lab One for providing recent laboratory data which can be used to help evaluate some of the survey data and set future preferred underwriting criteria. The Task Force also thanks those who helped us review this document and offered helpful suggestions and comments. Finally, the Task Force thanks a number of the Society of Actuaries staff for their help in completing this project: Jack Luff, Karen Haywood, Kathie Peters and particularly Korrel Hester for all of her coordination efforts.

Comments on this report and suggestions for the next survey are welcome and can be addressed to the Task Force on Preferred Underwriting c/o The Society of Actuaries.

Task Force on Preferred Underwriting

Allen M. Klein, Chair
Faye S. Albert
Mary J. Bahna-Nolan
Richard L. Bergstrom
Stacy C. Gill
Kenneth E. Joyce
Jess L. Mast
Timothy J. McGrath
David N. Wylde

SoA Staff Liaison: John A. Luff
SoA Research Liaison: Korrel E. Hester
SoA Vice President Life Practice Council: Esther H. Milnes

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REPORT
OF THE
SOCIETY OF ACTUARIES TASK FORCE
ON
PREFERRED UNDERWRITING

EXECUTIVE SUMMARY

The following summary highlights some of the more significant items in this report. We recommend reading the full report to better appreciate the statements below.

- The Society of Actuaries Task Force on Preferred Underwriting developed a survey of preferred underwriting practices and sent it to underwriters and actuaries at U.S. and Canadian life insurance companies requesting data on policies written in the U.S. This is the second survey of its kind. The first survey of preferred underwriting practices was completed in July, 1995 and published in June, 1996. This survey is based on practices in April, 1997.
- Sixty-one companies responded to the survey based on data from their 10-year level term life insurance product(s) with preferred risk classes.
- Although members of the Task Force believe that there is a trend toward using more preferred risk classes, the data did not prove this conclusively. Use of four risk class products is now more common than three risk class products among the respondents and more respondents are using five or more risk class products than in the 1995 Survey.
- The respondents generally experienced more insureds qualifying for the preferred nonsmoker risk class than they expected and less insureds qualifying for the preferred smoker risk class than expected. The actual and expected qualifying percentages for preferred and standard risk smokers were both low and in a narrow range. While the actual and expected results were close on average, the range of results for individual respondents was, in fact, quite wide.
- Not taken rates varied widely, but were lowest for the most restrictive preferred nonsmoker risk class and highest for the least restrictive standard smoker risk class as would be expected.
- On average, expected mortality assumptions decreased from the last survey.
- The ratio of standard to preferred expected mortality results was similar to that in the 1995 Survey for both smokers and nonsmokers.

- Although there was some variance by age and face amount, most of the respondents require a full blood profile and urine testing to be done on each applicant for the preferred risk class. When urine testing is performed, tests for cotinine and cocaine were commonly included.
- Sixteen of the 61 respondents allow someone other than paramedical personnel to collect fluids (i.e., oral fluid and urine).
- The most frequently used criteria for determining preferred risk classification are those that pertain to personal histories of diabetes, heart disease, cancer, and elevated cholesterol, and life style criteria of alcohol or other substance abuse. These criteria were used by at least 95% of the respondents.
- More than half of the respondents do not allow any tobacco use in the last 12 months as a prerequisite for qualifying for the preferred nonsmoker risk class. The next most common requirement was no tobacco use in the last 36 months.
- More than half of the respondents use maximum total cholesterol readings of 220, 240 or 250 milligrams per deciliter as a criterion to qualify for the preferred risk class. Almost three-fourths of the respondents use a maximum total cholesterol to HDL cholesterol ratio of 5.0, 5.5, or 6.0 as a qualification for the preferred risk class.
- Some respondents allow exceptions to preferred risk criteria. Exceptions are allowed for blood pressure and build, family history, slight variations in one criterion, and cholesterol level. Of all of the laboratory tests, the total cholesterol to HDL cholesterol ratio is the only criterion where more than 50% of the respondents would always preclude an applicant from the preferred risk class when the actual ratio is higher than the maximum allowed.
- Over half of the respondents use either captive or independent agents to sell preferred risk products. A number of other distribution channels are also used.
- Six of the 61 respondents require the applicant to apply for the preferred risk class to receive it.
- Most of the respondents have a preferred risk class on their other products, except decreasing term.

INTRODUCTION

Background

Classification of risk by underwriting factors which exhibit different trends and levels of mortality has been used for many years. Impaired or substandard risk classifications with appropriate increases in premium, or alternative offers of coverage, have been in use for over 100 years.

By the 1940's, distinctions were made by sex. The 1970's introduced a smoker/nonsmoker split and some companies offered discounts for joggers and regular exercisers. In the 1980's, a further refinement of the smoker risk class was introduced with a tobacco / non-tobacco distinction. In the late 1980's, companies began to test for Human Immunodeficiency Virus (HIV) infection by drawing blood from the applicant. Since the blood draw became routine at certain levels of coverage, more information from the laboratories became available and companies began to expand their use of this information to more effectively distinguish among risks. Now, risk selection has been further refined with the introduction of one or more preferred risk classifications from the general pool of non-substandard applicants.

For purposes of this report, the preferred risk class will refer to the risk class with the better expected mortality drawn from the group of non-substandard (nonsmoker or smoker) applicants. The standard risk class will refer to the residual nonsmoker or smoker risk class, the risk class with the worse expected mortality drawn from the group of non-substandard nonsmoker or smoker applicants.

The preferred risk class is more varied than any of its predecessors. There are variations from company to company, product to product, and even from one generation of a product to the next generation as preferred risk underwriting continues to evolve.

How are these new preferred underwriting risk classes established? They are derived by splitting an aggregate risk class into two or more risk classes where each risk class is distinguished by its requirements for qualification and its corresponding expected mortality results. This is true whether splitting for sex, smoking status or any other reason. What distinguishes this new preferred risk class are a number of new factors (or criteria) which are used to separate better mortality risks from the remaining risks. This report identifies and summarizes these criteria and some of the related assumptions from a survey of 61 companies now offering preferred risk products.

Due to the lack of credible preferred risk experience data, companies may use one of several methods for splitting aggregate mortality into two risk classes. The following two formulas are now commonly used:

$$\text{Preferred } q = (1 - \text{Discount}) \times \text{Aggregate } q$$

and

$$\text{Standard } q = [\text{Aggregate } q - (\text{Preferred } q \times \% \text{ Qualifying})] / [1 - \% \text{ Qualifying}]$$

- where:
- *Preferred q* is the preferred risk mortality rate at a particular age and duration.
 - *Discount* is the percentage reduction in aggregate mortality expected for the preferred risk class at that age and duration.
 - *Aggregate q* is the aggregate mortality rate at that age and duration.
 - *Standard q* is the residual nonpreferred risk class (as defined above) mortality rate at the same age and duration.
 - *% Qualifying* is the percentage qualifying for the preferred risk class at the same age. This value depends on the criteria used and other factors as described in the report.

With these two equations, a company can determine its theoretical expected mortality for all ages and risk classes. The Task Force did not attempt to try to take into consideration any of the other factors the pricing actuary could consider in deriving expected mortality (e.g. lapses, expenses, not takens). Also, there are other formulas which can be used to solve for preferred and standard risk class mortality.

Besides the aggregate mortality assumption, there are two critical assumptions that need to be made. These assumptions are related and are made based on the preferred underwriting criteria chosen.

The first assumption is the discount to apply to the aggregate mortality rate in deriving the preferred risk class mortality rate. The amount of discount should appropriately reflect the criteria used. There are a number of considerations in determining the discount, including:

- The aggregate mortality rate used,
- The screening tools used (e.g., paramedical vs. nonmedical, full blood profile),
- The strictness and level of criteria used to qualify for the preferred risk class,
- The company's practice on underwriting exceptions, and
- The percentage of applicants desired to qualify for the preferred risk class.

The stricter the underwriting, the greater the discount can be. Discounts typically used

have ranged from 5% to 30% with most companies in the 10% to 20% range. Note that when more than one preferred class is derived from the aggregate rate, the discount used for the most restrictive class may be even greater than the 30% just stated.

The second assumption is the percentage expected to qualify for the preferred risk class. This percentage can cover a wide range. Generally, a company decides where they want to fall in this range based on where they want their rate to be and then they determine their underwriting criteria to achieve this.

In general, the lower the assumption the more aggressive or competitive the rate will be. However, the company is likely to experience more applicant and producer dissatisfaction with a lower assumption. There may be additional pressures on the underwriters to make exceptions and there may also be a higher than expected not taken rate. These extra not takens result in an increased expense level and should be considered in the pricing model. The Task Force was able to obtain some not taken data in the 1997 Survey.

If the percentage expected to qualify is high, more applicants will qualify for the preferred risk class due to less restrictive underwriting and there will be fewer complaints. However, the rate that is offered may not be materially different from that offered on an aggregate basis.

Companies balance these issues in determining an appropriate assumption to make. It is important for the actuarial, underwriting, and marketing functions to be involved in the process and understand the common goal. Once the assumption is made and the product is introduced, the actual percentage qualifying for the preferred risk class is generally monitored. Initially the number of applicants applying for the preferred risk class often exceeds expectations because the producers have a tendency to bring their better risks forward. The percentage of preferred risk class business that is actually placed initially will also often exceed expectations for the same reason and due to a higher percentage of not takens in the standard risk class. If the actual percentage that qualifies for the preferred risk class does not match the expected after an initial period, actual to expected mortality results may need review.

If the actual mortality results are consistent with what is expected, this may be satisfactory to the company. There may be other reasons for getting a disproportionate share of the preferred or standard risk class, such as:

- A particular producer's client base,
- A specific criterion which is quite different from what other companies use,
- Underwriting concessions that companies make, and
- Unreasonable initial expectations.

Why have these new preferred risk classes developed? There are a number of reasons,

including legitimate discrimination and equity considerations. However, the main reason for the introduction of preferred risk classes appears to be its usefulness as a marketing tool. When the new preferred risk classes were introduced, those companies offering such classes gained a marketing advantage. They could sell their products at a lower price than the competition to those applicants qualifying for the new preferred risk class.

Many preferred risk classes are being developed today for competitive reasons and/or for defensive purposes. Companies in markets where preferred products are available will be selected against if they do not also have a preferred risk class product. As many companies ultimately yielded to market and agency pressures to convert to a smoker/nonsmoker product distinction, the Task Force believes that companies will also feel pressure to convert to a preferred/standard product distinction. Some companies have market niches where preferred risk class products have not been introduced. However, this situation can change over time. If it does, those companies that do not develop preferred risk class products will attract a disproportionate share of standard risks in their aggregate risk class; this is likely to lead to higher than expected mortality results.

Caveats

The purpose of this report is to describe the results of the survey which the Society of Actuaries Task Force on Preferred Underwriting sent to U.S. and Canadian life insurance companies. The intent of the survey was to gather information on the many variations in preferred risk underwriting. This report describes the preferred risk criteria currently being used, their prevalence, related assumptions, and how accurate some of these assumptions have proven to be. This latter item, unfortunately, has not been fully developed in this report as the required experience is still lacking in many areas.

The intent of this report is to provide an objective observation of what companies are doing with respect to the preferred risk underwriting class. Selective comments are made where the Task Force thought appropriate.

While we anticipate and hope that the results prove useful for the industry, there are several caveats which must be made:

- The data which the Task Force received, while fairly comprehensive, is by no means a look at the whole industry or all preferred risk class products in the marketplace.
- The data itself, while reviewed for inconsistencies, was not verified with the individual companies. The Task Force relied on the data provided for this report.
- The results are indicative of the preferred risk criteria as of April, 1997. However, this is a constantly changing environment. Criteria used and qualification requirements

appear to change frequently.

- A number of comparisons are made between the surveys conducted in 1995 and 1997. The 1995 Survey asked for information on term products in general while the 1997 Survey asked specifically about 10-year level term products. Please keep this in mind when reviewing the comparisons.

Terminology varies from company to company and even product to product. Some common names for the preferred risk class are preferred, select, elite and super-preferred. There is no common definition. Preferred risk class rates on one company's product may be lower than super-preferred risk class rates on another company's product.

Responding Companies

Sixty-one companies responded to our survey that they had at least one preferred risk class. Not all companies answered all of the questions; therefore, the number of respondents may vary by question. The 61 respondents are shown in Appendix A.

Appendix B provides a breakdown by A.M. Best Financial Size Category of the 61 companies responding to the survey with a comparison to the 1995 Survey. The breakdown is by "adjusted policyholder's surplus and conditional reserve funds" and is based on 1997 results.

Twenty-six companies who responded to this survey also responded to our 1995 Survey. Where possible, we have made comparisons of results between the two surveys overall, as well as between just these 26 companies. Note for comparison purposes that the 1995 Survey asked for results based on the most popular preferred nonsmoker risk class while the 1997 Survey asked for results based on the most restrictive preferred nonsmoker risk class.

RESULTS

Risk Classes

The survey asked for a description of each company's preferred and standard risk classes for their ten-year level premium term life insurance products.

Table 1 shows the compilation of risk classes by survey respondents, with a comparison to the 1995 Survey results.

Table 1 - Number of Preferred and Standard Risk Classes

Total Number of Risk Classes	Breakdown of Risk Classes				Number of Respondents	
	Nonsmoker		Smoker		1997 (61)	1995 (51)
	Preferred	Standard	Preferred	Standard		
3	1	1	--	1	25	26
4	1	1	1	1	22	22
4	2	1	--	1	5	0
5	2	1	1	1	4	1
6	3	1	1	1	3	0
6	2	1	2	1	1	0
8	4	2	1	1	1	1
9	--	--	--	--	0	1

Although members of the Task Force believe that there is a trend toward using more preferred risk classes, the data do not prove this conclusively. Of the 26 respondents that participated in both the 1995 and 1997 Surveys, four increased the number of risk classes, two decreased them, and 20 remained the same.

When comparing the results of all participants in both surveys, more than half of the respondents had three risk classes in the 1995 Survey, while the majority had four or more risk classes in the 1997 Survey. In the 1995 Survey, only three respondents had five or more risk classes, compared to nine respondents in the 1997 Survey. Note that the Task Force did not receive a breakdown of the rate classes for the nine rate class product in the 1995 Survey.

Percentage Expected to Qualify and Percentage Actually Issued by Risk Class

The survey asked for a breakdown of the percentage of applicants expected to qualify and the percentage actually issued in each risk class. Forty-nine respondents provided the percentages they expected to qualify and 46 provided actually issued percentages. Of these, 42 respondents provided both expected and actual percentages.

Table 2 summarizes the actual and expected results for the 42 respondents' most restrictive and least restrictive nonsmoker and smoker risk classes. Twenty-two respondents had only one smoker risk class; their data is listed separately from those respondents with multiple smoker risk classes in both Table 2 and Table 3 below.

Numbers in parenthesis represent the number of respondents in the particular category.

Table 2 - Respondents' Range of Expected Qualifying and Actually Issued Percentages

Range (%)	Nonsmoker Risk Classes				Smoker Risk Classes					
	Most Restrictive (42)		Least Restrictive (42)		Most Restrictive (20)		Least Restrictive (20)		Aggregate (22)	
	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
≤ 10	1	1	3	1	17	17	18	18	2	3
11 - 20	3	4	1	4	2	2	2	2	17	16
21 - 30	8	8	12	13	1	0	0	0	2	3
31 - 40	15	4	13	11	0	1	0	0	1	0
41 - 50	8	11	7	4	0	0	0	0	0	0
51 - 60	5	12	4	6	0	0	0	0	0	0
61 - 70	2	2	1	3	0	0	0	0	0	0
> 70	0	0	1	0	0	0	0	0	0	0
Low	8%	0%	2% (2)	2%	3% (3)	1%	2% (4)	0%	5% (2)	5%
High	67%	65%(2)	72%	68%	30%	34%	15%	14%	35%	30%
Average	39%	42%	36%	35%	9%	8%	6%	6%	19%	17%

On average, respondents issued more policies in their most restrictive nonsmoker risk class (42%) than they originally expected to qualify (39%). Seventeen of 20 respondents expected and actually issued 10% or less applicants in their most restrictive smoker risk class. On average, respondents issued slightly less policies in their most restrictive smoker class (8%) than originally expected to qualify (9%).

Table 3 shows the range between the percentage actually issued and the percentage expected to qualify for the most restrictive and least restrictive nonsmoker and smoker risk classes. This is a simple subtraction of percentages. For example, if a company expected 40% to qualify for the most restrictive preferred risk class and 45% actually qualified, the result would be 5% and shown in the "2.1 to 10.0" range in Table 3. Conversely, if 45% were expected to qualify and 40% actually qualified, this result would be -5% and shown in the "-10.0 to -2.1" range. If a company had only one smoker risk class, these respondents are included in the aggregate smoker risk column.

Table 3 - Range of Differences Between Actual and Expected Qualifying Percentages

Range (%)	Nonsmoker Risk Classes		Smoker Risk Classes		
	Most Restrictive (42)	Least Restrictive (42)	Most Restrictive (20)	Least Restrictive (20)	Aggregate (22)
<-10.0	4	5	0	0	1
-10.0 to -2.1	9	12	4	4	10
-2.0 to 2.0	10	11	14	15	9
2.1 to 10.0	10	7	2	1	1
>10.0	9	7	0	0	1
Low	- 18.5%	- 42.0%	- 5.5%	- 8.0%	- 12.0%
High	51.0%	25.0%	4.0%	7.0%	12.5%
Average	3.3%	- 0.3%	- 0.9%	- 0.6%	- 2.3%

More than half of the respondents had a higher than expected percentage qualifying for the most restrictive preferred nonsmoker risk class and a lower than expected percentage qualifying for all other risk classes. While actual and expected results were close on average, the range of results for individual respondents was, in fact, quite wide particularly for the nonsmoker risk class.

If the actual results are appreciably different from the expected qualifying percentages, a company may want to investigate the reasons for the disparity. There could be several explanations for this, including:

- Agent selection,
- Improper initial assumptions,
- Underwriting exceptions which allow more issues in the preferred risk classes, and/or
- Not taken in the standard risk classes which distort the percentage placed in the preferred risk classes.

Chart 1 and Chart 2 graphically depict the data contained in Table 2. The charts show the actual versus expected percentages qualifying for the most restrictive preferred nonsmoker and the most restrictive smoker risk classes, respectively.

In both charts, points above the diagonal line represent respondents that have actual qualifying percentages greater than expected. Points that fall below the line have actual qualifying percentages less than expected.

Chart 1 - Actual versus Expected Qualifying Percentages for Most Restrictive Preferred Nonsmoker Risk Class

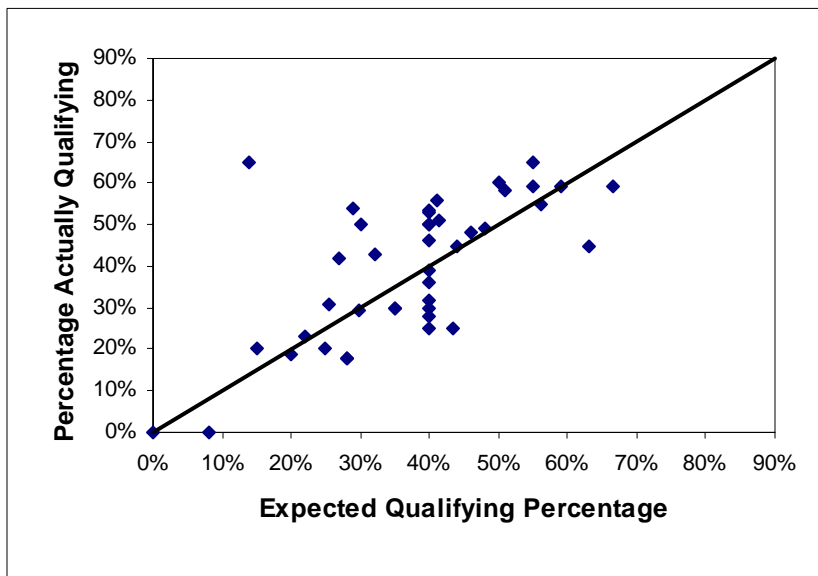
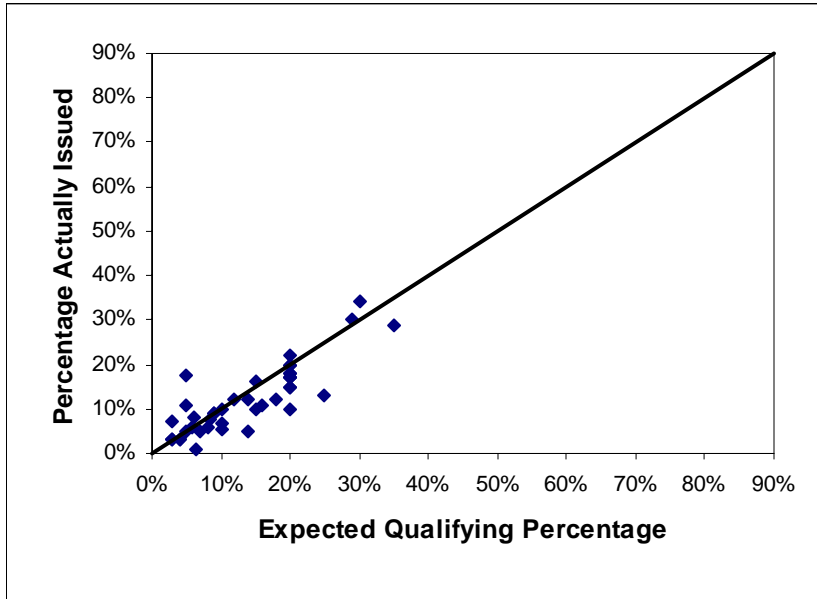


Chart 1 shows more respondents had a higher percentage qualifying for the preferred nonsmoker risk class than expected; the magnitude of these differences varied widely.

Chart 2 - Actual versus Expected Qualifying Percentages for Most Restrictive Preferred Smoker Risk Class



Unlike the most restrictive preferred nonsmoker risk class, the most restrictive smoker risk class had more respondents where the actual percentage qualifying for the preferred risk class was less than expected. Here, the arithmetic differences between expected and actual percentages are much closer than for the preferred nonsmoker risks.

Not Taken Rates

The survey asked respondents to indicate their not taken rates (i.e., cases which were issued but never placed in force) by risk class.

Twenty respondents were able to provide not taken experience; thirteen of these were able to break this experience down by risk class. Table 4 shows the low, high and average not taken ratios for the respondents that were able to provide a breakdown by risk class.

Table 4 - Not Taken Rates by Risk Class

	Nonsmoker Risk Classes		Smoker Risk Classes		
	Most Restrictive (13)	Least Restrictive (13)	Most Restrictive (8)	Least Restrictive (8)	Aggregate (5)
Low	1.0%	5.5%	3.0%	6.0%	5.5%
High	9.0%	45.0%	26.0%	45.0%	13.0%
Average	5.0%	17.1%	9.9%	23.6%	8.3%

On average, the not taken rates for the most restrictive preferred risk classes were better than for least restrictive risk classes and not taken rates for nonsmoker risks were better than for smoker risks. The average not taken rates had the following relationship:

Most Restrictive Nonsmoker (5.0%) < Aggregate Smoker (8.3%) < Most Restrictive Smoker (9.9%) < Least Restrictive Nonsmoker (17.1%) < Least Restrictive Smoker (23.6%)

The range of not taken rates is stable for the most restrictive nonsmoker risk class (1% to 9%) and the aggregate smoker risk class (5.5% to 13%), but is very erratic for all other risk classes. As shown in Table 4 above, the largest ranges are for the least restrictive risk class within a multi-class system. This vast difference in placement ratios by risk class may be attributable to agent and insured selection. Applicants dissatisfied with their risk classification may be more likely to look elsewhere for a better rating and premium, thus causing the higher not taken rates for the less restrictive risk classes.

As companies continue to refine their position in the preferred risk marketplace, they may want to study their not taken rates by risk class. The effect of the anticipated not taken rates on policy pricing assumptions (i.e., mortality, per policy issued and placed expenses, persistency) should be reviewed because the use of historical not taken rate experience may not be appropriate.

Expected Mortality

The survey asked for expected mortality by underwriting risk class as a percentage of the Society of Actuaries (SoA) 1975-80 Select and Ultimate Basic Tables (TSA XXXVIII, pp. 209-224) for male issue ages 25, 45 and 65 and durations 1, 3, 6 and 10. Tables 5 and 6 summarize the responses for the most restrictive preferred nonsmoker and the most restrictive preferred smoker risk classes, respectively.

Table 5 - Expected Mortality as a Percentage of SoA 1975-80 Select and Ultimate Basic Tables for the Most Restrictive Preferred Nonsmoker Risk Class (Male Risks)

Number of Respondents (53)												
% of SoA 1975-80 Basic Table	Age 25				Age 45				Age 65			
	Dur. 1	Dur. 3	Dur. 6	Dur. 10	Dur. 1	Dur. 3	Dur. 6	Dur. 10	Dur. 1	Dur. 3	Dur. 6	Dur. 10
< 30	5	3	1	1	1	1	1	1	1	0	0	0
30 - 39	10	10	10	6	20	26	20	13	6	6	4	4
40 - 49	17	17	18	15	18	17	20	18	21	27	25	22
50 - 59	9	11	13	22	11	7	10	19	12	10	11	9
60 - 69	7	8	9	5	2	2	2	2	7	7	9	11
70 - 79	4	4	2	3	1	0	0	0	6	3	3	4
80 +	1	0	0	1	0	0	0	0	0	0	1	3
Low	25.0%	26.0%	29.0%	29.0%	24.7%	27.6%	29.0%	29.0%	27.5%	30.4%	34.7%	37.0%
High	80.0%	74.0%	72.0%	80.0%	73.6%	66.0%	67.0%	69.0%	74.0%	73.0%	80.0%	88.0%
Average	48.0%	48.3%	49.0%	50.5%	42.6%	41.0%	42.5%	45.2%	51.7%	49.0%	51.2%	54.1%

Of the 53 respondents, 41 had one preferred nonsmoker risk class, nine had two preferred nonsmoker risk classes, two had four preferred nonsmoker risk classes and one had six preferred nonsmoker risk classes.

Although the low and high values remained roughly the same as the 1995 Survey, the average expected mortality from the 1997 Survey was about 90% of that from the 1995 Survey. Note that the 1995 Survey was based on the most popular preferred risk class while the 1997 Survey is based on the most restrictive preferred risk class. The percentages, in the 1997 Survey, ranged from a low of 24.7% (age 45 duration 1) to a high of 88.0% (age 65 duration 10). Percentages tended to be lowest at issue age 45 and were generally flat across durations for all ages. Two respondents used the same percentage for all issue ages and across all durations.

For issue age 45, five respondents had percentages that were 30% - 40% higher for duration 1 than for durations 3, 6 and 10. Possible explanations for this include:

- Respondents using an underlying mortality assumption other than the SoA 1975-80 Basic Tables,
- Limited ability to minimize the risk of antiselection, or
- Respondents not contesting claims or having been unsuccessful contesting claims in the past.

In order to analyze differences that could arise when comparing respondents with one preferred risk class to respondents with many preferred risk classes, the Task Force looked at respondents having exactly one preferred nonsmoker risk class. These results were similar to the "all respondent" analysis. As expected, average percentages increased slightly since respondents with super preferred risk classes had been eliminated.

There were 26 respondents that provided expected mortality assumptions for preferred nonsmoker risks in both the 1995 and 1997 Surveys. For issue age 45 (at durations 1 and 6), 14 of these had a mortality assumption that was lower in the 1997 Survey, six had an assumption that was higher in the 1997 Survey, and four had an assumption that was approximately the same in both surveys. The remaining two had results that were not readily comparable.

Table 6 - Expected Mortality As A Percentage of SoA 1975-80 Select and Ultimate Basic Tables For The Most Restrictive Preferred Smoker Risk Class (Male Risks)

Number of Respondents (24)												
% of SoA 1975-80	Age 25				Age 45				Age 65			
	Dur. 1	Dur. 3	Dur. 6	Dur. 10	Dur. 1	Dur. 3	Dur. 6	Dur. 10	Dur. 1	Dur. 3	Dur. 6	Dur. 10
< 60	1	2	2	2	2	2	2	2	0	0	0	0
60 - 79	11	6	0	1	2	3	1	0	5	4	6	8
80 - 99	6	10	14	9	8	9	9	9	6	8	7	5
100 - 119	5	4	6	9	7	8	9	10	5	9	8	8
120 - 139	1	2	1	2	4	2	3	3	5	3	3	2
140 +	0	0	1	1	1	0	0	0	3	0	0	1
Low	55.4%	55.4%	54.0%	52.0%	53.0%	52.0%	52.0%	54.0%	61.0%	61.0%	60.8%	61.0%
High	128.0%	133.0%	142.0%	140.0%	147.0%	125.0%	127.0%	130.0%	163.0%	127.0%	136.0%	159.0%
Average	87.1%	89.9%	94.9%	99.4%	98.2%	93.3%	96.3%	100.2%	105.0%	96.6%	97.5%	96.3%

Of the 53 respondents answering this question, 23 had one preferred smoker risk class and one had two preferred smoker risk classes. The remaining 29 had only a standard smoker risk class and were omitted from the preferred smoker risk class analysis.

Percentages ranged from a low of 52.0% (at age 25 duration 10 and age 45 durations 3 and 6) to a high of 163.0% (age 65 duration 1). Percentages tended to be lowest for issue age 25 and highest for issue age 65 but were generally flat (or graded up slightly) by duration. This was in contrast to the most restrictive preferred nonsmoker risk class analysis, where age 45 had the lowest percentages. As with the nonsmokers, average expected mortality for smokers from the 1997 Survey was about 90% of that from the 1995 Survey.

In general, expected mortality assumptions for both nonsmoker and smoker preferred risks have decreased in the two years since the 1995 Survey. Possible explanations for this decrease are:

- Tighter preferred underwriting requirements,
- A shift from nonsmoker to nontobacco and a corresponding shift from smoker to tobacco use criterion,
- Better than expected early duration experience, and
- Competitive market pressures.

Ratio of Standard to Preferred Mortality

The survey asked for the percentage of a respondent's own aggregate smoker or nonsmoker mortality (not necessarily the SoA 1975-80 Select and Ultimate Basic Tables) that it used for the various preferred and standard risk classes for male issue ages 25, 45, and 65 and durations 1, 3, 6 and 10. These results were analyzed by taking the ratio of the standard percentage to the preferred percentage. In order to provide more meaningful results, the Task Force reported on respondents with exactly one preferred nonsmoker or one preferred smoker risk class. Tables 7 and 8 summarize the responses for the nonsmoker and smoker risk classes, respectively.

Table 7 - Ratio Of Standard To Preferred Expected Mortality (Nonsmoker Risk Class)

Number of Respondents (34) *												
Ratio Range	Age 25				Age 45				Age 65			
	Dur. 1	Dur. 3	Dur. 6	Dur. 10	Dur. 1	Dur. 3	Dur. 6	Dur. 10	Dur. 1	Dur. 3	Dur. 6	Dur. 10
1.00 - 1.19	4	4	4	5	4	4	4	5	5	5	5	5
1.20 - 1.29	9	9	9	12	8	8	8	9	7	7	7	10
1.30 - 1.39	9	6	9	9	8	7	8	9	7	7	8	11
1.40 - 1.49	6	9	5	3	6	7	5	6	9	9	7	3
1.50 +	6	6	7	5	8	8	9	5	5	5	6	4
Low	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
High	1.56	1.56	1.54	1.54	1.67	1.67	1.55	1.54	1.67	1.67	1.67	1.67
Average	1.34	1.34	1.34	1.31	1.36	1.36	1.36	1.33	1.36	1.35	1.35	1.33

* One respondent did not report results for age 65.

Of the 42 respondents answering this question, 34 had exactly one preferred nonsmoker risk class and are shown in Table 7 above. Ratios ranged from a low of 1.08 (across all ages and durations) to a high of 1.67 (age 65 all durations) with average ratios ranging from 1.31 (age 25 duration 10) to 1.36 (age 45 durations 1, 3 and 6 and age 65 duration 1). Ratios generally did not change by duration or issue age, and 15 respondents had ratios that did not change at all by issue age or duration. The nonsmoker ratios from the 1997 Survey were similar in magnitude to those from the 1995 Survey.

Table 8 - Ratio Of Standard To Preferred Expected Mortality (Smoker Risk Class)

Number of Respondents (16)												
Ratio Range	Age 25				Age 45				Age 65			
	Dur. 1	Dur. 3	Dur. 6	Dur. 10	Dur. 1	Dur. 3	Dur. 6	Dur. 10	Dur. 1	Dur. 3	Dur. 6	Dur. 10
1.00 - 1.19	3	3	3	3	2	2	2	2	3	3	4	4
1.20 - 1.29	6	6	6	7	7	7	7	8	5	5	4	5
1.30 - 1.39	3	3	4	3	3	3	4	2	4	4	5	4
1.40 - 1.49	3	2	1	2	3	4	3	4	3	3	2	3
1.50 +	1	2	2	1	1	0	0	0	1	1	1	0
Low	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
High	1.84	1.84	1.84	1.84	1.51	1.49	1.49	1.47	1.51	1.51	1.51	1.49
Average	1.32	1.32	1.32	1.30	1.31	1.30	1.30	1.29	1.31	1.30	1.29	1.28

Of 42 respondents, 16 had exactly one preferred smoker risk class. The remaining 26 respondents were omitted from the standard/preferred smoker risk class ratio analysis. Ratios ranged from a low of 1.08 (across all ages and durations) to a high of 1.84 (age 25 all durations) with average ratios ranging from 1.28 (age 65 duration 10) to 1.32 (age 25 durations 1, 3 and 6). Six companies had ratios that were the same for all ages and durations. Ratios generally did not vary much by age or duration, but one respondent had ratios that were significantly higher at issue age 25, while another had ratios that were significantly higher at issue age 65. Removing the highest value in each age/duration category gave average results similar to those in the 1995 Survey.

Maximum Issue Age and Minimum Face Amount Limits

The survey asked for the maximum issue age and minimum face amount limits for each risk class. The maximum issue age and minimum face amount for the respondents' most restrictive preferred risk class are shown in Table 9 and Table 10, respectively.

Table 9 - Maximum Issue Age for Most Restrictive Preferred Nonsmoker Risk Class

Maximum Issue Age	Number of Respondents (60)
< 70	9
70	25
75	22
> 75	4

The maximum issue age ranged from 59 to 85 with over 75% of respondents at exact issue age 70 or 75. Only two of the 60 respondents reported varying maximum issue ages by risk class.

Table 10 - Minimum Face Amount for Most Restrictive Preferred Nonsmoker Risk Class

Minimum Face (\$000)	Number of Respondents (61)
25	2
50	6
100	44
200	2
250	7

The minimum qualifying face amount for the most restrictive preferred nonsmoker risk class ranged from \$25,000 to \$250,000 with \$100,000 being the most common response.

There were 14 respondents with multiple preferred nonsmoker risk classes; three of these required higher minimums for the most restrictive risk class. Of the 61 respondents, 19 allowed lower minimums for the standard nonsmoker risk class than for the most restrictive preferred nonsmoker risk class.

Age and Face Amount for Underwriting Requirements

Table 11 and Table 12 summarize the number of respondents who routinely require specific underwriting requirements for issue ages 25, 45 and 65 and for amounts applied for of \$50,000, \$100,000, \$250,000 and \$500,000. Information was requested on each of the following underwriting requirements: oral fluid testing (OFT), full blood profile, dried blood spot (DBS), urinalysis, cotinine testing, cocaine testing, testing for other illegal drugs, medical examination, paramedical examination, nonmedical evidence of insurability, attending physician's statement (APS), motor vehicle report (MVR), resting electrocardiogram (ECG), Human Immunodeficiency Virus (HIV) testing, prostate-specific antigen (PSA) testing, and stress (exercise ECG) testing.

Companies use various combinations of many of these requirements, depending on the applicant's age, the face amount of insurance requested and admitted history. The choice of particular requirements to use in distinguishing preferred from standard risks varies considerably from company to company and reflects a myriad of factors, which include:

- Company's market,
- Competitive environment,
- Distribution system,
- Underwriting philosophy and expertise,
- The specific criteria that must be met to qualify on a preferred risk class basis,
- Mortality expectations, and
- Other financial objectives.

Table 11 and Table 12 show how many of the 61 participants use each of the requirements. Table 11 is a summary by issue age within face amount and Table 12 is a summary by face amount within issue age.

Table 11 - Number of Respondents Using the Listed Underwriting Requirements by Face Amount Issued

Requirement	\$50,000			\$100,000			\$250,000			\$500,000		
	Age 25	Age 45	Age 65	Age 25	Age 45	Age 65	Age 25	Age 45	Age 65	Age 25	Age 45	Age 65
Blood Profile	10	13	17	47	48	47	57	57	56	56	58	55
DBS	1	1	1	7	8	7	6	6	5	4	4	3
Oral Fluid	4	5	0	6	4	1	2	2	0	1	0	0
Urine	11	14	31	50	52	54	60	60	59	60	58	59
Cotinine	13	15	29	47	48	49	56	55	53	55	56	54
Cocaine	13	15	26	47	49	47	57	57	53	56	57	53
Illegal Drugs	0	0	1	3	2	3	2	3	2	3	3	2
Nonmedical	34	32	5	29	18	1	21	9	1	9	5	1
Paramedical	2	8	34	22	36	49	34	51	43	50	52	34
Medical	0	0	2	0	0	6	0	0	14	1	3	23
APS	1	1	7	3	4	15	5	12	23	17	22	26
MVR	3	3	3	18	12	12	23	17	18	28	24	25
ECG	0	0	0	0	0	19	1	3	44	4	22	54
PSA	0	0	4	0	1	16	1	3	20	1	5	25
HIV	13	16	18	50	49	46	55	57	54	55	56	54

Table 12 - Number of Respondents Using the Listed Underwriting Requirements by Issue Age (\$000)

Requirement	Age 25				Age 45				Age 65			
	\$50	\$100	\$250	\$500	\$50	\$100	\$250	\$500	\$50	\$100	\$250	\$500
Blood Profile	10	47	57	56	13	48	57	58	17	47	56	55
DBS	1	7	6	4	1	8	6	4	1	7	5	3
Oral Fluid	4	6	2	1	5	4	2	0	0	1	0	0
Urine	11	50	60	60	14	52	60	58	31	54	59	59
Cotinine	13	47	56	55	15	48	55	56	29	49	53	54
Cocaine	13	47	57	56	15	49	57	57	26	47	53	53
Illegal Drugs	0	3	2	3	0	2	3	3	1	3	2	2
Nonmedical	34	29	21	9	32	18	9	5	5	1	1	1
Paramedical	2	22	34	50	8	36	51	52	34	49	43	34
Medical	0	0	0	1	0	0	0	3	2	6	14	23
APS	1	3	5	17	1	4	12	22	7	15	23	26
MVR	3	18	23	28	3	12	17	24	3	12	18	25
ECG	0	0	1	4	0	0	3	22	0	19	44	54
PSA	0	0	1	1	0	1	3	5	4	16	20	25
HIV	13	50	55	55	16	49	57	56	18	46	54	54

Blood Profile Testing

Standard blood profile testing provides information that can be used to assess the relative risk of mortality with respect to indications of coronary artery and other cardiovascular diseases, diabetes, liver disease, antibodies to HIV infection and other impairments. Based on the results of the standard blood tests and other requirements, companies may choose to perform additional tests (called reflex tests) for such things as hepatitis B and C and alcohol abuse. Over 20 tests may be performed on a single blood sample collected via syringe by paramedical technicians or nurses.

Blood profile testing is required at exactly \$100,000 for about 80% of the respondents. Several respondents indicated that a full blood profile is not required until the face amount is at least \$250,000; however, it appears that these companies require either a DBS or an OFT instead of full blood profile testing at significantly lower amounts. Results of blood testing minimums were similar to the 1995 Survey results.

Dried Blood Spot (DBS) Testing

The DBS test provides information that can be used to assess the relative risk of mortality with respect to indications of cardiovascular disease, diabetes, liver disease, antibodies to HIV and alcohol abuse. The specimen of blood is collected by fingerstick onto filter paper.

Few respondents are currently testing with DBS. Peak usage (eight respondents) is at issue age 45 for \$100,000. In the 1995 Survey, three companies permitted DBS testing for some issue age and amount combinations.

Oral Fluid Testing (OFT)

Oral fluid testing involves the collection of mucosal transudate, which has properties more similar to serum than saliva and can be used to test for evidence of HIV infection. It can also be used to test for cotinine (a metabolite of nicotine, which is an indicator of recent tobacco usage), and cocaine. The fluid may be collected by an agent or paramedical technician using a noninvasive oral collection device.

Although the number of respondents using OFT in both the 1995 and 1997 Surveys was limited, members of the Task Force are aware that more companies are now using OFT at higher face amounts for issue ages under 40. Six respondents indicated usage of OFT in the 1997 Survey, while only three respondents indicated use of OFT in the 1995 Survey.

Urine Testing

Urinalysis or Home Office Specimen (HOS) typically test for cotinine, cocaine, indications of poorly controlled diabetes, and kidney disorder. Such testing may also indicate use of a diuretic (antihypertensive agent) and illegal drugs (e.g., marijuana, methamphetamines, heroin and opium). The fluid may be collected by an agent or paramedical technician.

When companies have paramedics collect blood, they typically also have the paramedics collect urine. However, a few respondents have lower testing limits for urine than blood, perhaps due, in part, to producer collection.

Cotinine Testing

The cotinine test is usually conducted on a specimen of blood, urine or oral fluid to indicate recent use of tobacco or other forms of nicotine. All companies that collect urine or oral fluid test for cotinine. Most respondents test for cotinine beginning at \$100,000. These results are similar to those in the 1995 Survey.

Cocaine Testing

A test for recent usage of cocaine can be conducted on urine or oral fluid. Almost all companies that collect urine or oral fluid, test for cocaine. It appears that all respondents that test for both cocaine and cotinine do so at the same amounts.

Nonmedical Application

The nonmedical application provides less medical information than an examination by either a paramedical technician or physician. It is the minimum level of information needed for an application to be considered on a regularly underwritten (i.e., not guaranteed-issue or simplified-issue) basis. However, nonmedicals with laboratory testing (but no paramedical exam) are classified as nonmedicals even if an APS is ordered.

Although not apparent from the 1997 Survey, the Task Force is aware that some companies are increasing their nonmedical limits when supplemented by additional evidence from Personal History Interviews (PHI), MVR and agent-collected fluids. This is somewhat inconsistent with the perceived trend toward more risk classes where one would expect more medical information to be used to differentiate among the risk classes.

Paramedical Examination

The paramedical examination became popular during the 1970's when insurers' confidence in the information obtained from medical examinations was deteriorating and there were concerns about the balance between the costs and benefits associated with such exams. Paramedicals are performed by trained nurses and other paramedical technicians. The information obtained includes the applicant's medical history. This history may alternatively be obtained by an agent or a teleunderwriting facility. The exam includes taking physiologic measurements (e.g., height and weight, blood pressure and pulse rate). An electrocardiogram, a pulmonary function test and a blood, urine or oral fluid sample may be obtained by the paramedical technician.

Due to the direct out-of-pocket costs of the paramedical exam (\$35 to \$65, depending on services requested), companies generally will not obtain a paramedical for amounts of coverage under \$100,000, except at the older issue ages. This can be seen in the 1997 Survey results.

Attending Physician's Statement (APS)

The APS is one of the most valuable tools used in the risk classification process. However, it is rarely used as a routine underwriting requirement because of its cost (e.g., \$35 to \$70+) and delay in processing the application. It is primarily used to clarify and supplement medical history disclosed by the applicant and is used more often in the standard / substandard risk class decision than the preferred / standard risk class decision. The APS is requested more frequently for the larger amounts and older age applicants. The 1997 Survey results show that APS usage increases for older applicants and larger face amounts.

Motor Vehicle Report (MVR)

The MVR is often used as a reflex to help clarify an applicant's driving record. The MVR may also be requested routinely among both younger and older applicants applying for significant amounts of coverage where the modest costs of the report (e.g., \$3 to \$7) and quick turnaround time are counterbalanced by the potential benefits from clarifying some of the violent death aspects of the risk.

Less than half of the respondents use the MVR on a routine basis to evaluate applicants for a preferred risk class. The 1997 Survey's findings parallel those of the 1995 Survey for those companies that responded to both.

Electrocardiogram (ECG)

The resting ECG is a test used to screen applicants for evidence of coronary heart disease (CHD). By recording electrical impulses from the conduction system of the heart, the test identifies heart rate and rhythm disorders, coronary blood vessel blocks and heart enlargement. The test may also indicate a prior heart attack (myocardial infarction) and other underlying diseases of the heart.

The stress test or exercise ECG is a noninvasive test used to screen applicants for evidence of coronary heart disease (CHD). The most common stress test performed is the treadmill, which provides a continuous recording of an ECG during exercise on a motorized treadmill. The treadmill provides the underwriter with far more diagnostic and prognostic information than the resting ECG. In particular, the treadmill shows the effect of exercise on the heart via blood pressure, chest pain, shortness of breath, arrhythmias (irregular heart rhythm) and level of exercise attained. The medical community uses the stress test for both screening and diagnostic procedures; for example, it can be used to screen for the presence of undiagnosed CHD and to evaluate whether chest pain may be related to CHD. The test is very expensive (e.g., \$200+), so its use is ordinarily reserved for issue ages 50 and above and when applying for jumbo amounts of insurance or when there is some other indication of heart disease. It is unlikely that companies will require the stress test specifically for preferred risk applicants.

The respondents that routinely require a resting ECG do so only for applicants at the older issue ages and at face amounts exceeding \$250,000. The survey responses indicated no usage of either test below \$100,000, selected usage at issue age 65 for face amounts above \$100,000 and general usage at issue ages 45 and above for face amounts exceeding \$500,000.

Prostate-Specific Antigen (PSA) Test

PSA is a type of protein produced by the prostate gland tissue. The PSA level in the bloodstream is a surrogate marker for prostate cancer. Since the test is used by the medical community in routinely screening most males over age 50 or so, the majority of these males who apply for insurance are likely to be aware of their most recent PSA test results. As a defensive position, many insurers choose to routinely require such testing among males applying for amounts of insurance that would also require blood testing. In general, the higher the level of PSA, the more likely the possibility of the presence of prostate cancer. Acceptable levels of PSA will vary by age, how quickly the levels rise over time, and the method used to determine the level.

Over 25% of the survey respondents indicated routine usage by issue age 65 for face amounts greater than \$100,000. These results parallel those in the 1995 Survey.

Collection of Fluids

The survey asked whether companies allow anyone other than a paramedic or medical personnel to collect oral fluid, DBS or urine. Companies' considerations for allowing someone other than a paramedic or medical personnel to collect bodily fluids must offset the time and cost savings with:

- Legal liability,
- Chain of custody considerations (e.g., increased risk of substitution),
- Confidence in quality of test results, and
- Producer/customer reaction.

Sixteen respondents allow collection by someone other than the paramedic or medical personnel. Seven of the respondents allow collection of oral fluid only, eight allow collection of urine only, one allows collection of both oral fluid and urine and none allow collection of DBS.

Indicators Being Used as Preferred Risk Criteria

Criteria for underwriting preferred risks are based on information contained in the application, results from laboratory tests and other screening procedures.

Application information items were divided into three broad categories:

- Personal History,
- Family History, and
- Life Style Considerations.

The Task Force examined the percentage of respondents using a particular criterion in the consideration of an applicant for the preferred risk class.

Some of the information critical to the risk classification process is often verified or discovered independently from the application itself (e.g., Driving while Under the Influence of alcohol or drugs (DUI)). Although the morbidity and mortality history of close family members is predictive of differentials in anticipated risk, this information may not always be elicited completely or accurately from the applicant. Even when details of family history are disclosed by the applicant, they may be incomplete, misstated or misunderstood; also, such details are difficult to obtain or verify independently.

The survey asked, for each criterion, whether an applicant who did not meet the corresponding minimum qualification requirement was precluded from the preferred risk class. Sometimes, favorable information may be used to offset unfavorable. For example, if the total cholesterol (Tot-C) level exceeds the stated maximum for preferred, the individual may still qualify for preferred if the high density lipoprotein cholesterol (HDL-C) is sufficiently high and the (Tot-C)/(HDL-C) ratio is favorable.

The most frequently used criteria for determining preferred risk classification are those that pertain to personal history (e.g., diabetes, heart disease, cancer, elevated cholesterol) and life style criteria (e.g., alcohol or other substance abuse). Personal history and life style criteria may be discovered, verified or clarified through an APS.

Both personal history and family history are used to evaluate the risk of death. Usually, however, personal history is considered to be more useful than family history in distinguishing preferred risks from other risks. Personal history data is used for evaluating histories of medical conditions such as diabetes, cancer, stroke and hypertension. However, for evaluating the risk of heart disease, a positive family history may be more commonly encountered than a personal history of heart disease for applicants below issue age 50.

Personal History

Table 13 presents survey results on the use of personal history criteria in underwriting preferred risk products. An individual's personal history is used to screen for and distinguish preferred risk applicants.

Table 13 - Personal History Preferred Risk Criteria

Criterion	Used for Preferred Risk Class?		Always Preclude from Preferred Risk Class?	
	Total Respondents	% of Total Respondents Using	Total Respondents	% of Total Respondents Precluding
Diabetes	61	98%	60	97%
Heart Disease	61	98%	60	87%
High Cholesterol	61	97%	58	38%
Non-skin Cancer	61	97%	57	67%
Stroke	59	93%	53	96%
Hypertension	61	92%	56	50%
Melanoma	60	92%	56	79%
Treatment for Hypertension	61	85%	54	61%
Mental and Nervous	59	85%	52	23%
Nonmelanoma Skin Cancer	59	81%	48	4%
Treatment for Cholesterol	60	82%	51	55%
Prescription Drugs	59	75%	45	2%

All of the personal history criteria are used by at least 75% of the respondents. The most commonly used criteria are diabetes and heart disease, followed by high cholesterol, non-skin (i.e., most) cancers, stroke, hypertension and melanoma. Except for cholesterol, each of these criteria is used by at least half the respondents to preclude an applicant from qualifying for the preferred risk class, irrespective of whether a rating would be assessed solely for that personal history. Taking prescription drugs is the least commonly used criterion and automatically precludes an applicant from the preferred risk class for only 2% of the respondents.

Family History

Table 14 provides the results from the survey on the use of family history criteria in underwriting preferred risk classes.

Family history data is generally used less often than personal history, probably due to difficulties in eliciting, verifying or clarifying a family history. Consequently, somewhat less reliance may be placed on family history of a natural parent or sibling. An exception to this is information about family history of heart disease, which is considered by most of the respondents in selecting a preferred risk.

Table 14 - Family History Preferred Risk Criteria

Criterion	Used for Preferred Risk Class?		Always Preclude from Preferred Risk Class?	
	Total Respondents	% of Total Respondents Using	Total Respondents	% of Total Respondents Precluding
Heart Disease	61	90%	55	58%
Cancer	61	57%	32	31%
Stroke	61	54%	29	48%
Diabetes	60	45%	23	48%
Hypertension	60	23%	11	27%
Non-Accidental Early Death	58	12%	4	25%

While an unfavorable result of most of the personal history criteria could preclude an applicant from qualifying as a preferred risk, only an unfavorable family history of heart disease precludes an applicant from the preferred risk class by over half of the respondents.

Family history of heart disease may be encountered more frequently than a corresponding personal history of heart disease when underwriting the younger issue ages. The majority of respondents that use age limits for a positive family history use age based on the occurrence of death rather than when the disease was diagnosed. Information about cause of death and age at death is more likely to be known by the applicant than whether or when a particular disease was diagnosed on a natural parent or sibling.

With respect to Family History requirements, the survey asked whether family history requirements were based on death or diagnosis. Table 15 shows the number of respondents for each of these categories.

Table 15 - Basis for Family History Requirements

Requirement	Age Limit Basis	
	Death	Diagnosis
Heart Disease	41	10
Diabetes	17	6
Cancer	27	3
Stroke	20	7
Hypertension	7	4
Non-Accidental Death	3	N/A

Most of the preferred risk programs that incorporate a family history base the history on the occurrence of death rather than the diagnosis of a particular disease prior to death. While many respondents use similar family history requirements, some programs differ by taking other factors into consideration, such as:

- Whether natural parents or both natural parents and siblings are included,
- The number of incidences of death or diagnoses allowed,
- The age limit for incidence of death or diagnosis.
- Offsetting family history with good applicant health or negative stress test in the past year, and
- Using gender specific cancers only (i.e., prostate cancer would count against male applicants only while breast cancer would count against female applicants only).

Life Style

Table 16 shows survey findings for life style criteria. Some of the life style criteria are among those most commonly used to eliminate an applicant from a preferred risk classification (e.g., alcohol abuse, use of illegal drugs, adverse driving record, driving under the influence (DUI), participation in private aviation and participation in hazardous sports or avocations).

The survey asked about underwriting practices pertaining to lifestyle for items that are included on most life insurance applications. Some of the life style criteria can be identified initially without disclosure from the applicant and/or may be evaluated more fully through a motor vehicle record (MVR) or laboratory testing of body fluids.

A high percentage of companies that preclude applicants for life style considerations will later reconsider those applicants some time after they discontinue the hazardous life style (e.g., returning to United States to reside after living in a foreign country, or discontinuing flying as a private pilot). Some companies allow issue on a preferred risk class basis, but include an extra premium for aviation or hazardous sports or avocations, expecting that the flat extra premium covers the excess risk above that provided for by the preferred risk class premium.

Table 16 - Life Style Preferred Risk Criteria

Criterion	Used for Preferred Risk Class?		Always Preclude from Preferred Risk Class?		If Precluded from Preferred Risk Class, can it be later considered?	
	Total Respondents	% of Total Respondents Using	Total Respondents	% of Total Respondents Precluding	Total Respondents	% of Total Respondents Considering Later
Alcohol Abuse	61	97%	58	67%	47	53%
Illegal Drugs	60	95%	57	67%	45	51%
Driving	61	90%	N/A	N/A	N/A	N/A
DUI	61	90%	N/A	N/A	N/A	N/A
Aviation	61	87%	53	43%	38	84%
Avocations / Hazardous Sports	61	85%	53	36%	37	78%
Other Tobacco Products	61	79%	N/A	N/A	N/A	N/A
Cigarettes	61	79%	N/A	N/A	N/A	N/A
Occupation	61	77%	48	42%	33	73%
Foreign Residence	60	67%	42	45%	28	86%
Foreign Travel	61	66%	41	7%	27	89%
Felony Conviction	61	57%	34	24%	25	68%
Regular Exercise	59	14%	12	8%	3	67%

Drug and alcohol abuse were taken into account by at least 95% of the respondents in consideration of preferred risk classification and were the only life style criteria where the majority of respondents would always preclude an applicant from the preferred risk class. In fact, two-thirds of the respondents said that these criteria would always preclude an applicant from the preferred risk class.

Except for regular exercise, life style criteria were regularly used by the respondents in determining qualification for the preferred risk class. Except for drug and alcohol abuse, the life style criteria typically did not automatically preclude an applicant from the preferred risk class and if the criterion did originally preclude an applicant from the preferred risk class, reconsideration was allowed by at least two-thirds of the respondents.

Nine companies reported using regular exercise as a preferred risk criterion, an increase from only one company that reported using it in the 1995 Survey. The relatively infrequent use of exercise as a criterion may reflect difficulties in verifying either the regularity or sufficiency of exercise. Results from physiologic measurements and serum lipid testing may be used as surrogate markers for the applicant's physical condition and health benefits related to regular exercise in lieu of an unverifiable statement regarding regular participation in an exercise program.

Summary of All Criteria

Table 17 ranks the criteria by frequency and category of use in classifying an applicant as a preferred risk. It summarizes much of the information from previous tables and ranks the criteria in order of usage.

Table 17 - Criteria by Category and Frequency of Use in the Preferred Decision

Criterion	Used for Preferred Risk Class?		
	Category	Total Respondents	% of Total Respondents Using
Diabetes	Personal History	61	98%
Heart Disease	Personal History	61	98%
Alcohol Abuse	Life Style	61	97%
High Cholesterol	Personal History	61	97%
Non-skin Cancer	Personal History	61	97%
Illegal Drugs	Life Style	60	95%
Stroke	Personal History	59	93%
Hypertension	Personal History	61	92%
Melanoma	Personal History	60	92%
Driving	Life Style	61	90%

Criterion	Used for Preferred Risk Class?		
	Category	Total Respondents	% of Total Respondents Using
DUI	Life Style	61	90%
Heart Disease	Family History	61	90%
Aviation	Life Style	61	87%
Avocations / Hazardous Sports	Life Style	61	85%
Treatment for Hypertension	Personal History	61	85%
Mental and Nervous	Personal History	59	85%
Nonmelanoma Skin Cancer	Personal History	59	81%
Treatment for Cholesterol	Personal History	60	82%
Other Tobacco Products	Life Style	61	79%
Cigarettes	Life Style	61	79%
Occupation	Life Style	61	77%
Prescription Drugs	Personal History	59	75%
Foreign Residence	Life Style	60	67%
Foreign Travel	Life Style	61	66%
Cancer	Family History	61	57%
Felony Conviction	Life Style	61	57%
Stroke	Family History	61	54%
Diabetes	Family History	60	45%
Hypertension	Family History	60	23%
Exercise	Life Style	59	14%
Non-Accidental Early Death	Family History	58	12%

Driving Record and DUI

The survey asked if driving record was used as a consideration for the preferred risk class. Fifty-five respondents said that they use driving record. Of these 55, 43 respondents allow a certain number of moving violations within a specified period, without indicating the violation. Of the remaining 12 respondents, three base their decision on the number of points on a driver's record within a specified time period, rather than counting moving violations. Three other respondents based their decision on whether the record requires a rating. For five other respondents, the decision is discretionary based on the type of violation rather than a specified number of violations.

Table 18 shows the number of respondents which use a specific number of moving violations within a specified time period as distinct criteria for their preferred risk classes.

Table 18 - Number of Moving Violations Allowed Within a Certain Time Period

Number of Years	Number of Moving Violations (43)			
	0	1	2	3
1	0	1	1	1
2	0	2	3	0
3	3	2	19	10
4	0	0	0	0
5	0	0	0	1

The most common driving record criterion was no more than two moving violations in a three-year period; no more than three moving violations over a three-year period was second. These two responses were used by two-thirds of the respondents.

The survey asked if DUI was used as part of the preferred criteria and, if so, how many incidents over what time period would eliminate an applicant from a preferred risk class. Fifty-five responded that they use DUI in their preferred criteria. Of these, 52 respondents stated the number of incidents allowed within a specific time period.

Table 19 shows the number of respondents that allow a maximum of zero or one DUI offense over various time periods as a consideration for the preferred risk class. None of the respondents allow for more than one violation, regardless of the number of years that have elapsed.

Table 19 - Time Horizon for DUI Criteria

Number of Years	Number of DUI's Allowed (52)	
	0	1
2	0	1
3	6	2
4	1	1
5	25	2
7	0	1
10	7	1
Not stated	5	0

Almost half of the respondents allow no DUI convictions within the past five years as consideration for preferred. Thirty-eight of the 52 respondents use a time horizon of greater than three years. Since motor vehicle reports generally do not go back more than three years, it may be more difficult to verify information beyond three years. Five respondents indicated they do not allow any DUI's for consideration for the preferred risk class, but did not specify over what time period.

Cigarette and Other Tobacco Use

The survey asked if cigarette use was a part of the preferred risk classification and, if so, how many years an applicant would have had not to use cigarettes in order to be considered for the preferred class. Forty-eight respondents said that they have cigarette use in their preferred risk criteria. At first, the Task Force thought the number of companies using this as a criterion appeared low. However, it may be that cigarette use is a factor in the base smoker / nonsmoker distinction rather than in the preferred risk classification itself. Three respondents answered this question with respect to their preferred smoker risk class and their responses are not included in Table 20 below.

Table 20 - Time Horizon Regarding Last Cigarette Use and Preferred Risk Classification

Months Since Last Used	Number of Respondents (45)
12	26
24	6
36	12
48	0
60	1

More than half of the respondents allow no cigarette use in the past 12 months. The second most common criterion is no cigarette use in the past 36 months.

The survey asked if other tobacco products are used in consideration for the preferred risk class and, if so, what quantity is allowed over what time period. Forty-eight respondents use other tobacco products in their preferred criteria. Of these, 46 respondents answered this question with respect to the preferred nonsmoker (or non-tobacco) risk class. The other two responded for a preferred tobacco category; their responses are not included in Table 21.

Table 21 - Time Horizon for No Use of Other Tobacco Products

Months Since Last Used	Number of Respondents (46)
12	27
24	7
36	11
48	0
60	1

More than half of the respondents allow no use of other tobacco products in the past 12 months. The second most common criterion is no use of other tobacco products in the past 36 months.

Differences in Criteria by Smoking Status

The survey asked if companies vary their preferred criteria by smoking status. Only two respondents said their criteria differ by smoking status. These criteria are blood pressure, build and cholesterol.

Differences in Criteria by Gender

The survey asked if companies vary their preferred criteria by gender. Four respondents said that they vary their build criteria by gender.

Other Criteria Used to Determine Preferred

The survey asked if any criteria other than those listed in the survey were used for determining the preferred risk class. Of 58 respondents, 22 said that they considered other criteria, of which 21 provided detail as shown in Table 22.

Table 22 - Other Criteria Used to Qualify for Preferred Risk Class

Other Criteria	Number of Respondents (21)
Must be a Standard Medical Risk	14
Income and Occupation	2
Other Chronic Disease or Illness	2
Supporting Business on Other Lines	1
Producer Pressures and Status of Producer	1
Normal Treadmill, No Chronic Respiratory Disease	1

Ranges of Criteria in Use

The survey asked selected questions about criteria used for male issue ages 25, 45 and 65 to determine distinctions, if any, by issue age. The survey then asked a general question to determine any differences by gender.

Where appropriate, the Task Force has included actual laboratory test range results on U.S. applicants for the calendar year 1997. These results were provided by LabOne and are included for informative or comparative purposes only.

The Task Force did not attempt to correlate laboratory findings with specific respondent criteria. Each respondent, however, may want to do this to verify that the preferred risk qualification percentages assumed are reasonable given their own specific criteria. For example, if a company wants 70% of its applicants to qualify for the preferred risk class, this may be difficult to do if the company has as one of its criteria that an applicant's total cholesterol level must be less than 200 mg. because, at this level, only 33% to 44% of applicants tested at issue ages 40 to 69 meet this criterion.

Total Cholesterol

The survey asked companies to provide the maximum total cholesterol reading that would qualify for preferred risk consideration. More than half of the respondents use these values as guidelines only and assess the risk profile as a whole. Total cholesterol is measured in milligrams per deciliter (mg. / dl.). Forty-eight companies responded; the lowest, highest and average maximum readings for issue ages 25, 45, and 65 are shown in Table 23 below.

Table 23 - Maximum Total Cholesterol to Qualify for Preferred Risk Class

	Total Cholesterol		
	Number of Respondents (48)		
mg. / dl.	Age 25	Age 45	Age 65
< 200	0	0	0
200 - 219	3	1	0
220 - 239	16	17	16
240 - 259	19	20	22
260 - 299	6	6	5
300 - 350	2	2	3
351 +	2	2	2
Low	200 (2)	200	220 (6)
High	400	400	400
Average	247	249	251

Twenty-seven of the 48 respondents have maximums of exactly 220, 240 or 250 mg. / dl. at issue age 45. A few of the respondents increased the maximum as issue age increased. The average in this survey is close to the average in the 1995 Survey.

Table 24 - Laboratory Results (1997) - Total Cholesterol

	Total Cholesterol		
mg. / dl.	Ages 20 - 29	Ages 40 - 49	Ages 60 - 69
< 200	68.2%	44.4%	33.3%
200 - 219	14.7	20.4	21.6
220 - 239	8.7	15.8	19.2
240 - 259	4.5	9.9	12.9
260 - 299	3.0	7.6	10.6
300 - 350	0.7	1.6	2.2
351 +	<u>0.2</u>	<u>0.3</u>	<u>0.3</u>
	100.0%	100.0%	100.0%

Total Cholesterol / HDL-C (Tot-C / HDL-C) Ratio

The survey asked companies to provide the maximum Tot-C / HDL-C ratio that would qualify for preferred risk consideration. Forty-eight companies responded; the lowest, highest and average maximum readings for issue ages 25, 45, and 65 are shown in Table 25 below.

Table 25 - Maximum Total Cholesterol / HDL-C Ratio to Qualify for Preferred Risk Class

Ratio	Total Cholesterol / HDL-C Ratio		
	Number of Respondents (48)		
	Age 25	Age 45	Age 65
≤ 3.5	1	1	1
3.6 - 5.0	13	11	11
5.1 - 6.0	24	26	25
6.1 - 7.4	6	6	6
7.5 - 10.0	4	4	5
10.1 +	0	0	0
Low	3.0	3.0	3.0
High	10.0	10.0	10.0
Average	5.80	5.83	5.87

Thirty-one of the 48 respondents had thresholds at exactly 5.0, 5.5, or 6.0 at issue age 45. The average results are close to those in the 1995 Survey.

Table 26 - Laboratory Results (1997) - Total Cholesterol / HDL-C Ratio

Ratio	Total Cholesterol / HDL-C Ratio		
	Ages 20 - 29	Ages 40 - 49	Ages 60 - 69
≤ 3.5	47.7%	33.1%	29.2%
3.6 - 5.0	35.3	37.5	41.8
5.1 - 6.0	9.8	15.5	16.6
6.1 - 7.4	5.2	9.7	9.2
7.5 - 10.0	1.8	3.6	2.8
10.1 +	<u>0.3</u>	<u>0.6</u>	<u>0.3</u>
	100.0%	100.0%	100.0%

Gamma Glutamyl Transpeptidase (GGT)

The survey asked about the maximum GGT level to qualify for the preferred risk class. GGT is a liver enzyme measured in units per liter. Elevated levels may indicate liver damage due to alcohol abuse or hepatitis. Typically, companies consider levels up to 65 normal. Some companies request reflex tests (alcohol marker tests such as CDT and hepatitis B tests) when GGT is above 65. Twenty-nine companies responded; the lowest, highest and average maximum readings for issue ages 25, 45 and 65 are shown in Table 27 below.

Table 27 - Maximum Level of GGT to Qualify for Preferred Risk Class

	GGT		
	Number of Respondents (29)		
Units / liter	Age 25	Age 45	Age 65
0 - 65	18	18	18
66 - 84	6	6	6
85 - 99	2	2	2
100 - 129	1	1	1
130 +	2	2	2
Low	60	60	60
High	130 (2)	130 (2)	130 (2)
Average	75	75	75

Most respondents use maximums up to 65. Eleven out of the 29 respondents use maximums between 66 and 130. In the 1995 Survey, 16 of 22 respondents reported using maximums above 65.

Table 28 - Laboratory Results (1997) - GGT

Units / liter	GGT		
	Ages 20 - 29	Ages 40 - 49	Ages 60 - 69
0 - 65	97.0%	91.6%	93.0%
66 - 84	1.4	3.2	2.7
85 - 99	0.6	1.4	1.2
100 - 129	0.5	1.6	1.3
130 +	<u>0.5</u>	<u>2.2</u>	<u>1.8</u>
	100.0%	100.0%	100.0%

Serum Glutamic Oxalacetic Transaminase (SGOT)

The survey asked about the maximum SGOT level used to qualify an applicant for the preferred risk class. SGOT is an enzyme found in cardiac, hepatic and skeletal muscle. It is used as an aid in monitoring and diagnosing myocardial infarction and in confirming viral hepatitis. SGOT is measured in units per milliliter. Most companies consider levels up to 41 normal. Twenty-nine companies responded; the lowest, highest and average maximum readings for issue ages 25, 45 and 65 are shown in Table 29 below.

Table 29 - Maximum Level of SGOT to Qualify for Preferred Risk Class

Units / ml.	SGOT		
	Number of Respondents (30)		
	Age 25	Age 45	Age 65
0 - 41	15	15	15
42 - 99	14	14	14
100 +	1	1	1
Low	40	40	40
High	100	100	100
Average	52	52	52

Half of the respondents used maximums at 40 or 41 and half used maximums above that.

The 1995 Survey did not inquire about SGOT levels.
 Table 30 - Laboratory Results (1997) - SGOT

	SGOT		
Units / ml.	Ages 20 - 29	Ages 40 - 49	Ages 60 - 69
0 - 41	97.3%	96.7%	97.3%
42 - 99	2.4	3.0	2.5
100 +	<u>0.3</u>	<u>0.3</u>	<u>0.2</u>
	100.0%	100.0%	100.0%

Serum Glutamic Pyruvic Transaminase (SGPT)

The survey asked about the maximum SGPT level for preferred risk consideration. SGPT is a liver enzyme. Elevated levels of SGPT may indicate liver damage due to hepatitis. Most companies consider levels up to 45 units / milliliter normal. Thirty companies responded; the lowest, highest and average maximum readings for issue ages 25, 45 and 65 are shown in Table 31 below.

Table 31 - Maximum Level of SGPT to Qualify for Preferred Risk Class

	SGPT		
	Number of Respondents (30)		
Units / ml.	Age 25	Age 45	Age 65
0 - 45	16	16	16
46 - 99	14	14	14
100 +	0	0	0
Low	41	41	41
High	90 (4)	90 (4)	90 (4)
Average	56	56	56

More of the respondents used maximums at or below "normal" than above "normal". The 1995 Survey did not ask about SGPT levels.

Table 32- Laboratory Results (1997) - SGPT

	SGPT		
Units / ml.	Ages 20 - 29	Ages 40 - 49	Ages 60 - 69
0 - 45	93.1%	92.0%	96.6%
46 - 99	6.1	7.2	3.0
100 +	<u>0.8</u>	<u>0.9</u>	<u>0.4</u>
	100.0%	100.0%	100.0%

Prostate-Specific Antigen (PSA)

The level of PSA in the blood can be useful in determining signs of prostate cancer in males. Elevated levels of PSA can be used as a tumor marker with greater accuracy at levels higher than 10 nanograms per milliliter (ng. / ml.) compared to other screening options available. Very few companies routinely test males under issue age 50 because the test is not as accurate at low PSA levels (under 10). Even though values are shown in Table 33 for other issue ages, many companies do not begin testing until issue age 50. Maximum PSA levels to qualify for the preferred risk class for issue ages 25, 45 and 65 are shown in Table 33 below.

Table 33 - Maximum Level of PSA to Qualify for Preferred Risk

	PSA		
	Number of Respondents (22)		
ng. / ml.	Age 25	Age 45	Age 65
≤ 4.0	19	19	15
4.1 - 10.0	3	3	7
10.1 +	0	0	0
Low	2.5	2.5	3.9
High	9.9	9.9	9.9
Average	4.4	4.5	5.0

Most of the respondents use maximums at or below 4.0 ng. / ml. The 1995 Survey asked for information on issue ages 35, 45 and 55 and, at all of these issue ages, more than half of the respondents used maximums above 4.0.

Table 34 - Laboratory Results (1997) - PSA

ng. / ml.	PSA		
	Ages 20 - 29	Ages 40 - 49	Ages 60 - 69
≤ 4.0	100.0%	97.8%	90.9%
4.1 - 10.0	0.0	1.9	7.8
10.1 +	<u>0.0</u>	<u>0.3</u>	<u>1.3</u>
	100.0%	100.0%	100.0%

Preclusion from Preferred Risk Class due to Laboratory Test Results

The survey asked whether a laboratory reading above the maximum would preclude an applicant from the preferred risk class. The results are shown in Table 35 below.

Table 35 - Preclusion from Preferred Risk Class due to Laboratory Test Results

	Number of Respondents	Answers			% Always
		Never	Sometimes	Always	
Cholesterol	48	0	27	21	44%
Tot-C / HDL-C	43	0	15	28	65%
GGT	38	1	28	9	24%
SGOT	38	0	28	10	26%
SGPT	37	0	27	10	27%
PSA	28	1	18	9	32%

About two-thirds of the respondents indicate that they would always preclude an applicant from consideration for a preferred risk classification based on the Tot-C / HDL-C ratio, while less than half always preclude an applicant based on the other tests. In fact, only a quarter of the respondents indicated that they would always preclude an applicant from the preferred risk class due to elevated liver enzymes.

Blood Pressure

Blood pressure is the force expended on the arterial walls by the flow of blood from the heart. Such pressure fluctuates in response to changes in physical activity, stress and other factors.

Readings of blood pressure are taken by a nurse or other paramedical technician as part of the medical or paramedical examination used in underwriting to evaluate and classify risk. Each reading includes a measurement in the systolic phase (i.e., pressure when the heart contracts) and one in the diastolic phase (i.e., pressure when the heart is at rest). It is measured in millimeters of mercury (mm.Hg.).

Sustained elevations of blood pressure usually require treatment and eventually can lead to organ damage (e.g., enlargement of the heart, congestive heart failure, kidney failure, stroke, etc.). Blood pressure is considered a coronary risk factor (along with cigarette smoking habits, pulse rate, height and weight, serum cholesterol, family history of cardiovascular disease prior to age 60, etc.) and is routinely used along with other information in screening individuals to determine the likelihood of increased risk of death. The survey asked companies about maximum treated and untreated blood pressure readings to qualify a male for the preferred risk classification at issue ages 25, 45 and 65. Table 36 is a summary of the maximum untreated values.

Table 36 - Maximum Untreated Blood Pressure to Qualify for Preferred Risk Class

Maximum Untreated Blood Pressure	Number of Respondents (54)		
	Systolic/Diastolic (mm.Hg.)	Male Age 25	Male Age 45
< 130/85	2	0	0
130/85 to 140/89	11	11	5
Exactly 140/90	25	26	24
141/90 to 150/90	5	5	9
> 150/90	1	2	4
Other (Mixed)	10	10	12
Low	125/80	130/80	130/85
High	160/95	160/95	165/94

There were a total of 54 respondents to this question. Although systolic/diastolic values varied somewhat, approximately one-half of the respondents used exactly 140/90 as the maximum untreated blood pressure for a preferred risk class at all issue ages.

Twenty respondents used the same blood pressure reading for all issue ages, while 20 used the same only for issue ages 25 and 45 (issue age 65 was higher). Four respondents used the same reading for issue ages 45 and 65 (issue age 25 was lower). The remaining 10 respondents used readings which increased by issue age. The low readings in the 1997 Survey were nearly identical to the 1995 Survey, while the high readings decreased slightly.

Nineteen respondents said that any treatment for hypertension (regardless of the treated blood pressure reading) would preclude an individual from a preferred risk class. For the remaining 35 respondents that allowed treated hypertensives into a preferred risk class, nearly all required the same maximum reading as untreated to qualify for preferred. However, a couple of these respondents required slightly lower systolic and diastolic readings for treated.

There were 26 respondents that answered this question in both the 1995 and 1997 Surveys. Of these, 12 had a maximum untreated blood pressure reading that was the same in both surveys, four had a higher maximum reading in the 1997 Survey, and three had a lower maximum reading in the 1997 Survey. The remaining seven had results that were not readily comparable.

Height and Weight

The survey asked for the maximum build that would qualify a 45-year old for a preferred risk class. Build is defined as weight for a specific height. Maximum weights (in pounds) at various heights are shown separately for males and females. Table 37 is a summary of the 57 responses received.

Table 37 - Maximum Weight to Qualify for Preferred Risk Class by Sex and Height

	5' 2"		5' 6"		5' 10"		6' 2"	
	Male	Female	Male	Female	Male	Female	Male	Female
Low	150	129	170	141	190	156	210	172
High	202	202	225	225	248	248	278	278
Average	167	161	187	180	208	200	232	223

Of the 57 respondents answering this question, 34 used the same maximum build for both males and females. For a 5' 10" male, maximum weights ranged from 190 to 248 with an average of 208. For a 5' 2" female, maximum weights ranged from 150 to 202 with an average of 167. For males, the average maximum builds were slightly higher than the maximums from the 1995 Survey.

Twenty-seven (or slightly less than half) of the respondents said that having a weight outside the maximum for a particular height would not automatically preclude an individual from a preferred risk class. These respondents allowed a preferred risk to be from five to 15 pounds overweight as long as all other criteria were met, or else they let their underwriters have some discretion.

There were 26 respondents that answered this question in both the 1995 and 1997 Surveys. For a 5' 10" male issue age 45, 14 of the respondents had a maximum weight that was the same in both surveys and seven had a weight that was higher in the 1997 Survey. The remaining five had results that were not readily comparable.

Debits

Historically, underwriters have been concerned about distinguishing between standard and substandard issues. To do this, a technique was developed to quantify risk factors. These have typically been called debits and credits, and the favorable factors may offset the unfavorable. With the introduction of the preferred classification, some companies have extended this approach to underwriting preferred risks.

Debits may be assigned for one or more unfavorable factors. Some companies may restrict the number of debits allowed for an applicant to be considered for the preferred class. Credits may be assigned for favorable factors such as blood pressure, build, cholesterol or other blood test findings. Some companies do not allow credits to be taken into account for classifying a preferred risk. Others do.

For the preferred risk classification, there is usually a maximum number of debits allowed for any risk to be considered further on a preferred basis. Table 38 shows the maximum number of debits allowed, both before and after applying credits.

Table 38 - Maximum Number of Debits Allowed Before and After Applying Credits

Maximum Debits (25 Debits = 1 Table)	Number of Respondents	
	Before Credits (47)	After Credits (43)
0	6	16
10 - 24	5	8
25	15	10
30 - 39	2	3
40 - 49	13	3
50 +	5	2
Varies	1	1

Forty-one out of the 47 respondents allow debits before credits for anything less than 50 debits, with 15 of those being at exactly 25 debits. Six respondents said that they do not allow any debits before consideration of any credits. Thirty-four out of 43 respondents allow debits after credits up to 25 debits, with 16 of those not allowing any debits after credits.

Sixteen of the respondents do not allow any credits to be applied against debits for consideration on a preferred risk basis.

Underwriting Guidelines and Judgment for Exceptions

The survey asked if written internal guidelines are used to determine which exceptions are made. Of the 50 respondents, 12 indicated that they have written internal guidelines on exceptions.

The survey also asked if exceptions are allowed based on underwriting judgment. Fifty-one companies responded to this question and all but one said that they allow their underwriters to use judgment in making exceptions to qualification for the preferred risk class. When exceptions are allowed, underwriting judgment plays a major role in the decision.

Exceptions to Preferred Criteria

The survey asked if companies allow exceptions to their published preferred criteria in the underwriting process. Of 15 respondents, most said that they allow exceptions only if the overall risk profile would still qualify for the preferred risk class. The most common exceptions are shown in Table 39 below.

Table 39 - Exceptions to Preferred Risk Criteria

Exception	Number of Respondents
Blood Pressure and Build	6
Family History	4
Slight Variation Allowed in One Criterion	2
Cholesterol Level	2

One respondent commented that they have seven exceptions based on internal guidelines; the underwriter can use only one of these seven exceptions to qualify an applicant for a preferred risk class.

Additional Comments

The final question in the survey asked if there were any additional comments that companies wanted to make. Six respondents provided additional comments. Since all of the comments were related to underwriting exceptions and judgment, this section was moved to this part of the report.

Three respondents commented on underwriting judgment and its importance in the decision making process. One respondent reiterated that only one exception to their preferred risk criteria is allowed. One respondent will reconsider applicants for the preferred risk class “after years of marked improvement.”

One respondent indicated that they have a marketing program which allows MGA’s to earn “IOU’s” based on production. These “IOU’s” may be redeemed to reduce premium ratings by up to two tables.

Distribution Channels

The survey asked respondents to identify distribution channels for their preferred risk class products. Table 40 shows the number of respondents using the indicated distribution channels.

Table 40 - Preferred Risk Class Product Distribution Channels

Distribution Channel	Distribution Source (61)	Single Distribution Source (31)
Independent Agents (Includes Brokers & PPGAs)	48	18
Captive Agents	35	12
Direct Response	11	1
Stockbrokers	10	0
Banks	7	0
Internet	5	0

About half of the respondents use more than one distribution channel. Over half of the respondents use either captive or independent agents. About one-third market exclusively through independent agents while less than a quarter market exclusively through captive

agents. No respondents said that they sell solely through stockbrokers, banks or the Internet. Companies selling preferred products through the Direct Response channel may be marketing either via direct mail and/or quoting services (e.g., BestQuote, Life Quotes, OmniQuote, Quotesmith, Select Quote).

Effect of Introduction of a Preferred Risk Class

The survey asked about the effect that the introduction of a preferred risk class product had on sales and the percentage of substandard business issued.

Of 54 respondents, 38 experienced increased sales after introduction of a preferred risk class, while 11 saw no change and five experienced a decrease. Of 46 respondents, seven experienced an increase in the percentage of substandard business issued after preferred introduction, 31 saw no change, and eight experienced a decrease.

It is important to note that there are many other factors beyond the introduction of preferred risk classification that also affect sales and substandard business issued.

Illustration Restrictions on Preferred Risk Classes

The survey asked if there were any illustration restrictions imposed on the most restrictive preferred risk classes. Fifty-nine of the 60 respondents allow all of their preferred risk classes to be illustrated. Some respondents discouraged the preferred risk classes from being illustrated initially. Some allow illustration of the preferred risk classes initially, but must provide an illustration using the standard risk class at the same time. Others initially illustrate the preferred risk class only after a favorable field underwriting assessment.

Application for Preferred Risk Class

The survey asked if an applicant needs to apply for a preferred risk class in order to receive the preferred risk classification.

Six of the 61 respondents required an applicant to apply for their most restrictive preferred risk class in order to receive it. Of these six, two commented that the exam and blood testing limits are different for their most restrictive preferred risk class.

Preferred Risk Classes on Other Products

The survey asked if companies sell other products and, if so, whether they offer them with a preferred risk class. Table 41 summarizes the responses.

Table 41 - Preferred Risk Classes on Other Products

Product Type	Number Selling the Product (61)	Number Selling the Product with a Preferred Risk Class	Percentage
Universal Life	58	43	74%
Annually Renewable Term	49	39	79%
Whole Life	48	25	52%
Second-to-Die	42	25	59%
Variable Life	24	18	75%
Decreasing Term	22	7	32%
First-to-Die	20	12	60%

All 61 companies responded to this question. Over half of the respondents sell the specified other products with one or more preferred risk classes, with the exception of decreasing term.

Twenty-one companies provided comments. Six have plans to add preferred risk classification to other products and four others are considering doing so.

The 1995 Survey asked a similar question, however, it encompassed only three of the products above, First-to-Die, Second-to-Die and Variable Life. The percentage of respondents offering preferred risk classification on their Second-to-Die products increased from 50% in the 1995 Survey to 59% in the 1997 Survey. For First-to-Die, the percentage increased from 49% to 60%.

The percentage of respondents issuing preferred risk classification on their Variable Life products decreased from 79% in the 1995 Survey to 75% in the 1997 Survey. However, for the 26 companies that responded to both surveys, the percentage issuing preferred risk classes increased from 64% to 79%. This discrepancy may be attributable to either more new entrants into the variable market without a preferred risk class or to the recent increase in simplified issue on single premium variable life products.

Table 42 shows a comparison between the 26 companies who responded in both the 1995 and 1997 Surveys and who use preferred risk classification for these product types.

Table 42 - Percentage of Respondents with Preferred Risk Class by Product Type

Product Type	1997 Survey (26)	1995 Survey (26)
First-to-Die	56%	44%
Second-to-Die	58%	48%
Variable Life	79%	64%

Table 42 indicates that the overall use of preferred risk classification has increased for all three product types.

Review of Preferred Risk Criteria

The survey asked companies how often they review their preferred risk criteria. Table 43 summarizes the responses.

Table 43 - Frequency of Preferred Risk Class Criteria Review

Frequency	Number of Respondents (57)
Annually	17
Semiannually	2
Quarterly	11
Monthly	3
As Needed	14
Other	10

Thirty-three of the 57 respondents review their criteria a minimum of once per year; the extent or depth of the review is not known. Many respondents commented that they review their preferred qualification percentages (actual to expected) on an ongoing basis and that the criteria are adjusted as needed. Four respondents commented that they continuously monitor the market due to competitive demands.

Of the ten respondents indicating “Other”, one reviews guidelines “frequently”, four review their guidelines with each product pricing or repricing, and five indicate that they do not review guidelines on a regular basis.

Future Changes in Preferred Criteria

The survey asked whether companies planned on changing their preferred risk criteria during 1997.

Nine of the 61 respondents had definite plans to change their preferred criteria, 37 had no such plans, and 15 did not know. Of the nine respondents planning to change their criteria, six will be adding additional preferred risk classes and three will be tightening their existing preferred risk criteria.

Future Survey Plans

The Task Force would again like to thank those who contributed to this survey. We believe that your contributions have led to a very useful document.

The Task Force plans to conduct another survey in 1999 and we ask for your continued support. Also, please encourage others to contribute to what is a very worthwhile project. For the next survey, we hope to give companies the choice of responding electronically or manually. If you are interested in helping to design the next survey or compile and analyze the results, please contact a member of the Task Force or the Society of Actuaries office. Thank you.

Appendix A - Participating Companies

Allied Life Insurance Company	Life Insurance Company of Georgia
Allstate Life Insurance Company	Life Insurance Company of Virginia
American General Life Ins. Co. of New York	Lincoln Benefit Life Company
American International Companies	Lutheran Brotherhood
American Family Insurance Group	Manhattan National Life Insurance Co.
American Republic Insurance Company	Metropolitan Life Insurance Company
Ameritas Life Insurance Corporation	Midland National Life Insurance Company
AmerUs Life Insurance Company	Minnesota Mutual Life Insurance Company
Auto-Owners Life Insurance Company	Modern Woodmen of America
Business Men's Assurance Company	Mutual of Omaha Companies
Canada Life Insurance Company	Mutual Trust Life Insurance Company
Chubb Life America	National Life Ins. Co. of Vermont
CIGNA	Nationwide Life Insurance Company
CNA Insurance Companies	Ohio National Financial Services
Columbian Mutual Life Insurance Company	Old Line Life Insurance Co. of America
Columbus Life Insurance Company	Pan-American Life Insurance Company
Cotton States Life Insurance Company	Penn Mutual Life Insurance Company
Crown Life Insurance Company	Phoenix Home Life Mutual Insurance Co.
CUNA Mutual Life Insurance Company	Principal Financial Group
Equitable Life Ins. Co. of Iowa	Protective Life Insurance Company
Farm Family Life Insurance Company	Provident Mutual Life Insurance Company
Farmers New World Life Insurance Company	Prudential Insurance Company of America
Federated Life Insurance Company	ReliaStar Life Insurance Company
Fidelity and Guaranty Life Insurance Company	Security Connecticut Life Insurance Co.
Golden Rule Insurance Company	Security Mutual Life of Nebraska
GPM Life Insurance Company	Security Mutual Life of New York
Great West Life & Annuity Insurance Company	State Farm Life Insurance Company
Indianapolis Life Insurance Company	The Mutual Group Life Insurance Co.
Integon Life Insurance Corporation	Transamerica Life Companies
Kansas City Life Insurance Company	Travelers Life and Annuity
Lafayette Life Insurance Company	

Appendix B - Size of Responding Companies

Category	Policyholder's Surplus plus Conditional Reserves (Millions)	Number of Respondents	
		1997 (61)	1995 (51)
III - V	\$2 - 25	0	7
VI - X	\$25 - 750	47	29
XI - XV	\$750 - 2,000	14	15