# Report of the Society of Actuaries Preferred Underwriting Structures Survey Subcommittee

# A Review of Current (December 2010) Preferred Underwriting Criteria

December 2012



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## **Executive Summary**

- A Survey on preferred underwriting practices was conducted between October 2010 and February 2011. In this Survey, 34 companies participated and 23 provided their specific preferred underwriting guidelines. This is the fourth preferred underwriting Survey the Committee on Life Insurance Mortality and Underwriting Surveys has performed (1995, 1997, 2002 and 2010).
- A different approach was used for data collection in this Survey compared to prior surveys on preferred classification. Respondents were asked to provide all published material related to their preferred underwriting guidelines. Additional survey questions were used to supplement the information provided.
- Comparisons to prior surveys are made where applicable and caution should be exercised due to the different data collection methods from prior surveys. Caution should also be exercised when viewing the information related to the specific preferred underwriting guidelines due to the limited number of respondents.
- In 2010, the most prevalent class structures were "3 Nontobacco / 2 Tobacco" and "4 Nontobacco / 2+ Tobacco", both with 35% of respondents. The percentage of respondents with 4 NT classes increased in this Survey as more companies introduced new third preferred or "Standard Best" risk classes. The continuing trend from prior studies has been overall increases in the number of Nontobacco and Tobacco classes.
- The trend of liberalizing preferred criteria continues as nearly 70% of the Term respondents and 77% of the Permanent respondents indicated that the most recent preferred criteria changes were either the same or less restrictive than the previous criteria. The criteria most often targeted for liberalization were lipids, build and family history.
- Changes to preferred criteria are becoming more frequent and more targeted for a number of companies; over half of the respondents indicated they were considering changes to their preferred criteria in 2011. Reasons cited included realignment to expectations, different rules for older ages and adjustments to specific criterion (build, avocation).
- Questions and observations regarding stretch criteria were included in this report. For purposes of this Survey, "stretch criteria" were defined as any formal written rules that exist outside a company's traditional published preferred criteria that allow underwriters to vary from the preferred criteria. Sixty-five percent of the Survey respondents use stretch criteria and cite improved risk selection and underwriting flexibility as the most important reasons for their use. Build, total cholesterol and family history were the criteria where stretch criteria were most often applied by the respondents.
- The criteria reviewed directly from the submitted guidelines were: alcohol and drug abuse, blood pressure (BP), build, cholesterol, driving record, family history, lifestyle, personal medical history and tobacco. The findings from some of these are described below.
  - For the best preferred NT class, there appears to be a shift downward from a blood pressure limit of exactly 140/90 (most common in the 1995 and 1997 Surveys) to a lower limit (130/85 to 140/89) in the 2002 and 2010 Surveys. There

was also a movement away from allowing treated blood pressure to qualify for the best preferred class.

- Similar to blood pressure, there was a tightening of height/weight requirements between the 1995 and 1997 Surveys and the 2002 and 2010 Surveys. In other words, there was a decrease in weight requirements by height. Also, some companies switched from height/weight requirements to Body Mass Index (BMI).
- The long-term trend regarding cholesterol before stretch criteria are taken into account appears to be a tightening of the guidelines for the best NT class. On the other hand, for the second best NT class, there appears to be a slight liberalization of the guidelines among respondents with 4+ NT classes; both before and after stretch criteria were applied. The respondents with three NT classes showed a tightening between 2002 and 2010. However, when stretch criteria are used, there was a slight liberalization.
- The biggest change in family history criteria was the reduction in the use of stroke as a criterion.
- The trend from 1997 to 2010 reflects a lengthening of the time period for smoking cessation required to be eligible for the best NT class. In 1997, the most common time period was 12 months. In 2002, it was 36 months and, in 2010, it was 60 months.
- Eighty-three percent of the respondents vary certain criteria by age. Some respondents split the qualifying levels by age into two groups and others split it into more groups. Among the respondents that submitted age-banded criteria, the three criteria most commonly used with an age split were blood pressure, cholesterol and the cholesterol ratio. The most common beginning age range for the top age band was 50-69 for blood pressure and 70+ for the other factors.
- Of the 23 respondents submitting preferred criteria, four used a debit/credit approach for some or all of their preferred criteria. The criteria used by all of the respondents using the debit/credit approach were blood pressure and cholesterol. There were also some unique criteria used by only one of the respondents, such as albumin, exercise and pulse rate. About half of the respondents allowed Preferred Business Exceptions. For purposes of this Survey, "Preferred Business Exceptions" were defined as any deviations from a respondent company's traditional published preferred criteria (including their stretch criteria). Of those that allowed Preferred Business Exceptions, all but one respondent allowed them through their best preferred class. Most of the respondents indicated that exceptions were made on only a small percentage of their business (generally 2% or less).
- Sixty-two percent of the 34 respondents indicated their company offered products on a Simplified Issue basis. Of those with SI products, 76% indicated that they did not currently offer preferred underwriting on those products and had no future plans to do so.
- The most common criteria respondents indicated using either exclusively for older age underwriting or differently from younger ages were blood pressure, ADL questions, falls

and weight loss. The most common sources that were indicated as planning to be used were the Delayed Word Recall, Get Up and Go and the Clock Drawing Test.

• The criteria most commonly used for determining the preferred risk classification of older age applicants tended to be the traditional preferred criteria with the most common sources utilized being blood pressure, BMI, cholesterol and driving record. There was less use of cognitive and functional testing among the preferred older age respondents; however, the Delayed Word Recall, Get Up and Go and Clock Drawing Test were the most common sources which were planned to be used. NT-proBNP was also planned be used.

## Introduction

This is the fourth preferred underwriting Survey conducted by the Society of Actuaries Committee on Life Insurance Mortality and Underwriting Surveys. This Survey was conducted between October 2010 and February 2011. The most recent past Survey was conducted in 2002 and released in March 2005. Previous reports were released in September 1998 (1997 data) and May 1996 (1995 data). Comparative data from previous reports are shown where possible; however, the 1996 and 1998 Surveys did not always solicit the specific information required to make those comparisons. It should also be noted that while a majority of the 2010 data is taken directly from published criteria provided to the Subcommittee by respondents, the data from the previous years is taken directly from completed survey data rather than the actual published criteria. For the March 2005 report (2002 data), a baseline applicant (a 45-year old male) was used for answering the Survey questions. The tables that follow use this same baseline for the 2010 results where needed in order to make the comparisons consistent.

For the current Survey, 23 (68%) of the 34 participating respondents submitted their published preferred criteria. Having the preferred criteria for only 23 respondents limits the descriptive value of the information collected. Nevertheless, it is interesting to compare the information received to that from prior surveys, if only to note where there appears to be visible movement over time.

Of the 23 respondents submitting criteria in the current Survey, 15 provided both regular and stretch criteria. Stretch criteria are defined as any formal written rules that exist outside a company's traditional published preferred criteria that allow underwriters to vary from the preferred criteria. With stretch criteria, this is typically done if all of the rest of the requirements for that class are met. For example, if the published guideline permits a maximum total cholesterol reading of 250 for a preferred class, stretch criteria may permit a maximum reading of 270 if all other regular criteria are met. Five respondents that provided preferred underwriting criteria stated that they did not have stretch criteria. One additional company submitted stretch criteria only and was, therefore, not included in the tables that follow. The level of detail within the published criteria varied widely, so certain disclaimers and caveats about the following tables are appropriate:

- The fact that a criterion isn't listed by a company does not necessarily mean a company isn't using it. Some criteria could be part of the regular underwriting requirements and, therefore, not listed again as part of the preferred criteria. Aviation is one such example.
- Since not all respondents shared their stretch criteria, it should be assumed that the tables that follow underreport the use of stretch factors in the 2010 data.
- Four respondents that submitted criteria for the current Survey used some degree of a "debit/credit" scoring system rather than the pure "knockout" scoring system. A debit/credit system is one where points are assigned for various criteria and tallied to determine the class the applicant belongs in. None of these four were a true debit/credit system; they all used some elements of the knockout system as well. This is the more

typical configuration (i.e., combination of debit/credit and knockout) of most so-called debit/credit structures.

- For the respondents using a debit/credit system, it was sometimes necessary to interpolate a representative value based upon contextual information from the rest of the guidelines for the 2010 data.
- Note that the percentages in the tables may not add up to 100%. The reason for this is either rounding or that companies were asked to indicate as many items as applicable.

The Survey Subcommittee would like to thank all of the respondents who participated in the Survey. We also thank those who helped us review this document and offered helpful suggestions and thoughtful comments. Finally, the Survey Subcommittee thanks the Society of Actuaries staff for their help in completing this project, especially Jack Luff and Korrel Rosenberg, without whose help this could not have been completed.

Comments about this report and suggestions for future surveys are welcome and can be addressed to the Committee on Life Insurance Mortality and Underwriting Surveys c/o The Society of Actuaries.

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Additional Caveat and Disclaimer

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## **Section 1 – General Company Information**

Company Structure	%
Stock	70%
Mutual	15
Mutual Holding Company	9
Fraternal	6
Total # of Respondents	34

#### **1.1: Company Organizational Structure**

Seventy percent of the respondents were stock respondents. Mutual respondents were next best represented with 15%.

#### **1.2:** Total Face Amount and Policy Count – Inforce as of 12/31/2009

Informa Daliay Count	% of Total Respondents		
Inforce Policy Count	Term	Permanent	
1-50,000	33%	34%	
50,001-100,000	11	11	
100,001-250,000	22	11	
250,001-500,000	8	11	
500,001-1,000,000	15	11	
1,000,001+	11	22	
Total # of Respondents	2	27	

Inforce Face Amount	% of Total Respondent		
Inforce race Amount	Term	Permanent	
\$1 - \$50 Billion	48%	44%	
\$51B - \$100B	19	15	
\$101B - \$500B	22	31	
\$501B+	11	10	
Total # of Respondents	28		

By inforce policy count, the largest percentage category for Term and Permanent was 1-50,000 policies, both at 33%. For inforce face amount, the largest category was \$1-50 billion for both Term (48%) and Permanent (44%).

Distribution Channel	% of Respondents Who Distribute Through				
Distribution Channel	All Term Products	All Permanent Products			
Brokerage	50%	46%			
Agency Building	46	50			
MLEA	23	23			
Banks/Savings Institutions	19	23			
Direct Response	15	8			
PPGA	15	15			
Stockbroker	12	15			
Worksite Marketing	4	8			
Home Service	-	-			
Other	15	19			
<b>Total # of Respondents</b>		26			

#### 1.3: Distribution Channels – Term and Permanent, 2009 Sales\*

\*The actual Survey question was "What was the total Face Amount and Policy Count written in 2009 for each distribution channel for your Term and Permanent product lines? (Check all that apply.)" Due to inconsistent responses, we weren't able to provide detailed data by face amount or policy count. However, we were able to provide a summary of the distribution channels used as shown in Table 1.3 above.

The top two distribution channels for Term and Permanent were brokerage and agency building.

Other responses:

- Independent agents
- Unknown combined
- Mixed bank, direct response, and broker
- Multiple sources, individual agents
- *Fee-based financial advisors* (Permanent only)

#### **1.4: Characteristics of Most Prevalent Term and Permanent Products**

Product	% Term	Product	% Permanent
20-Year Level Term	65%	Universal Life	58%
Level Term*	16	Whole Life	35
10-Year Term	10	10 Variable Universal Life	
ART/YRT	6		
Term Rider	3		
Total # of Respondents		31	

\*Respondents who didn't provide a single specific duration Level Term product.

The most prevalent Term and Permanent products were used in the Survey as the basis for some of the questions (in case different preferred criteria were used within Term and Permanent).

Twenty-year Level Term was the most cited Term product, with 65% of respondents specifically mentioning only that plan. For Permanent, the most common products were Universal Life (58%) and Whole Life (35%).

Subsequent questions in the Survey may relate to either these specific products or a respondent's entire Term and Permanent portfolio.

## **Section 2 – Distributions**

This section provides some baseline information pertaining to the products and preferred criteria studied in this Survey.

	Term Products - % of Respondents					
Minimum Face Amount	Preferred Class #1 (Best Class) NT	Preferred Class #2 NT	Other Preferred/ Standard NT	Residual Standard NT	Preferred Tobacco	Standard Tobacco
\$0	3%	4%	5%	3%	4%	3%
\$25,000	-	-	-	13	-	13
\$50,000	6	7	11	25	7	23
\$100,000	70	67	61	47	70	48
\$150,000	3	4	5	3	4	3
\$200,000	3	4	5	3	4	3
\$250,000	14	15	11	6	11	6
Total # of	Total # of Respondents		32			

#### 2.1a: Minimum Face Amount by Class – Term Products

For Term products, the \$100,000 minimum had the highest response for all risk classes. While averages are not shown, the average minimum face amount decreases as the risk class worsens among both nontobacco and tobacco.

	Permanent Products - % of Respondents					
Minimum	Preferred		Other	Residual		
Face	Class #1 (Best	Preferred	Preferred/	Standard	Preferred	Standard
Amount	Class) NT	Class #2 NT	Standard NT	NT	Tobacco	Tobacco
\$0	3%	4%	6%	3%	3%	3%
\$5,000	-	-	-	13	-	13
\$10,000	-	-	-	9	-	9
\$25,000	17	16	18	38	18	35
\$50,000	10	11	12	22	10	23
\$100,000	67	65	62	16	68	16
\$250,000	3	4	-	_	_	_
Total # of ]	Respondents			32		

#### 2.1b: Minimum Face Amount by Class – Permanent Products

For Permanent products, the \$100,000 minimum had the highest response for all risk classes with the exception of Standard Tobacco, where the highest response was for \$25,000. The percentage of respondents citing lower minimums than \$100,000 was greater for Permanent than for Term in all classes.

2.2: Number of Nontobacco and Tobacco Classes

The 2010 information provided in 2.2 was not asked in the Survey. Instead, the results shown below were derived from individual company Preferred Criteria submissions.

Category (NT = Non Tobacco, T = Tobacco)	1995 %	1997 %	2002 %	2010 %
2 NT, 1 T	51%	41%	12%	-
3 NT, 1 T	-	8	14	17%
4 NT, 1 T	-	-	4	4
2 NT, 2 T	43	36	4	4
3 NT, 2 T	2	8	43	35
4 NT, 2+ T	2	5	18	35
5+ NT, 2+ T	2	2	4	4
Total # of Respondents	51	61	49	23

The most prevalent class structure in 1995 and 1997 was "2NT, 1T" with 51% of respondents using that structure in 1995, and 41% in 2007. In 2002, the most prevalent structure was "3NT, 2T" with 43% of the respondents. In 2010, the most prevalent class structures were "3NT, 2T" and "4NT, 2+T," both with 35% of the respondents.

There was also a growth in 2T class plans, although not as dramatic, moving from 49% in 1995 and 51% in 1997, to 69% in 2002 and 78% in 2010.

#### 2.3: Prevalent NT Risk Class Structures

The 2010 information provided in 2.3 was not asked in the Survey. Instead, the results shown below were derived from individual company Preferred Criteria submissions.

# of NT Classes	1995 %	1997 %	2002 %	2010 %
2 NT	94%	77%	16%	4%
3 NT	2	16	57	52
4+ NT	4	7	26	43
Total # of Respondents	51	61	49	23

This table illustrates that there has been a change from 2 NT classes as the prevalent structure in 1995 and 1997 to 3 NT classes by 2002. The 3 NT, 2 T class structure has remained the most common structure among respondents since 2002.

Class		All Ag	es	Ι	Issue Age 25		Issue Age 45			Issue Age 65		
Class	High	Low	Median	High	Low	Median	High	Low	Median	High	Low	Median
Preferred #1 (Best) NT	42%	17%	32%	55%	17%	30%	41%	17%	29%	33%	10%	18%
Preferred #2 NT	37	15	22	31	10	17	31	15	19	39	16	22
Other Preferred / Standard NT	40	9	22	40	8	23	40	10	25	40	11	22
Residual Standard NT	44	16	27	37	16	24	42	17	27	57	18	27
Total # of Respondents		7		6			6			5		

2.4a: Percentage Expected to Qualify for Risk Class by Issue Age (4+ NT Classes) - Term, 2009 Sales

2.4b: Percentage that Actually Qualified for Risk Class by Issue Age (4+ NT Classes) - Term, 2009 Sales

Class		All Ag	ges	Is	sue Ag	ge 25	Is	ssue Ag	ge 45	Is	ssue Ag	ge 65
Class	High	Low	Median	High	Low	Median	High	Low	Median	High	Low	Median
Preferred #1 (Best) NT	46%	18%	35%	59%	15%	47%	43%	10%	30%	31%	5%	11%
· /												
Preferred #2 NT	35	14	25	31	9	20	31	13	24	45	18	24
Other Preferred / Standard NT	41	9	15	41	8	12	40	10	19	94	25	45
Residual Standard NT	44	6	26	37	4	17	43	6	28	57	8	33
Total # of Respondents		10		9		9			8			

For 2.4a and 2.4b, when focusing on the medians, the percentage expected to qualify for the best preferred class and the percentage that actually qualified for the best preferred class decreased by age for the 4+ NT class products. Conversely, for the other risk classes, the percentage expected to qualify and the percentage that actually qualified increased by age.

As with the Preferred Best risk class, the range of actual qualifying percentages for the Residual Standard class was wider by issue age than the expected qualifying percentages. That is, the actual qualifying percentage for issue age 25 was lower than expected, and higher than expected for issue age 65. For the other risk classes, the Preferred #2 actual median percentages were always higher than the expected across all ages and the Other Preferred actual median percentages were always lower than the expected across all ages.

The lowest expected qualifying percentage was the third risk class for issue age 25. However, the lowest actual qualifying percentage for issue age 25 was the fourth risk class.

The highest expected and actual qualifying percentage was for the Residual Standard NT class for issue age 65.

2.4c: Percentage Expected to Qualify for Risk Class by Issue Age (3 NT Classes) - Term, 2009 Sales

Class	Class All Ages		ges	Issue Age 25			Issue Age 45			Issue Age 65		
Class	High	Low	Median	High	Low	Median	High	Low	Median	High	Low	Median
Preferred #1 (Best) NT	43%	17%	27%	58%	21%	49%	47%	17%	32%	31%	12%	14%
Preferred #2 NT	37	13	28	32	21	23	32	25	29	35	24	29
Residual Standard NT	65	24	50	47	18	30	56	20	40	65	33	57
Total # of Respondents		9		4		4			3			

# 2.4d: Percentage that Actually Qualified for Risk Class by Issue Age (3 NT Classes) - Term, 2009 Sales

Class		All Ages		Is	ssue Ag	ge 25	Issue Age 45			Issue Age 65		
Class	High	Low	Median	High	Low	Median	High	Low	Median	High	Low	Median
Preferred #1 (Best) NT	83%	12%	38%	81%	28%	56%	72%	18%	52%	59%	6%	25%
Preferred #2 NT	39	-	25	26	-	16	30	-	27	39	-	18
Residual Standard NT	82	7	32	72	6	26	82	14	20	94	25	45
Total # of Respondents		10		5		5				4		

Results for the 3 NT risk class (as shown in 2.4c and 2.4d) were the same as described above for the 4+ NT risk class except for the following:

- The lowest actual qualifying percentage for issue age 25 was the second risk class in the 3 NT risk class structure.
- The highest actual qualifying percentage was 94% for the worst class for issue age 65 in the 3 NT risk class structure.

Class	All Ages		I	ssue Ag	je 25	Issue Age 45			Issue Age 65			
Class	High	Low	Median	High	Low	Median	High	Low	Median	High	Low	Median
Preferred #1 (Best) NT	33%	8%	26%	33%	8%	30%	33%	8%	29%	33%	5%	24%
Preferred #2 NT	35	11	15	22	5	11	24	11	14	22	14	17
Other Preferred / Standard NT	50	8	21	50	4	21	50	12	22	62	8	22
Residual Standard NT	65	22	38	76	22	35	49	22	35	69	22	38
Total # of Respondents	6		5		5			4				

2.5a: Percentage Expected to Qualify for Risk Class by Issue Age (4+ NT Classes) – Permanent, 2009 Sales

2.5b: Percentage that Actually Qualified for Risk Class by Issue Age (4+ NT Classes) – Permanent, 2009 Sales

Class		All Ag	es	Ι	ssue Ag	e 25	Is	sue Ag	e 45	Is	sue Age	e 65
Class	High	Low	Median	High	Low	Median	High	Low	Median	High	Low	Median
Preferred #1 (Best) NT	35%	6%	24%	64%	14%	34%	40%	14%	26%	27%	4%	11%
Preferred #2 NT	34	8	15	19	6	10	32	10	17	45	14	19
Other Preferred / Standard NT	20	7	12	22	4	11	29	11	20	100	46	66
Residual Standard NT	74	11	44	76	8	41	51	13	38	92	9	59
Total # of Respondents		8		7		7			6			

Focusing on the means for Tables 2.5a and 2.5b, the percentage expected to qualify for the best preferred class and the percentage that actually qualified for the best preferred class decreased by age for the 4+ NT class products, similar to Term. The opposite of this happened for all other risk classes, except for the Residual Standard NT class where there was a dip for issue age 45.

The lowest expected qualifying percentage was the third risk class for issue age 25. However, the lowest actual qualifying percentage for issue age 25 was the fourth risk class.

Similar to Term, the highest expected and actual qualifying percentage was for the Residual Standard NT class for issue age 25.

Class	Class All Ages		ges	Issue Age 25			Issue Age 45			Issue Age 65		
Class	High	Low	Median	High	Low	Median	High	Low	Median	High	Low	Median
Preferred #1 (Best) NT	43%	6%	23%	58%	24%	30%	47%	22%	28%	31%	18%	22%
Preferred #2 NT	44	6	24	44	15	24	44	19	28	41	24	35
Residual Standard NT	89	24	50	47	18	32	57	20	43	65	33	51
Total # of Respondents		8		5		5				4		

2.5c: Percentage Expected to Qualify for Risk Class by Issue Age (3 NT Classes) – Permanent, 2009 Sales

2.5d: Percentage that Actually Qualified for Risk Class by Issue Age (3 NT Classes) – Permanent, 2009 Sales

Class		All Ages		Issue Age 25			Issue Age 45			Issue Age 65		
Class	High	Low	Median	High	Low	Median	High	Low	Median	High	Low	Median
Preferred #1 (Best) NT	83%	-	20%	64%	-	48%	40%	-	29%	19%	-	12%
Preferred #2 NT	34	-	22	25	-	16	38	-	24	34	-	25
Residual Standard NT	100	7%	54	100	16%	35	100	22%	45	100	46%	66
Total # of Respondents		8		6		6				5		

Results for the 3 NT risk class (as shown in 2.5c and 2.5d) were the same as described above for the 4+ NT risk class except for the following:

- The lowest actual qualifying percentage for issue age 25 was the second risk class in the 3 NT risk class structure.
- The highest actual qualifying percentage was 94% for the worst class for issue age 65 in the 3 NT risk class structure.

		4+ NT (	Class		3 NT C	lass
Class	2002	2010 (Term)	2010 (Permanent)	2002	2010 (Term)	2010 (Permanent)
Preferred #1 (Best) NT	33%	32%	26%	29%	27%	23%
Preferred #2 NT	22	22	15	30	28	24
Other Preferred / Standard NT	17	22	21			
<b>Residual Standard NT</b>	20	27	38	35	50	50
Total # of Respondents	24-42	7	6	24-42	9	8

#### 2.6: Percentage Expected to Qualify by Risk Class – Median for All Issue Ages

There are two caveats to keep in mind when viewing the following comments. First, the comments are based on median values and individual company results are likely to differ. Second, the 2002 Survey was based on 10-year Level Term products so the results are likely to differ considerably from the Permanent results shown for the 2010 Survey, as well as somewhat from the 2010 Term results, as there are a variety of Term products included in the 2010 Survey.

That said, both the 2002 Survey and the 2010 Term results showed a relatively even distribution of qualifying percentages between the 4+ NT risk classes, with the Preferred #1 (best) risk class having the largest qualifying percentage. On the other hand, the 2010 Permanent results had the highest qualifying percentage in the Residual Standard risk class.

For the 3 NT risk classes, while all studies showed a higher median percentage at the Residual Standard NT risk class, the 2010 Survey showed a much higher percentage qualifying for the residual class than the 2002 Survey (50% vs. 35%).

Chart 1: Actual versus Expected Qualifying Percentages for Most Restrictive Preferred NT - (4+ NT Class – 7 respondents for Term, 8 respondents for Permanent)



Although 0% actual is unlikely, there was no indication that the response of 20% expected and 0% actual was invalid based on the review of the Survey responses.

For 4+ NT class structures, Chart 1 shows that five out of seven Term respondents and two out of six Permanent respondents had the same or higher percentage qualifying for their best class than expected. The previous Survey conducted in 2002 didn't differentiate between Term and Permanent, but showed 10 of 11 respondents with a higher percentage qualifying than expected.



Chart 2: Actual versus Expected Qualifying Percentages for Most Restrictive Preferred NT – (3 NT Class – 8 respondents)

For 3 NT class structures, Chart 2 shows that five out of seven Term respondents and only one out of eight Permanent respondents had the same or higher percentage qualifying for their best class than expected. The previous Survey conducted in 2002 shows 14 out of 23 respondents with a higher percentage qualifying than expected.

The magnitude of the differences is greater for 3 NT class structures than 4+ NT class structures, as was the case with the 2002 Survey.

## Section 3 – Recent Changes to Preferred Risk Criteria

The questions in this section were designed to fully define any recent changes to respondents' preferred criteria/risk selection process. They were intended to capture both the impact and direction of any changes.

Year Implemented	% Term	% Permanent
2010	28%	28%
2009	16	16
2008	24	36
2007 and prior	32	20
Total # of Respondents		25

#### 3.1: Year Current Preferred Criteria Implemented

For both Term and Permanent, 44% of the respondents based their answers on preferred criteria implemented within two years of this Survey. This increases to 68% and 80% for Term and Permanent, respectively, for those implemented within three years of the Survey.

#### **3.2: Overall Impact of Changes Made (Current Criteria versus Prior)**

Preferred Criteria Relative to Prior	% Term	% Permanent
Less restrictive	31%	42%
About the same	38	35
More restrictive	15	8
Unknown/Other	15	15
Total # of Respondents		26

Sixty-nine percent of the Term respondents and 77% of the Permanent respondents indicated the preferred criteria changes they made were either the same or less restrictive than the previous criteria.

Comments from "Less restrictive" respondents:

- Separated out preferred criteria for ages 70 and above and under 70. Incorporated BMI vs. ht/wt.
- Allowed family history of cancer to be preferred, family history does not apply if applicant is over 65
- Actually we have 3 main distribution channels. 2 were changed in Sep 2008, but the other was unchanged. All 3 are the same now.
- Liberalized family history criteria.

• Minor changes to blood pressure and cholesterol cut offs

Comments from "About the same" respondents:

- Changes in April 2010 balanced. Some more restrictive, some less, same pricing.
- Periodically, the preferred criteria have minor changes. We introduced a wellness credit program, external to the preferred criteria; however, this effectively helps better place customers with additional criteria.
- *Most changes affect senior market only (ages 70+)*

Comments from "More restrictive" respondents:

• Established maximum acceptable value for NT-ProBNP test for the top 2 preferred classes. Eliminated "stretch" cholesterol guidelines for top 2 preferred classes and tightened additional stretch guidelines.

Comments from "Unknown/Other" respondents:

- We have not changed preferred criteria
- No significant changes since introduction
- Do not have that information
- Added classes, went from 2 nonsmoker to 3, and 1 smoker to 2

#### 3.3a: Change in Number of Classes (Current Criteria versus Prior) - Term

Preferred UW Classes to Prior	% Term – % Term NT Tobacc	
Decreased	4%	-
Stayed the same	75	83%
Increased	21	17
Total # of Respondents	24	

Preferred UW Classes to Prior	% Permanent –% PermanentNTTobacco	
Decreased	8%	4%
Stayed the same	71 83	
Increased	21	13
Total # of Respondents	24	

#### 3.3b: Change in Number of Classes (Current Criteria versus Prior) - Permanent

For both Term and Permanent NT risk classes, over 70% of the respondents kept the same number of risk classes with their most recent preferred criteria changes. This compares to 60% for the 2002 Survey respondents. For tobacco risk classes, the results were similar between the two Surveys (83% vs. 81% in the prior Survey).

While the percentages are down from the 2002 Survey, there is still a movement towards more NT risk classes.

	Changes to Current Criteria: % of Total			of Total
Criteria	Less Restrictive	About the Same	More Restrictive	Unknown / Other
Alcohol / Substance abuse	-	100%	-	-
Aviation	-	93	-	7%
Avocation	7%	86	-	7
Blood pressure	7	93	_	-
Build	7	79	7%	7
Cholesterol (total)	21	71	_	7
Cholesterol / HDL ratio	14	64	7	14
Other lipids	-	93	_	7
Driving	7	93	-	-
Family history	14	71	7	7
Foreign travel or residence	-	100	-	-
Laboratory findings (not listed elsewhere)	14	79	-	7
Medical history	7	93	-	-
Tobacco use or timing	-	86	_	14
Total # of Respondents		14	1	

#### 3.4a: Impact of Changes by Criterion – Current Preferred versus Prior, Term Products

Respondents indicated what they anticipated the impact of their current preferred criteria on Term products to be. Of those indicating a less restrictive impact, the most common responses were total cholesterol (21%), cholesterol/HDL ratio (14%) and family history (14%).

The vast majority of responses indicated no expected impact. The top responses here were foreign travel or residence and alcohol/substance abuse, both at 100%. The next most common responses were other lipids, driving, medical history, blood pressure and aviation, all at 93%. The only responses with respect to more restrictive changes were build, cholesterol/HDL ratio and family history, all at 7%.

The most common Other/Unknown categories were cholesterol/HDL ratio and tobacco use or timing, both at 14%.

	Changes to Current Criteria: % of Total			f Total
Criteria	Less	About the	More	Unknown
	Restrictive	Same	Restrictive	/ Other
Alcohol / Substance abuse	-	95%	-	5%
Aviation	-	95	-	5
Avocation	5%	89	-	5
Blood pressure	11	89	-	-
Build	16	68	5%	11
Cholesterol (total)	26	68	-	5
Cholesterol / HDL ratio	21	63	5	11
Other lipids	5	84	-	11
Driving	11	84	-	5
Family history	11	74	5	11
Foreign travel or residence	-	100	-	-
Laboratory findings (not listed elsewhere)	5	84	-	11
Medical history	5	84	-	11
Tobacco use or timing	5	89	-	5
Total # of Respondents		1	9	

# **3.4b: Impact of Changes by Criterion – Current Preferred versus Prior, Permanent Products**

Respondents indicated what they anticipated the impact of their current preferred criteria on Permanent products to be. Of those indicating a less restrictive impact, the most common responses were total cholesterol (26%) and the cholesterol/HDL ratio (21%).

The vast majority of responses indicated no expected impact. The most common responses here were foreign travel or residence (100%), alcohol/substance abuse (95%) and aviation (95%). The only responses with respect to more restrictive changes were build, cholesterol/HDL ratio and family history, all at 5%.

The most common Other/Unknown categories were build, cholesterol/HDL ratio, other lipids, family history, laboratory findings (not listed elsewhere) and medical history, all at 11%.

Comparing the Term and Permanent results in Tables 3.4a and 3.4b, there were 11 criteria that were liberalized for Permanent products versus nine for Term. For Permanent products, there were three criteria that were liberalized by more than two respondents compared to one for Term.

Resource	% Applicable	% Most Important
Actuarial	96%	-
Underwriting	92	-
Reinsurers	88	4
Medical	65	-
Sales / Marketing	58	42
Competitive intelligence	54	-
Claims	23	8
Laboratories	19	-
R&D	19	8
External consultant	12	-
Legal	4	-
Other	38	38
Total # of Respondents		26

#### **3.5: Resources Used to Develop Current Preferred Criteria**

Respondents were asked to indicate all resources they used to develop preferred criteria and then the single most important resource utilized.

Almost all of the respondents cited Actuarial (96%), Underwriting (92%), and Reinsurer input as resources used to develop preferred criteria. Sales/Marketing was cited as the most important resource by 42% of the respondents. No definitions were provided by the ten respondents citing "Other" as the most important resource. The distribution of "number of resources" used is shown in Chart 1 below:

**Chart 3: Number of Resources Used to Develop Current Criteria (by Company)** 



The most companies (11) indicated using six different resources in the development of their preferred criteria. The most resources that one company indicated using was nine, while no company indicated using less than four resources (which happened to be the second most common response with eight companies).

Change in 2011	% Term	% Permanent
Have Current Plans	17%	24%
Considering Changes	34	28
No Plans to Change	48	48
Total # of Respondents		29

#### 3.6: Considering Making Changes to Preferred Criteria by End of 2011?

Of the 15 respondents for each of Term and Permanent (16 overall respondents) that either indicated they had current plans to change their preferred criteria or were considering changes by the end of 2011, the anticipated implementation dates were evenly distributed between February 2011 and January 2012.

There were seven respondents that indicated they had current plans to change their preferred criteria by the end of 2011. Of these seven respondents, only two indicated they had last changed their preferred criteria in 2010, and one did not provide an indication. All others and all Term respondents indicated they last changed their preferred criteria in 2008 or 2009. Therefore, those respondents who indicated they would be changing their criteria appear to do it on a somewhat regular basis.

Preferred Criteria Relative to Current – Expect Change to be:	% Term	% Permanent
Less restrictive	50%	43%
About the same	29	29
More restrictive	7	7
Unknown	14	21
Total # of Respondents	14	

#### 3.7: Expected Overall Impact from Anticipated Changes to Preferred Criteria

Of those respondents who envisioned making changes to their preferred criteria in 2011, half of the Term and almost half of the Permanent respondents were adjusting their criteria to be less restrictive.

While this observation should be viewed with caution due to the limited number of respondents, this table shows that of those planning changes, there is a higher percentage planning less restrictive changes than those who had made recent changes, as shown in Table 3.2.

Comments from "Less restrictive" respondents:

- Would be less restrictive for younger ages but more restrictive for ages over 70.
- *To be more competitive with aviation and avocation risks.*

Comments from "More restrictive" respondents:

• More restrictive requirements will be implemented for a new "ultra preferred" class.

Comments from "Unknown/Other" respondents:

- If we go forward would be more restrictive for males and less restrictive for females.
- Looking to create further distinction between first and second preferred classes by adjusting build rules.

Considerations	% Applicable for Current Criteria	% Applicable for Anticipated Changes
Competitive Reasons	61%	72%
Mortality Experience	56	39
Part of Periodic Review	50	44
Research (Medical)	44	50
Adjust Mortality	39	39
Adjust Qualification %	33	44
Placement Rates	28	28
X-Factors / Reserve	28	6
Reinsurance Influence	22	28
Research (Actuarial)	17	17
Total # of Respondents		15

3.8a: Considerations for Anticipated Changes to Preferred Criteria – Term Products

For the respondents who have current plans or are considering making changes to their preferred criteria in 2011, the two most common considerations governing the creation of the current preferred criteria for Term products were competitive reasons (61%) and mortality experience (56%). Competitive reasons was cited most often (72%) as the reason driving an anticipated change to their preferred criteria.

3.8b: Considerations for Anticipated Changes to Preferred Crite	eria – Permanent Products
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Considerations	% Applicable for Current Criteria	% Applicable for Anticipated Changes
Competitive Reasons	53%	73%
Mortality Experience	53	47
Part of Periodic Review	47	40
Adjust Qualification %	40	40
Adjust Mortality	33	40
Research (Medical)	33	53
Placement Rates	20	27
Reinsurance Influence	13	27
X-Factors / Reserve	13	7
Research (Actuarial)	7	20
Total # of Respondents		15

Similar to Term, the top two considerations for adopting current criteria for Permanent products were competitive reasons and mortality experience (both at 53%). Regarding anticipated

changes to be made in 2011, the two most common considerations were competitive reasons (73%) and medical research (53%).

# **3.9:** For Term and Permanent policies, has your company made or is it considering making any basic structural changes to both the current preferred risk assessment process and any anticipated changes by end of 2011? (Check all that apply)

Unfortunately, most of the responses to this question were inconsistent and, therefore, we are not able to provide results.

# **3.10a: Impact of Changes by Criterion – Anticipated Preferred versus Current, Permanent Products**

	Changes from Current Criteria: % of Total			of Total
Criteria	Less	About the	More	Unknown
	Restrictive	Same	Restrictive	/ Other
Alcohol / Substance abuse	15%	62%	8%	15%
Aviation	15	77	-	8
Avocation	8	85	-	8
Blood pressure	31	38	8	23
Build	31	38	15	15
Cholesterol (total)	54	23	15	8
Cholesterol / HDL ratio	15	38	38	8
Other lipids	8	62	8	23
Driving	8	69	8	15
Family history	23	54	23	-
Foreign travel or residence	-	92	-	8
Laboratory findings (not listed elsewhere)	15	38	15	31
Medical history	8	62	15	15
Tobacco use or timing	8	69	8	15
Total # of Respondents		1.	3	

Respondents indicated what they anticipated the impact of their current preferred criteria on Term products to be. Of those indicating a less restrictive impact, the most common responses were total cholesterol (54%), followed by build and blood pressure, both at 31%.

The top responses indicating no impact were foreign travel or residence (92%) and avocation (85%). The most common responses with respect to more restrictive changes were cholesterol/HDL ratio (38%) and family history (23%).

The most common Other/Unknown categories were laboratory findings (not listed elsewhere) at 31%, followed by blood pressure and other lipids, both at 23%.

<b>3.10b: Impact of Changes by Criterion – Anticipated Preferred versus Current, Permanent</b>
Products

	Changes from Current Criteria: % of Total							
Criteria	Less Restrictive	About the Same	More Restrictive	Unknown / Other				
Alcohol / Substance abuse	17%	67%	8%	8%				
Aviation	8	83	0 70	8				
Avocation	0	92	-	8				
Blood pressure	33	50	8	8				
Build	25	50	17	8				
Cholesterol (total)	50	33	17	0				
Cholesterol / HDL ratio	8	50	33	- 8				
Other lipids	0	75	8	17				
Driving	8	75	8	8				
Family history	25	58	17	0				
Foreign travel or residence	23	100	17	-				
Laboratory findings (not listed elsewhere)	-	58	- 17	25				
Medical history	- 8	67	17	8				
ř.	-		-	0				
Tobacco use or timing	17	75	8	-				
Total # of Respondents	12							

Respondents indicated what they anticipated the impact of future changes to their current preferred criteria on Permanent products to be. Of those indicating a less restrictive impact, the most common responses were total cholesterol (50%) and blood pressure (33%).

The vast majority of respondents indicated no expected impact. The most common responses were foreign travel or residence (100%) and avocation (92%). The most common response for more restrictive changes was cholesterol/HDL ratio (33%).

The most common Other/Unknown category was laboratory findings (not listed elsewhere) at 25%.

Other comments for 3.10a and 3.10b:

- *Hypertension Rx* (less restrictive)
- *Increased functional testing at the older ages* (more restrictive)

## Section 4 – Review of Company Preferred and Stretch Criteria

This section provides a detailed analysis of the preferred criteria submitted by the respondents. Where appropriate, results from prior preferred criteria surveys were included to add context and outline trends.

The following items will be covered in this section:

#### **Preferred Criteria**

- Alcohol and drug abuse
- Blood pressure (BP)
- Build
- Cholesterol
- Driving record
- Family history
- Lifestyle
- Personal medical history
- Tobacco

#### Other related items

- Debit/credit
- Criterion that vary by age
- Prostate Specific Antigen

Some of the areas presented in this Survey may not have been covered in prior SOA preferred underwriting surveys. Where data from prior surveys was not available, the appropriate areas are shaded out in the respective table.

#### **Alcohol and Drug Abuse**

See Lifestyle section for information on alcohol and drug abuse.

#### **Blood Pressure**

In this section, the following items will be reviewed:

- The maximum untreated blood pressure to qualify for the best preferred NT class
- Guidelines for treated blood pressure for the best preferred NT class

# **4.1:** Maximum Untreated Blood Pressure to Qualify for Best Class NT for a Male, Age 45 (all BP measures are in mm Hg)

Data Year and # of NT Classes	Less than 130/85	130/85 to 140/89	140/90	141/90 to 151/90	Greater than 150/90	Other (mixed)	Low	High	# of Respondents by Class Structure						
1995, All Structures	24%		35% 27%		27%		27%		27%		27%		130/80	169/99	37
1997, All Structures	-	20	48	9	4	19	130/80	160/95	54						
2002, 4+ NT classes	42	42	8	-	-	8	120/80	140/90	12						
2002, 3 NT classes	-	69	31	-	-	-	130/85	140/90	26						
2002, 2 NT classes	-	14	43	43	-	-	140/85	150/90	7						
2010, 4+ NT classes	40	60	-	-	-	-	130/80	140/85	10						
2010, 3 NT classes	8	67	8	17	-	-	130/80	150/90	12						
2010, 2 NT classes	-	100	-	-	-	-	140/85	140/85	1						

In 1995 and 1997, the data were not segregated by number of classes and the ranges used were different. In 1995, in addition to the numbers in Table 4.1, six respondents stated that blood pressure was not used in consideration for preferred classes, and nine respondents added that a reading above the stated maximum would not necessarily preclude a preferred classification.

There appears to be a downward shift from a blood pressure limit of exactly 140/90 (most common in the 1995 and 1997 Surveys) to a lower limit (130/85 to 140/89) in the 2002 and 2010 Surveys.

- In 1995, 35% of the respondents reported using exactly 140/90 as the maximum blood pressure reading for their best class. Another 24% reported using readings of less than 140/90. Together, these categories accounted for 59% of the 1995 responses.
- In 1997, 48% of the respondents indicated using exactly 140/90, and another 20% indicated using readings of less than 140/90. Together, these categories accounted for 68% of the respondents.

- In 2002, 83% of the respondents with 4+ NT classes were using a maximum blood pressure reading of less than 140/90; only one company used exactly 140/90. Of the respondents with 3 NT classes in 2002, 69% used a reading of less than 140/90 and 31% used exactly 140/90. Respondents with 2 NT classes in 2002 were more liberal, with 43% using a maximum reading between 141/90 and 151/90, along with 43% using exactly 140/90.
- In 2010, however, 100% of the respondents with 4+ NT classes used readings of less than 140/90, and 75% of the respondents with 3 NT classes used readings of less than 140/90.

4.2: Is treated Blood Pressure allowed for Best Class NT for a M
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Data Year	% Treated BP Allowed	% Treated BP Not Allowed	Total # of Respondents
1997	65%	35%	54
2002	58	42	45
2010	30	70	23

1995 data were not available for this item. In 1997, 65% of the respondents allowed treated blood pressure for the best NT class; in 2002, this dropped to 58% and, in 2010, this dropped further to 30%.

#### <u>Build</u>

This section will cover the maximum weight allowed at selected heights for the best preferred NT class. This will be reviewed for different total class structures and for males and females. The heights chosen for the comparison table are those used in prior surveys.

Tables 4.3 and 4.4 are confined to respondents with 4+ NT classes. Only 13 respondents from the 2010 Survey submitted their build tables, and only four of those had preferred structures of 4+ NT classes. Additionally, four of the respondents in the current Survey mentioned that they now use body mass index (BMI) instead of height and weight; two of those respondents had Preferred Risk class structures with 4+ NT classes.

The 2002 Survey segregated the responses by Preferred Risk class structure without doing an aggregate average.

For the 2010 data, numbers in parentheses represent adjusted numbers after stretch criteria are applied. For purposes of this report and as defined in Section 5, 'stretch criteria' were defined as any formal written rules that exist outside a company's traditional published preferred criteria that allow underwriters to vary from the preferred criteria. The stretch criteria may be published or unpublished. **4.3: Maximum Weight Allowed (in lbs.) at Selected Heights for best NT Class for a 45-Year Old Male** 

	1995 (All Class Structures Combined)		1997 (All Class Structures Combined)			2002 (4+ NT Class)			2010 (4+ NT Class)			
Male Height	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max
5'2"				150	167	202				150	154 (156)	164
5'6"	156	183	224	170	187	225	153	173	190	170	174 (175)	184
5'10"	174	204	244	190	208	248	170	194	207	190	195 (196)	207
6'2"	194	227	275	210	232	278	190	217	230	210	217 (218)	230
6'5"							205	234	247	225	233 (235)	250
Total # of Respondents	Unknown		57		12		4					

Note: figures in parentheses represent adjusted figures with stretch criteria taken into account

The weights in Table 4.3 are for a male age 45 best preferred NT class. They need to be viewed with caution due to the small number of responses in the 2010 data, but among respondents still using height and weight rather than BMI, there appears to have been a tightening of weight requirements overall from 1995 to 2002, and then a stable pattern going forward to 2010. For example, at 5'6", the average upper weight limit in 1995 was 183; it increased to 187 in 1997, and then dropped to 173 in 2002 and 174 in 2010.

It is not clear from the 2010 Survey responses regarding BMI whether the change to BMI represented a tightening from earlier guidelines.

Refer to Table 4.5 for displays on the 2002 and 2010 Survey data for respondents with 3 NT classes.
	1997 (All Class Structures Combined)			(4+	2002 (4+ NT Class)			2010 (4+ NT Class)		
Female Height	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	
5'2"	129	161	202	128	147	163	132	137 (138)	153	
5'6"	141	180	225	147	165	179	146	159 (160)	170	
5'10"	156	200	248	168	185	202	163	178 (180)	193	
6'2"	172	223	278	185	206	225	180	198 (199)	216	
Total # of Respondents	57			12		4				

4.4: Maximum Weight Allowed (in lbs.) for best NT Class for a 45-Year Old Female

Note: figures in parentheses represent adjusted figures with stretch criteria taken into account

Data from the 1995 Survey were not available for this question. Among respondents still using height and weight rather than BMI, there appears to have been a tightening of weight requirements overall from 1997 to 2010 for 45-year old females as well. However, for females there is a continuous tightening, in contrast to the male tables, which for the heights sampled remained more or less level between 2002 and 2010. For example, at 5'6", the average upper weight limit in 1997 was 180 and it dropped to 165 in 2002 and 159 in 2010.

Similar to males, it is not clear from the 2010 Survey responses regarding BMI whether the change to BMI represented a tightening from earlier guidelines.

**4.5: Maximum Weight Allowed (in lbs.) for best NT Class for a 45-Year Old Male or Female, Respondents with 3 NT Classes** 

II. isht				02 Class)			2010 (3 NT Class)					
Height		Male		Female		Male			Female		e	
	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max
5'2"				131	143	159	146	153	161	131	146	161
52				131	143	139	9 140	(158)	(166)	131	(150)	(166)
5'6"	160	174	187	140	163	187	166	173	180	145	163	180
50	100	1/4	107	140	105	107	100	(178)	(185)	145	(168)	(185)
5'10"	180	195	210	157	183	210	187	194	200	165	184	200
5 10	160	195	210	137	165	210	107	(199)	(206)	105	(188)	(205)
6'2"	205	217	234	169	204	234	209	217	224	183	205	224
0 2	203	217	234	109	204	234	209	(222)	(231)	165	(210)	(231)
6'5"	221	235	254				226	235	244	106	224	244
0.3	221	233	234				220	(240)	(252)	196	(230)	(252)
Total # of Respondents		26							8	8		

Note: figures in parentheses represent adjusted figures with stretch criteria taken into account

For 1995 and 1997, data were not available for this specific item.

For the 2010 Survey, only eight respondents had data available for this category. An additional two respondents stated that they used BMI instead of height and weight. One difference between the respondents with 3 NT classes and the respondents with 4+ NT classes is that the stretch criteria for respondents with 3 NT classes (shown in parentheses) raised the maximum average weight by about five pounds, as opposed to the one to two pound differences shown by respondents with 4+ NT classes. However, both the male and female weight averages remained stable between 2002 and 2010.

4.6: Average Upper Weight Limits for Males and Females, 3 and 4+ NT Structures before
(and after) Stretch Criteria Applied

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Height	2010 (3 NT Class) Male Average	2010 (3 NT Class) Female Average	2010 (4+ NT Class) Male Average	2010 (4+ NT Class) Female Average	
5'2"	153 (158)	146 (150)	154 (156)	137 (138)	
5'6"	173 (178)	163 (168)	174 (175)	159 (160)	
5'10"	194 (199)	184 (188)	195 (196)	178 (180)	
6'2"	217 (222)	205 (210)	217 (218)	198 (199)	
6'5"	235 (240)	224 (230)	233 (235)	210 (212)	
Total # of Respondents		8	4		

Note: figures in parentheses represent adjusted figures with stretch criteria taken into account

The 2010 data for the respondents who submitted height and weight tables exhibit differences between those with 3 NT classes and those with 4+ NT classes for females. The difference between the stretch and the non-stretch criteria is about five pounds for the 3 NT class structure and 1-2 pounds for the 4+ NT class structure.

### **Cholesterol**

This section will review the maximum allowable total cholesterol (cholesterol) levels and the cholesterol to HDL ratio for the best and second best preferred NT classes. It will also discuss the allowance of treated cholesterol in the preferred classes.

Cholesterol Range (mg/DL)	1995	1997	4+ N	T Class	3 N'	Г Class	2 NT Class in 2002
			2002	2010	2002	2010	
< 200	-	-	-	-	-	-	-
200-219	5	1	6	3 (1)	5	1 (1)	-
220-239	11	17	4	5 (6)	15	8 (5)	1
240-259	15	20	2	2 (3)	5	0 (3)	2
260-299	15	6	-	-	1	1 (1)	2
300-350	3	2	-	-	-	-	-
351+	1	2	-	-	-	-	-
Total # of Respondents	35	48	12	10	26	10	5
Minimum	200	200	200	200	210	210	230
Average	249	249	218	222 (228)	227	226 (233)	251
Maximum	351	400	250	250	260	260	274

# 4.7: Maximum Allowed Cholesterol for Best Preferred NT Class for a 45-Year Old Male Applicant

Note: figures in parentheses represent adjusted figures with stretch criteria taken into account

A 45-year old male is being used as the baseline for comparison because this was the representative applicant used in the 2002 data. Only one company had 2 NT classes in 2010 and is not reported in Table 4.7.

Several notes about the data and table:

- Two respondents in 2010 provided a published rule for the Cholesterol/HDL (Chol/HDL) ratio, but did not provide total cholesterol and they are, therefore, not included in this table.
- For 1995 and 1997, the Survey did not distinguish responses by number of preferred classes in the same fashion that was available in the 2002 and 2010 data.
- In 2010, many respondents were using "stretch" criteria, which allowed for acceptance of slightly higher cholesterol levels if all other criteria for the class were met. For the 2010 data, the figures in parentheses represent adjusted figures with stretch criteria taken into account.
- The long-term trend regarding cholesterol before stretch criteria are taken into account appears to be a tightening of the guidelines as far as the best NT class is concerned. In 1995, 43% of the respondents allowed maximum cholesterol readings in the 240-299

range, and 11% allowed maximum cholesterol readings of 300 or more. In 2010, only 15% of respondents allowed maximum cholesterol readings in the 240-299 range, and none allowed maximum cholesterol readings in excess of 300. Eighty percent of the 3 NT class respondents and 50% of the 4+ NT class respondents used maximum cholesterol readings in the 220-239 range.

- After stretch criteria are applied in 2010, the percentage of respondents allowing a maximum in the 240-299 range increases to 38%; however, if this category is further segregated (which cannot be done with the 1995 data), 33% actually use a range of 240-259, and only 5% use a range of 260-299. Even stretch criteria do not allow for cholesterol readings of 300 or greater. It is also worth mentioning that, while stretch criteria had an effect on the mean averages in 2010, they had no effect on either the low or the high ends of the ranges reported by the respondents.
- As only one company had a 2 NT class product in 2010, those results are not shown.

# **4.8: Maximum Allowable Cholesterol for a 45-year old Male Applicant Best Preferred Tobacco Class, 2010**

Cholostanal Lanal (mg/dL)	# of Res	pondents
Cholesterol Level (mg/dL)	2002	2010
< 200	-	-
200-219	-	-
220-239	4	3 (1)
240-259	17	8 (4)
260-299	8	4 (10)
300-350	-	2 (2)
351+	-	-
Total # of Respondents	29	17
Minimum	220	220
Average	248	255 (282)
Maximum	280	300

Note: figures in parentheses represent adjusted figures with stretch criteria taken into account

Data from 1995 and 1997 were not available. As with the NT class, the effects of stretch criteria are shown in parentheses. In 2002, 17 (59%) respondents used a maximum range of 240-259; in 2010, eight (47%) respondents did so before stretch criteria were considered. Examining a broader range, 240-299, 25 (86%) respondents allowed a maximum in this range in 2002, and 12 (71%) respondents did so in 2010. An additional two (12%) allowed a high of 300 in 2010. Stretch criteria had a more significant effect on the tobacco classes than it did on the non-tobacco classes in 2010; the average increasing from 255 to 282.

The conclusion here is, before stretch criteria were applied in 2010, there was a slight tightening in the allowable cholesterol levels; however, after the effects of the stretch criteria, there was actually a loosening in the allowable cholesterol levels from 2002.

Cholesterol Level	4+ N'	Γ Class	3 N'.	<b>F</b> Class
(mg/dL)	2002	2010	2002	2010
< 200		-		-
200-219		1 (0)		-
220-239		0(1)		4 (3)
240-259		6 (3)		3 (2)
260-299		3 (5)		3 (4)
300-350		0(1)		0(1)
351-+		-		-
<b>Total # of Respondents</b>	-	10	-	10
Minimum	210	215 (230)	230	220 (220)
Average	237	252 (266)	252	248 (259)
Maximum	260	275 (325)	300	275 (300)

4.9: Maximum Available Total Cholesterol for Second Best Preferred NT Class

Note: figures in parentheses represent adjusted figures with stretch criteria taken into account

Data were not available for 1995 and 1997; for 2002, only the minimum, average and maximum cholesterol levels were available. For the second best NT class, there appears to be a slight liberalization of the guidelines among respondents with 4+ NT classes, both before and after stretch criteria were applied. The respondents with 3 NT classes showed a tightening between 2002 and 2010. However, when stretch criteria are used, there was a slight liberalization.

4.10: Allowance of Treated	Cholesterol in Best and Second Best NT Class, 201	10
TIU, Anowance of ficate	Choicsteror in Dest and Second Dest 111 Class, 201	10

	Best NT	Class	Second Bes	t NT Class	
# of Risk Classes		Medicat	Total # of Respondents		
	Yes	No	Yes	No	
3 NT	67%	33%	75%	25%	12
4+ NT	40	60	90	10	10

Data for 1995, 1997 and 2002 were not available. However, the 2002 Survey indicated that for the best NT class, 47% of the respondents considered treated cholesterol "differently" than untreated cholesterol. In 2010, 45% of the respondents with three or more NT classes considered treated cholesterol differently than untreated cholesterol for the best NT class.

For the 3 NT class structure, 67% allow medication for the best class and 75% allow it for the second best class. For the 4+ NT class structure, 40% allow medication for the best class structure and 90% allow it for the second best class structure.

In 2010, 23 respondents reported data for this category; however, the response from the company with only 2 NT classes is not shown due to sample size. In the instances where no mention was made of treatment in the guidelines, it was assumed treatment was allowed.

					4+ NT Class		3 N'	T Class	2 NT
Cholesterol/HDL Ratio	1995	1997	2002	2010	2002	2010	Class 2002		
< 4.0			1	-	-	1 (0)	-		
4.0-5.0	Note 1		10	10 (8)	19	11 (10)	1		
5.1-6.0	INO	le I	1	0 (2)	6	0(1)	5		
6.1-7.4			-	_	-	0(1)	1		
Total # of Respondents	35	48	12	10	25	12	7		
Minimum	4.0	3.0	< 4.0	4.0 (4.5)	4.0	3.5 (4.2)	5.0		
Average	5.8	5.8	4.7	4.8 (5.0)	5.1	4.7 (4.9)	5.8		
Maximum	10.0	10.0	5.5	5.0 (5.5)	6.5	5.0 (6.5)	6.5		

4.11: Maximum Cholesterol/HDL Ratio for Male, age 45, to qualify for Best NT Class

Note: figures in parentheses represent adjusted figures with stretch criteria taken into account

Note 1: For 1995 and 1997, the Surveys did not distinguish responses by number of Preferred Risk classes in the same fashion available in the 2002 and 2010 data. The two earliest Surveys also used different response ranges than the ones shown in Table 4.11.

The average upper Chol/HDL limit available for a 45-year old male for the best NT class declined from 5.8 in 1995 and 1997 to 4.7-4.8 before stretch criteria are applied in 2010, or 4.9-5.0 after stretch criteria are applied for the 3 and 4+ NT class products.

In 2010, 7 of 10 in the 4+ NT class structure and 8 of 12 in the 3 NT class structure had Chol/HDL ratios of exactly 5.0. Unfortunately, comparable information was not available from the 2002 Survey. There were data for the 2 NT classes in 2002 and the 5.1-6.0 range was most common. As there was only one 2 NT class product in 2010, these data were not shown.

**4.12: Maximum Total Cholesterol/HDL Ratio for Male Age 45 to Qualify for Best Tobacco Class, 2010** 

Datio	2 T	Class
Ratio	2002	2010
4.0-5.0	11%	6%
5.1-6.0	54	53
6.1-7.4	36	41
Total # of Respondents	28	17
Minimum	4.0	4.5 (6.0)
Average	6.0	6.1 (6.4)
Maximum	6.5	7.0 (7.0)

Note: figures in parentheses represent adjusted figures with stretch criteria taken into account

Data were not available for 1995 and 1997. The 2010 data submitted by the respondents appear to show liberalization in the maximum permitted Chol/HDL ratio for the best tobacco class between 2002 and 2010. While the average moved slightly, from 6.0 to 6.1 before the 2010 stretch criteria were considered, it moved to 6.4 after those criteria were considered. The 5.1-6.0 Cholesterol/HDL ratio range for the tobacco classes was most common in both 2002 and 2010.

# **4.13: Maximum Total Cholesterol/HDL Ratio for Male Age 45 to Qualify for Second Best NT Class**

Datio	4+ NT	Class	3 NT Class		
Ratio	2002	2010	2002	2010	
Minimum	< 4.5	4.5 (5.5)	4.5	4.5 (4.5)	
Average	5.5	5.7 (6.2)	6.2	5.5 (5.7)	
Maximum	6.0	7.0 (7.0)	7.0	6.0 (6.5)	
Total # of Respondents	Unknown	9	Unknown	12	

Note: figures in parentheses represent adjusted figures with stretch criteria taken into account

Data were not available for 1995 and 1997. For respondents with 4+ NT classes, there appears to have been a liberalization of the guidelines for the maximum allowable Chol/HDL ratio. For the second best class, the average moved from 5.5 in 2002 to 5.7 in 2010 before stretch criteria were applied, and to 6.2 after stretch criteria were applied. However, for respondents with only 3 NT classes, there appears to have been a tightening of the guidelines for the second best class, with the average moving from 6.2 in 2002 to 5.5 in 2010 before stretch criteria were applied, and 5.7 after stretch criteria were applied.

### **Driving Record**

This section will review information related to moving violations and DUIs. 1995 data were not available regarding the number of moving violations used to disqualify an applicant from the best preferred class.

Two caveats apply to the data in this section:

- In practice, some types of motor vehicle offenses such as reckless driving carry high point counts in company Motor Vehicle Report (MVR) guidelines, and this table may not completely capture the handling of certain types of severe violations other than DUI.
- Over the years, many respondents are known to have liberalized their handling of "administrative" offenses on MVR such as license revocations due to lack of insurance, failure to appear and other non-driving related offenses. There were not sufficient data available to determine whether these liberalizations are statistically significant enough to mask other trends in the data.

	Maximum % of Violations Allowed by Data Year											
Time Period		19	97			2	002			201	10	
	0	1	2	3	0	1	2	3	0	1	2	3
9 months	-	-	-	-	-	3%	-	-	-	-	-	-
1 year	-	2%	2%	2%	-	-	-	-	-	-	-	-
2 years	-	5	7	-	3%	18	-	-	-	-	4%	4%
3 years	7%	5	44	23	-	9	41%	6%	4%	4%	30	30
4 years	-	-	-	-	-	-	-	-	-	-	-	-
5 years	-	-	-	2	-	3	18	-	4	4	-	13
Total # of Respondents		4	3				34			23	3	

# **4.14: Maximum Number of Moving Violations Other Than DUI Allowed for Best NT Class, By Percentage of Respondents**

While there were and are many combinations of the number of moving violations allowed for different periods of time, the following commentary summarizes the results.

In 1997, the most common criterion was to allow two moving violations in a three-year period; 44% of respondents used that time frame. The second most common criterion was three violations over a period of three years at 23%; together, the allowance of 2-3 violations over a three-year period accounted for 67% of the respondents.

In 2002, the most common rule was still two violations over a three-year period (41% of respondents), followed by one violation over a two-year period (18% of respondents); together these accounted for 59% of respondents.

In 2010, the most common rules were either two or three violations over a three-year period, at 30% each (total of 60%). Although there are a number of minor variations over the years, the

broad practice appears to have remained stable from 1997 to the present, with the most typical criteria being the allowance of either two or three moving violations other than DUI for the best class within a three-year period.

Horizon	Maximum # of Moving Violations Allowed					
Horizon	1	2	3	4		
2-Year	-	4%	10%	-		
3-Year	10%	-	57	10%		
5-Year	-	-	10	-		
Total # of Respondents	21					

**4.15: Number of Moving Violations Allowed in Certain Periods for Second Best Preferred NT Class, 2010** 

For 2010, the most common number of moving violations allowed was three in three years (57%) for the second best preferred class.

Time Horizon (Years)	1997 DUIs Allowed		2002 Allo		2010 DUIs Allowed	
	Zero	One	Zero	One	Zero	One
1	-	2%	-	_	-	-
2	-	2	-	-	-	-
3	11%	4	5%	_	-	-
4	2	2	-	_	-	-
5	47	4	57	3%	52%	-
7	-	2	8	-	8	-
10	13	2	22	_	20	-
"Ever"			3	3	8	-
Not Stated	9	-	-	-	4	8%
<b>Total # of Respondents</b>	53	;	3'	7	25	5

# **4.16:** Number of DUIs in Certain Periods for Best Preferred NT Class, By Percentage of Respondents by Study Year

Note that 1995 data were not available for this question. From 1997 to 2010, the most common DUI guideline for a knockout from the best class has been that one DUI within a five-year period would automatically disqualify from that class. In 1997, 47% of respondents used this time frame; in 2002, 57% used it and, in 2010, 52% used it. Also of note is the apparent disappearance of time frames of less than five years between 1995 and 2010 for the best class. In cases where two DUIs were used in the criteria, these were generally a supplemental rule in addition to a rule for one DUI.

**4.17: Number of DUIs in Certain Periods for Second Best Preferred NT Class, By Percentage of Respondents, 2010** 

Time Honizon (Voors)	2010 DUIs	Allowed	
Time Horizon (Years)	Zero	One	
1	-	_	
2	5%	-	
3	5	-	
4	-	-	
5	77	-	
7	5	-	
10	5	-	
"Ever"	5	-	
Not Stated	-	_	
<b>Total # of Respondents</b>	22		

For 2010, it was also possible to illustrate the number of allowable DUIs for the second best preferred class for 22 respondents. Seventy-seven percent (17 of 22 total respondents) also use the five-year time horizon for DUI as a knockout from the second best preferred class, as well as the best preferred class.

#### Family History

This section will cover the family history criteria used, the type and number of incidences allowed, which family members are included in the analysis and the age to which respondents review this information. The previous Surveys did not ask respondents to distinguish between early death and early disease. Therefore, data showing this distinction are available for 2010 only.

Criterion	% of Respondents by Data Year						
Criterion	1995	1997	2002	2010			
Heart Disease	92%	90%	100%	96%			
Cancer	59	57	72	61			
Diabetes	51	45	44	39			
Stroke	56	54	59	17			
Hypertension	38	23	16	-			
Other Non-Accidental Early Death	30	12	13	-			
Alcohol Abuse			6	-			
Total # of Respondents	49	61	41	23			

### 4.18: Family History Preferred Risk Criteria for Best Preferred NT Classes

The biggest change in family history criteria was the reduction in the use of stroke as a criterion. In 2010, 17% of respondents used stroke criterion, where the three prior studies each had over 50% of the respondents citing stroke as a criterion. Heart disease remains the most common criterion, with a 96% use rate among the respondents in 2010. This has consistently been the most commonly used criterion in all years studied.

**4.19:** Family History Preferred Risk Criteria by Type of Incidence for Best and Second Best Preferred NT Classes, 2010

Criterion	% Incidence of Either Disease or Death	% Incidence of Death Only	Total # of Respondents						
Best Class									
Heart Disease	55%	45%	22						
Cancer	50	50	14						
Diabetes	33	66	9						
Stroke	25	75	4						
	Second I	Best Class							
Heart Disease	30%	70%	20						
Cancer	31	69	13						
Diabetes	17	83	6						
Stroke	25	75	4						

Table 4.19 shows the breakdown into whether incidence of disease or death is the qualifying characteristic. It shows that the use of incidence of disease drops between the best class and the second best class, except in the case of stroke, which stayed the same. However, this may be due to the small number of respondents that use stroke as a criterion.

Note that while Table 4.18 uses percentages based upon the number of respondents that submitted any preferred criteria, Table 4.19 uses percentages based upon the number of respondents that stated that they actually used a particular criterion.

# **4.20:** Family History Number of Incidences Allowed for Best and Second Best Preferred NT Classes, 2010

# of Incidences Allowed	% Best Class	% Second Best Class
0	91%	81%
1	9	19
Total # of Respondents	22	21

The incidences allowed could either be the occurrence of disease or death. Table 4.20 shows the percentage of respondents by number of incidences allowed. It shows that most (91%) of the respondents do not allow any incidence of disease or death to qualify for the best preferred class. For the second best class, slightly less (81%) do not allow any incidence of disease or death to qualify. Also, note that no respondents allowed more than one incidence in their best two classes.

**4.21:** Family Members Considered When Using Family History Criterion for the Best and Second Best Preferred NT Classes, 2010

Criteria Based On	% Best Class	% Second Best Class
Parents Only	9%	10%
Parents and Siblings	91	90
Total # of Respondents	22	21

The persons upon whom the family history criteria are based were either parents only or parents and siblings. Table 4.21 shows the results for the best and second best Preferred Risk classes. For both the best and second best classes, it shows that 90+% of the respondents based the criteria on parents and siblings.

# **4.22:** Age Criteria for Family History Criterion for Best and Second Best Preferred NT Classes, 2010

Age Of Family Member With Medical History	% Best Class	% Second Best Class	
60	73%	100%	
65	27	-	
Total # of Respondents	22	21	

All of the respondents who reported using family history as a criterion used either age 60 or 65 for the age of disease or death of the family member. Almost three-quarters (73%) used age 60 for the best class, and 100% used age 60 for the second best class.

**4.23:** Family History - Easing of Restrictions for Older Age Applicants for Best and Second Best Preferred NT Classes, 2010

Applicant Age at which Family History Criteria Ignored	% Best Class	% Second Best Class
Greater than 60	-	12%
Greater than 65	43%	38
Greater than 69 / 70	57	50
Total # of Respondents	7	8

There are differing opinions in the industry as to whether the death of parents or siblings at an age below the current age of an older applicant makes a difference in the expectation of death for an older applicant. Consequently, some respondents disregard family history criteria when an applicant reaches a certain age. For the best preferred class, of the 22 respondents, seven (32%) stated in their guidelines (or stretch criteria) that they ignored the family history criterion for applicants over a certain age. For the second best preferred class, of the 21 respondents, eight (38%) ignored family history above a certain age.

### **Lifestyle**

Lifestyle criteria include alcohol and drug abuse and a number of other criteria, as shown in Table 4.24. Although the percentages shown are being reported for comparison purposes, they need to be viewed with caution. While the 2002 results were based upon direct questioning, the 2010 results were based upon a review of submitted criteria, which can create inconsistencies when comparing results.

	1995		]	1997	2002		,	2010
Criterion	% use	% <u>always</u> preclude						
Alcohol Abuse	88%	74%	97%	42%	100%	78%	87%	75%
Illegal Drugs	88	93	95	40	100	82	91	62
Bankruptcy					37	19	-	-
Poor Credit History					30	15	-	-
Aviation (private pilot)	71	77	87	60	98	58	100	22
Avocation/Hazard Sport	66	73	85	56	98	65	96	32
Felony Conviction			57	49	69	77	22	80
Foreign Residence	60	82	67	60	73	75	57	62
Foreign Travel	50	53	66	60	73	45	57	-
Foreign National					68	57	35	25
Hazardous Occupation	52	74	77	51	91	78	43	80
Total # of Respondents	4	6-51	6	60-61		45		23

### 4.24: Lifestyle Criteria for Preferred NT Best Class

Note that the "% always preclude" columns are expressed as a percentage of respondents using the particular criterion rather than the percentage of the total number of respondents. Foreign residence excludes Canada. Entries that are shaded were not covered in that particular Survey. In all four Surveys, the most frequently used lifestyle categories for preferred criteria were alcohol, illegal drugs, aviation and avocation/hazardous sports. In terms of lifestyle criteria precluding an insured from any preferred classification, alcohol use and illegal drugs had the highest response rate in all four Surveys. In addition, for the 2002 and 2010 Surveys, a high percentage also precluded hazardous occupations and felony convictions.

#### 4.25: Personal Medical History Criteria

	19	995	199	1997		2002		10
Criterion	Used for Preferred Risk Class? (% of Respondents Using)	Always Preclude from any Preferred Risk Class? (% of Yes Respondents)	Used for Preferred Risk Class? (% of Respondents Using)	Always Preclude from any Preferred Risk Class? (% of Yes Respondents)	Used for Preferred Risk Class? (% of Respondents Using)	Always Preclude from any Preferred Risk Class? (% of Yes Respondents)	Used for Preferred Risk Class? (% of Respondents Using)	Always Preclude from any Preferred Risk Class? (% of Yes Respondents)
Internal Cancer	86% *	88% *	97%	64%	98%	83%	89%	76%
Diabetes Type I	-	-	-	-	98	93	-	-
Diabetes Type II	-	-	-	-	98	83	-	-
Diabetes	92	100	98	97	-	-	84	94
Heart Disease	88	100	98	87	95	88	84	88
Melanoma	-	-	92	80	93	82	-	-
Stroke	83	88	93	93	93	35	42	63
Hypertension	88	69	92	50	91	90	11	-
Treatment for Cholesterol	69	66	82	57	91	44	5	-
Elevated Total Cholesterol	88	74	97	34	86	30	-	-
Treatment for Hypertension	79	60	85	63	84	25	-	-
Mental and Nervous Disorder	64	76	85	24	63	48	21	100
Other Skin Cancer	-	-	81	4	60	35	-	-
Total # of Respondents	47	-50	59-	61	4	3	]	.9

\* includes all cancer

Table 4.25 shows the personal history criteria used in the 2002 and 2010 Surveys. In the 2002 Survey, specific criteria were asked about, while in the 2010 Survey, the submitted criteria were used. Note that it is not always clear what the intention of the company is when looking at the criteria. For example, a number of respondents in the 2010 Survey had diabetes as a criterion. However, it was not clear if both Type-1 and Type-2 were included. Only one or two respondents specifically distinguished between Type-1 and Type-2 in the 2010 criteria received. While it would generally be expected that both would be included, since there were some minor differences in the 2002 Survey, the 2010 results are shown below as Diabetes in general rather than distinguishing between types. Another issue was that melanoma was generally not specifically mentioned in the 2010 criteria. While it is likely a criterion, it was ignored for the 2010 data rather than including what would likely be a partial and possible misleading answer. Similarly, skin cancer results are not included in the 2010 data so as not to be misleading.

Table 4.25 shows a lesser usage of personal history criteria in the 2010 Survey, but this could be related to a misinterpretation of the criterion. There is still strong usage of the cancer, diabetes and heart disease criteria.

### **Tobacco**

Months Since Last Used	% 1997	% 2002	% 2010
12	58%	16%	9%
24	13	7	4
36	27	39	26
48	-	-	4
60	2	34	52
More than 60	-	4	4
Total # of Respondents	45	44	23

### **4.26: Tobacco Cessation Period Required For Best NT Class**

1995 data is not available for this item. The trend from 1997 to 2010 reflects a lengthening of the time period for smoking cessation required to be eligible for the best NT class. In 1997, the most common time period was 12 months (58% of respondents), followed by 36 months (27%). In 2002, the most common period was 36 months (50%), followed by 60 months (34%). In 2010, the most common time frame was 60 months (52%), followed by 36 months (26%).

In 2002, two respondents responded with "ever" as the time frame, signifying that any history of tobacco use was a Permanent disqualification from best class. In 2010, one company required 48 months and another required 120 months for the best class.

4.27: Tobacco Cessation Period Required (in months) for Best NT Class, by Number of NT	
Classes	

	2002					2010						
# of NT Classes	12	24	36	60	Ever	Total # of Respondents	12	36	48	60	120	Total # of Respondents
4+	8%	-	25%	50%	17%	12	-	10%	10%	70%	10%	10
3	8	8%	48	36	-	25	17%	42	-	42	-	12
2	57	14	29	-	-	7	-	-	-	-	-	-
Total # of Respondents	44							22				

In 2002, the cessation periods with the most respondents were 60 months for 4+ NT class products, 36 months for the 3 NT class products and 12 months for 2 NT class products. The 2010 results, while limited, continue to show a trend toward longer cessation periods.

In 2002, there were two respondents who indicated if an applicant ever used tobacco products, they would not be eligible for the best preferred class. No respondents in the 2010 Survey indicated "Ever."

4.28: Respondents That Allow Occasional Cigar Use for Best NT Class, by Number of NT	
Classes	

# of Nontobacco Classes	% Allowing Occasional Cigar Usage for Best Class				
# of Nontobacco Classes	2002	2010			
4+ NT	50%	40%			
3 NT	60	42			
2 NT	57	_			
Total # of Respondents	45	23			

With respect to the use of cigars, data for 1995 and 1997 were not available for this item.

Occasional cigar usage in the best class was shown to be allowed by 50% or more of the respondents in 2002, and 40% or more of the respondents in 2010, regardless of the number of total NT classes. The fact that the 2010 percentages are lower than the 2002 percentages may be reflective of how data were gathered for the two surveys. The 2002 Survey used survey responses, whereas the 2010 Survey relied on published data.

Note that with only one 2 NT class company in 2010, this cell is not considered.

#### 4.29: Tobacco Cessation Period for Second Best NT Class, 2010

# of NT Classes	<b>12 mos</b>	24 mos	36 mos	60 mos	Total # of Respondents
4+ NT	-	30%	50%	20%	10
3 NT	50%	17	17	17	12

Data for the cessation period of the second best NT class is available for 2010 only. Table 4.29 shows that 50% of the respondents with 4+ NT classes will allow the second best NT class after 36 months of smoking cessation, and 50% of respondents with 3 NT classes will allow the second best NT class after 12 months of smoking cessation.

Twelve of the 22 respondents (55%) also reported allowing occasional cigar use for the second best NT class.

4.30: Debit	/ Credit	Criterion	Utilized, 2010
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Criterion	% of Respondents With Debit / Credit Approach That Use Criterion
Blood Pressure	100%
Cholesterol	100
Cholesterol Ratio	75
BMI / Build	75
Family History	75
Personal History	75
Tobacco	75
Driving	50
Albumin	25
Avocations	25
Cardiovascular Testing	25
Exercise	25
Laboratory Readings	25
Pulse Rate	25
Total # of Respondents Using Debit / Credit Approach	4

Of the respondents submitting preferred criteria, four (17%) used a debit / credit approach for some or all of their preferred criteria. The criteria used by all of the respondents using the debit / credit approach were blood pressure and cholesterol. There were also some unique criteria used by only one of the respondents as shown in Table 4.30.

		Initia	Age in			
Criterion	40-49	50-59	60-69	70+	# of Respondents Using Age Banding For Criterion	% of # of Respondents Using Any Age Banding (N=19)
Blood Pressure	5%	37%	37%	21%	19	100%
Cholesterol	20	20	10	50	10	53
<b>Cholesterol Ratio</b>	14	14	14	57	7	37
BMI / Build	-	_	_	100	3	16
Driving	-	-	-	100	2	11

#### 4.31: Criterion that Vary by Age, 2010

Nineteen respondents (83% of the respondents that submitted criteria) vary certain criteria by age. Some respondents split the qualifying levels by age into two groups and others split it into more groups. Table 4.31 shows the criteria that are split by age and the beginning age for the highest age band (independent of whether there are two or more age bands). Among the respondents that submitted age-banded criteria, the three criteria most commonly used with an age split were blood pressure (100%), cholesterol (53%) and the cholesterol ratio (37%). The most common beginning age range for the top age band was 50-69 for blood pressure and 70+ for the other factors.

#### 4.32: Prostate Specific Antigen (PSA)

In the 2002 Survey data, 20 respondents reported using PSA as a criterion for preferred classes; in the 1997 data, 22 respondents reported doing so; and, in the 1995 data, 14 respondents reported doing so. Only two of the respondents for the 2010 Survey listed PSA in their published preferred criteria, so a comparison isn't included in this Survey. This may mean a significant reduction in the use of PSA as a preferred criterion, but it may also represent an underreporting anomaly in the 2010 guidelines submitted by the respondents. Another possibility to explain the low reported number for 2010 might be the fact that PSA testing is specific to males and frequently does not begin until older ages in most respondents.

## Section 5 – Stretch Criteria General Information

The questions in this section were used to capture information on 'stretch criteria' used to refine company's preferred criteria/risk selection process as it pertains to both fully underwritten Term and Permanent business.

For purposes of this Survey, 'stretch criteria' were defined as any formal written rules that exist outside a company's traditional published preferred criteria that allow underwriters to vary from the preferred criteria. The stretch criteria may be published or unpublished.

#### 5.1: Does your company have stretch criteria?

Have Stretch Criteria?	%
Yes	65%
No	35
<b>Total # of Respondents</b>	31

Sixty-five percent of the respondents indicated they had stretch criteria for their most prevalent Term and Permanent products, based on the definition provided in the introduction to this section.

### RESPONDENTS WHO INDICATED THEY HAD NO STRETCH CRITERIA WERE DIRECTED PAST THE REMAINDER OF SECTION 5.

#### 5.2: Reasons for Implementing Stretch Criteria

Reasons Stretch Criteria were Implemented?	% Used	% Most Important
Enhanced underwriting flexibility	95%	25%
Competitive reasons	85	5
Improved risk selection	50	50
Alternative to Debit / Credit	40	5
Allow more risks in a particular class	35	-
Meet pricing objectives	15	15
Total # of Respondents		20

Respondents were asked to provide the reasons for using stretch criteria and then which one reason was most important. The two most common reasons for using stretch criteria were enhanced underwriting flexibility (95%) and competitive reasons (85%). Although improved risk selection was third at 50%, every respondent that chose risk selection cited it as the most important reason. As a consequence, improved risk selection was the most important criteria cited overall for implementing stretch criteria. Enhanced underwriting selection was the second most important reason indicated at 25%.

<b>Resource</b> *	% Used	% Most Important
Underwriting	90%	30%
Reinsurers	80	45
Medical	60	5
Actuarial	55	-
Laboratories	20	5
Sales / Marketing	15	-
R & D	10	10
Claims	10	5
External consultant(s)	5	-
Legal	-	-
Total # of Respondents		20

### 5.3: Resources Used to Develop Stretch Criteria

\*Note: Competitive intelligence was included in the list of choices for preferred criteria, but was inadvertently left out as an option for applicable resources used to develop stretch criteria. However, the subcommittee is of the opinion that this is unlikely to be a significant factor due to very limited public availability of stretch criteria.

Respondents were asked to provide the resources they used and the single most important resource utilized. Underwriting (90%), Reinsurers (80%) and Medical (60%) were the most popular resources to develop their stretch guidelines. This compares to resources for preferred criteria of Actuarial (96%), Underwriting (92%) and Reinsurers (88%). Of note in this comparison, actuarial resources for stretch criteria were about half those used for preferred criteria and reinsurers were a greater resource for stretch criteria than preferred criteria.

When asked what the most important resource was, the largest percentages were Reinsurers (45%), Underwriting (30%) and R & D (10%). This compares to the most important resource for preferred criteria of Sales/Marketing (42%). Note that Sales/Marketing was not the most important for stretch criteria for any respondent.

The number of resources used in determining stretch criteria by company is shown below:



Chart 4: Number of Resources Used to Determine Stretch Criteria for Term

**Chart 5: Number of Resources Used to Determine Stretch Criteria for Permanent** 



All respondents used between two (one respondent) and twelve (one respondent) resources for determining stretch criteria for both Term and Permanent products. Four to six resources were most commonly used by Term respondents and four to seven resources were most commonly used by Permanent respondents.

#### **5.4: Criteria Included for Stretch Consideration**

Criteria	% Term	% Permanent
Build	95%	100%
Cholesterol (total)	90	89
Family history	80	78
Cholesterol / HDL ratio	70	67
Blood pressure	65	61
Tobacco use or timing	50	56
Alcohol / Substance abuse	30	33
Laboratory findings	30	33
Driving	15	22
Medical history	15	17
Avocation	10	11
Other	10	11
Aviation	5	6
Foreign travel or residence	5	-
Total # of Respondents	20	18

Multiple stretch criteria factors were identified by the respondents. When asked about the type of factors included in their stretch criteria, the most common Term and Permanent factors were build (95% and 100%, respectively), total cholesterol (90% and 89%, respectively) and family history (80% and 78%, respectively).

Other comments (Term only):

- Exception to allow exams and labs for up to 12 months
- Aviation & Avocation excluded by rider

#### 5.5: Best Class to Allow Stretch Criteria

Class	% Term	% Permanent
Preferred Class #1 (Best Class) NT	85%	89%
Preferred Class #2 NT	15	11
Other Preferred / Standard NT	-	-
Residual Standard NT	-	-
Do not allow stretch criteria for this product	-	-
Total # of Respondents	20	18

This question asked participants to indicate the best class that allowed stretch criteria for their most prevalent Term and Permanent products. Most respondents allowed stretch criteria in their best preferred class for both Term (85%) and Permanent (89%). All respondents who didn't allow stretch criteria in their best preferred class did allow it in their second best preferred class.

#### 5.6: Expected Mortality Impact of Stretch Criteria for Best Class Allowed

Expected Impact	% Term	% Permanent
Higher	15%	17%
About the same	85	83
Lower	-	-
Total # of Respondents	20	18

Most respondents expected mortality resulting from the use of stretch criteria to be about the same as without it for both Term (85%) and Permanent (83%). None of the respondents expected the usage of stretch criteria to result in lower mortality.

#### 5.7: Communication Method for Stretch Criteria

How Stretch Criteria Communicated	%
All are internal, non-published	70%
Some are internal, some are published	15
All are published	15
Total # of Respondents	20

Seventy percent of the respondents indicated that their stretch criteria were internal/non-published. The remainder was split evenly between partial and full publication.

#### 5.8: Methods for Monitoring Stretch Criteria

Expected Impact	%
Number of cases	50%
Percentage of cases	14
Face amount of cases	14
Stretch mortality experience separately from the overall	-
Other	50
Total # of Respondents	14

Only 14 of the 20 respondents who use stretch criteria answered this question. Fifty percent of them indicated that they monitor their number of stretch criteria cases. Fourteen percent of the respondents monitor the percentage of cases and/or face amounts. Two respondents identified that they monitor their stretch criteria cases in all three of the ways indicated; number of cases, percentage of cases and by face amount of cases.

Other responses:

- Audit (2)
- Do not monitor (5)

### 5.9: Considering Making Changes to Stretch Criteria by End of 2011?

Change	% Term	% Permanent
We have current plans to make changes	55%	63%
We are considering potential changes	30	21
We have no plans to make changes	15	16
Total # of Respondents	20	19

The majority of the respondents noted that they had plans to make changes to their stretch criteria prior to the end of 2011 (55% for Term products and 63% for Permanent products). In total, 85% for Term and 84% for Permanent either had active plans or were considering possible changes.

Nine respondents specifically noted dates when their company first planned to implement these changes. The dates ranged from December 2010 to December 2011.

## **Section 6 – Preferred Business Exception Practices**

The responses to the questions in this section show what companies are doing with respect to the practice of 'Preferred Business Exceptions' as it relates to the preferred risk selection process.

For purposes of this Survey, Preferred Business Exceptions were defined as any deviations from a respondent's company's traditional published preferred criteria including their stretch criteria.

#### 6.1: Best Class Allowed for Preferred Business Exceptions

Class	% Term	% Permanent
Preferred Class #1 (Best Class) NT	48%	55%
Preferred Class #2 NT	3	3
Other Preferred / Standard NT	-	-
Residual Standard NT	-	-
Do not allow any business exceptions	48	41
Total # of Respondents	29	29

This question was asked about the respondents' most prevalent Term and Permanent product. About half of the respondents allowed Preferred Business Exceptions (15 of the 29 respondents on their Term products, and 17 of 29 on their Permanent products). Of those who allowed Preferred Business Exceptions, all but one respondent allowed them through their best preferred class.

#### 6.2: Percentage of Exceptions Made - All Term and Permanent Products

% of Policies Preferred Business Exceptions Made	% Term	% Permanent
> 0 - 1%	73%	67%
> 1 - 2%	18	25
> 2%	9	8
Total # of Respondents	11	12

Most of the respondents indicated that exceptions were made on a small percentage of their business. Eight of the 11 respondents on Term and 8 of the 12 respondents on Permanent indicated that they made exceptions on 1% or less of their preferred business.

It should be noted that one respondent indicated making exceptions on 20% of their preferred business. Since we didn't follow-up with this respondent to verify the accuracy of this result, it is not included in the table above.

Area Involved with Preferred Business Exceptions	% Involved in Process	% Makes Final Decision
Underwriting	100%	12%
Actuarial	35	-
Medical	35	-
Senior Management	29	-
Sales / Marketing	24	-
Reinsurers	18	-
Claims	-	-
Legal	-	-
R & D	-	-
Other	-	88
Total # of Respondents	17	

#### 6.3: Areas of the Company Involved in Exception Decisions

The respondents were asked to choose all the areas that were involved in the exception process and then to designate one as the final decision-maker in the process.

All of the respondents chose Underwriting as being involved in the Business Exception Process. After Underwriting, the areas most involved were Actuarial and Medical (both at 35%).

"Other" was the most common category selected for making the final decision on Preferred Exceptions. Based on the written responses shown below, the selection of "Other" indicated the use of a cross-functional committee to make the final decision:

- Exceptions can be made by committee of Underwriting, Medical, Sr. Mgt. and Distribution
- Medical and underwriting combined
- Underwriting, Medical and Actuarial as a committee

6.4a: Handling of Preferred B	<b>Business Exceptions with Rein</b>	surers - All Term Products
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Action on Term Products	% Use	% Primary Use
Retain	80%	-
Consult with Reinsurers to Allow Automatically	67	21%
Reinsure Automatically but Pay Correct Rate	53	29
Reinsure Automatically at Special Exception Rate	40	36
Use a Special Reinsurance Program to Handle	13	-
Other	20	14
Total # of Respondents	15	14

Respondents were asked to indicate as many ways of handling Preferred Business Exceptions for Term products as they used. In addition, respondents were asked to identify one method as primary.

The most common action taken was to retain the business (80%). The actions indicated by the respondents as taken most often with reinsurers regarding Preferred Business Exceptions on Term were to consult with the reinsurers to allow automatically (67%) and to reinsure automatically but pay the correct rate (53%). *"Facultative Reinsurance"* was the only write-in response provided for those selecting "Other."

The primary action taken by the most respondents was to reinsure automatically but pay the correct rate (36%).

Action On Permanent Products	% Use	% Primary Use
Retain	76%	-
Consult with Reinsurers to Allow Automatically	65	25%
Reinsure Automatically but Pay Correct Rate	59	25
Reinsure Automatically at Special Exception Rate	48	44
Use a Special Reinsurance Program to Handle	12	-
Other	12	6
Total # of Respondents	17	16

Respondents were asked to indicate as many ways of handling Preferred Business Exceptions for Permanent Products as they used. In addition, respondents were asked to identify one method as primary.

The most common action taken was to retain the business (76%). The actions indicated by the respondents as being taken most often with reinsurers regarding Preferred Business Exceptions on Permanent were to consult with the reinsurers to allow automatically (65%) and to reinsure

automatically but pay the correct rate (59%). These were the same top actions used for Term business.

"Facultative Reinsurance" was the only write-in response provided for those selecting "Other."

The primary action taken by the most respondents was to reinsure automatically at special exception rate (44%).

#### 6.5: Items Monitored for Preferred Business Exceptions

Item Monitored	%
Number of cases	67%
Face amount of cases	53
Percentage of cases	47
Mortality experience on these cases separately	7
Other	27
Total # of Respondents	15

Respondents were asked to indicate all items that they monitored. Of the 15 respondents, the most common items monitored were the number of cases (67%) and the face amount of the cases (53%). Two respondents indicated that they did not monitor their Preferred Business Exceptions and are included in "Other" above.

Other comments included:

- We do not monitor
- We calculate the cost of an exception and monitor cost of exceptions on a monthly basis
- *No formal monitoring*
- Agents

#### 6.6: Other Comments for this Section

- We have been consistent in not making exceptions to the preferred guidelines.
- We make decisions based upon risk.
- Underwriting has the final say on exceptions; however, they have a budget to operate within and it is possible for specific cases to be escalated to senior management.
- As a general rule, we do not offer exceptions.
- We do not make business exceptions. Strict adherence to guidelines.
- Any "exception" we make is evidence based. On the rare occasion where we may make a true business decision, we would either retain the risk or discuss with our reinsurers. Most exceptions are simply the exercising of good underwriting judgment. Posture has been discussed with and approved by reinsurers. Careful monitoring done.

## Section 7 – Simplified Issue (SI) Criteria

This section summarizes the respondents approach to simplified issue (i.e., where less than full underwriting is required) on preferred risk selection for Term and Permanent business.

Approximately five years ago, the SI market began to change and grow. Over the last 2-3 years, growth has picked up considerably and companies are beginning to evaluate other methodologies for their SI products, such as predictive analytics/modeling. It is unclear at this time whether these changes will take place; however, we anticipate the results of future surveys related to SI may be different than the results from this Survey. Caution should also be used when viewing the SI results from this Survey due to the limited number of respondents.

# 7.1: Does your company offer any products on an individual basis using Simplified Issue underwriting?

Twenty-one of the 34 respondents (62%) indicated that their company offered products on a Simplified Issue basis.

# 7.2: Does your company use criteria to enable it to categorize risks on a preferred basis on its Simplified Issue business?

Of the 21 respondents with SI products, 16 (76%) indicated that they did not currently offer preferred underwriting on these products and had no future plans to do so. Two of the remaining five indicated they are considering offering preferred underwriting on their SI products, and the other three respondents indicated they currently do offer SI on their preferred products. Therefore, only three of the 21 respondents (14%) currently offer SI on their preferred products.

7.3: What are your company's SI distribution channels? (Check all that apply) Please also provide your company's primary channel for SI. (Check one)

Distribution Channel	% Using that Channel	% Primary Channel		
Brokerage	47%	11%		
Banks / Savings institutions	37	21		
PPGA	37	21		
Agency building	37	-		
Direct response	32	21		
MLEA	26	5		
Stockbroker	16	-		
Home service	11	11		
Other: IMO	11	5		
Worksite marketing	5	-		
Other: Funeral home	5	5		
Total # of Respondents	1	9		

The distribution channels most frequently used with SI were brokerage (47%), agency building (37%) and bank/savings institutions (37%). The channels most often considered to be the primary SI channel were banks/savings institutions, direct response and PPGA (all at 21%). Interestingly, only one of the top three channels used was among the top three primary channels.

7.4a: What is your company	's maximum SI issue amount?
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Maximum SI Issue Amount	%
<u>&lt;</u> \$25,000	26%
\$25,001 - \$99,999	11
\$100,000	11
\$100,001-\$249,999	21
\$250,000	21
> \$250,000	11
Total # of Respondents	19

There was a wide range of maximum SI face amounts (\$7,500 to \$5,000,000). This is likely due to the difference in types of underlying SI products among the respondents.

The most common maximum issue amounts are under \$25,000 and \$100,001 to \$250,000. The wide range of responses reflects the different uses of SI in the marketplace.

#### 7.4b: What is your company's maximum SI issue amount on a preferred basis?

Only three of the respondents indicated offering preferred SI policies. The maximum face amount for preferred was the same as that for non-preferred and ranged from \$20,000 to \$500,000.

Maximum SI Issue Age	%
under 45	5%
45 - 54	11
55 - 64	11
65 - 74	16
75 - 84	37
85	21
Total # of Respondents	19

### 7.5a: What is your company's maximum SI issue age?

The maximum issue age on SI products ranged from 40 to 85. The most commonly used maximum issue age range was 75 - 84 (37%).

#### 7.5b: What is your company's maximum SI issue age on a preferred basis?

For the three respondents using preferred on SI policies, the maximum issue age ranged from 40 to 80.

7.6: What sources of information and tests does your company use for SI and which does it utilize for determining whether the applicant is preferred? Does your company plan to begin or plan to stop using the source within the next 6 months. (Check all that apply)

Source of Information	% Currently Use for SI	% Plan to Use for SI	% Currently Use for Preferred SI	% Plan to Use for Preferred SI	
Application questions	100%	-	100%	-	
MIB	84	-	-	-	
Prescription profile	68	11%	100	-	
Insurance Activity Index	32	-	-	-	
MVR*	32	-	100	-	
APS	26	-	-	-	
Identity verification	26	5	67	-	
Teleunderwriting	21	5	33	-	
Avocation / Occupation	16	-	33	-	
Personal History Interview	16	-	33	-	
Background check	11	5	33	-	
Consumer database check	11	-	33	33%	
Financial questionnaire	11	-	-	-	
Follow-up verification	11	-	-	-	
Inspection report	11	-	-	-	
Urine specimen	11	-	-	-	
Oral fluid	5	-	-	-	
Paramedical examination	5	-	-	-	
Credit profiles	-	11	-	-	
Credit scores	-	5	-	-	
Dried Blood Spot	-	-	-	-	
Total # of Respondents	19	19	3	3	

\*MVR was not listed in the original list of sources, but was a write-in comment. If MVR had been included in the original list, it is likely that more companies would have chosen it.

The most common sources of information used for SI products were application questions (100%), MIB (84%) and prescription database (68%). The only sources with more than one respondent indicating that they planned to use in the future for SI products were credit profile and prescription profile, both indicated by two respondents.

For the respondents offering preferred SI, the only sources indicated being used by all three companies were application questions, prescription database and MVR. Two of these companies indicated they used identity verification and one indicated they planned to use a consumer database check. No respondents indicated any plans to stop using any sources they currently use.

## Section 8 – Older Age Criteria

This section summarizes the respondents approach to special older age underwriting criteria and requirements and the older age underwriting process of preferred risk selection on Term and Permanent business.

Class	Maxi	i <mark>mum I</mark> s	sue Age	Maan	Total # of			
Class	< 65	65	70	75	80	> 80	Mean	Respondents
Preferred Class #1 (Best) NT	7%	19%	15%	33%	19%	7%	73	27
Preferred Class #2 NT	4	20	12	36	16	12	74	25
Other Preferred NT	13	13	6	38	19	13	74	16
Standard NT	7	18	18	32	14	11	73	28
Preferred Tobacco	4	21	17	38	13	8	73	24
Standard Tobacco	7	18	18	32	14	7	73	28

### 8.1a: Maximum Issue Age by Class - Fully Underwritten Term Products.

The most common maximum issue age for all classes was age 75, and the mean varied between 73 and 74. The lowest maximum age was 60 for all classes except Preferred #2 NT and Preferred Tobacco, where it was 64. The highest maximum age was 85 for all classes.

Class	Maximum Issue Age - % of Respondents						Maan	Total # of	
Class	< 65	65	70	75	80	85	> 85	Mean	Respondents
Preferred Class #1 (Best) NT	4%	-	-	7%	33%	44%	11%	82	27
Preferred Class #2 NT	-	-	-	4	42	42	13	83	24
Other Preferred NT	-	-	-	-	38	54	8	83	13
Standard NT	-	-	-	11	14	57	18	84	28
Preferred Tobacco	-	-	-	8	42	42	8	83	26
Standard Tobacco	-	-	-	11	14	57	18	84	28

#### 8.1b: Maximum Issue Age by Class - Fully Underwritten Permanent Products

As expected, the maximum issue ages are much higher for Fully Underwritten Permanent products compared to Fully Underwritten Term. The most common maximum issue age was 85, and the mean varied between 82 and 84. The lowest maximum issue age was 75 for all classes except for Preferred Class #1 NT (60) and Other Preferred NT (80). The highest maximum issue age for all classes was 90.
Ductorned Survey	Maximu	m Issue Age	Total # of		
Preferred Survey	< 70	70	75	> 75	Respondents
1995 (Term and Permanent)	16%	32%	26%	26%	50
1997 (10-year Term)	15	42	37	7	60
2002 (10-year Term)	18	34	27	20	44
2010 (Term)	26	15	33	26	27
2010 (Permanent)	4	-	7	89	27

### 8.1c: Maximum Issue Age for Preferred Class #1 (Best) NT

As expected, Term has a lower maximum age than Permanent. Therefore, when comparing the maximum age between studies, for Term, the comparison will be based on the 1997, 2002 and 2010 studies. It appears the percentage of participants that indicated a maximum issue age of <70 and >75 increased between studies, while the percentage of participants at an exact maximum issue age of 70 decreased. For Permanent, and here the comparison is between the 1995 and 2010 studies, there has been an increase in the maximum issue age. It is difficult to determine by how much because the 1995 Survey was split fairly evenly between those responding to Term products and those responding to Permanent products.

8.2: What sources of information and tests does your company use exclusively for older age underwriting or use differently than for younger ages? Please also indicate whether your company plans to begin using the source for older age underwriting or whether it plans to stop using the source within the next 6 months. Also, what sources of information and tests does your company utilize for determining whether the applicant is preferred? Please indicate whether your company plans to begin using the source for preferred underwriting or whether it plans to stop using the source within the next 6 months.

Sources of Information & Tests	% Currently Use for Older Age	% Plan to Use for Older Age	% Currently Use for Preferred Older Age	% Plan to Use for Preferred Older Age
Blood pressure (age thresholds)	71%	-	86%	-
ADL, IADL, AADL questions	62	14%	32	17%
Falls	62	-	23	-
Weight loss	62	-	27	_
Last doctor visit	57	-	36	_
BMI (different thresholds)	52	-	73	-
Cholesterol, HDL ratio (age thresholds)	52	-	73	-
NT-proBNP	48	29	27	33
Delayed Word Recall (DWR) - 10 words	43	71	18	67
Serum albumin (decreased)	38	-	23	17
Get Up and Go	38	71	14	67
Prescription profile	38	14	27	-
Driving record	38	-	45	-
Clock drawing test	33	57	5	50
Social activities per week	29	14	14	17
Treadmill EKG	24	-	18	-
Exercise per week	24	-	23	-
Living arrangements	24	-	14	-
Longevity of parents	19	-	23	-
Have pets?	19	14	5	17
Death of spouse or significant other	14	-	9	-
Hours worked per week	14	-	14	-
Mini Mental Status Exam	10	14	5	17
Plan to travel in next 12 months	10	14	9	17
Peak Flow Test	-	-	-	-
Total # of Respondents	21	7	22	6

The most common sources respondents indicated using either exclusively for older age underwriting or differently from younger ages were blood pressure (71%), followed by ADL questions, falls and weight loss (all at 62%). The Peak Flow Test was not used by any of the

respondents. The most common sources that were indicated as planning to be used were the Delayed Word Recall and Get Up and Go (both at 71%) and the Clock Drawing Test (57%).

The sources most commonly used for determining the preferred risk classification of older age applicants tended to be the traditional preferred criteria. For preferred classification of older age applicants, the most common sources utilized were blood pressure (86%), BMI and cholesterol (both at 73%) and driving record (45%). There was less use of cognitive and functional testing among the preferred older age respondents; however, the Delayed Word Recall (67%), Get Up and Go (67%) and Clock Drawing Test (50%) were the most common sources that were planned to be used. NT-proBNP was also planned be used by an additional 33% of the respondents.

No respondents indicated plans to stop using any sources they currently use both for older age underwriting in general and also preferred classification of older age applicants.

Respondents were also invited to add comments to question 8.2:

- As a client gets past age 50, and especially age 60, we expect to see some sort of regular medical care. This applies to underwriting for standard or preferred premium rates. We do not have specified separate ranges or tests for older age applicants, but do watch for any abnormal tests or for the client's Physician requesting that tests be performed and the client not having completed the testing.
- We do not utilize older age criteria outside of our normal practices. We do not offer preferred on our SI products. Our bank SI product is normally a single payment whole life product utilized as a wealth transfer sale.
- We plan to add a senior (age 70 and above) supplement to our underwriting requirements in May 2011.
- We insist on face to face application and we require a PHI on all apps over 65 and an APS and pertinent medical records.
- Maximum issue age may be up to 90 on one life for Survivorship UL; no super preferred for some VUL or max issue age is 75 or 80; most Permanent products all classes to age 85 / / max issue age for Term varies by Term period; after end of level premium period must be no more than attained age 85 in the first year after the end of the level Term period, state variations / / no plans to change in next 6 months, except add super standard to a UL product.
- Do not treat elderly different at this time.

## **Appendix A - List of Participants**

AAA Life Insurance Co Alfa Life Corp Allianz Life Allstate Life American Family Life Insurance Company American-Amicable Group Aviva USA Banner Life Citizens, Inc Grange Life Insurance Hartford Life Horace Mann Life Ins. Co. Jackson National Knights of Columbus Legal and General America Liberty Life Assurance Company of Boston Lincoln Financial Group MassMutual Financial Group MetLife Missouri Farm Bureau Mutual of Omaha Nationwide Financial Netcare Life and Health Insurance Company New York Life Northwestern Mutual Ohio National Presidential Life Principal Financial Group Protective Life Insurance Company Prudential RiverSource Life Insurance Company Royal Neighbors of America TIAA-CREF Unified Life Insurance Company

# **Appendix B – Preferred Structures Survey**

#### Introduction

This survey is designed to capture the current state of preferred risk underwriting practices in the US life insurance market. This is the most recent in a series of surveys by the Society of Actuaries (SOA) Committee on Mortality and Underwriting Surveys on this topic. The survey is for Canadian and US life insurance companies that write preferred risk business in the US.

As part of this survey, we are asking each participating company to provide complete electronic versions of their Preferred Criteria (as well as any special guidelines or 'stretch' criteria whether published or unpublished) as of October 1, 2010. If you do not have the guidelines in electronic form, we will accept a paper copy. Specifically, we are requesting the criteria used for two products:

Your company's most prevalent (biggest selling by face amount in 2009) Term Product; and Your company's most prevalent Permanent Product.

Submitting the actual criteria allows the Committee to prepare a more comprehensive report while minimizing the number of survey questions. The questions in the survey are designed to provide additional context and focus in the following areas:

General Company Information Distributions Recent Changes to Preferred Risk Criteria Internal Stretch Criteria Preferred Business Exception Practices Simplified Issue Criteria Older Age Criteria

In addition to using the collected information for this survey, we request permission to have the information used for a concurrent project by the SOA. This project involves the development of a new underwriting criteria scoring algorithm by the Underwriting Criteria Team for use with the upcoming Principles Based Reserve initiative. For the work of both the Survey Team and the Underwriting Criteria Team, all preferred criteria will be de-identified before the teams begin their analysis. All information received by the SOA is considered confidential and proprietary and will be aggregated for reporting purposes. Prior to any analysis by the committee, all company identifying information will be removed.

### **Section 1 - General Company Information**

Except for question 1.0, the questions in this section will be used to provide background information and to help categorize and analyze the overall survey information.

1.0: We have your company's permission to use your company data for:

Both the Survey Team and the Underwriting Criteria Team Survey Team Only

1.1: What is the organizational structure of your company?

Fraternal Mutual Mutual Holding Company Stock Other (please specify)

1.2: What was the total Face Amount and Policy Count of your company's Life Insurance Inforce as of 12/31/2009?

All Term (fully underwritten) products All Permanent (fully underwritten) products

1.3: What was the total Face Amount and Policy Count written in 2009 for each distribution channel for your company's fully underwritten term and permanent product lines?

Agency building Banks / Savings institutions Brokerage Direct response Home service Multiple line exclusive agency (MLEA) Personal producing general agency (PPGA) Stockbroker Worksite marketing Other1 (please describe) Other2 (please describe) Other3 (please describe) 1.4: Please describe, in general, the characteristics of the most prevalent term and permanent product that you will be using as the basis for your company's survey answers (e.g., 10-year level term, no lapse Universal Life).

Term: Permanent:

Subsequent questions in the survey may relate to either these specific products or your company's entire term and permanent portfolio.

### **Section 2 - Distributions**

The questions in this section will be used to capture key demographic information as it pertains to your company's fully underwritten term and permanent business.

2.1: What is your company's minimum Face Amount for each class? This question relates to all of your company's Term and Permanent products.

Preferred Class #1 (Best Class) Nontobacco (NT) Preferred Class #2 NT Other Preferred NT Standard NT Preferred Tobacco Standard Tobacco

2.2: For sales in 2009, please enter the following expected and actual qualification percentages for your company's preferred risk classes (by policy count). If you cannot provide a breakdown by age, please still complete the All Ages columns. [Note the first table is for the Term product used in the survey and the second is for the Permanent product.]

Term Product:

	Issue Age 25		Issue Age 25Issue Age 45Issue Age 65		Age 65	All Ages		
	Expect	Actual	Expect	Actual	Expect	Actual	Expect	Actual
	%	%	%	%	%	%	%	%
Preferred Class #1								
(Best Class) NT								
Preferred Class #2								
NT								
Other Preferred NT								
Standard NT								
Preferred Tobacco								
Standard Tobacco								

## Permanent Product:

	Issue A	Issue Age 25		Issue Age 45		Age 65	All A	Ages
	Expect	Actual	Expect	Actual	Expect	Actual	Expect	Actual
	%	%	%	%	%	%	%	%
Preferred Class #1								
(Best Class) NT								
Preferred Class #2 NT								
Other Preferred NT								
Standard NT								
Preferred Tobacco								
Standard Tobacco								

## Section 3 - Recent Changes to Preferred Risk Criteria

The questions in this section will be used to fully define any recent changes to your company's Preferred Criteria / Risk Selection process. The questions are designed to capture both the impact and direction of any changes as it pertains to your company's fully underwritten term and permanent business.

3.1: When were the Preferred Criteria submitted for this survey implemented (month/year)?

Term: Permanent:

3.2: What was the overall impact of the changes made on your company's Preferred Risk Criteria relative to the prior Preferred Risk Criteria? (Check if applicable)

	Less restrictive	About the same	More restrictive	Unknown / Other (please explain*)
Term				
Permanent				

\* Please explain Other:

3.3: Compared to your company's prior Preferred Risk Criteria, did the number of classes change? (Check if applicable)

	Decreased	Stayed the Same	Increased
Nonsmoker – Term			
Nonsmoker – Permanent			
Smoker – Term			
Smoker - Permanent			

3.4a: What resources were used to develop your company's most current Preferred Risk Criteria? (Check all that apply)

Actuarial Claims Competitor's intelligence External consultant(s) Laboratories Legal Medical R & D Reinsurers Sales / Marketing Underwriting Other (please explain)

3.4b: Which does your company consider to be the most important resource? (Choose one)

Actuarial Claims Competitor's intelligence External consultant(s) Laboratories Legal Medical R & D Reinsurers Sales / Marketing Underwriting Other (please explain)

3.5a: Is your company considering changes to the Preferred Risk Criteria between now and the end of 2011? (Check if applicable)

	We have current plans to make changes	We are considering potential changes	We have no plans to make changes
Term			
Permanent			

When does your company first plan to implement these changes? (Month, Year)

3.5b: What does your company expect the overall impact of these changes to be? (Check if applicable)

	Less restrictive	About the same	More restrictive	Unknown / Other (please explain*)
Term				
Permanent				

\* Please explain Other:

3.6: For permanent policies only, what are the considerations for changes to your company's Preferred Risk Criteria for both the current criteria and any anticipated changes by the end of 2011? (Check all that apply)

Adjust mortality Adjust qualification percentages Competitive reasons Mortality experience Part of a periodic review Placement rates Reinsurance influence Research (actuarial) Research (medical) X-Factors Other1 (please describe) Other2 (please describe) Other3 (please describe) Unknown

3.7: For permanent policies only, has your company made or is it considering making any basic structural changes to both the current preferred risk assessment process and any anticipated changes by the end of 2011? (Check all that apply)

Maintaining our current structure with our changes Moving from Knockout criteria to Debit / Credit Moving from Knockout criteria to Credit only Moving from Debit / Credit to Knockout Moving from Debit / Credit to Credit only Moving from Credit only to Knockout Moving from Credit only to Debit / Credit 3.8: For permanent policies only, what did or what does your company anticipate the impact of the changes to be to the following traditional preferred risk criteria?

		Curre	nt Criteria			Anticip	ated Change	
	Less Restrictive	About the Same	More Restrictive	Unknown	Less Restrictive	About the Same	More Restrictive	Unknown
Alcohol /								
Substance								
abuse								
Aviation								
Avocation								
Blood								
pressure								
Build								
Cholesterol								
(total)								
Cholesterol /								
HDL ratio								
Other lipids								
Driving								
Family								
history								
Foreign travel								
or residence								
Laboratory								
findings (not								
listed								
elsewhere)								
Medical								
history								
Tobacco use								
or timing								
Other1								
(please								
describe)								
Other2								
(please								
describe)								
Other3								
(please								
describe)								

3.9: For term policies only, what are the considerations for changes to your company's Preferred Risk Criteria for both the current criteria and any anticipated changes by the end of 2011? (Check all that apply)

Adjust mortality Adjust qualification percentages Competitive reasons Mortality experience Part of a periodic review Placement rates Reinsurance influence Research (actuarial) Research (medical) X-Factors Other1 (please describe) Other2 (please describe) Other3 (please describe) Unknown

3.10: For term policies only, is your company currently making, or is it considering making, any basic structural changes to both the current preferred risk assessment process and any anticipated changes by the end of 2011? (Check all that apply)

Maintaining our current structure with our changes Moving from Knockout criteria to Debit / Credit Moving from Knockout criteria to Credit only Moving from Debit / Credit to Knockout Moving from Debit / Credit to Credit only Moving from Credit only to Knockout Moving from Credit only to Debit / Credit 3.11: For term policies only, what did or what does your company anticipate the impact of the changes to be to the following traditional preferred risk criteria?

		Curre	nt Criteria		Anticipated Change				
	Less Restrictive	About the Same	More Restrictive	Unknown	Less Restrictive	About the Same	More Restrictive	Unknown	
Alcohol /		Sunt				Sume			
Substance									
abuse									
Aviation									
Avocation									
Blood									
pressure									
Build									
Cholesterol									
(total)									
Cholesterol /									
HDL ratio									
Other lipids									
Driving									
Family									
history									
Foreign travel									
or residence									
Laboratory									
findings (not									
Medical									
history									
Tobacco use									
or timing									
Other1									
(please									
describe)									
Other2									
(please									
describe)									
Other3									
(please									
describe)									

### Section 4 - Internal Stretch Criteria

The questions in this section will be used to capture information on 'stretch criteria' used to refine your company's Preferred Criteria / Risk Selection process as it pertains to your company's fully underwritten term and permanent business.

For purposes of this survey, 'stretch criteria' are defined as any formal written rules that exist outside a company's traditional published preferred criteria that allow underwriters to vary from the preferred criteria. The stretch criteria may be published or unpublished to your distribution channels.

4.1: Based on the definition above, does your company have stretch criteria for its most prevalent term and / or permanent product?YesNo

4.2a: Why were the stretch criteria implemented? (Check all that apply)

Allow more risks in a particular class Alternative to Debit / Credit Competitive reasons Enhanced underwriting flexibility Improved risk selection Meet pricing objectives Other1 (please describe) Other2 (please describe) Other3 (please describe)

4.2b: Which does your company consider to be the most important reason? (Choose one)

Allow more risks in a particular class Alternative to Debit / Credit Competitive reasons Enhanced underwriting flexibility Improved risk selection Meet pricing objectives Other1 (please describe) Other2 (please describe) Other3 (please describe) 4.3a: What resources were used to develop your company's most current stretch criteria? (Check all that apply)

Actuarial Claims External consultant(s) Laboratories Legal Medical R & D Reinsurers Sales / Marketing Underwriting Other (please explain)

4.3b: Which does your company consider to be the most important resource? (Choose one)

Actuarial Claims External consultant(s) Laboratories Legal Medical R & D Reinsurers Sales / Marketing Underwriting Other (please explain) 4.4: Which of these factors are included in your company's stretch criteria? (Check all that apply)

	Term	Permanent
Alcohol / Substance abuse		
Aviation		
Avocation		
Blood pressure		
Build		
Cholesterol (total)		
Cholesterol / HDL ratio		
Driving		
Family history		
Foreign travel or residence		
Laboratory findings (not listed elsewhere)		
Medical history		
Tobacco use or timing		
Other1 (please describe)		
Other2 (please describe)		
Other3 (please describe)		

4.5: What is the best class that your company allows to be issued using stretch criteria? (Answer this question using your company's most prevalent Term and Permanent products.)

	Preferred Class #1 (Best Class) NT	Preferred Class #2 NT	Other Preferred / Standard NT	Residual Standard NT	We do not allow stretch criteria for this product
Term					
Permanent					

4.6: For the best class that your company allows to be issued using stretch criteria, what is the expected mortality impact?

	Higher	About the Same	Lower
Term			
Permanent			

4.7: How does your company share its stretch criteria with your distribution channels? (Check one)

All are internal, non-published Some are internal, some are published All are published

4.8: For policies issued with the benefit of stretch criteria, does your company monitor: (Check all that apply)

Number of cases Percentage of cases Face amount of cases Mortality experience on these cases separately from the overall experience Other (please explain)

4.9: Is your company considering changes to its stretch criteria between now and the end of 2011?

	We have current plans to make changes	We are considering potential changes	We have no plans to make changes
Term			
Permanent			

When does your company first plan to implement these changes? (Month, Year)

### **Section 5 - Preferred Business Exception Practices**

The questions in this section will be used to define the practice of 'Preferred Business Exceptions' as it relates to the preferred risk selection process.

For purposes of this survey, Preferred Business Exceptions are defined as any deviations from your company's traditional preferred criteria (including your company's stretch criteria).

5.1: What is the best class for which your company allows Preferred Business Exceptions? (Answer this question using its most prevalent Term and Permanent products.)

	Preferred Class #1 (Best Class) NT	Preferred Class #2 NT	Other Preferred / Standard NT	Residual Standard NT	We do not allow any business exceptions for this product
Term					
Permanent					

5.2: On what percentage of policies issued does your company make a Preferred Business Exception for all Term and Permanent products in 2009?

Term: Permanent:

5.3a: What areas of the company are involved in making a specific Preferred Business Exception? (Check all that apply)

Actuarial Claims Legal Medical R & D Reinsurers Sales / Marketing Senior management Underwriting Other (please explain) 5.3b: Which area is responsible for the final decision? (Choose one) If a committee makes a final decision, please check "Other" and explain.

Actuarial Claims Legal Medical R & D Reinsurers Sales / Marketing Senior management Underwriting Other (please explain)

5.4a: For all Term and Permanent products, if your company makes a Preferred Business Exception, how would it handle this with its reinsurers? (Check all that apply)

Retain Consult with reinsurers to allow automatically Reinsure automatically but pay correct rate Reinsure automatically at special exception rate Use a special reinsurance program to handle Other (please explain)

5.4b: What is your company's primary approach? (Choose one)

Term:

Retain Consult with reinsurers to allow automatically Reinsure automatically but pay correct rate Reinsure automatically at special exception rate Use a special reinsurance program to handle Other (please explain)

Permanent:

Retain

Consult with reinsurers to allow automatically Reinsure automatically but pay correct rate Reinsure automatically at special exception rate Use a special reinsurance program to handle Other (please explain) 5.5: For your company's Preferred Business Exceptions, does it monitor: (Check all that apply)

Number of cases Percentage of cases Face amount of cases Mortality experience on these cases separately from the overall experience Other (please explain)

### Section 6 - Simplified Issue (SI) Criteria

The questions in this section will be used to analyze your company's simplified issue approach (i.e., where less than full underwriting is required) to preferred risk selection as it pertains to your company's fully underwritten term and permanent business.

6.1: Does your company offer any products on an individual basis using Simplified Issue underwriting?

Yes No

6.2: Does your company use criteria to enable it to categorize risks on a preferred basis on its Simplified Issue business?

Yes No, but we are considering or plan to offer in the near future No, and we have no plans to do so

6.3a: What are your company's SI distribution channels? (Check all that apply)

Agency building Banks / Savings institutions Brokerage Direct response Home service Multiple line exclusive agency (MLEA) Personal producing general agency (PPGA) Stockbroker Worksite marketing Other1 (please describe) Other2 (please describe) Other3 (please describe) 6.3b: What is your company's primary channel for SI. (Choose one)

Agency building Banks / Savings institutions Brokerage Direct response Home service Multiple line exclusive agency (MLEA) Personal producing general agency (PPGA) Stockbroker Worksite marketing Other1 (please describe) Other2 (please describe) Other3 (please describe)

6.4a: What is your company's maximum SI issue amount?

6.4b: What is your company's maximum SI issue amount on a preferred basis?

6.5a: What is your company's maximum SI issue age?

6.5b: What is your company's maximum SI issue age on a preferred basis?

6.6: What sources of information and tests does your company use for SI and which does it utilize for determining whether the applicant is preferred? Please also indicate whether your company plans to begin using the source or whether it plans to stop using the source within the next 6 months. (Select all that apply)

Application questions APS Avocation / Occupation questionnaire Background check Consumer database check Credit profiles Credit scores **Dried Blood Spot** Financial questionnaire Follow-up verification IAI (Insurance Activity Index) Identify verification Inspection report MIB Oral fluid Paramedical examination Personal History Interview Prescription profile Teleunderwriting Urine specimen Other1 (please describe) Other2 (please describe) Other3 (please describe)

#### Section 7 - Older Age Criteria

The questions in this section will be used to understand your company's approach to applying special older age criteria and requirements to the process of preferred risk selection on your company's fully underwritten term and permanent business.

7.1: Please provide the maximum issue age by class on all of your company's fully underwritten Term and Permanent products.

Preferred Class #1 (Best Class) NT Preferred Class #2 NT Other Preferred NT Standard NT Preferred Tobacco Standard Tobacco

7.2: What sources of information and tests does your company use exclusively for older age underwriting or use differently than for younger ages? Which does it utilize for determining whether the applicant is preferred? Please also indicate whether your company plans to begin using the source for older age underwriting or whether it plans to stop using the source within the next 6 months. (Select all that apply)

Blood pressure (different thresholds) BMI (height/weight) (different thresholds) Peak Flow Test TM EKG Cholesterol, HDL ratio (different thresholds) NT-proBNP Serum albumin (decreased) Clock drawing test Delayed Word Recall (DWR) - 10 words Mini Mental Status Exam Get Up and Go ADL, IADL, AADL questions or questionnaire(s) Last doctor visit Prescription profile Longevity of parents Driving record Falls Weight loss Death of spouse or significant other Exercise per week Have pets? Hours worked per week

Living arrangements Plan to travel in next 12 months Social activities per week Other1 (please describe) Other2 (please describe) Other3 (please describe) Other4 (please describe) Other5 (please describe)