

Analysis of Claim Incidence Experience from 2006 to 2014





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AUTHOR Society of Actuaries' Individual Disability
Experience Committee

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Section 1: Introduction

The Individual Disability Experience Committee (IDEC) of the Society of Actuaries has analyzed industry Individual Disability Income (IDI) claim incidence and termination experience trends relative to the 2013 IDI Valuation Table (2013 IDIVT) base incidence rates. This report is intended for the benefit of the Society of Actuaries. This report discusses claim incidence, demographic, and product trends for IDI business from 2006 through 2014. The IDEC is preparing a similar report on IDI claim termination rate experience over this same period of time.

1.1 Background

In 2013, the IDEC published a report analyzing the industry IDI claim incidence and termination experience trends relative to the 1985 Commissioner's Individual Disability Tables A and C (CIDA, CIDC)¹. The claim incidence database developed by the IDEC for this report covered the years 1990 to 2006. The claim termination database covered the years 1990 to 2007. The IDEC claim incidence and termination databases served as the data sources for industry experience for the development of the 2013 IDIVT, which was approved by the National Association of Insurance Commissioners (NAIC) in August 2016 to replace the 1985 CIDA and CIDC tables as statutory minimum reserve morbidity bases for IDI.

Subsequently, the SOA engaged Milliman, Inc., to analyze IDI claim trends emerging over the 1990 – 2007 period relative to the 2013 IDIVT base claim incidence and termination rates. Milliman used the IDEC claim databases that were the bases of the 2013 IDIVT. Milliman released the incidence report in January 2018 (“the Milliman Claim Incidence Report”)².

Chart 1.1 shows the pre-tax profit margins for noncancelable (“noncan”) IDI business, which represents approximately 90% of all IDI inforce premium from 1988 through 2017. These results were published in the November 2018 issue of the Disability Newsletter³. Pre-tax profit margins peaked in 2007, but remained relatively stable since then.

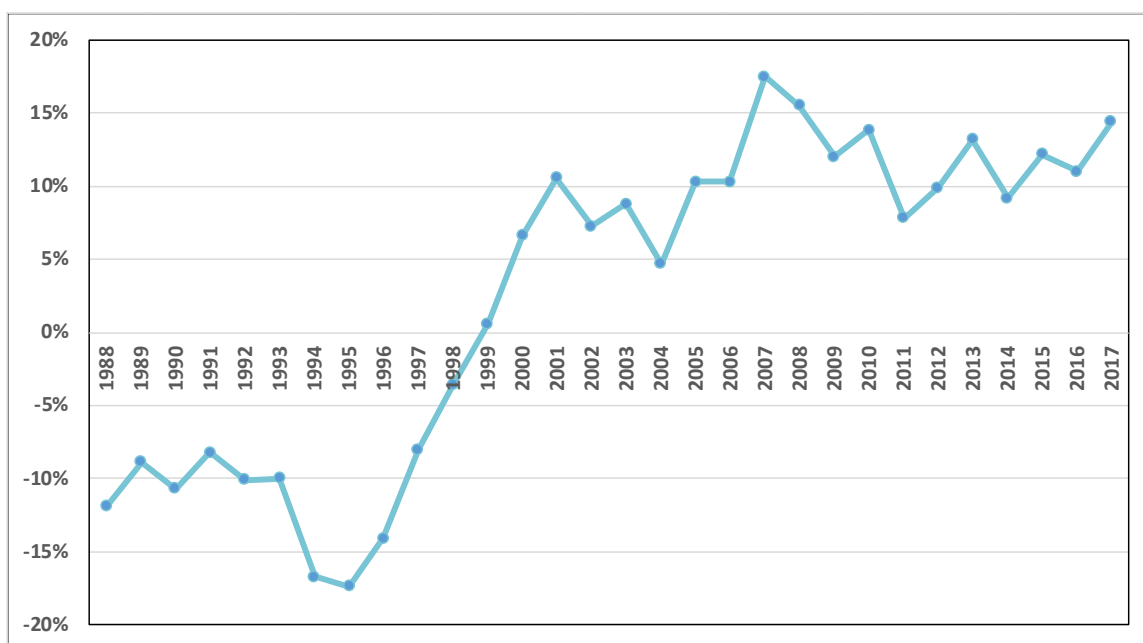
¹ *Report of the Individual Disability Experience Committee Analysis of Experience from 1990 to 2007*, Society of Actuaries (SOA), March 2013, <http://research-1990-2007-indiv-analysis-experience.pdf>.

² *Milliman Claim Incidence Report*, SOA, Beal, R., January 2018, <http://assets.milliman.com/downloads/claim-incidence-trend-report.pdf>.

³ “Noncancelable IDI: 2017 Financial Results,” Beal, R. and Seliber, M, published in the *Disability Newsletter*, November 2018, Milliman Inc., <http://assets.milliman.com/downloads/noncancelable-IDI-2017-Financial-Results.pdf>

Chart 1.1

ANNUAL NONCON STATORY MARINS AFTER DIVIDENDS AND BEFORE FIT FOR 16 IDI WRITERS FROM 1988 THROUGH 2017 AS PERCENT OF EARNED PREMIUM



Many IDI companies addressed the severe financial losses suffered in the 1990's by implementing stronger underwriting and claim management practices and revising their IDI contracts and pricing for new business to correct weaknesses found in the earlier contracts. Since the 1990's, the make-up of the IDI business has slowly changed:

- Doctors and other medical occupations now comprise the largest occupational grouping;
- The employer-sponsored multi-life market is growing much faster than the individual market;
- Voluntary guaranteed standard issue underwriting has become accepted among companies, as well as more competitive;
- New annualized premium has grown at less than a 3% annual growth rate since 2005; and
- The low interest rate environment of the most recent years may have caused some companies to utilize stronger underwriting and claims practices in order to stay competitive.

The scope of the IDEC 2006 – 2014 claim incidence and termination studies has been expanded in order to obtain greater insight into emerging changes in the IDI markets and underwriting methods and the resulting claims experience.

1.2 Contributors

The IDEC 1990 - 2006 database was developed from two separate industry data calls, one covering the period 1990 - 1999 and a later one covering the period 2000 - 2007. The most recent IDEC study, which was completed in 2018, covers the period 2006 through 2014.

Table 1.1 lists the companies that contributed their IDI policy and claims data to the three IDEC data calls. Three companies that contributed to the 2000 – 2006 data call did not contribute to the most recent call. The size of these three IDI blocks were relatively small compared to those of the other contributors.

Table 1.1
COMPANIES CONTRIBUTING TO THE IDEC DATA CALLS

Contributors	1990-1999	2000-2006	2005-2015
Ameritas Life Insurance Corporation (Union Central)	X	X	X
Assurity Life Insurance Company			X
Berkshire Life Insurance Company of America	X	X	X
Guardian Life Insurance Company		X	X
Illinois Mutual Life Insurance Company	X	X	X
Massachusetts Casualty Insurance Company	X	X	
Massachusetts Mutual (including Connecticut Mutual)	X	X	X
Monarch Life Insurance Company (including Penn Mutual)	X	X	
Mutual of Omaha Insurance Company		X	
Northwestern Mutual Life Insurance Company	X	X	X
Paul Revere Life Insurance Company	X	X	X
Principal Financial Group	X	X	X
Provident Life & Accident Insurance Company	X	X	X
RiverSource Life Insurance Company		X	X
Standard Life Insurance Company		X	X
Trustmark Life Insurance Company	X		

1.3 Scope and Purpose

This report studies IDI claim incidence trends from 2006 through 2014 relative to the 2013 IDIVT base incidence rates, i.e., the “expected” basis. Although data was collected for years 2005 and 2015, it was excluded from this study. Year 2005 was a partial year and incidence experience in year 2015 was not fully developed at the time the data was collected.

The 2013 IDIVT is a graduated model of average industry experience from 1990 through 2006. The purpose of this analysis was to quantify how experience has changed over time relative to the expected basis for key subsets of the business. The results of the analysis provide important insight into the nature of the IDI risk and underlying trends.

The IDEC database contains records for six types of IDI contracts:

- *Accident and sickness (AS)* — The contracts provide personal IDI coverage that make up the large majority of the IDI experience. Elimination periods range from 0 days to 2 years, and benefit periods range from short-term (e.g., 24 months) to a specific age (e.g., 65, 70) or lifetime. The face amount of AS policies are described in terms of the maximum monthly benefit.
- *Business overhead expense (BOE)* — The contracts reimburse business owners for overhead expenses incurred while they are disabled. These policies typically have short elimination periods (e.g., 30 days or less) and short maximum benefit periods (e.g., 24 months or less).

- *Disability buy-out (DBO)* — These contracts provide lump-sum benefits at the end of long elimination periods (e.g., at least one year) to business owners for buying out the business share of a disabled partner. Some DBO policies provide monthly benefits instead of lump-sum benefits.
- *Accident only (AO)* — These contracts are personal IDI policies that pay benefits only in the event of an accident. The face amount of AO policies are described in terms of the maximum monthly benefit.
- *Key person (KP)* — These contracts provide monthly benefits to businesses to compensate for losses resulting from key employees being disabled. Like OE policies, KP policies typically have short elimination and benefit periods, although some KP policies are designed similar to DBO policies with a long elimination period (e.g., 365 days) and a lump-sum benefit.
- *Other* — This category includes contract types not listed above and that were issued mostly prior to 1990.

The 2013 IDIVT base incidence rates vary by elimination period, occupation class, issue age, and gender. By definition, the base incidence rates do not include valuation margins. For the purpose of calculating statutory minimum active life reserves, the 2013 IDIVT base claim incidence rates are additionally modified to reflect differences by contract type, smoker status, benefit period, and market/underwriting type. Appendix A of this report provides the 2013 IDIVT claim incidence modifiers. Except for specific analyses (e.g., trends by market and underwriting method), the claim incidence rates used as the expected basis for the analyses described in this report are derived from the 2013 IDIVT claim incidence rates after the application of the claim incidence modifiers.

IDI claim incidence experience is described in terms of actual-to-expected (A/E) ratios in Section 3. Three types of A/E ratios are discussed in this report:

- *Unmodified A/E incidence ratios* — The expected basis is the 2013 IDIVT incidence rates before the application of the claim incidence modifiers described in Appendix A. These are used primarily in the Milliman Claim Incidence Report.
- *Modified A/E incidence ratios* — The expected basis is the 2013 IDIVT incidence rates after the application of all of the claim incidence modifiers described in Appendix A. Most of the claim incidence analysis in this report uses the modified A/E incidence ratios.
- *Semi-modified A/E incidence ratios* — The expected basis is the 2013 IDIVT incidence rates after the application of all claim incidence modifiers except for the marketing/underwriting modifiers. The semi-modified A/E incidence ratios are used to observe and compare the underlying incidence trends affected by market and underwriting methods without the potential distortion created by the marketing and underwriting claim incidence modifiers.

This report is comprised of the following sections:

Section 1 [Introduction](#)

Section 2 [Acknowledgements](#)

Section 3 [Study Highlights](#)

This section summarizes significant demographic, product, and claim incidence trends discussed in Sections 3 and 4.

Section 4 [Claim Incidence Trends](#)

This section discusses claim incidence relative to the 2013 IDIVT claim incidence during the 2006 – 2014 period. Claim incidence trends are studied by contract, occupation class, specific occupation, gender, attained age, maximum benefit period, elimination period, cost-of-living benefits, smoker status, market, payor type, underwriting type, state of issue, and size of monthly benefit.

Section 5 Demographic and Product Trends

This section discusses changes in the profile of IDI inforce and new business by contract, occupation class, gender, attained age, smoker status, maximum benefit period, elimination period, cost-of-living benefits, market, payor type, underwriting method, state of issue, and size of monthly benefit.

Appendix A 2013 IDIVT Claim Incidence Modifiers

Appendix A provides the claim incidence modifiers that were applied to the 2013 IDIVT base incidence rates to produce the expected incidence basis.

Appendix B IDI Claim Incidence Experience Detail by State of Issue

Appendix B provides the modified and unmodified A/E claim incidence ratios, indemnity exposure, and volume of Claim Count by state of issue, listed in alphabetical order, for the 2006 - 2014 study period.

The discussion in Section 3 includes charts to highlight and illustrate the underlying claim and demographic trends. The IDI details provided in Sections 4 and 5 use only tables to display the results. These tables are also in an Excel file, which accompanies this report.

Section 2: Acknowledgements

Deepest gratitude goes to those without whose efforts this project could not have come to fruition: the Individual Disability Experience Committee (IDEC) for their diligent work in reviewing and editing this report for accuracy and relevance.

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Section 3: Study Highlights

This section highlights key results from Sections 4 and 5.

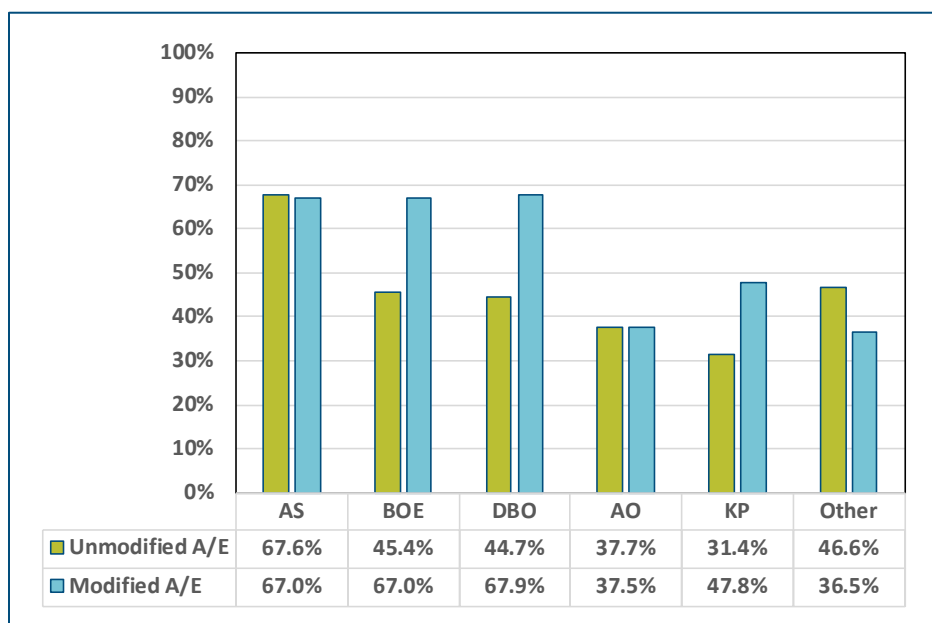
3.1 Highlights of Claim Incidence Trends

Unless otherwise stipulated, Incidence experience is presented in terms of A/E incidence ratios as measured by indemnity, not by policy count.

- This is the first IDEC study in which the claim incidence experience has been reported where the expected basis is primarily the 2013 IDIVT after the claim incidence modifiers (see Appendix A) have been applied. Chart 3.1 compares the unmodified and modified A/E incidence ratios by contract type over the 2006 - 2014 study period. The 66.9% claim incidence modifier for business products (i.e., BOE, DBO, and KP) is the main cause behind the difference between the unmodified and modified A/E incidence ratios for the business contracts.

Chart 3.1

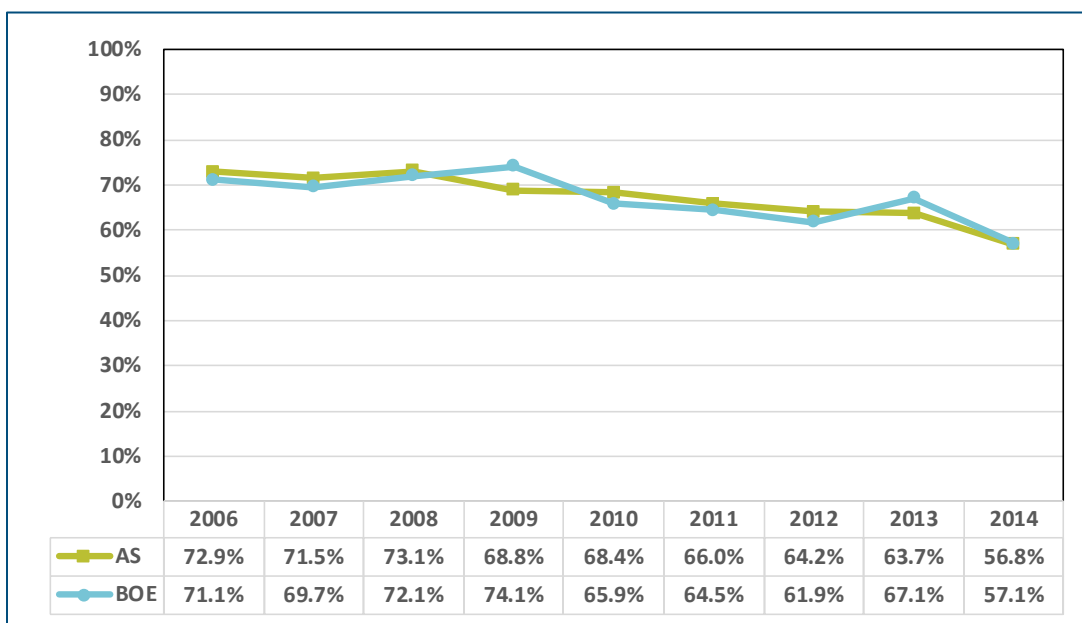
MODIFIED AND UNMODIFIED A/E INCIDENCE RATIOS BY CONTRACT TYPE - STUDY PERIOD 2006 - 2014



- Both AS and BOE policies experienced improving and closely parallel A/E claim incidence ratios throughout the 2006 - 2014 study period. Chart 3.2 shows the annual modified A/E incidence ratios for AS and BOE policies by study period from 2006 through 2014.

Chart 3.2

MODIFIED A/E INCIDENCE RATIOS FOR AS AND BOE POLICIES BY STUDY YEAR - 2006 THROUGH 2014



- All five IDEC occupation classes, which are described below, experienced generally decreasing modified A/E incidence ratios throughout the 2006-2014 study period for the AS policies.

Class M - All medical occupations, e.g., doctors, surgeons, dentists, nurses, podiatrists, veterinarians, psychologists, psychiatrists, pharmacists

Class 1 - All nonmedical white-collar and professional occupations

Class 2 - Skilled labor and most sales-related occupations

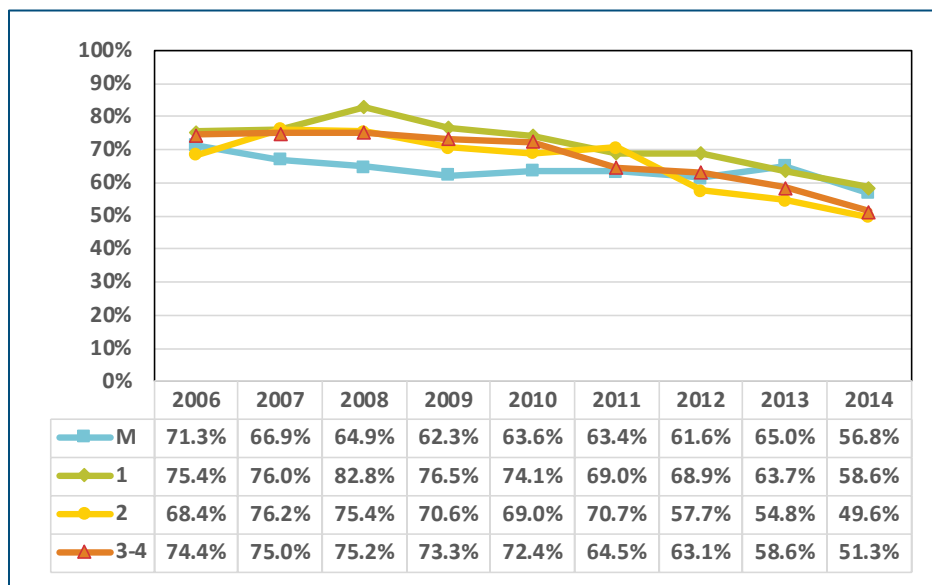
Class 3 - Blue-collar occupations with light manual duties

Class 4 - Blue-collar occupations with heavy manual duties

- Chart 3.3 compares the annual modified A/E incidence ratios by occupation class and study year from 2006 through 2014. A small jump in the A/E ratios observed in occupation class 1 around 2008 may reflect the impact on IDI claim activity of the economic recession that occurred around that time.

Chart 3.3

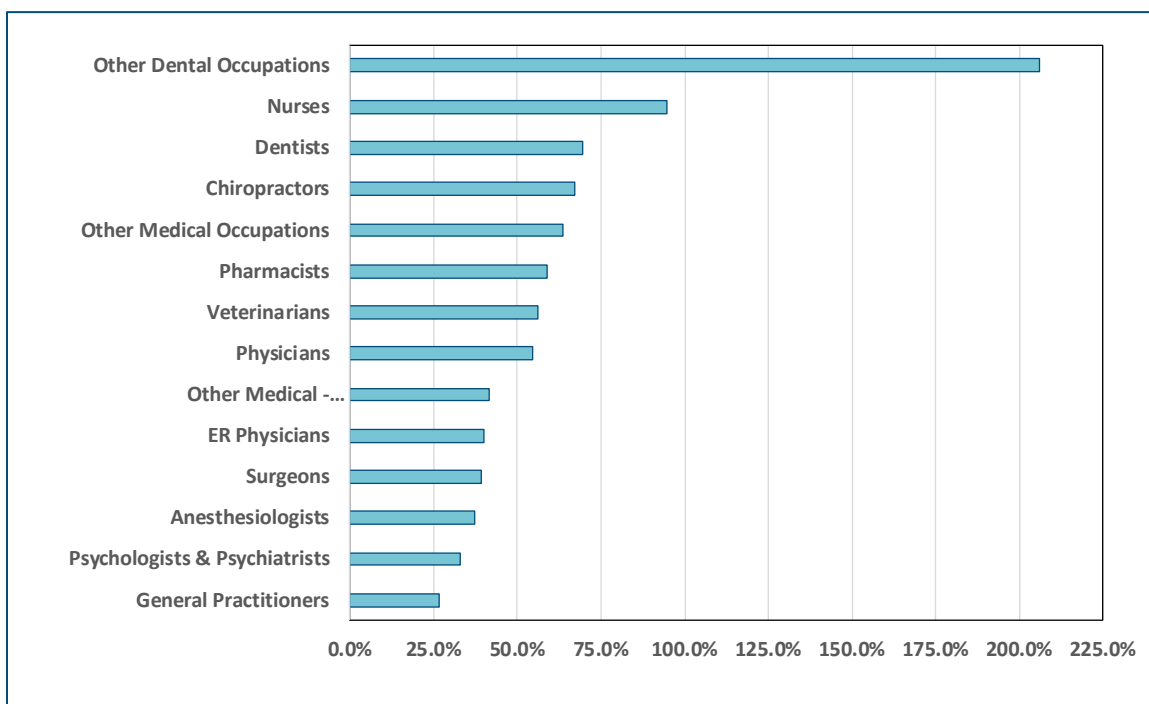
MODIFIED A/E INCIDENCE RATIOS FOR AS BY OCCUPATION CLASS AND STUDY YEAR - 2006 THROUGH 2014



- This incidence study is the first time that the IDEC has been able to report A/E incidence results by specific medical and non-medical occupations. The results shown below are limited to AS business issued since 2000. Chart 3.4 compares the modified A/E incidence ratios for the medical occupation categories over the 2006 - 2014 study period. General practitioners have the lowest A/E incidence ratio, and other dental occupations have the highest.
- Please note that, in more recent years, insurers' occupation coding has become more granular, so groupings may not be homogenous over the 2000 to 2014 period.

Chart 3.4

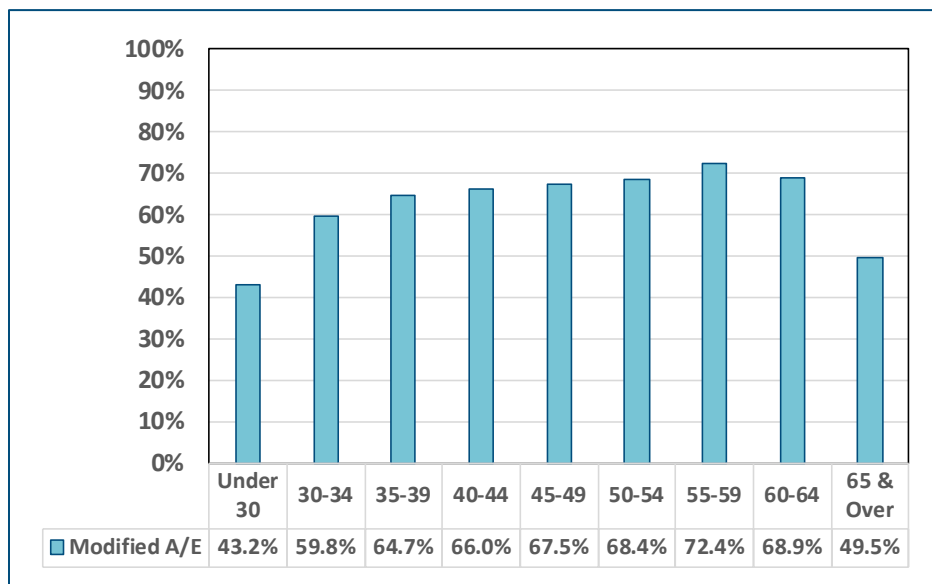
MODIFIED A/E INCIDENCE RATIOS FOR MEDICAL OCCUPATIONS ISSUED IN YEARS 2000 - 2014



- Modified A/E incidence ratios were generally consistent by attained age, except for ages under 30 and ages 65 and higher. Chart 3.5 shows the modified A/E incidence ratios by attained age over the study period 2006 - 2014. The low A/E incidence ratios for ages 65 and higher may be due in large part to the requirement that insureds be gainfully employed in order to renew their IDI coverage beyond the end of the normal renewal period, e.g., age 65.

Chart 3.5

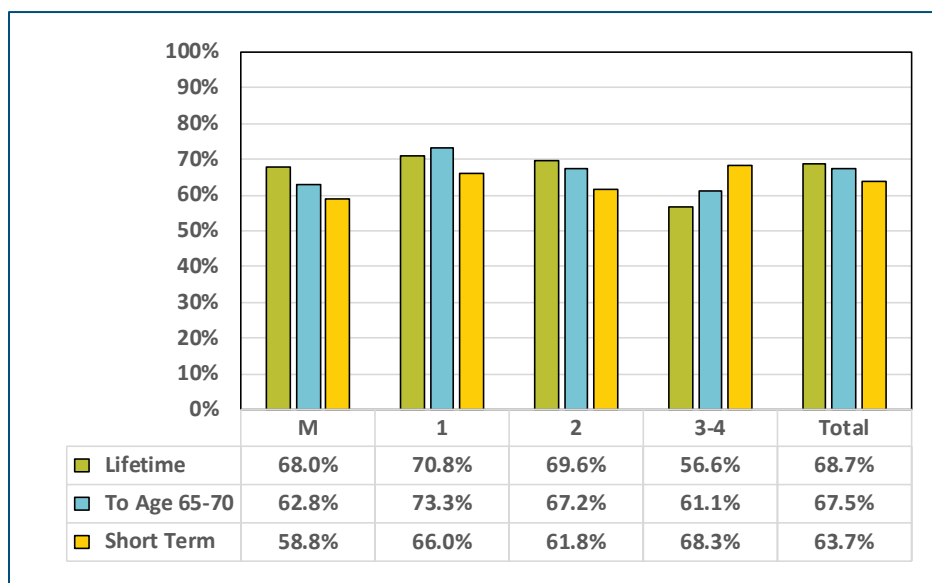
MODIFIED A/E INCIDENCE RATIO BY ATTAINED AGE FOR STUDY YEARS 2006 - 2014



- The modified A/E ratios for AS policies with lifetime maximum benefit periods were slightly higher than those with To Age 65-70 maximum benefit periods, although this varies by occupation class. AS policies with short-term maximum benefit periods have lower A/E ratios than lifetime and To Age 65-70, except for occupation class 3-4. Chart 3.6 compares the modified A/E incidence ratios by maximum benefit period and occupation class over the 2006 - 2014 study period.

Chart 3.6

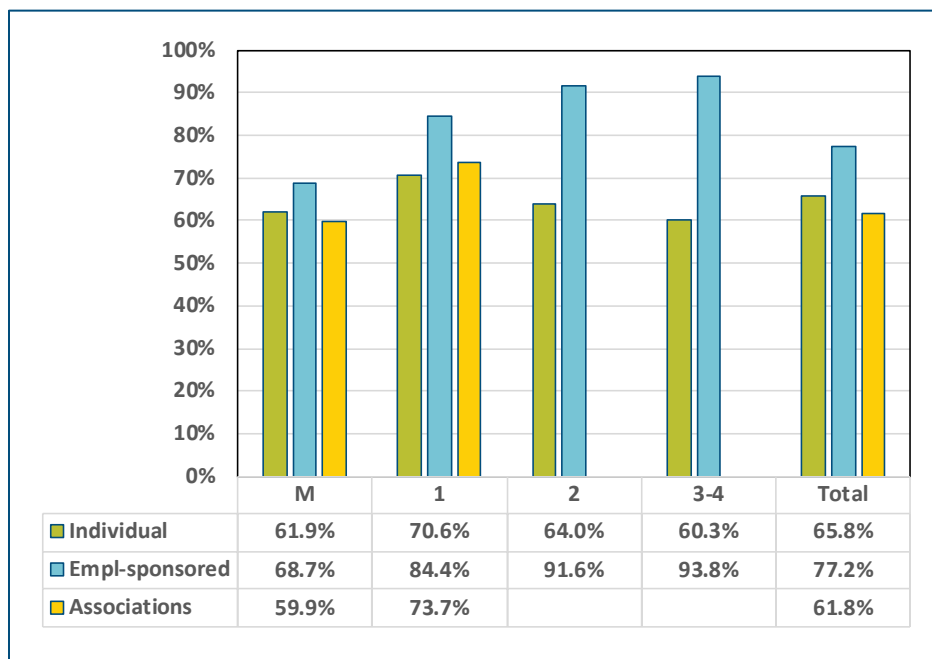
MODIFIED A/E INCIDENCE BY OCCUPATION CLASS AND MAXIMUM BENEFIT PERIOD FOR STUDY PERIOD 2006 - 2014



- In the analysis of incidence experience by market discussed below, only AS policies with To Age 65-70 maximum benefit periods (BP) and 30+ day elimination periods (EP) have been included to ensure more homogeneity among the various subsets of business. Chart 3.7 compares the modified A/E ratios by market and occupation class over the 2006 - 2014 study period. The results combine all forms of underwriting. Employer-sponsored AS business has higher modified A/E incidence ratios than the individual and association markets in all occupation classes. This is different from results observed during the 1990 - 2006 study period, which showed that the employer-sponsored market had significantly lower A/E incidence ratios than the other markets.

Chart 3.7

MODIFIED A/E INCIDENCE RATIOS BY MARKET AND OCCUPATION CLASS FOR STUDY PERIOD 2006 - 2014 TO AGE 65-70 BP AND 30+ DAY EP'S

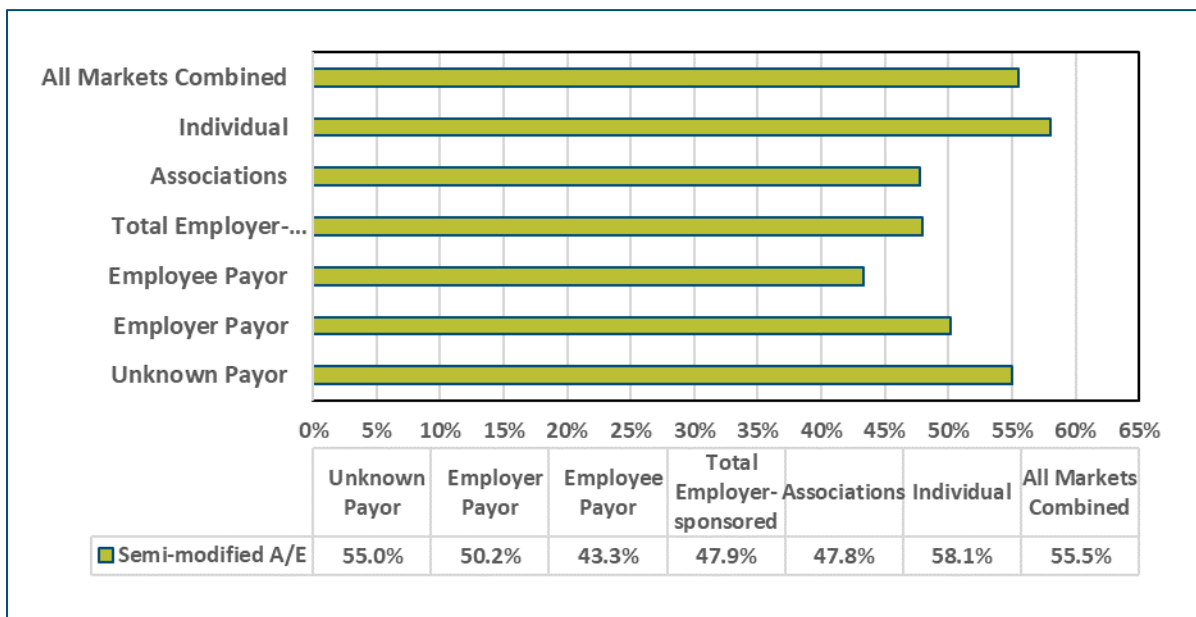


- The employer-sponsored market has been separated into three payor segments for business issued since 2000:
 1. *Employee payor* - The premium is largely, if not 100%, paid by the employee and the purchase of the IDI coverage by eligible employees under the employer-sponsored plan is voluntary.
 2. *Employer payor* - The premium is largely, if not 100%, paid by the employer and the purchase of the IDI coverage by eligible employees under the employer-sponsored plan is mandatory.
 3. *Unknown payor* – The subset represents employer-sponsored plans where companies were unable to distinguish between employee or employer payor. It contains an unknown mixture of employee and employer payor business.
- In order to understand the underlying differences in A/E ratios by market and underwriting type, semi-modified A/E incidence ratios, in which the market and underwriting claim incidence modifiers have been removed, were introduced. We also restricted our analysis to policies issued since 2000 when the coding of underwriting type and payor segments was much more robust among the contributing companies.

- The medically underwritten employer-sponsored business issued in the employee payor segment has the lowest A/E ratios among the various market/payor segments. Chart 3.8 shows the semi-modified A/E incidence ratios by market/payor segment over the 2006 - 2014 study period for the medically underwritten business issued in years 2000 - 2014.

Chart 3.8

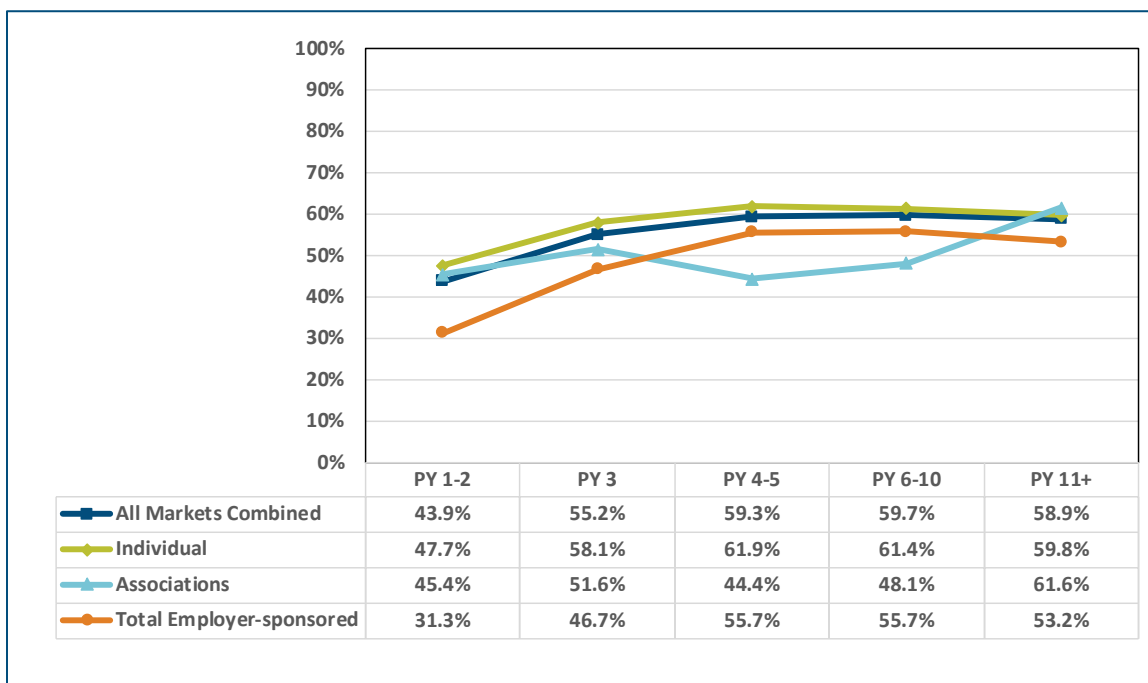
SEMI-MODIFIED A/E INCIDENCE RATIOS BY MARKET AND PAYOR SEGMENT MEDICALLY UNDERWRITTEN AS BUSINESS ISSUED IN 2000 - 2014 TO AGE 65-70 BP'S & 30+ DAYS EP



- The biggest differences by market for medically underwritten business occur in the first five policy years. Chart 3.9 compares the semi-modified A/E ratios for the medically underwritten business for each market by policy year over the 2006 - 2014 study period. The results of the employer-sponsored market, which has the lowest average medically underwritten A/E incidence ratios among the three markets, combine the results of the three payor segments.

Chart 3.9

SEMI-MODIFIED A/E INCIDENCE RATIOS BY MARKET AND POLICY YEAR MEDICALLY UNDERWRITTEN BUSINESS ISSUED IN 2000 - 2014 TO AGE 65-70 BP'S & 30+ DAYS EP

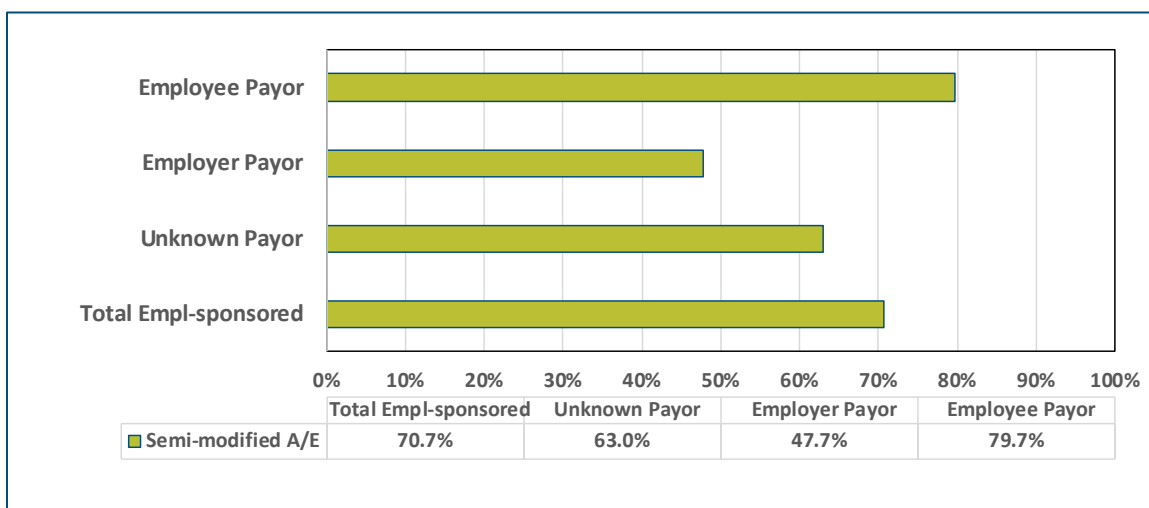


- There were apparent inconsistencies among contributors in the labeling of guaranteed standard issue (GSI) and guaranteed-to-issue (GTI) underwriting. Consequently, we have combined the GSI and GTI underwritten businesses for our analysis and labeled the result “guaranteed issue.”

- The employee payor segment has the highest semi-modified A/E incidence ratio for employer-sponsored guaranteed issue business as a result of voluntary participation, while the employer payor segment has the lowest A/E ratio as a result of mandatory participation. The semi-modified A/E incidence ratio for the unknown payor segment falls between the A/E ratios for the employee and employer payor segments. Chart 3.10 compares the semi-modified A/E incidence ratios of the guaranteed issue business issued in the three payor segments of the employer-sponsored business over the 2006 - 2014 study period.

Chart 3.10

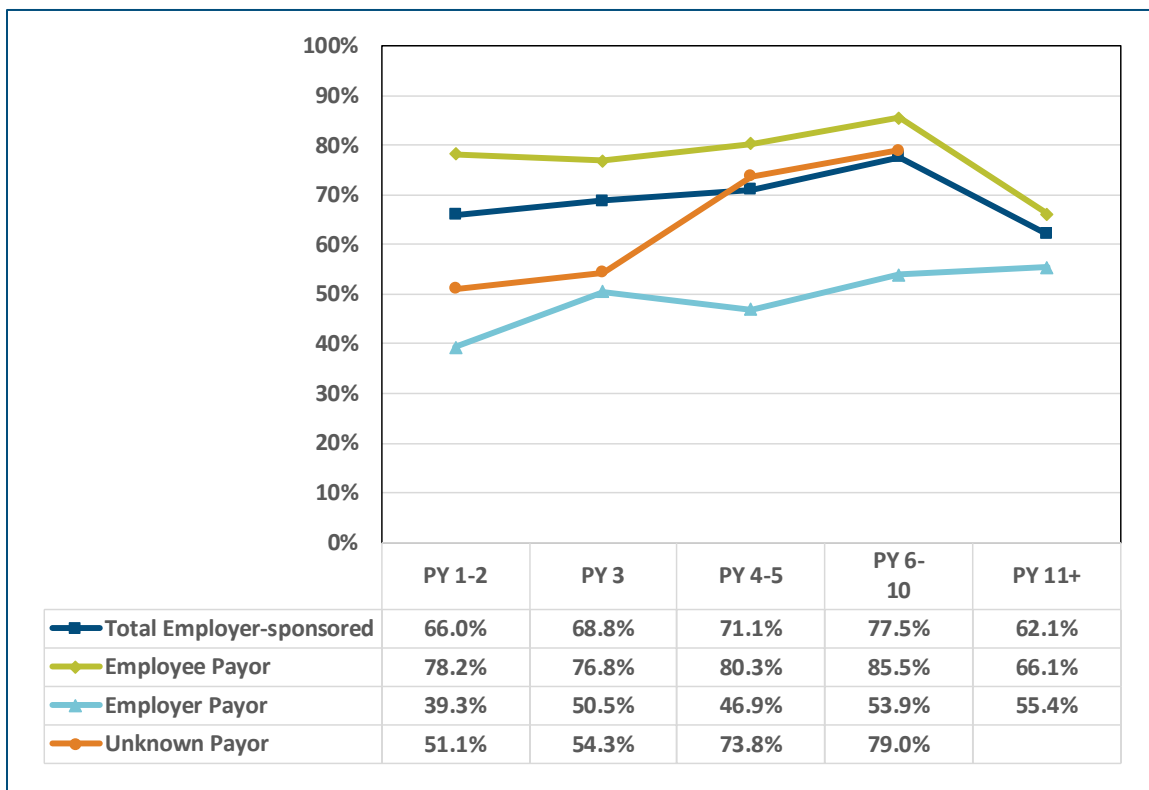
SEMI-MODIFIED A/E INCIDENCE RATIOS FOR GUARANTEED ISSUE BUSINESS BY PAYOR SEGMENT IN THE EMPLOYER-SPONSORED BUSINESS ISSUED 2000 - 2014 TO AGE 65-70 BP'S & 30+ DAYS EP



- Chart 3.11 illustrates significantly different patterns of semi-modified A/E incidence ratios by policy year for the three payor segments of the employer-sponsored market. Differences in the A/E incidence ratios by payor segment in the employer-sponsored market largely disappear after the first ten policy years.

Chart 3.11

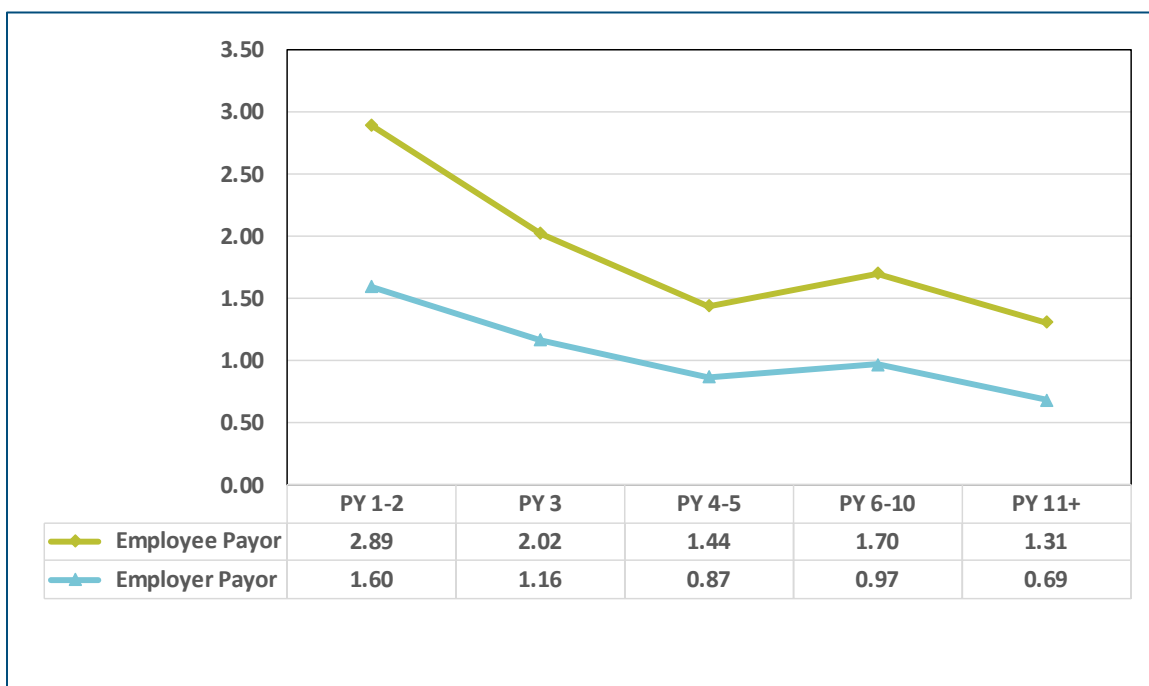
SEMI-MODIFIED A/E INCIDENCE RATIOS FOR EMPLOYER-SPONSORED MARKET GUARANTEED ISSUE - BY POLICY YEAR - ISSUED IN 2000 - 2014 TO AGE 65-70 BP'S & 30+ DAYS EP



- The semi-modified A/E incidence ratios for the employee payor segment is approximately twice the level in the employer segment during the first two policy years. Chart 3.12 illustrates the different levels of anti-selection generated by guaranteed issue underwriting in the employee and employer payor segments of the employer-sponsored market by comparing the ratios of (1) their semi-modified A/E ratios for the guaranteed issue business to (2) their semi-modified A/E ratios for medically underwritten business.

Chart 3.12

RATIOS OF (1) SEMI-MODIFIED A/E INCIDENCE RATIOS FOR GUARANTEED ISSUE TO (2) SEMI-MODIFIED A/E INCIDENCE RATIOS FOR MEDICALLY UNDERWRITTEN BY POLICY YEAR FOR THE EMPLOYEE AND EMPLOYER PAY SEGMENTS OF THE EMPLOYER-SPONSORED MARKET ISSUED IN 2000-2014 – TO AGE 65-70



- There are significant differences in A/E incidence ratios by state of issue. Chart 3.13 shows the modified A/E incidence ratios for the ten states with the highest A/E ratios over the 2006 - 2014 study period. Chart 3.14 shows the average modified A/E incidence ratios for the ten states with the lowest ratios over the 2006 - 2014 study period. The District of Columbia and Puerto Rico are included among the 50 states. Rhode Island has the highest A/E incidence ratios among all of the states, followed by California, while Wyoming has the lowest, followed by Puerto Rico.

Chart 3.13

TEN STATES WITH THE HIGHEST AVERAGE MODIFIED A/E INCIDENCE RATIOS OVER THE 2006 - 2014 STUDY PERIOD

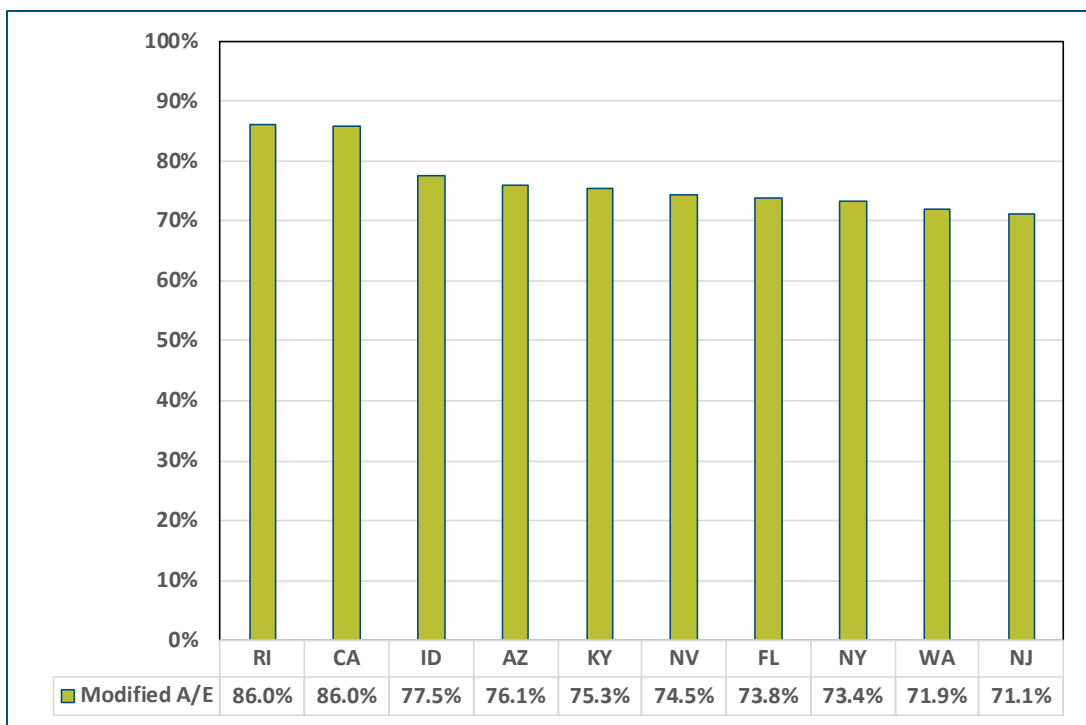
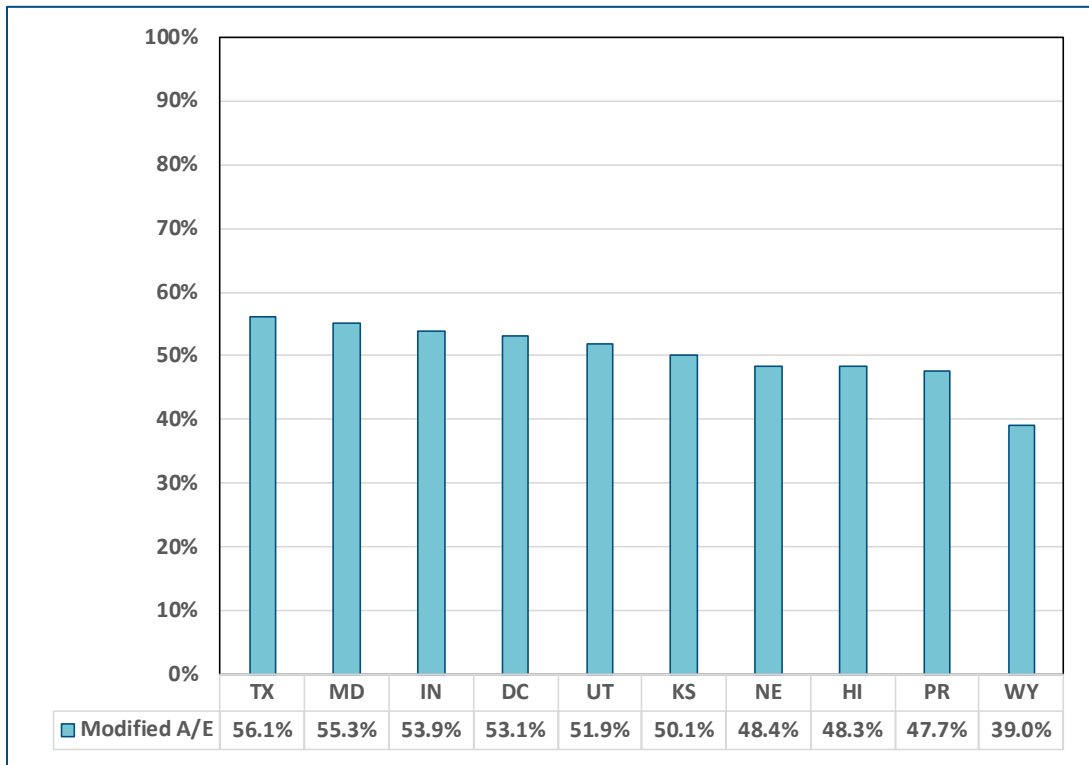


Chart 3.14

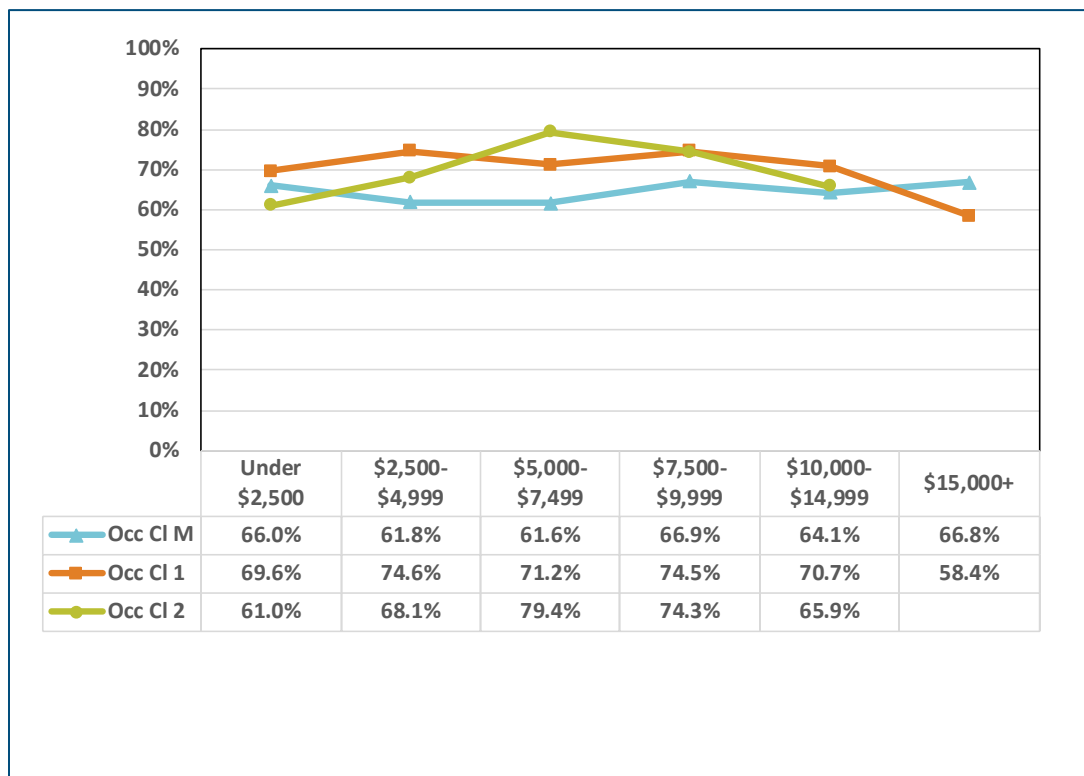
TEN STATES WITH THE LOWEST AVERAGE MODIFIED A/E INCIDENCE RATIOS OVER THE 2006 - 2014 STUDY PERIOD



- Chart 3.15 compares the modified A/E incidence ratios by policy size band for occupation classes M, 1, and 2. Occupation class 3-4 was excluded because over 99% of the policies have face amounts under \$5,000. Although the A/E ratios decreased somewhat at the upper policy size bands, there did not appear to be significant differences by policy size bands.

Chart 3.15

MODIFIED A/E INCIDENCE RATIOS BY POLICY SIZE BANDS AND OCCUPATION CLASS OVER THE 2006 - 2014 STUDY PERIOD

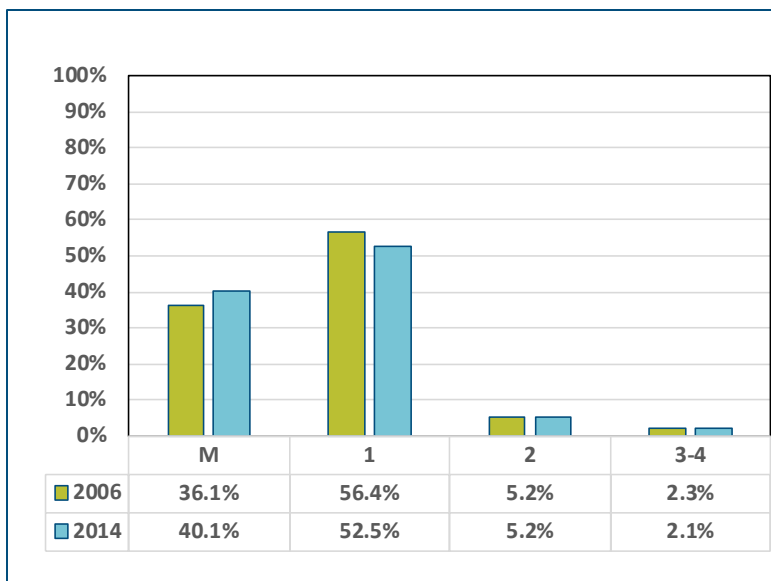


3.2 Highlights of Demographic and Product Trends

- AS contracts comprised 94% of all IDI policies during the 2006 - 2014 study period, BOE contracts comprised 4%, and DBO contracts comprised 1%. Accident only, key person, and all other contract types comprised only 1%.
- Occupation classes M and 1 together represented over 92% of the AS inforce indemnity with occupation class 1 being the largest class. Occupation class M has been increasing, while occupation class 1 has been decreasing. Chart 3.16 shows the change in the distribution of the AS inforce indemnity by IDEC occupation class from 2006 to 2014.

Chart 3.16

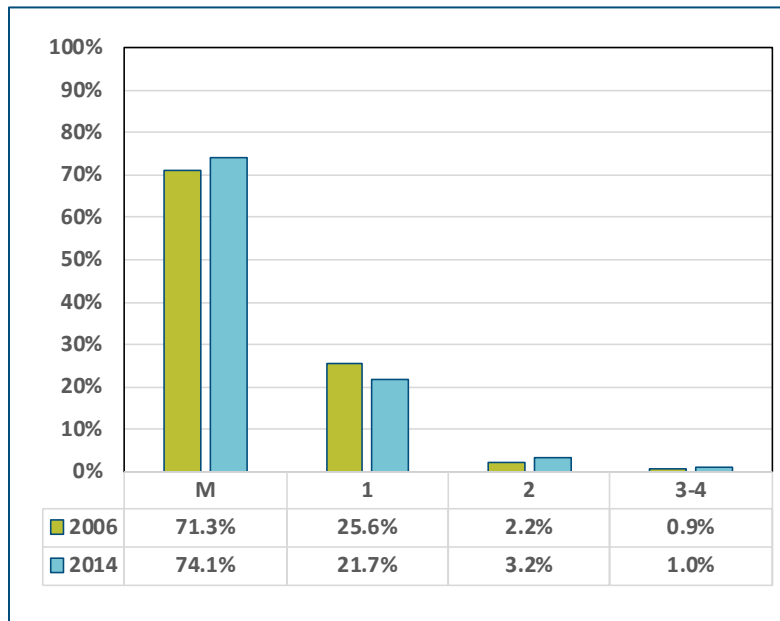
PERCENTAGE OF AS INFORCE INDEMNITY BY OCCUPATION CLASS - 2006 VS 2014



- Occupation classes M and 1 together represented over 96% of the BOE inforce indemnity with occupation class M being the largest class. As with AS contracts, the share of BOE inforce in occupation class M continues to grow, while that in occupation class 1 continues to decrease. Chart 3.17 illustrates the change in the distribution of the BOE inforce indemnity by IDEC occupation class from 2006 to 2014.

Chart 3.17

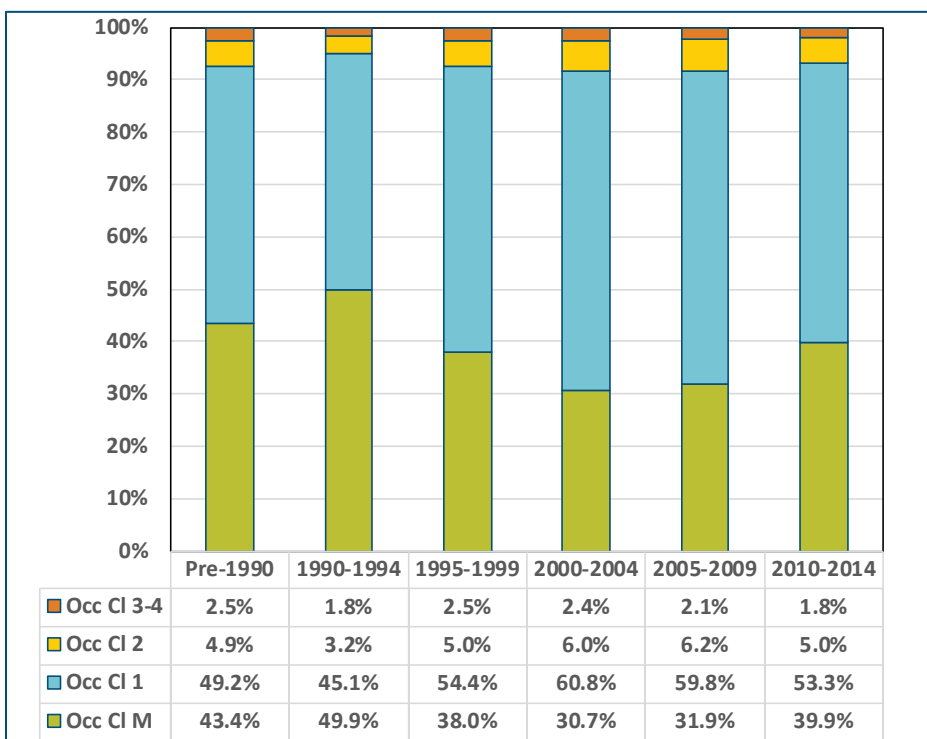
PERCENTAGE OF BOE INFORCE INDEMNITY BY OCCUPATION CLASS - 2006 VS 2014



- Since issue year 2005, the percentage of new business issued to occupation class M has been increasing steadily, while that of occupation class 1 has been decreasing. Chart 3.18 shows the distribution of the AS indemnity by IDEC by occupation class and issue year.

Chart 3.18

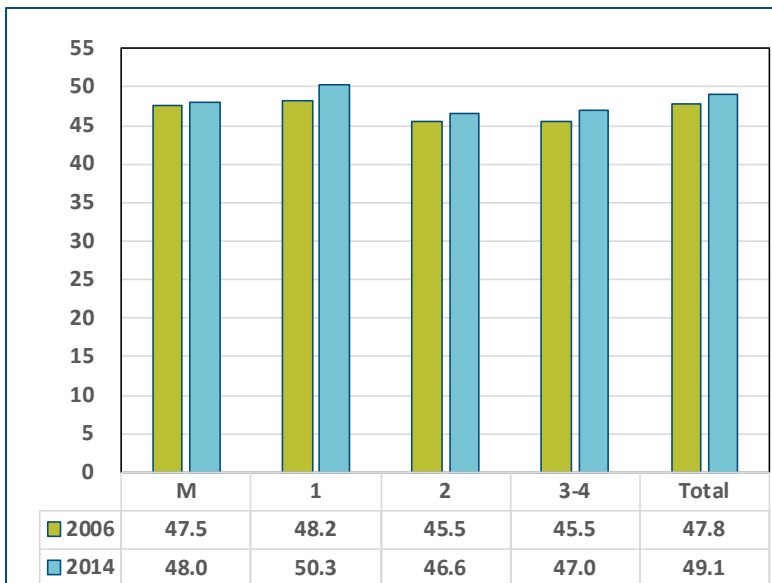
DISTRIBUTION OF AS INDEMNITY BY OCCUPATION CLASS AND ISSUE YEAR



- The average attained age of the AS inforce (weighted by indemnity) increased from 47.8 in 2006 to 48.7 in 2014. The average age increased in all occupation classes. Occupation class 1 has the oldest average attained age. Chart 3.19 shows the change in the average attained age from 2006 through 2014 by occupation class.

Chart 3.19

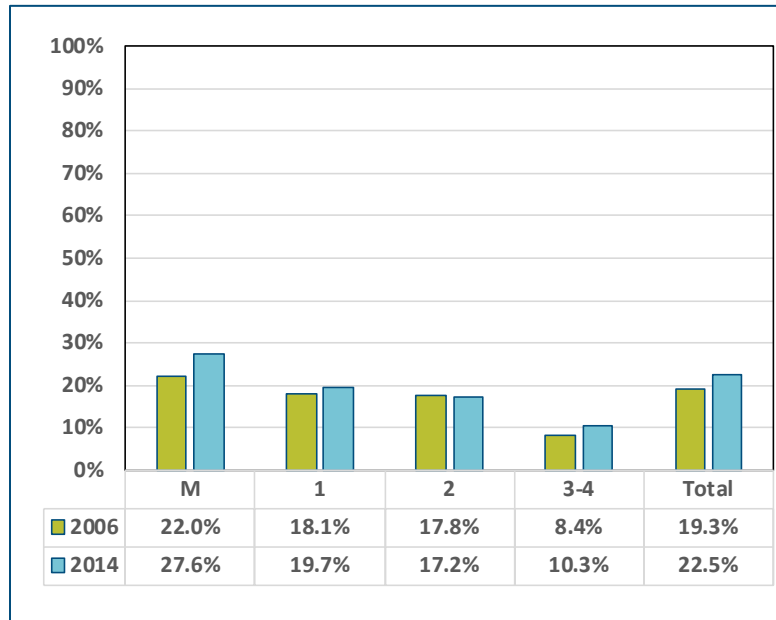
AVERAGE ATTAINED AGE OF AS INFORCE BY OCCUPATION CLASS - 2006 VS 2014



- The percentage of females increased from 19% in 2006 to 23% in 2014 for occupation classes combined. Occupation class M has the largest share of females as well as the fastest growing share. Chart 3.20 shows the percentage of females in the AS Inforce Indemnity in 2006 and 2014 by occupation class.

Chart 3.20

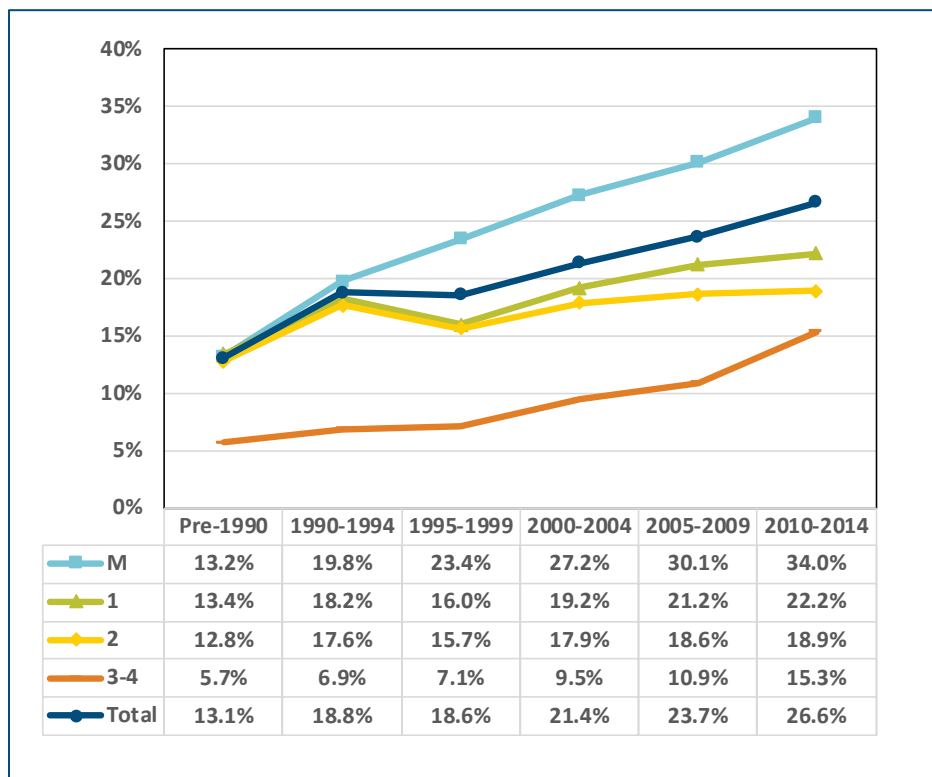
FEMALE PERCENTAGE OF AS INFORCE INDEMNITY BY OCCUPATION CLASS - 2006 VS 2014



- Females reached 34% of AS indemnity in occupation class M for issue years 2010 - 2014, compared to only 13% for the business issued prior to 1990. Chart 3.21 illustrates how the share of females has changed by issue year for the various IDEC occupation classes.

Chart 3.21

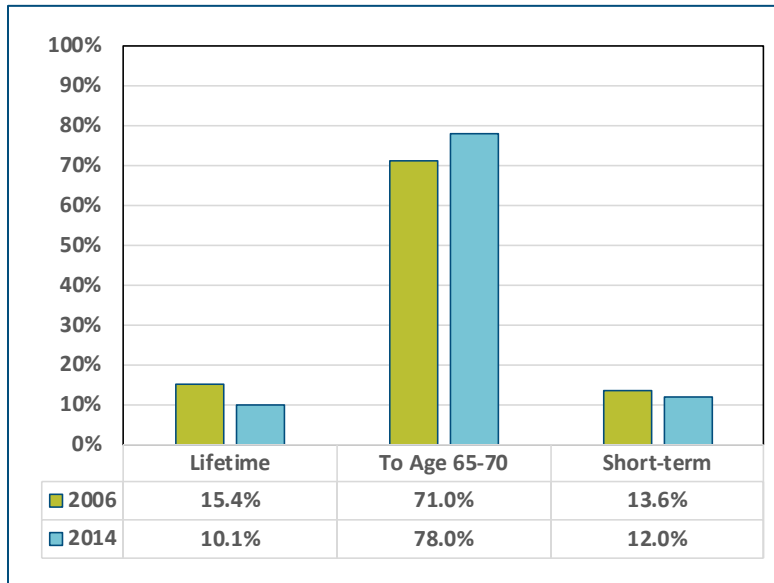
PERCENTAGE OF AS INDEMNITY ISSUED TO FEMALES BY OCCUPATION CLASS AND ISSUE YEAR



- The percentage of AS inforce indemnity from policies with the lifetime maximum benefit period has decreased from 15% in 2006 to 10% in 2014. Chart 3.22 shows how the distribution of the AS inforce indemnity for three maximum benefit period groupings has changed from 2006 through 2014.

Chart 3.22

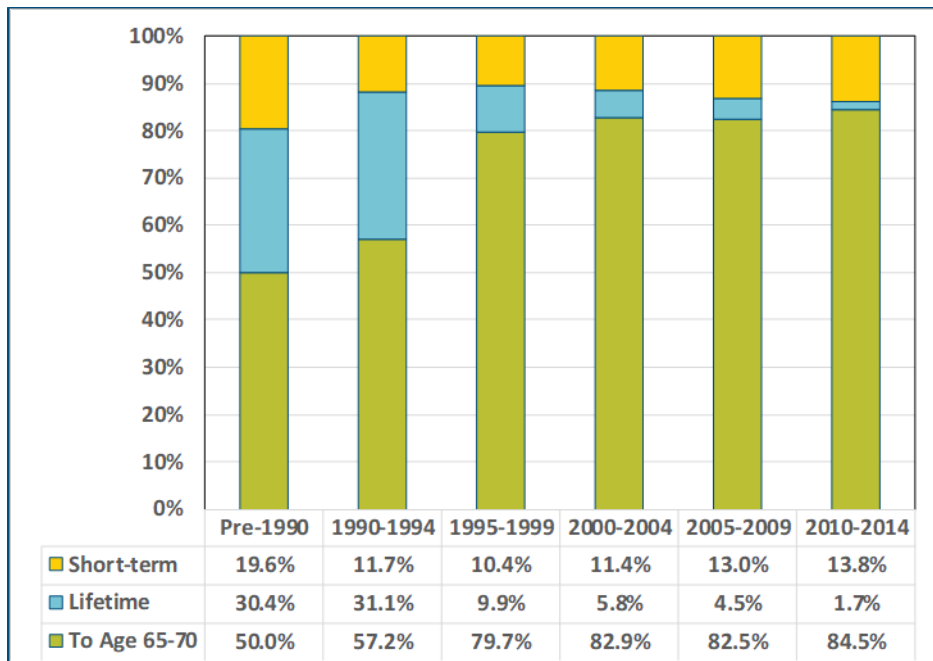
PERCENTAGE OF AS INDEMNITY BY MAXIMUM BENEFIT PERIOD - 2006 VS 2014



- Over 30% of the business issued prior to 1995 had the lifetime maximum benefit period. During the 1995 - 1999 issue years, the percentage of lifetime business dropped sharply to just under 10% and has continued to fall, reaching less than 2% by the 2010 - 2014 period. Chart 3.23 compares the distribution of the AS indemnity by maximum benefit period and issue year.

Chart 3.23

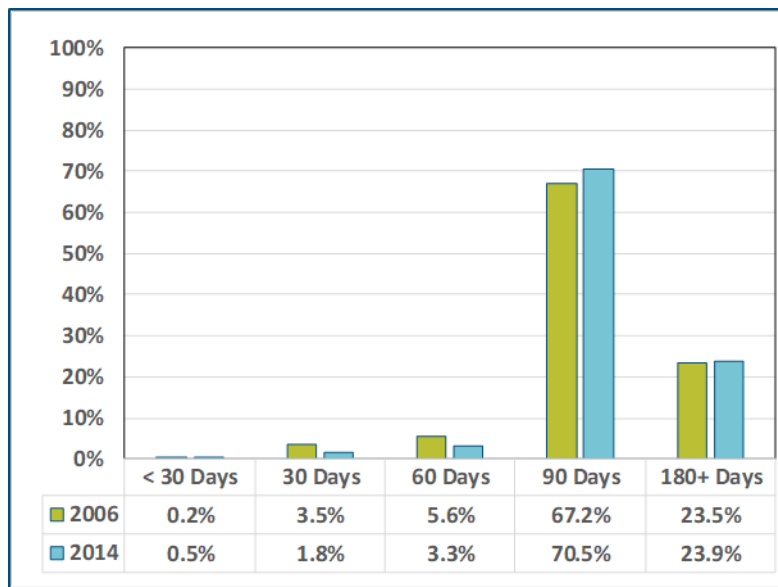
DISTRIBUTION OF AS INDEMNITY BY MAXIMUM BP AND ISSUE YEAR



- The share of the AS indemnity from policies with elimination periods under 90 days has continued to decline to less than 6% in 2014. Chart 3.24 illustrates the change in the distribution of the AS indemnity by elimination period between 2006 and 2014.

Chart 3.24

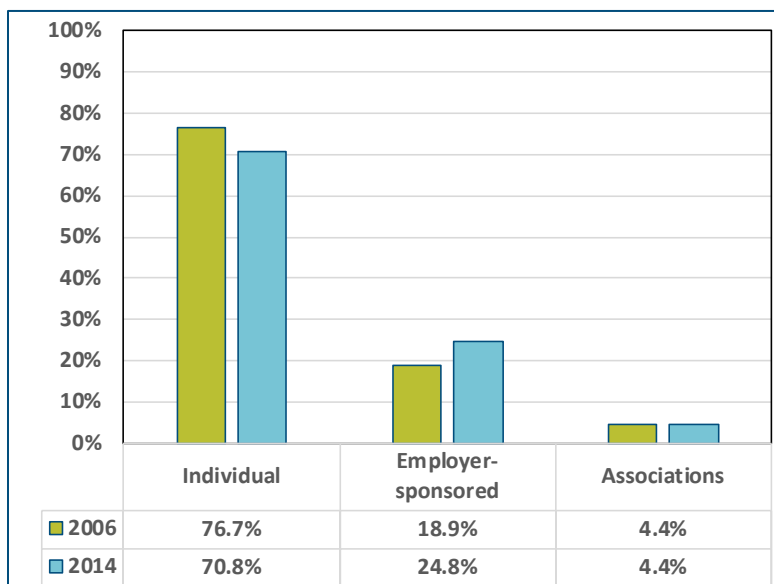
PERCENTAGE OF AS INDEMNITY BY ELIMINATION PERIOD - 2006 VS 2014



- Although the individual market remains the largest of the three IDI markets, the employer-sponsored market has been growing the fastest. The association market's share of the IDI market remained flat at less than 5%. Chart 3.25 compares the percentage of AS indemnity by market in 2006 and 2014.

Chart 3.25

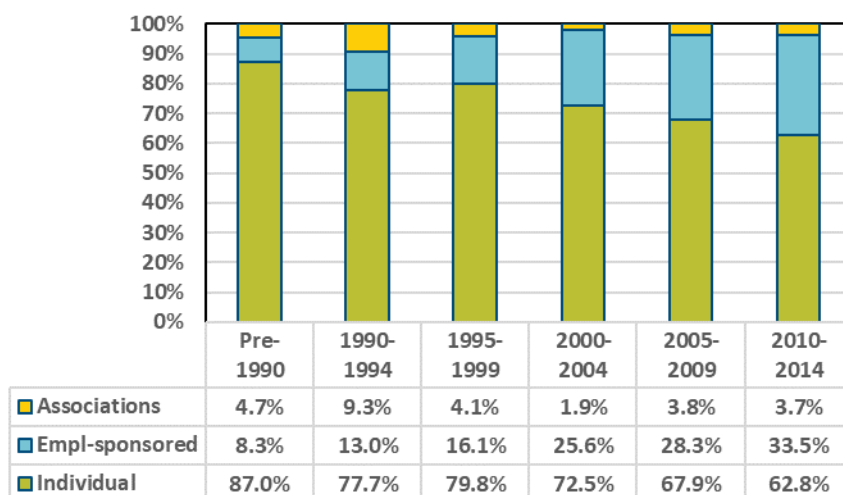
PERCENTAGE OF AS INDEMNITY BY MARKET - 2006 VS 2014



- The share of the AS indemnity for the employer-sponsored business has grown from 8% for business issued prior to 1990 to over 33% for business issued in years 2010 - 2014. Chart 3.26 shows the distribution of business by market and issue year.

Chart 3.26

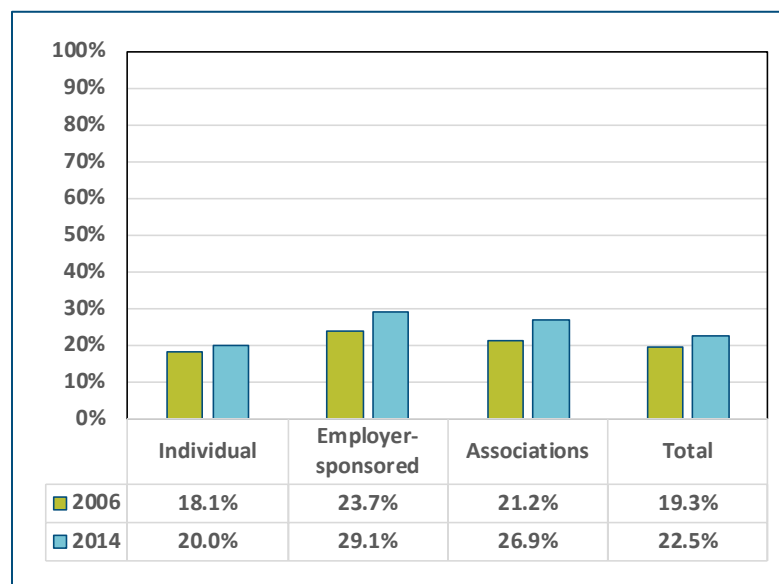
DISTRIBUTION OF AS INDEMNITY BY MARKET AND ISSUE YEAR



- The female percentage has grown in all three markets. The employer-sponsored market has the largest percentage of females among the three IDI markets, reaching approximately 29% by 2014. Chart 3.27 compares the female percentage of the AS indemnity among the three markets and the changes from 2006 to 2014.

Chart 3.27

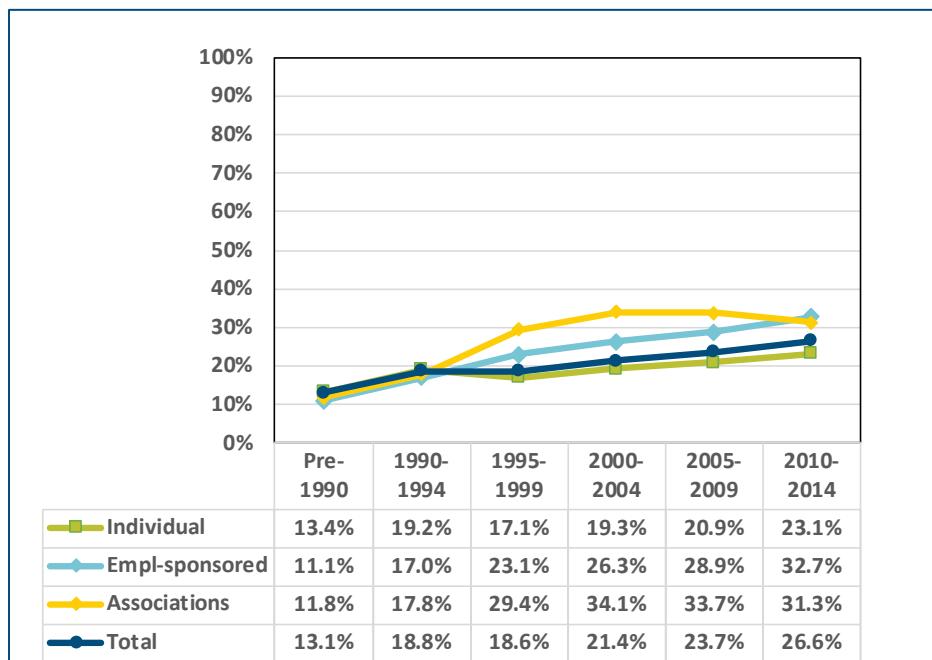
FEMALE PERCENTAGE OF AS INDEMNITY BY MARKET- 2006 VS 2014



- The female percentage of AS business increased by issue year in both the individual and employer-sponsored markets, while decreasing slightly since the 2000 - 2004 period in the associations market. Chart 3.28 shows the female percentage by market and issue year.

Chart 3.28

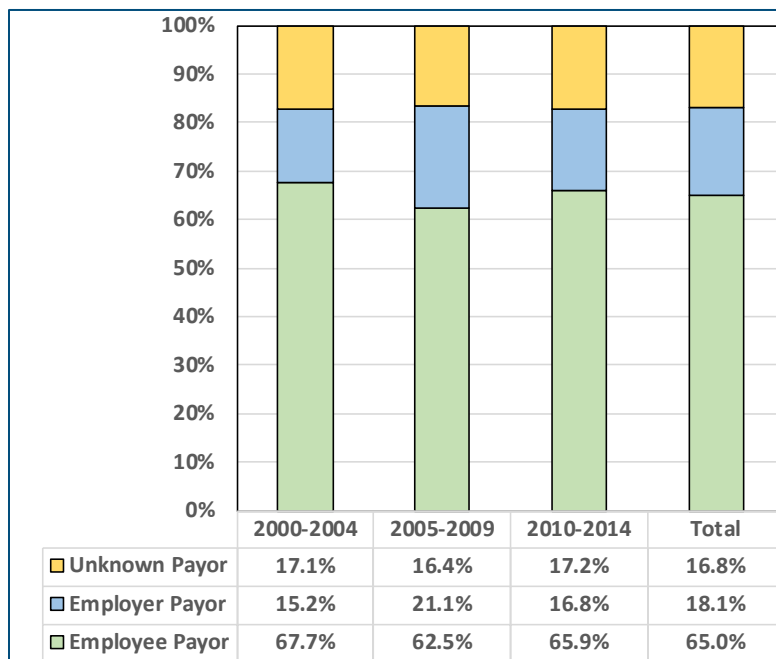
FEMALE PERCENTAGE OF AS INDEMNITY BY MARKET AND ISSUE YEAR



- The distribution by payor segment in the employer-sponsored market does not appear to have changed significantly by issue year. Chart 3.29 shows the distribution of the AS indemnity of all employer-sponsored business issued in years 2000 - 2014 by payor segment.

Chart 3.29

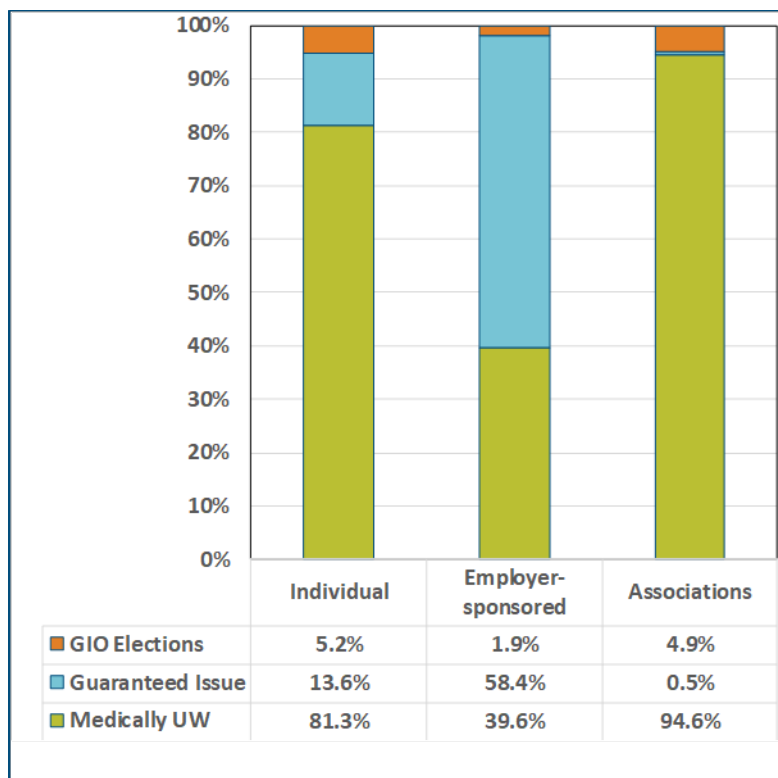
DISTRIBUTION OF THE EMPLOYER-SPONSORED BUSINESS ISSUED 2000 - 2014 BY PAYOR SEGMENT AND ISSUE YEAR



- Guaranteed issue underwriting comprised 58% of the AS indemnity of the employer-sponsored market issued in years 2000 - 2014. Guaranteed issue, which was 14% of the individual market, is comprised of business issued under various marketing programs in which some aspects typically included in medical underwriting were not used. Chart 3.30 compares the distribution of IDI markets by underwriting type.

Chart 3.30

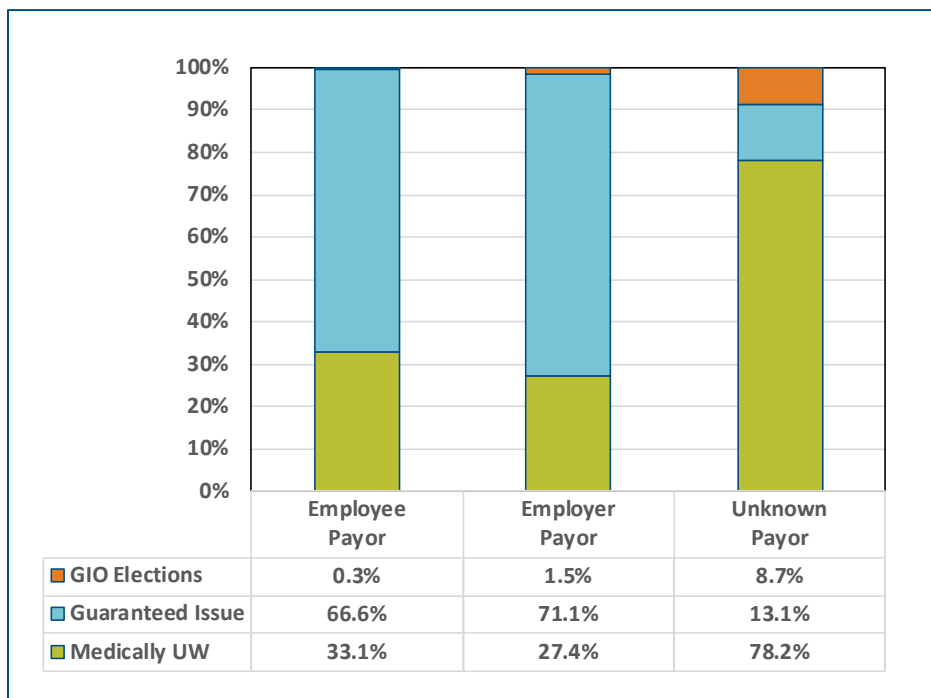
DISTRIBUTION OF UNDERWRITING TYPES BY MARKET ISSUED IN 2000 - 2014



- Guaranteed issue business represented 67% and 71% of the employee and employer payor segments, respectively, for business issued in years 2000 - 2014. On the other hand, guaranteed issue business represented only 13% of the unknown payor segment. Chart 3.31 compares the distribution of employer-sponsored business by underwriting type within each payor segment.

Chart 3.31

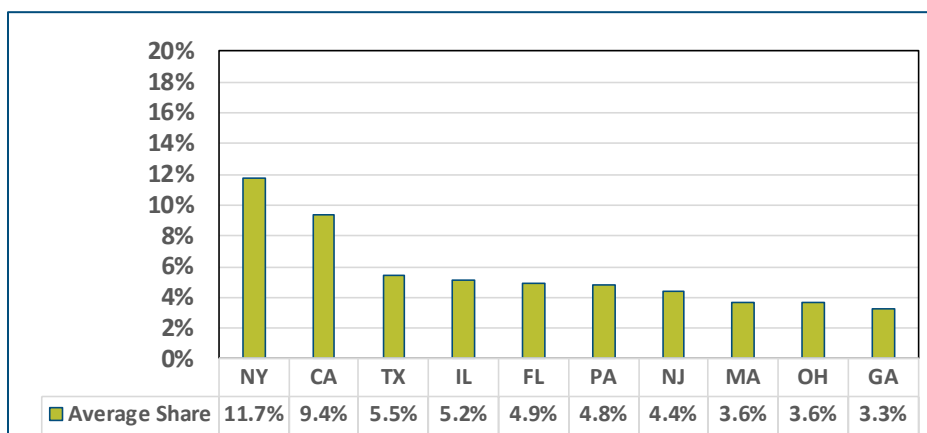
DISTRIBUTION OF UNDERWRITING TYPES BY PAYOR SEGMENT IN EMPLOYER-SPONSORED BUSINESS ISSUED IN 2000 - 2014



- New York has the largest share of the AS indemnity among all of the states, followed by California. Chart 3.32 shows the average AS indemnity share for the ten states with the largest AS indemnity over the 2006 - 2014 study period.

Chart 3.32

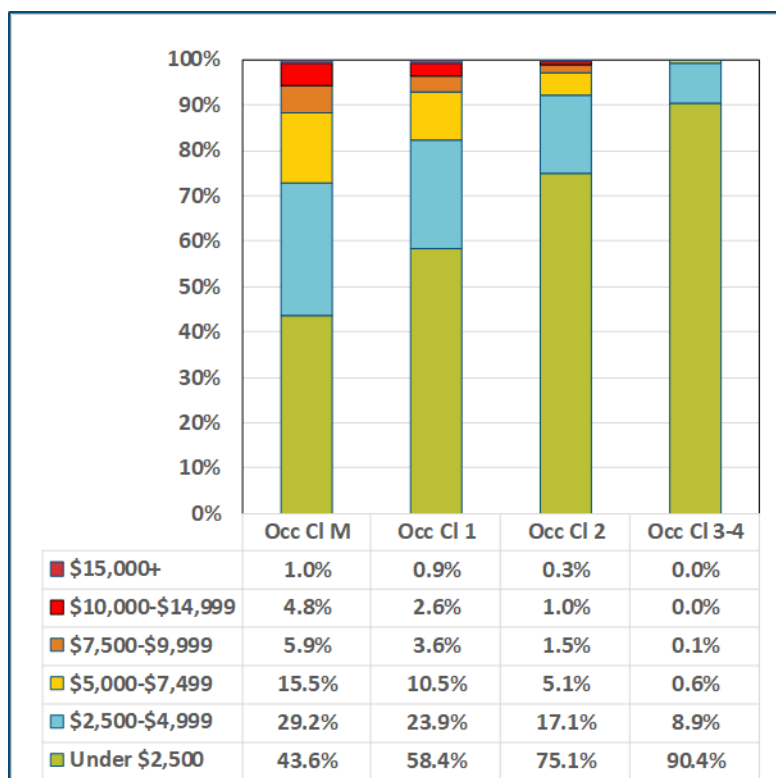
TEN STATES WITH THE LARGEST AVERAGE SHARE OF THE AS INDEMNITY FROM 2006 THROUGH 2014



- Chart 3.33 shows the distribution of the AS policies by policy size bands and occupation class.

Chart 3.33

DISTRIBUTION OF AS INDEMNITY BY POLICY SIZE AND OCCUPATION CLASS – 2006 - 2014 STUDY PERIOD



Section 4: Claim Incidence Trends

4.1 Introduction and Summary

This section analyzes claim incidence trends from 2006 through 2014 relative to the 2013 IDIVT. Unless otherwise described, the 2013 IDIVT incidence rates are adjusted by the claim incidence modifiers provided in Appendix A. When there are less than 50 claims for a specific segment, “NA” is displayed in lieu of the A/E incidence ratio.

IDI claim incidence experience is described in terms of actual-to-expected (A/E) ratios. There are three types of A/E ratios utilized in this report, which are described in Section 1. Except for specific analyses related to trends by market and underwriting methods, the modified A/E incidence ratio (based on indemnity) is the primary measurement of claim incidence experience.

The following are highlights from the discussion in Section 4:

- During the 2006 - 2014 study period, AS, BOE, and DBO policies experienced overall modified A/E incidence ratios of 67%.
- A/E incidence ratios have continued to decrease over the years, a trend that was also observed in the IDEC 1990 - 2006 database.
- From the 2006 - 2009 study period to the 2010 - 2014 study period, the modified A/E incidence ratio declined by 13% for all contract types combined, from 74% to 61%. This decline in A/E incidence ratios was observed in most key subsets (e.g., contract type, occupation class, gender, attained age, market, etc.) although the extent of the decline varied among subsets.
- Occupation class M had an overall modified A/E incidence ratio of 64% over the 2006 - 2014 study period, and occupation class 1 had an overall modified A/E incidence ratio of 72%.
- Among the medical occupations, general practitioners and psychologists/psychiatrists had the lowest modified A/E incidence ratios, and nurses and other dental occupations (e.g., dental hygienists and assistants) had the highest.
- Among the nonmedical occupations in occupation class 1, engineers and architects had the lowest modified A/E incidence ratios, and clerical occupations had the highest.
- Males and females have comparable modified A/E incidence ratios for occupation classes 1 and 2. Females have higher A/E incidence ratios than males in occupation class M, while the opposite occurred in occupation class 3-4.
- The A/E incidence ratios for elimination periods under 30 days are quite low relative to the longer elimination periods. Much of this decrease appears to have occurred during the 2010 - 2014 study period.
- Overall, AS policies with COLA benefits experienced a lower modified A/E incidence ratio than those that did not have COLA benefits. However, this varies by market and underwriting type.
- AS policies issued to nonsmokers had a modified A/E incidence ratio of 67% over the 2006 - 2014 study period, while smokers has an A/E ratio of 71%. The difference in incidence rates between nonsmokers and smokers may be wider than expected from the earlier IDEC database.
- Over the 2006 - 2014 study period, the individual market has a modified A/E incidence ratio of 66%, the associations market 62%, and the employer-sponsored market 77%. Relative to the 2013 IDIVT, the employer-sponsored market's A/E incidence ratio now exceeds the A/E incidence ratios of the individual market when all underwriting types are combined.
- For medically underwritten business issued in 2000 - 2014, the individual market has a semi-modified A/E incidence ratio of 60%, the employer-sponsored market 61%, and the associations market 49%.
- For medically underwritten business in the employer-sponsored market issued in 2000 - 2014, the employee payor segment has a semi-modified A/E incidence ratio of 43%, the employer payor segment 50%, and the unknown segment 55.0%.

- For guaranteed issue business (i.e., GSI and GTI combined) in the employer-sponsored market issued in 2000 - 2014, the employee payor segment has a semi-modified A/E incidence ratio of 80%, the employer payor segment 48%, and the unknown payor segment 63%.
- For guaranteed insurability option (GIO) elections in 2000 - 2014, the semi-modified A/E incidence ratio when all markets are combined was 90%, which is 62% higher than the semi-modified A/E incidence ratio for medically underwritten business.
- Although the differences between the guaranteed issue A/E ratios and the medically underwritten A/E ratios decreased over time, the differences did not disappear completely. The impact of the anti-selection associated with the guaranteed issue underwriting in the employee pay segment appears to continue indefinitely.
- The employer payor segment that was issued via guaranteed issue underwriting experienced a lower level of anti-selection in the first two policy years than the employee payor segment. Further, the impact of this anti-selection appears to run off by the fourth policy year.
- Rhode Island has the highest modified A/E ratio among all fifty states, plus Washington D.C. and Puerto Rico. California has the next largest modified A/E ratio.
- The modified A/E ratios for occupation classes M and 1 peaked in monthly income benefit band \$7,500-\$9,999 and decreased for the higher bands.

4.2 Experience by Contract Type

Table 4.1 provides the A/E incidence ratios by count and indemnity for the six contract types over the 2006 - 2014 study period. Definitions of the various contract types are provided in Section 1. For comparison purposes, the A/E incidence ratios are shown without (“unmodified”) and with (“modified”) adjustments to the expected incidence rates by the claim incidence modifiers.

Table 4.1
A/E INCIDENCE RATIOS BY CONTRACT TYPE OVER THE STUDY PERIOD 2006 - 2014

Contract Type	A/E Incidence Ratios by Count		A/E Incidence Ratios by Indemnity		Claim Count
	Unmodified Expected	Modified Expected	Unmodified Expected	Modified Expected	
AS	66.8%	65.7%	67.6%	67.0%	134,370
BOE	45.9%	67.1%	45.4%	67.0%	9,304
DBO	35.6%	53.4%	44.7%	67.9%	289
AO	28.4%	28.3%	37.7%	37.5%	243
KP	35.6%	54.7%	31.4%	47.8%	54
Other	66.1%	60.0%	46.6%	36.5%	1,306
Total	64.7%	65.5%	57.5%	66.7%	145,566

The average modified A/E ratio by indemnity for AS contracts is 67% compared to 68% for the average unmodified A/E ratio. The claim incidence modifiers slightly increased the A/E incidence ratios by indemnity for the AS contracts from 66% to 67%.

There are bigger differences between the unmodified and modified A/E incidence ratios for the three business contract types, BOE, DBO, and KP since the claim incidence modifier for those business contract types is 66.9%. The contract type claim incidence modifier for the AS, AO, and Other contracts is 100.0%.

The A/E incidence ratios for the AO, KP, and Other contracts were considerably lower than for the AS, BOE, and DBO contracts, but the volume of claims was much lower as well. The A/E incidence ratio analysis discussed below focuses on AS contracts and, to a lesser extent, on BOE contracts. In the remainder of Section 3, A/E incidence ratios are based on indemnity and not by count.

4.3 Comparison of AS A/E Incidence Ratios from Prior and New IDEC Studies

Table 4.2 compares the A/E incidence ratios for AS policies by claim count and claim indemnity for five study periods ranging from 1990 through 2014. The results for the first three study periods are from the IDEC 1990 – 2006 database. The results for two recent study periods are from the new IDEC database.

The expected incidence basis for all A/E ratios in Table 4.2 in all five study period is the unmodified 2013 IDIVT base incidence rates, since the previous IDEC study results only used unmodified A/E incidence ratios. At the aggregate level, there are only small differences between A/E incidence ratios calculated using the unmodified expected basis and ratios calculated using the modified expected basis.

Table 4.2
COMPARISON OF UNMODIFIED A/E INCIDENCE RATIOS - AS POLICIES ONLY

Study Years	By Count	By MI
Previous IDEC Studies		
1990 - 1994	111.6%	118.2%
1995 - 1999	96.7%	104.0%
2000 - 2006	86.0%	88.4%
New IDEC Study		
2006 - 2009	71.6%	72.8%
2010 - 2014	63.0%	63.9%

The A/E incidence ratios for AS policies have been continuously declining over the years.

4.4 AS and BOE Experience by Study Year

Table 4.3 compares the A/E incidence ratios by contract year for study years 2006 through 2014. The modified expected basis is used. In the remainder of Section 4, all A/E incidence ratios are based on indemnity, not policy.

Table 4.3
 MODIFIED A/E INCIDENCE RATIOS (INDEMNITY) AND INCURRED CLAIMS BY CONTRACT AND STUDY YEAR
 (2006-2014)

Modified A/E Incidence Ratios by Indemnity							
Study Year	AS	BOE	DBO	AO	KP	Other	Total
2006	72.9%	71.1%	NA	52.9%	NA	40.9%	74.4%
2007	71.5%	69.7%	NA	55.8%	NA	36.4%	73.5%
2008	73.1%	72.1%	NA	NA	NA	40.8%	81.0%
2009	68.8%	74.1%	NA	NA	NA	35.1%	68.5%
2010	68.4%	65.9%	NA	NA	NA	39.2%	67.6%
2011	66.0%	64.5%	NA	NA	NA	37.8%	67.3%
2012	64.2%	61.9%	NA	NA	NA	34.2%	60.5%
2013	63.7%	67.1%	NA	NA	NA	31.3%	60.4%
2014	56.8%	57.1%	NA	NA	NA	32.9%	51.2%
2006-2009	71.5%	71.8%	88.7%	44.9%	NA	38.3%	74.3%
2010-2014	63.7%	63.3%	52.6%	28.9%	NA	35.1%	61.2%
Total	67.0%	67.0%	67.9%	37.5%	47.8%	36.5%	66.7%
Incurred Claims							
Study Year	AS	BOE	DBO	AO	KP	Other	Total
2006	16,019	1,155	46	50	4	167	17,441
2007	16,122	1,138	42	53	5	143	17,503
2008	16,445	1,195	42	25	4	182	17,893
2009	15,836	1,132	25	31	6	137	17,167
2010	15,306	1,015	37	15	6	167	16,546
2011	14,503	943	28	19	5	146	15,644
2012	14,208	955	23	18	9	123	15,336
2013	13,757	960	32	13	9	126	14,897
2014	12,174	811	14	19	6	115	13,139
2006-2009	64,422	4,620	155	159	19	629	70,004
2010-2014	69,948	4,684	134	84	35	677	75,562
Total	134,370	9,304	289	243	54	1,306	145,566

The AS and BOE contract types experienced a similar decline in the A/E ratios after 2010. The year 2008 shows a small jump in the A/E ratios in the generally downward slope of the AS A/E ratios over the nine-year period. This jump may reflect the impact of the recession that occurred about that time. A similar pattern is seen in the BOE A/E ratios, albeit in years 2008, 2009, and 2010. The potential impact of the recession is more noticeable when analyzed by occupation class, which is discussed below.

4.5 Experience by Occupation Class

The IDEC database utilizes the following five occupation classes, which are also used in the 2013 IDIVT:

- Class M—All medical occupations, e.g., doctors, surgeons, dentists, nurses, podiatrists, veterinarians, psychologists, psychiatrists, pharmacists
- Class 1—All nonmedical white-collar and professional occupations
- Class 2—Skilled labor and most sales-related occupations
- Class 3—Blue-collar occupations with light manual duties
- Class 4—Blue-collar occupations with heavy manual duties

Table 4.4 shows the modified A/E incidence ratios by indemnity for AS policies by occupation class and study year from 2006 through 2014, along with the claim count. Occupation classes 3 and 4 have been combined for the incidence analysis because of their relatively low volume of claims. Experience for each study period reflect all policies with exposure in that period, regardless of issue year.

Table 4.4
 MODIFIED AS A/E INCIDENCE RATIOS (INDEMNITY) AND INCURRED CLAIMS BY OCCUPATION CLASS AND STUDY YEAR (2006-2014)

Modified A/E Incidence Ratios by Indemnity					
Study Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
2006	71.3%	75.4%	68.4%	74.4%	72.9%
2007	66.9%	76.0%	76.2%	75.0%	71.5%
2008	64.9%	82.8%	75.4%	75.2%	73.1%
2009	62.3%	76.5%	70.6%	73.3%	68.8%
2010	63.6%	74.1%	69.0%	72.4%	68.4%
2011	63.4%	69.0%	70.7%	64.5%	66.0%
2012	61.6%	68.9%	57.7%	63.1%	64.2%
2013	65.0%	63.7%	54.8%	58.6%	63.7%
2014	56.8%	58.6%	49.6%	51.3%	56.8%
2006-2009	66.2%	77.7%	72.7%	74.5%	71.5%
2010-2014	62.0%	66.8%	60.1%	61.7%	63.7%
Total	63.7%	71.5%	65.6%	67.2%	67.0%
Incurred Claims					
Study Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
2006	5,407	6,969	1,534	2,109	16,019
2007	5,341	7,081	1,629	2,071	16,122
2008	5,354	7,422	1,613	2,056	16,445
2009	5,321	7,038	1,541	1,936	15,836
2010	5,476	6,604	1,441	1,785	15,306
2011	5,508	6,048	1,331	1,616	14,503
2012	5,537	5,933	1,149	1,589	14,208
2013	5,760	5,418	1,105	1,474	13,757
2014	5,058	4,800	936	1,380	12,174
2006-2009	21,423	28,510	6,317	8,172	64,422
2010-2014	27,339	28,803	5,962	7,844	69,948
Total	48,762	57,313	12,279	16,016	134,370

Occupation class M had the lowest A/E incidence ratios among the occupation classes, and occupation class 1 had the highest ratios. The A/E ratios for AS policies in all occupation classes decreased between study period groupings 2006 - 2009 and 2010 - 2014, resulting in an average reduction of 11%. Occupation class M incurred the lowest reduction in the A/E ratio (6%) and occupation classes 2 and 3-4 incurred the highest reduction (17%).

A jump in the generally downward pattern of A/E incidence ratios in 2008 for occupation class 1, and during 2007 - 2008 for occupation class 2, coincided with the economic recession. Similar jumps around that time were not evident for occupation classes M and 3-4.

Table 4.5 shows the modified A/E incidence ratios (indemnity) for BOE policies and the claim count by occupation class for study period groupings 2006 - 2009 and 2010 - 2014.

Table 4.5
 MODIFIED BOE A/E INCIDENCE RATIOS (INDEMNITY) AND INCURRED CLAIMS BY OCCUPATION CLASS AND STUDY YEAR (2006-2014)

Modified A/E Incidence Ratios by Indemnity					
Study Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
2006-2009	66.7%	86.6%	98.3%	115.0%	71.8%
2010-2014	61.5%	68.8%	63.2%	108.9%	63.3%
Total	63.7%	77.0%	77.7%	111.5%	67.0%
Incurred Claims					
Study Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
2006-2009	2,700	1,372	297	251	4,620
2010-2014	2,956	1,184	292	252	4,684
Total	5,656	2,556	589	503	9,304

The A/E ratios for BOE policies in all occupation classes decreased between study period groupings 2005 - 2009 and 2010 - 2014, resulting in an average reduction of 12%, which is close to the average A/E reduction for AS policies. Occupation class 3-4 incurred the lowest reduction (5%) in the A/E ratio and occupation class 2 incurred the highest reduction (36%). Volatility in these lower occupation classes should be expected due to the low volume of BOE policies issued to these occupation classes.

Table 4.6 shows the modified A/E incidence ratios by occupation class and policy year for AS business during the 2006 - 2014 study period. We have grouped the first two policy years (PY 1-2) because they coincide with the contestable period. During the contestable period, companies are contractually permitted to contest claims resulting from pre-existing medical conditions that were not disclosed at issue.. The third policy year (PY 3) is the first year following the contestable period. Prior IDI experience studies have seen a jump in incidence in PY 3 as some insureds have delayed filing claims until the after the contestable period. The remaining policy year groupings are PY 4-5, PY 6-10, and PY 11+.

Table 4.6
 MODIFIED AS A/E INCIDENCE RATIOS (INDEMNITY) AND INCURRED CLAIMS FOR AS POLICIES BY OCCUPATION CLASS AND POLICY YEAR DURING YEARS 2006-2014

Modified A/E Incidence Ratios by Indemnity						
Occ Class	PY 1-2	PY 3	PY 4-5	PY 6-10	PY 11+	Total
M	49.5%	57.6%	58.4%	60.8%	66.9%	63.7%
1	58.7%	64.4%	68.6%	71.0%	74.6%	71.5%
2	52.4%	62.7%	71.0%	68.3%	66.4%	65.6%
3-4	54.5%	70.5%	83.1%	78.0%	64.6%	67.2%
Total	53.7%	61.2%	64.7%	66.8%	69.5%	67.0%
Incurred Claims						
Occ Class	PY 1-2	PY 3	PY 4-5	PY 6-10	PY 11+	Total
M	3,274	1,545	2,835	6,181	34,927	48,762
1	4,278	1,905	3,819	8,656	38,655	57,313
2	664	336	692	1,503	9,084	12,279
3-4	821	417	892	2,264	11,622	16,016
Total	9,037	4,203	8,238	18,604	94,288	134,370

A/E incidence ratios in the above table generally increase with subsequent policy year groupings. The increase in the A/E incidence ratios in PY 3 is apparent in all occupation classes but is larger for occupation classes 2 and 3-4. The A/E incidence experience by markets and underwriting method, which is discussed below, highlights even greater differences by policy year.

Table 4.7 shows the modified A/E incidence ratios by occupation class and policy year for BOE policies.

Table 4.7
 MODIFIED BOE A/E INCIDENCE RATIOS (INDEMNITY) AND INCURRED CLAIMS BY OCCUPATION CLASS AND POLICY YEAR DURING YEARS 2006-2014

Modified A/E Incidence Ratios by Indemnity						
Occ Class	PY 1-2	PY 3	PY 4-5	PY 6-10	PY 11+	Total
M	43.8%	48.6%	59.2%	55.6%	72.1%	63.7%
1	75.5%	89.6%	80.2%	69.3%	77.8%	77.0%
2	54.4%	NA	NA	67.6%	84.1%	77.7%
3-4	108.3%	NA	139.3%	96.3%	96.5%	111.5%
Total	49.8%	59.5%	63.4%	58.5%	73.7%	67.0%
Incurred Claims						
Occ Class	PY 1-2	PY 3	PY 4-5	PY 6-10	PY 11+	Total
M	357	166	353	722	4,058	5,656
1	170	79	132	256	1,919	2,556
2	52	40	48	83	366	589
3-4	55	38	63	110	237	503
Total	634	323	596	1,171	6,580	9,304

BOE policies issued to occupation class 1 exhibit a higher jump in PY 3 than observed in AS policies. The A/E incidence ratios of BOE policies issued to occupation class 3-4 stand out as significantly higher than the A/E ratios for the other occupation classes. Less than 1% of the BOE indemnity has been issued to occupation class 3-4.

4.6 Experience for Specific Occupations

Table 4.8 shows the modified A/E incidence ratios for AS policies over the 2006 – 2014 study period for medical occupations. We have limited our analysis by occupation to policies issued in 2000 and later when companies generally improved their coding of occupations on policy records. In addition to the A/E ratios, we show the relative A/E ratios (by dividing each occupation’s A/E ratio by the overall A/E ratios for occupation class M), each occupation’s share of the total indemnity for occupation class M, and the number of claims. The medical occupations have been ordered from lowest to highest in terms of their A/E incidence ratios.

Table 4.8
MODIFIED A/E INCIDENCE RATIOS FOR MEDICAL OCCUPATION AS POLICIES ISSUED IN 2000 AND LATER

Medical Occupation	A/E Ratio	Relative A/E	Incurred Claims
General Practitioners	26.8%	47%	176
Psychologists & Psychiatrists	33.1%	58%	138
Anesthesiologists	37.3%	66%	209
Surgeons	39.1%	69%	332
ER Physicians	39.9%	70%	159
Other Medical - Residents/Students	41.7%	73%	109
Physicians	54.7%	96%	6,695
Veterinarians	56.2%	99%	265
Pharmacists	59.0%	104%	287
Other Medical Occupations	63.7%	112%	2,570
Chiropractors	67.2%	118%	38
Dentists	69.7%	123%	2,947
Nurses	94.7%	167%	841
Other Dental Occupations	206.2%	363%	294
Total - Medical Occupations	56.8%	100%	15,060

Many results in Table 4.8 are consistent with general expectations, while other results are more surprising. For example, general practitioners, psychologists, and psychiatrists have the lowest A/E ratios among the range of medical occupations, which is consistent with general expectations. Anesthesiologists and surgeons also have low relative A/E ratios. Chiropractors, nurses, and other dental occupations (e.g., dental assistants and hygienists) have the highest A/E ratios, which is not surprising. Emergency room physicians have an A/E ratio that is only 70% of the A/E ratios for all medical occupations combined, and pharmacists have A/E ratios that are close to the A/E ratio for physicians. We included chiropractors’ A/E ratios, although the Claim Count is less than 50 because earlier IDEC reporting showed that A/E experience for chiropractors was substantially higher.

Most companies currently utilize two or three medical occupation classes in their rate books, reflecting their own view or experience of the relative risk levels associated with the various medical occupations. The range of A/E ratios in Table 4.8 confirms the need for companies to have more than a single medical occupation class in their rate books.

Table 4.9 provides the modified A/E incidence ratios and the claim count for various non-medical occupations. The occupations have been re-sorted within each prevailing occupation class grouping from the lowest A/E incidence ratios to the highest under the respective prevailing occupation class. "NA" is displayed for the A/E ratios where the claim count is less than 50.

Table 4.9
MODIFIED A/E INCIDENCE RATIOS (INDEMNITY) FOR NONMEDICAL OCCUPATIONS BY OCCUPATION CLASS - BUSINESS ISSUED IN 2000 AND LATER

Nonmedical Occupations	Modified A/E Incidence Ratios			Incurred Claims		
	Occ Class 1	Occ Class 2	Occ Class 3-4	Occ Class 1	Occ Class 2	Occ Class 3-4
Prevailing Occupation Class 1						
Engineers & Architects	54.8%	NA	NA	383	20	27
Other White Collar	59.8%	NA	NA	390	30	12
Lawyers	61.5%	NA	NA	2,146	11	2
Unknown	63.2%	35.3%	28.6%	2,382	423	394
Other Professionals	64.9%	NA	NA	364	19	15
Accountants & Actuaries	65.8%	NA	NA	749	7	0
Education	65.8%	NA	NA	261	17	7
Executives & Managers	66.4%	74.4%	74.9%	10,195	412	451
Other Occupations	72.7%	77.3%	77.6%	1,653	361	835
Programmers & Analysts	76.0%	NA	NA	185	1	0
Clerical	87.9%	98.3%	93.2%	901	182	63
Prevailing Occupation Class 2						
Other Sales	162.7%	54.7%	NA	114	904	1
Insurance Sales	NA	70.8%	NA	0	274	0
Real Estate Sales	NA	73.2%	NA	0	173	0
Stockbrokers & Commodity Traders	NA	98.1%	NA	0	195	0
Prevailing Occupation Class 3-4						
Handlers & Laborers	73.2%	125.2%	86.8%	58	107	1,087
Police & Fire	NA	NA	104.2%	4	4	125
Transportation	NA	NA	116.0%	10	15	368
No Prevailing Occupation Class						
Service Occupations	NA	NA	41.7%	27	45	140
Skilled Trades	100.5%	110.8%	99.5%	117	188	1,157
Total - Nonmedical Occupations	66.1%	63.6%	71.8%	19,939	3,388	4,684

The grouping for prevailing occupation 1 has the most occupations since occupation class 1 represents 88% of the total indemnity for all nonmedical occupations. Engineers and architects had the lowest modified A/E incidence ratio among the occupation class 1 occupations, while clerical occupations had the highest.

4.7 Experience by Gender

Table 4.10 shows the modified A/E incidence ratios for AS business by occupation class and gender. The business is separated into two study period groupings, 2006-2009 and 2010-2014 and then combined.

Table 4.10

MODIFIED A/E INCIDENCE RATIOS FOR AS POLICIES BY GENDER AND OCCUPATION CLASS FOR STUDY PERIODS 2006-2009, 2010-2014 AND COMBINED

Occupation Class M				
Study Year	Modified A/E Incidence Ratios		Incurred Claims	
	Male	Female	Male	Female
2006-2009	63.6%	73.7%	14,027	7,396
2010-2014	60.0%	67.3%	17,763	9,576
Total	61.5%	69.8%	31,790	16,972
Occupation Class 1				
Study Year	Modified A/E Incidence Ratios		Incurred Claims	
	Male	Female	Male	Female
2006-2009	77.8%	77.6%	20,127	8,383
2010-2014	66.4%	68.1%	20,069	8,734
Total	71.3%	72.1%	40,196	17,117
Occupation Class 2				
Study Year	Modified A/E Incidence Ratios		Incurred Claims	
	Male	Female	Male	Female
2006-2009	71.7%	76.0%	4,730	1,587
2010-2014	60.7%	58.3%	4,485	1,477
Total	65.5%	66.0%	9,215	3,064
Occupation Class 3-4				
Study Year	Modified A/E Incidence Ratios		Incurred Claims	
	Male	Female	Male	Female
2006-2009	75.8%	61.8%	7,508	664
2010-2014	63.1%	48.6%	7,197	647
Total	68.7%	54.2%	14,705	1,311
All Occupation Classes				
Study Year	Modified A/E Incidence Ratios		Incurred Claims	
	Male	Female	Male	Female
2006-2009	70.4%	75.1%	46,392	18,030
2010-2014	62.6%	66.8%	49,514	20,434
Total	65.9%	70.2%	95,906	38,464

The modified A/E incidence ratios for both genders decreased in all occupation classes from 2006 - 2009 to 2010 - 2014. Males and females had comparable A/E incidence ratios in occupation classes 1 and 2. On the other hand, females in occupation class M had higher A/E incidence ratios than males, while the opposite occurred in occupation class 3-4.

4.8 Experience Attained Age

Table 4.11 provides the modified A/E incidence ratios by attained age groupings for study period groupings 2006 - 2009, 2010 – 2014, and combined.

Table 4.11

MODIFIED A/E INCIDENCE RATIOS BY ATTAINED AGE FOR STUDY PERIOD 2006 - 2009, 2010 – 2014, AND COMBINED

Attained Age	Modified A/E Incidence Ratios			Incurred Claims		
	2006-09	2010-14	Total	2006-09	2010-14	Total
Under 30	50.3%	38.7%	43.2%	543	564	1,107
30-34	67.1%	55.1%	59.8%	1,584	1,728	3,312
35-39	72.9%	58.4%	64.7%	3,000	2,631	5,631
40-44	72.6%	60.5%	66.0%	4,982	4,215	9,197
45-49	72.3%	63.0%	67.5%	8,531	7,158	15,689
50-54	72.3%	65.1%	68.4%	13,189	12,470	25,659
55-59	75.6%	70.1%	72.4%	16,595	18,656	35,251
60-64	71.6%	67.3%	68.9%	13,295	17,804	31,099
65 & Over	52.8%	48.0%	49.5%	2,703	4,722	7,425
Total	71.5%	63.7%	67.0%	64,422	69,948	134,370

All attained age groupings exhibited decreases in their modified A/E incidence ratios from the study period 2006 - 2009 to 2010 - 2014. In general, it appears that attained ages under 30 experienced noticeably lower A/E incidence ratios compared to attained ages 30 through 64. The A/E incidence ratios for attained ages 65 and over were also noticeably lower compared to attained ages 45 through 64. The gainfully employed requirement following the normal renewal period of IDI policies may produce some selection at these older ages, contributing to their lower A/E incidence ratios.

Table 4.12 compares the modified A/E incidence ratios by attained age groupings and occupation class for the total study period 2006 - 2014.

Table 4.12
MODIFIED A/E INCIDENCE RATIOS (INDEMNITY) BY ATTAINED AGE AND OCCUPATION CLASS FOR STUDY PERIOD 2006-2014

Modified A/E Incidence Ratios					
Attained Age	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
Under 30	38.4%	49.8%	44.7%	47.6%	43.2%
30-34	59.2%	65.6%	46.3%	60.0%	59.8%
35-39	61.0%	72.7%	60.4%	71.1%	64.7%
40-44	62.8%	68.8%	70.6%	74.0%	66.0%
45-49	61.9%	74.8%	68.4%	65.6%	67.5%
50-54	64.4%	73.5%	68.2%	67.7%	68.4%
55-59	71.3%	74.8%	66.8%	68.6%	72.4%
60-64	66.3%	72.0%	67.5%	69.7%	68.9%
65 & Over	45.6%	54.9%	46.0%	43.2%	49.5%
Total	63.7%	71.5%	65.6%	67.2%	67.0%
Incurred Claims					
Attained Age	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
Under 30	385	337	133	252	1,107
30-34	1,701	958	251	402	3,312
35-39	2,636	1,883	419	693	5,631
40-44	3,807	3,307	837	1,246	9,197
45-49	5,774	6,381	1,411	2,123	15,689
50-54	9,182	10,722	2,281	3,474	25,659
55-59	12,501	15,264	3,230	4,256	35,251
60-64	9,947	14,561	3,316	3,275	31,099
65 & Over	2,829	3,900	401	295	7,425
Total	48,762	57,313	12,279	16,016	134,370

While both occupation classes M and 1 experienced lower A/E incidence ratios at the lower attained ages, the A/E incidence ratios for occupation class M were significantly lower for the younger attained ages than observed for occupation class 1.

4.9 Experience by Maximum Benefit Period

Table 4.13 compares the modified A/E incidence ratios by maximum benefit period and occupation class for study period groupings 2006 - 2009, 2010 – 2014, and the combined study period.

Table 4.13

MODIFIED A/E INCIDENCE RATIOS (INDEMNITY) BY OCCUPATION CLASS AND MAXIMUM BENEFIT PERIOD FOR STUDY PERIODS 2006-2009, 2010-2014 AND COMBINED

Maximum Benefit Period	Modified A/E Incidence Ratios			Incurred Claims		
	2006-2009	2010-2014	Combined	2006-2009	2010-2014	Combined
Occupation Class M						
Lifetime	70.5%	66.0%	68.0%	5,421	6,434	11,855
To Age 65-70	66.4%	60.6%	62.8%	11,968	16,477	28,445
Short Term	56.6%	60.6%	58.8%	4,034	4,428	8,462
Occupation Class 1						
Lifetime	77.3%	65.0%	70.8%	3,644	3,212	6,856
To Age 65-70	80.0%	68.6%	73.3%	17,189	18,582	35,771
Short Term	71.1%	62.0%	66.0%	7,677	7,009	14,686
Occupation Class 2						
Lifetime	73.7%	65.7%	69.6%	567	474	1,041
To Age 65-70	74.7%	61.8%	67.2%	2,873	2,982	5,855
Short Term	69.1%	55.9%	61.8%	2,877	2,506	5,383
Occupation Class 3-4						
Lifetime	64.5%	47.8%	56.6%	336	232	568
To Age 65-70	64.0%	58.7%	61.1%	919	905	1,824
Short Term	76.2%	62.3%	68.3%	6,917	6,707	13,624
All Occupation Classes						
Lifetime	72.5%	65.7%	68.7%	9,968	10,352	20,320
To Age 65-70	72.8%	63.9%	67.5%	32,949	38,946	71,895
Short Term	67.2%	61.0%	63.7%	21,505	20,650	42,155

The claim incidence modifiers by maximum benefit period (see Appendix A) increase the expected incidence rates for policies with the lifetime maximum benefit period and slightly decrease them for policies with short-term maximum benefit periods. The modified A/E incidence ratios dropped from the study period 2006 - 2009 to 2010 - 2014, except for policies with short-term maximum benefit periods issued to occupation class M, which incurred an increase.

4.10 Experience by Elimination Period

Table 4.14 compares the modified A/E incidence ratios by elimination period and occupation class for study period groupings 2006 - 2009, 2010 – 2014, and the combined study period.

Table 4.14
 MODIFIED A/E INCIDENCE RATIOS (INDEMNITY) BY OCCUPATION CLASS AND ELIMINATION PERIOD FOR STUDY PERIODS 2006-2009, 2010-2014 AND COMBINED

Elimination Period	Modified A/E Incidence Ratios			Incurred Claims		
	2006-2009	2010-2014	Combined	2006-2009	2010-2014	Combined
Occupation Class M						
Under 30 Days	59.0%	45.0%	52.8%	533	303	836
30 Days	59.1%	56.6%	57.8%	3,233	3,105	6,338
60 Days	69.1%	65.6%	67.2%	2,516	2,888	5,404
90 Days	67.1%	61.8%	63.9%	13,682	19,012	32,694
180+ Days	61.9%	65.4%	64.0%	1,459	2,031	3,490
Occupation Class 1						
Under 30 Days	64.7%	19.8%	35.3%	836	462	1,298
30 Days	68.6%	59.9%	64.2%	5,847	4,628	10,475
60 Days	76.0%	66.8%	71.3%	3,181	2,818	5,999
90 Days	78.7%	66.9%	71.9%	14,466	16,103	30,569
180+ Days	82.5%	72.9%	76.8%	4,180	4,792	8,972
Occupation Class 2						
Under 30 Days	51.8%	23.3%	35.2%	620	348	968
30 Days	63.8%	54.8%	59.2%	2,173	1,795	3,968
60 Days	68.7%	57.5%	62.9%	626	624	1,250
90 Days	79.4%	64.1%	70.3%	2,417	2,684	5,101
180+ Days	70.2%	63.2%	66.1%	481	511	992
Occupation Class 3-4						
Under 30 Days	48.9%	18.8%	29.5%	929	586	1,515
30 Days	69.0%	59.9%	64.2%	4,337	3,924	8,261
60 Days	67.7%	61.4%	64.3%	807	840	1,647
90 Days	92.0%	74.3%	81.4%	1,815	2,107	3,922
180+ Days	78.0%	77.8%	77.9%	284	387	671
All Occupation Classes						
Under 30 Days	55.7%	21.5%	34.5%	2,918	1,699	4,617
30 Days	64.9%	58.2%	61.4%	15,590	13,452	29,042
60 Days	71.7%	65.4%	68.3%	7,130	7,170	14,300
90 Days	72.5%	64.0%	67.4%	32,380	39,906	72,286
180+ Days	75.2%	70.1%	72.1%	6,404	7,721	14,125

All elimination period/occupation class categories experienced a reduction in their A/E incidence ratios between study period groupings 2006 - 2009 and 2010 - 2014. The A/E incidence ratios for elimination periods under 30 days were quite low relative to the longer elimination periods. Much of this decrease appears to have occurred during the 2010 - 2014 study period.

4.11 Experience by COLA Benefit

Table 4.15 shows the modified A/E incidence ratios by occupation class for AS policies both with and without a COLA benefit. In order to remove the impact of different distributions by elimination period and benefit period, Table 4.15 is limited to policies with To Age 65-70 maximum benefit periods and elimination periods of 30+ days.

Table 4.15
 MODIFIED A/E INCIDENCE RATIOS (INDEMNITY) BY OCCUPATION CLASS AND COLA BENEFIT - POLICIES WITH TO AGE 65-70 MAXIMUM BENEFIT PERIODS AND 90+ DAYS ELIMINATION PERIODS FOR STUDY PERIODS 2006-2009, 2010-2014 AND COMBINED

COLA Rider	Modified A/E Incidence Ratios			Incurred Claims		
	2006-09	2010-14	Combined	2006-09	2010-14	Combined
Occupation Class M						
No	69.1%	63.0%	65.5%	8,236	10,356	18,592
Yes	62.0%	57.7%	59.2%	3,703	6,101	9,804
Occupation Class 1						
No	82.4%	70.0%	75.3%	12,574	13,030	25,604
Yes	75.4%	66.2%	69.8%	4,483	5,484	9,967
Occupation Class 2						
No	78.4%	63.9%	70.2%	2,026	2,028	4,054
Yes	68.5%	58.9%	62.7%	773	910	1,683
Occupation Class 3-4						
No	65.4%	59.0%	61.8%	700	674	1,374
Yes	58.4%	61.2%	60.0%	77	106	183
All Occupation Classes						
No	75.7%	66.1%	70.1%	23,536	26,088	49,624
Yes	67.8%	60.9%	63.4%	9,036	12,601	21,637

Policies with COLA benefits experienced generally lower A/E incidence ratios than policies with no COLA benefits for all occupation classes. Lower A/E incidence ratios for policies with COLA benefits does not occur consistently among the markets and underwriting types, which is discussed below.

4.12 Experience by Smoker Status

Table 4.16 shows the modified A/E incidence ratios by occupation class and smoker status for AS policies. In order to remove the impact of different distributions by elimination period and benefit period, Table 4.16 is limited to policies with To Age 65-70 maximum benefit periods and elimination periods of 30+ days.

Table 4.16

MODIFIED A/E INCIDENCE RATIOS (INDEMNITY) BY OCCUPATION CLASS AND SMOKER STATUS - POLICIES WITH TO AGE 65-70 MAXIMUM BENEFIT PERIODS AND 90+ DAYS ELIMINATION PERIODS FOR STUDY PERIODS 2006-2009, 2010-2014 AND COMBINED

Smoker Status	Modified A/E Incidence Ratios			Incurred Claims		
	2006-09	2010-14	Combined	2006-09	2010-14	Combined
Occupation Class M						
Nonsmoker	66.4%	60.6%	62.8%	10,774	15,273	26,047
Smoker	69.2%	60.8%	64.5%	638	676	1,314
Unknown	61.3%	59.1%	60.2%	527	508	1,035
Occupation Class 1						
Nonsmoker	79.7%	68.8%	73.3%	13,751	15,839	29,590
Smoker	84.0%	69.9%	76.3%	1,906	1,704	3,610
Unknown	77.6%	55.9%	67.3%	1,400	971	2,371
Occupation Class 2						
Nonsmoker	75.3%	62.3%	67.6%	2,182	2,370	4,552
Smoker	67.7%	57.9%	62.4%	337	333	670
Unknown	83.9%	63.6%	73.9%	280	235	515
Occupation Class 3-4						
Nonsmoker	64.1%	61.2%	62.4%	424	461	885
Smoker	66.4%	54.4%	59.6%	81	78	159
Unknown	63.5%	56.6%	59.9%	272	241	513
All Occupation Classes						
Nonsmoker	72.5%	64.0%	67.3%	27,131	33,943	61,074
Smoker	78.0%	65.8%	71.3%	2,962	2,791	5,753
Unknown	70.6%	57.9%	64.3%	2,479	1,955	4,434

The A/E claim incidence ratios for both nonsmokers and smokers declined between study period groupings 2006 - 2009 and 2010 - 2014. The claim incidence modifiers (provided in Appendix A) were substantially higher for smokers than nonsmokers.

4.13 Experience by Market

Table 4.17 shows the modified A/E incidence ratios (indemnity) by occupation class and market for AS policies. The three market categories are

- *Individual* - policies purchased by individuals and not endorsed by either employers or associations;
- *Employer-sponsored* – policies issued to employees of firms either under a voluntary or mandatory basis. These plans are often referred to as multi-life; and
- *Associations* - individual policies sold via endorsements by professional associations.

In order to remove the impact of different distributions by elimination period and benefit period, Table 4.17 is limited to policies with To Age 65-70 maximum benefit periods and elimination periods of 30+ days.

Table 4.17

MODIFIED A/E INCIDENCE RATIOS (INDEMNITY) BY OCCUPATION CLASS AND MARKET - POLICIES WITH TO AGE 65-70 MAXIMUM BENEFIT PERIODS AND 30+ DAYS ELIMINATION PERIODS

Smoker Status	Modified A/E Incidence Ratios			Incurred Claims		
	2006-09	2010-14	Combined	2006-09	2010-14	Combined
Occupation Class M						
Individual	65.6%	59.6%	61.9%	9,354	12,352	21,706
Associations	63.0%	57.9%	59.9%	765	1,108	1,873
Employer-sponsored	73.3%	66.5%	68.7%	1,820	2,997	4,817
Occupation Class 1						
Individual	77.4%	65.5%	70.6%	12,966	13,507	26,473
Associations	79.8%	69.2%	73.7%	256	266	522
Employer-sponsored	92.0%	79.7%	84.4%	3,835	4,741	8,576
Occupation Class 2						
Individual	71.7%	58.4%	64.0%	2,405	2,468	4,873
Associations	NA	NA	NA	4	3	7
Employer-sponsored	98.4%	87.1%	91.6%	390	467	857
Occupation Class 3-4						
Individual	63.6%	57.7%	60.3%	752	729	1,481
Associations	NA	NA	NA	1	1	2
Employer-sponsored	NA	106.5%	93.8%	24	50	74
All Occupation Classes						
Individual	71.2%	62.0%	65.8%	25,477	29,056	54,533
Associations	65.7%	59.4%	61.8%	1,026	1,378	2,404
Employer-sponsored	84.1%	73.4%	77.2%	6,069	8,255	14,324

The A/E claim incidence ratios for all three markets declined between study period groupings 2006 - 2009 and 2010 - 2014.

The claim incidence modifiers vary by market for the individual and association markets and by both market and underwriting method for the employer-sponsored market. The claim incidence modifiers by market were developed using the 1990 - 2006 database, while the underwriting modifiers were developed from a separate study. Before the underwriting modifiers were added, the Individual Disability Table Working Group (IDTWG) recommended an overall employer-sponsored modifier of 79.9%, which reflected the combined incidence of all underwriting methods. The modifier for the individual and associations markets was 105.3%, indicating that the employer-sponsored market had experienced lower overall A/E incidence experience than the individual or associations markets during the 1990 - 2006 period.

The 1990 - 2006 database could not distinguish incidence experience by underwriting method. Upon request from a few IDI companies, the IDTWG developed underwriting claim incidence modifiers for the employer-sponsored market using a separate study of industry experience. The goal was to have the modified A/E

incidence ratios for the three markets remain close unless there had been an underlying change in the incidence among the markets. Table 4.17 shows that the modified A/E incidence ratios for the employer-sponsored market was significantly higher than the modified A/E incidence ratios for the individual and associations markets. This suggests that employer-sponsored overall incidence moved closer to that of the individual and associations markets in the 2006 - 2014 study period than observed in the 1990 - 2006 experience.

The following discussion on incidence experience by underwriting method sheds more light on the incidence differences among these three markets when the modified A/E ratios are replaced by the semi-modified A/E ratios.

4.14 Experience by Underwriting Method

The analysis of claim incidence experience by underwriting method focuses on the following subset of the IDI business:

- AS policies issued since 2000, since companies have improved their retention of underwriting information in policy records since then; and
- Policies with maximum benefit periods of To Age 65-70 and elimination periods of 30 days and longer in order to maintain some homogeneity.

Since the presence of COLA can affect incidence rates, we separated the analysis between policies, both with and without COLA in some cases. Furthermore, we combined GSI and GTI underwriting (GSI/GTI) due to some apparent confusion among contributing companies regarding the coding of GSI and GTI underwriting. The need to combine GSI and GTI underwriting is discussed later in this section.

We also utilized semi-modified A/E incidence ratios instead of the modified basis. Although this change may cause confusion, we feel the claim incidence modifiers pertaining to market/underwriting may not reflect the true differences in experience by market and underwriting. Using the semi-modified A/E ratios allows us to observe the actual differences by market/underwriting method.

The employer-sponsored market is segmented by the premium payor:

- *Employee payor* – the premium is primarily paid by the employee and the purchase of the IDI coverage by eligible employees under the employer-sponsored plan is largely voluntary; and
- *Employer payor* - the premium is primarily paid by the employer and the purchase of the IDI coverage by eligible employees under the employer-sponsored plan is mainly mandatory.

Most IDI companies have improved their capability of capturing whether the business is employee or employer payor. However, some contributing companies are unable to distinguish between employee and employer payor in their data and, for this reason, our analysis also includes an “unknown” payor category for these situations. Our analysis of payor segmentation is restricted to employer-sponsored AS policies issued since 2000 in order to exclude business issued in years when the payor segmentation was not as reliably coded.

Table 4.18 compares the unmodified, modified, and semi-modified A/E claim incidence ratios by market and payor segments within the employer-sponsored market after all underwriting types are combined.

Table 4.18

COMPARISON OF UNMODIFIED, MODIFIED, AND SEMI-MODIFIED A/E CLAIM INCIDENCE RATIOS TO AGE 65-70 MAXIMUM BENEFIT PERIODS AND 30+ DAYS ELIMINATION PERIOD
IDI POLICIES ISSUED 2000-2014 – ALL UNDERWRITING TYPES COMBINED

Market	A/E Incidence Ratio			Semi-modified / Modified
	Unmodified	Modified	Semi-modified	
Individual	56.5%	56.6%	59.6%	1.053
Associations	47.0%	46.3%	48.7%	1.053
Employer-sponsored:				
Employee Payor	63.5%	75.2%	65.8%	0.876
Employer Payor	52.9%	65.6%	48.8%	0.745
Unknown Payor	52.9%	67.5%	56.9%	0.843
Total Empl-sponsored	58.7%	72.1%	60.9%	0.844
All Markets Combined	56.7%	60.1%	59.5%	0.989

The semi-modified A/E ratios for the employer-sponsored market when all payor segments are combined are higher than those for the individual market. This result is significantly different from the 1990 - 2006 IDEC database, which showed that the unmodified A/E ratio for the employer-sponsored market was approximately 75% of the unmodified A/E ratio for the individual market. This change may be caused by a higher percentage of employer-sponsored business from the employee pay segment with voluntary guaranteed standard issue underwriting during the 2006 - 2014 study period than during the 1990 - 2006 study period.

There are four underwriting types:

1. *Medical underwriting* – This underwriting involves traditional medical and financial underwriting;
2. *Guaranteed standard issue (GSI)* – This underwriting involves issuing policies to employer-sponsored cases on a standard basis for all actively-at-work applicants up to a specified monthly amount limit, with no medical underwriting. In the case of individual and associations markets, companies may use a form of GSI underwriting in certain marketing programs;
3. *Guaranteed to issue (GTI)* – This underwriting involves traditional medical and financial underwriting of policies in employer-sponsored cases, with a guarantee that policies will be issued to eligible employees, albeit possibly rated and/or with waived impairments. In the case of individual and associations markets, companies may use a form of GTI underwriting in certain marketing programs; and
4. *Guaranteed insurability options (GIO)* – This underwriting involves the exercising of GIO options to increase the IDI coverage without medical underwriting, although companies are typically allowed to apply financial underwriting rules in order to limit the additional coverage.

As some contributing companies had difficulty distinguishing GSI from GTI policies, for the purposes of the analysis to follow, those categories are combined and called “Guaranteed Issue.”

Table 4.19 compares the semi-modified A/E incidence ratios by market/payor segments and underwriting type for business issued in 2000 - 2014 with maximum benefit periods of To Age 65-70 and elimination periods of 30+ days. Results are shown separately for policies with COLA benefits and those without.

Table 4.19
SEMI-MODIFIED A/E INCIDENCE RATIOS BY MARKET AND UNDERWRITING TYPE TO AGE 65-70 MAXIMUM BENEFIT PERIODS; 30+ DAY ELIMINATION PERIOD
IDI POLICIES ISSUED 2000 – 2014

Market	Policies without COLA			
	Medically UW	GSI/GTI UW	GIO	Combined
Individual	59.0%	49.7%	101.5%	59.7%
Associations	46.0%	NA	76.2%	46.3%
Employer-sponsored:				
Employee Payor	50.6%	80.8%	134.2%	72.3%
Employer Payor	45.0%	46.3%	88.7%	46.6%
Unknown Payor	62.7%	70.7%	75.6%	65.3%
Total Empl-sponsored	53.5%	65.7%	81.3%	65.4%
All Markets Combined	57.1%	63.9%	97.9%	61.0%
Market	Policies with COLA			
	Medically UW	GSI/GTI UW	GIO	Combined
Individual	57.3%	67.0%	87.9%	59.5%
Associations	49.4%	NA	93.4%	50.9%
Employer-sponsored:				
Employee Payor	37.6%	77.2%	83.6%	56.8%
Employer Payor	55.9%	51.4%	62.5%	53.4%
Unknown Payor	49.5%	50.7%	55.2%	50.2%
Total Empl-sponsored	43.5%	70.0%	60.2%	54.7%
All Markets Combined	54.1%	69.3%	83.0%	57.7%
Market	Combined			
	Medically UW	GSI/GTI UW	GIO	Combined
Individual	58.1%	53.3%	94.7%	59.6%
Associations	47.8%	NA	87.7%	48.7%
Employer-sponsored:				
Employee Payor	43.3%	79.7%	96.1%	65.8%
Employer Payor	50.2%	47.7%	75.8%	48.8%
Unknown Payor	55.0%	63.0%	64.4%	56.9%
Total Empl-sponsored	47.9%	70.7%	69.5%	60.9%
All Markets Combined	55.5%	63.1%	90.2%	59.5%

The employee payor segment of the employer-sponsored market had the lowest semi-modified A/E incidence ratio for medically underwritten business among all market/payor segments but the highest A/E ratio for guaranteed issue business. The individual market had the highest semi-modified A/E incidence ratio for medically underwritten business. When all markets were combined, the semi-modified A/E incidence ratio for GIO business was 163% of the semi-modified A/E ratio for all medically underwritten business. Policies with COLA benefits had lower semi-modified A/E incidence ratios than those with COLA benefits in the employer-sponsored market when the three payor segments were combined. However, the presence of COLA benefits increased the A/E ratio in the employer pay segment.

Table 4.20 compares the semi-modified A/E incidence ratios for guaranteed issue business for the three payor segments of the employer-sponsored market. In addition, the ratios of the semi-modified A/E ratios for guaranteed issue to the corresponding semi-modified A/E ratios for medically underwritten are shown by payor segment.

Table 4.20
 COMPARISON OF SEMI-MODIFIED A/E INCIDENCE RATIOS FOR EMPLOYER-SPONSORED GSI/GTI UNDERWRITTEN BUSINESS ISSUED IN 2000-2014 TO AGE 65-70 MAXIMUM BENEFIT PERIODS; 30+ DAY ELIMINATION PERIOD

Payor Segment	A/E	Ratio to Med UW
Employee Payor	79.7%	1.84
Employer Payor	47.7%	0.95
Unknown Payor	63.0%	1.15
Total Employer-sponsored	70.7%	1.47

The employer payor segment, where employee participation is mandatory, had the lowest semi-modified A/E incidence ratio for guaranteed issue business among the three payor segments, which was even lower than that of the medically underwritten business for this payor segment. The employee payor segment, where employee participation is voluntary, had the highest A/E ratio among the three payor segments. The A/E ratio for the unknown payor segment, which is comprised of both employee and employer pay segments, fell between the A/E ratios for the employee and employer segments.

Table 4.21 compares the semi-modified A/E incidence ratios for all markets/payor segments by policy year for medically underwritten business that was issued in 2000 - 2014. Policies with COLA and no COLA benefits have been combined.

Table 4.21
 SEMI-MODIFIED A/E INCIDENCE RATIOS BY POLICY YEAR FOR MEDICALLY UNDERWRITTEN BUSINESS (COLA AND NO COLA COMBINED) ISSUED IN 2000-2014 TO AGE 65-70 MAXIMUM BENEFIT PERIODS; 30+ DAY ELIMINATION PERIOD

Market	Semi-modified A/E Incidence Ratios					
	PY 1-2	PY 3	PY 4-5	PY 6-10	PY 11+	Total
Individual	47.7%	58.1%	61.9%	61.4%	59.8%	58.1%
Associations	45.4%	51.6%	44.4%	48.1%	61.6%	47.8%
Employer-sponsored:						
Employee Payor	27.0%	38.0%	55.7%	50.3%	50.5%	43.3%
Employer Payor	24.6%	43.4%	53.9%	55.5%	80.5%	50.2%
Unknown Payor	41.3%	63.6%	56.5%	64.7%	47.0%	55.0%
Total Empl-sponsored	31.3%	46.7%	55.7%	55.7%	53.2%	47.9%
All Markets Combined	43.9%	55.2%	59.3%	59.7%	58.9%	55.5%
Market	Ratio to Individual A/E Ratios					
	PY 1-2	PY 3	PY 4-5	PY 6-10	PY 11+	Total
Associations	0.95	0.89	0.72	0.78	1.03	0.82
Employer-sponsored:						
Employee Payor	0.57	0.65	0.90	0.82	0.84	0.75
Employer Payor	0.52	0.75	0.87	0.90	1.35	0.86
Unknown Payor	0.87	1.10	0.91	1.05	0.79	0.95
Total Empl-sponsored	0.66	0.80	0.90	0.91	0.89	0.83

In general, the A/E incidence ratios for the medically underwritten business increased by policy year as the effect of the underwriting selection decreased over time. The A/E ratios for the employer-sponsored market for the employee and employer pay segments during the first two policy years were 52-57% of the corresponding individual market A/E ratios during the first two policy years. When medical underwriting was

used, the employer-sponsored plans appeared to remove much of the anti-selection that might have occurred in the individual market. The differences in the A/E ratios tended to decrease over time, but did not disappear entirely.

Table 4.22 compares the semi-modified A/E incidence ratios for the employer-sponsored payor business issued using guaranteed issue underwriting. Ratios of these A/E ratios to their corresponding A/E ratios for medically underwritten business illustrate the level of anti-selection arising from the guaranteed issue underwriting.

Table 4.22
SEMI-MODIFIED A/E INCIDENCE RATIOS BY POLICY YEAR FOR GUARANTEED ISSUE EMPLOYER-SPONSORED BUSINESS (COLA AND NO COLA COMBINED) ISSUED IN 2000-2014 TO AGE 65-70 MAXIMUM BENEFIT PERIODS; 30+ DAY ELIMINATION PERIOD

Semi-modified A/E Incidence Ratios						
Payor Segment	PY 1-2	PY 3	PY 4-5	PY 6-10	PY 11+	Total
Employee Payor	78.2%	76.8%	80.3%	85.5%	66.1%	79.7%
Employer Payor	39.3%	50.5%	46.9%	53.9%	55.4%	47.7%
Unknown Payor	51.1%	54.3%	73.8%	79.0%	NA	63.0%
Total Employer-sponsored	66.0%	68.8%	71.1%	77.5%	62.1%	70.7%
Ratios to Corresponding A/E Incidence Ratios for Medically Underwritten Business						
Payor Segment	PY 1-2	PY 3	PY 4-5	PY 6-10	PY 11+	Total
Employee Payor	2.89	2.02	1.44	1.70	1.31	1.84
Employer Payor	1.60	1.16	0.87	0.97	0.69	0.95
Unknown Payor	1.24	0.85	1.31	1.22	NA	1.15
Total Employer-sponsored	2.11	1.47	1.28	1.39	1.17	1.47

The employee payor segment that was issued using guaranteed issue underwriting experienced a substantial increase in the A/E incidence ratio in the first two policy years compared to the medically underwritten business issued in this segment. Although the differences between the guaranteed issue A/E ratios in the employee segment and the corresponding medically underwritten A/E ratios tended to decrease over time, the differences did not go away entirely. The impact of the anti-selection in the employee payor segments due to guaranteed issue underwriting appears to continue indefinitely.

In comparison, the extent of the anti-selection in the first two policy years from employer pay business issued using guaranteed issue underwriting was significantly less than observed in the employee pay business. Furthermore, the level of anti-selection in the employer pay segment appears to disappear by the end of the third policy year.

Table 4.23 compares the semi-modified incidence ratios for GIO elections issued in 2000 - 2014.

Table 4.23

SEMI-MODIFIED A/E INCIDENCE RATIOS BY POLICY YEAR FOR GIO ELECTIONS (COLA AND NO COLA COMBINED) ISSUED IN 2000-2014

TO AGE 65-70 MAXIMUM BENEFIT PERIODS; 30+ DAY ELIMINATION PERIOD

Semi-modified A/E Incidence Ratios						
Market	PY 1-2	PY 3	PY 4-5	PY 6-10	PY 11+	Total
Individual	119.7%	91.5%	93.1%	89.1%	79.3%	94.7%
Associations	89.2%	53.2%	50.4%	104.0%	148.2%	87.7%
Employer-sponsored	55.4%	70.2%	62.0%	86.0%	79.7%	69.5%
Total	103.3%	85.6%	86.1%	89.1%	80.6%	90.2%
Ratios to Corresponding A/E Incidence Ratios for Medically Underwritten Business						
Market	PY 1-2	PY 3	PY 4-5	PY 6-10	PY 11+	Total
Individual	2.51	1.58	1.51	1.45	1.33	1.63
Associations	1.96	1.03	1.13	2.16	2.40	1.84
Employer-sponsored	1.77	1.50	1.11	1.54	1.50	1.45
Total	2.35	1.55	1.45	1.49	1.37	1.62

The GIO elections in the individual and employer-sponsored markets experienced their highest A/E ratios relative to medically underwritten business in the first two policy years. In subsequent policy years, the relative A/E ratios decreased slowly, but remained higher than individual medical A/E ratios even in policy years 11+. The difference between the GIO A/E ratios and the medically underwritten A/E ratios in the association market increased by policy year.

4.15 Experience by State of Issue

Appendix B provides policy and claim detail by state of issue for all AS business. To compare claim incidence experience by state, we used the modified A/E claim incidence ratios and, in addition, calculated “relative” A/E ratios by dividing the modified A/E ratio for each state by the modified A/E ratio for all states combined.

Table 4.24 shows the minimum, maximum, and median A/E claim incidence ratios (modified and relative) among the various states for all issue years combined and for issue years 2005 - 2014. It should be noted that A/E ratios for Alaska and Wyoming were not included in the 2005 - 2014 results because neither state incurred more than 25 claims from those issue years.

Table 4.24

A/E CLAIM INCIDENCE RATIOS BY STATE OF ISSUE

MINIMUM, MAXIMUM, MEDIAN AND AVERAGE FOR AS CONTRACTS ONLY

All Issue Years		
Statistical Measure	Modified A/E	Relative A/E
Minimum	39.0%	58%
Maximum	86.0%	128%
Median	62.2%	93%
Issue Years 2005-2014		
Statistical Measure	Modified A/E	Relative A/E
Minimum	37.7%	65%
Maximum	97.8%	169%
Median	52.5%	91%

When all issue years were included, the maximum relative A/E ratio increased from 128% to 169% when only business issued in years 2005 - 2014 was included.

Table 4.25 lists the ten states with the highest relative A/E ratios for the two issue year periods. The “red” states represent those that made the top ten list for both issue year periods.

Table 4.25
 10 HIGHEST RELATIVE A/E RATIOS BY STATE OF ISSUE
 ALL ISSUE YEARS COMBINED AND ISSUED IN YEARS 2005-2014

Ranking	All Issue Years		Issued in Years 2005-2014	
	State of Issue	Relative A/E	State of Issue	Relative A/e
1	Rhode Island	128%	Rhode Island	169%
2	California	128%	California	151%
3	Idaho	116%	Idaho	128%
4	Arizona	114%	Arizona	126%
5	Kentucky	112%	Kentucky	120%
6	Nevada	111%	Florida	119%
7	Florida	110%	Nevada	115%
8	New York	110%	New York	113%
9	Washington	107%	New Jersey	110%
10	New Jersey	106%	Alaska	108%

Rhode Island, California, Idaho, Arizona, and Kentucky ranked 1 through 5, respectively, during both issue year groupings, indicating that relative differences in A/E claim incidence ratios have not bounced around significantly for those with the highest A/E ratios. Florida, New York, and New Jersey were in the top ten during both issue year groupings.

Table 4.26 lists the ten states with the lowest relative A/E ratios for the two issue year periods.

Table 4.26
 10 LOWEST A/E RATIOS BY STATE OF ISSUE
 ALL ISSUE YEARS COMBINED AND ISSUED IN YEARS 2005-2014

Ranking	All Issue Years		Issued in Years 2005-2014	
	State of Issue	Relative A/E	State of Issue	Relative A/e
43	Texas	84%	Iowa	76%
44	Maryland	83%	Vermont	75%
45	Indiana	80%	Nebraska	73%
46	DC	79%	Maine	72%
47	Utah	77%	Indiana	72%
48	Kansas	75%	Montana	70%
49	Nebraska	72%	Kansas	70%
50	Hawaii	72%	Oklahoma	69%
51	Puerto Rico	71%	Utah	66%
52	Wyoming	58%	New Mexico	65%

Only four states (shown in red) made the list of the ten with the lowest relative A/E ratios during both issue year groupings.

4.16 Experience by Policy Size

Table 4.27 shows the modified A/E incidence ratios by policy size for the IDEC occupation classes M, 1, and 2. Occupation class 3-4 was not shown because over 99% of the policies fell within the first two size bands. The reader should be aware that policy size pertains to the monthly benefit per policy and does not pertain to the amount of monthly benefit per insured. The database is at the policy level and does not provide any means to combine policies for each insured.

Table 4.27

MODIFIED A/E INCIDENCE RATIOS FOR AS POLICIES BY POLICY SIZE BAND FOR OCCUPATION CLASSES M, 1, AND 2 STUDY PERIOD: 2006 - 2014

Size Band	Occupation Class M		Occupation Class 1		Occupation Class 2	
	Modified A/E	Number of Claims	Modified A/E	Number of Claims	Modified A/E	Number of Claims
Under \$2,500	66.0%	25,017	69.6%	37,721	61.0%	10,336
\$2,500-\$4,999	61.8%	12,411	74.6%	12,450	68.1%	1,383
\$5,000-\$7,499	61.6%	6,200	71.2%	4,552	79.4%	395
\$7,500-\$9,999	66.9%	2,623	74.5%	1,442	74.3%	98
\$10,000-\$14,999	64.1%	2,074	70.7%	919	65.9%	67
\$15,000+	66.8%	437	58.4%	229	*	*
Total	63.7%	48,762	71.5%	57,313	65.6%	12,279

The modified A/E ratios for occupation classes M and 1 peaked in band \$7,500-\$9,999. The modified A/E ratio for occupation class 2 peaked in band \$5,000-\$7,499

Section 5: Demographic and Product Trends

5.1 Introduction and Summary

This section covers changes in the profile of IDI inforce and new business. An understanding of trends in the IDI inforce and the composition of new business is important for understanding the implications for future claim incidence experience.

Since the IDEC database does not have inforce records as of specific dates or new business records of policies issued in specific years, we rely on the policy and indemnity exposures of policies within specific study periods to estimate changes in the profile of inforce and new business. A policy's exposure is the number of years of exposure within a specific study period. For example, if a specific study period is five years long and a policy was inforce for the full five years, the policy exposure in that study period would be five years. If the policy was issued halfway through the five-year study period and stayed inforce for the remainder of the study period, its policy exposure would be 2.5 years. The indemnity exposure for a policy is the policy exposure times the policy's face amount (at issue). In the discussion below, the distribution of policies and indemnity refers to the distribution of the policy exposure and indemnity exposure, respectively. Unless otherwise specified in the discussion below, exposure refers to indemnity exposure.

The experience study is limited to the 2006 - 2014 study period, but includes all IDI policies issued through 2014 as long as they were inforce on or after 1/1/2006.

The following are highlights from the discussion in the rest of Section 5:

- Accident and sickness (AS) policies currently comprise over 94% of the IDI policies, and this percentage has been slowly increasing over the years.
- Occupation class 1, which is comprised of non-medical professionals, executives, and other white collar occupations, is the largest of the five IDEC occupation classes among AS policies, but occupation class M, which is comprised of medical occupations, is the fastest growing.
- Occupation class M is the largest of the five IDEC occupation classes among the business overhead expense (BOE) policies, representing over 74% of the BOE indemnity.
- The percentage of the IDI indemnity inforce on policies with female insureds exceeds 22%. Occupation class M has the highest percentage of females at 28%.
- The average attained age of the AS inforce, weighted by indemnity, has grown from 47.8 in 2006 to 49.1 in 2014.
- The percentage of the AS inforce attributable to smokers has decreased from 6% in 2006 to 4% in 2014. Occupation class M has the lowest percent of smokers of the five IDEC occupation classes with less than 2% in 2014. Occupation class 3-4 has the highest percentage of smokers at 16% in 2014.
- Policies with a lifetime maximum benefit period as a percent of AS indemnity inforce has dropped from 15% in 2006 to 10% in 2014. Occupation class M has the highest percentage of indemnity inforce of the five IDEC occupation classes at 16% in 2014.
- The percentage of AS indemnity inforce with COLA benefits increased from 37% in 2006 to 46% in 2014. With respect to the maximum benefit periods, lifetime has the highest percent of indemnity with COLA at 51%.
- The individual market has the largest percentage of the AS indemnity inforce of the three markets at 71% in 2014. The employer-sponsored market is next with 25% in 2014, followed by the associations market at less than 4% in 2014.
- The employer-sponsored market is the fastest growing of the three IDI markets and comprised 33% of the indemnity of AS policies issued in years 2010 - 2014.

- Employee-payor plans represented 65% of the employer-sponsored business issued from 2000 through 2014. Employer-payor plans represented 18%. The unknown-payor plans represented 17% of the employer-sponsored business issued from 2000 through 2014.
- Policies issued in the employer-sponsored market using guaranteed underwriting comprised 71% of the employer-payor business issued from 2000 through 2014, 67% of the employee-payor business and 13% of the unknown-payor business.
- New York has the largest share of AS indemnity over the 2006 - 2014 study period at 11%, followed by California at 9%.

5.2 Type of Contracts

Over the full study period 2006 - 2014, AS policies represented 94% of the policies, followed by BOE policies at 4%. The other contract types comprised the remaining 2% of all policies.

Table 5.1 shows the distribution of the policies by contract type by calendar years. Only the even number calendar years are shown over the 2006 - 2014 study period in order to limit the size of the tables while illustrating the trends.

Table 5.1
DISTRIBUTION OF POLICY EXPOSURE BY CONTRACT TYPE 2006-2014

Year	AS	BOE	DBO	AO	KP	Other	Total
2006	93.1%	4.5%	1.3%	0.3%	0.1%	0.8%	100.0%
2008	93.3%	4.4%	1.2%	0.2%	0.1%	0.8%	100.0%
2010	93.5%	4.4%	1.2%	0.2%	0.1%	0.7%	100.0%
2012	93.8%	4.2%	1.1%	0.2%	0.1%	0.6%	100.0%
2014	94.3%	3.9%	1.0%	0.1%	0.1%	0.6%	100.0%
2006-2014	93.6%	4.3%	1.2%	0.2%	0.1%	0.7%	100.0%

The distribution of IDI policies by contract type has remained quite stable throughout the full study period. The AS policies have slowly increased their share of the total number of IDI policies, going from 93% in 2006 to 94% in 2014.

Table 5.2 compares the distribution of the policies by contract type and issue year periods. It should be noted that the distributions of business issued prior to our study period 2006 - 2014 included only policies that persisted beyond 1/1/2006 and did not include policies that lapsed or expired prior to that date.

Table 5.2
DISTRIBUTION OF POLICY EXPOSURE BY CONTRACT TYPE AND ISSUE YEAR PERIOD
STUDY PERIOD 2006-2014

Issue Year	AS	BOE	DBO	AO	KP	Other	Total
Pre-1990	91.7%	5.3%	0.5%	0.1%	0.0%	2.5%	100.0%
1990-1994	92.8%	5.1%	1.1%	0.0%	0.1%	0.9%	100.0%
1995-1999	94.3%	3.9%	1.5%	0.2%	0.1%	0.0%	100.0%
2000-2004	93.9%	3.7%	1.6%	0.6%	0.1%	0.1%	100.0%
2005-2009	94.3%	3.9%	1.3%	0.2%	0.1%	0.3%	100.0%
2010-2014	94.9%	3.6%	0.9%	0.0%	0.2%	0.3%	100.0%
Total	93.6%	4.3%	1.2%	0.2%	0.1%	0.7%	100.0%

Over time, AS policies have slowly increased their share of new IDI policies while BOE policies have decreased their share. DBO policies' share of new business has been decreasing since the 2000 - 2004 period. The policies falling in the Other category were primarily issued prior to 1990.

Table 5.3 shows the average policy size per policy (obtained by dividing the indemnity exposure by the policy exposure) of the various contract types over time.

Table 5.3
AVERAGE POLICY SIZE PER POLICY BY CONTRACT TYPE 2006-2014

Year	AS	BOE	DBO	AO	KP	Other
2006	\$2,758	\$7,546	\$293,189	\$1,169	\$67,793	\$1,359
2008	\$2,871	\$7,920	\$313,637	\$1,203	\$62,605	\$1,515
2010	\$2,987	\$8,339	\$336,929	\$1,201	\$89,740	\$1,628
2012	\$3,123	\$8,755	\$363,884	\$1,203	\$126,332	\$1,750
2014	\$3,237	\$9,130	\$390,530	\$1,235	\$155,968	\$1,893
2006-2014	\$2,992	\$8,309	\$336,563	\$1,201	\$103,747	\$1,608
CAGR	2.0%	2.4%	3.6%	0.7%	11.0%	4.2%

The average policy size of AS contracts grew from 2006 to 2014 at an average compound annual growth rate (CAGR) of 2%. The average policy size of BOE contracts were almost three times that of AS contracts and had an average CAGR of 2.4%. The average policy size of DBO contracts reflected lump-sum benefits, which exceeded ten times the average AS (monthly) face amount and had a CAGR of 3.6%. The average policy size of AO contracts remained relatively flat over that period. The average policy size of KP policies reflected a combination of monthly and lump-sum benefits among the various KP contracts. The average policy size of the Other contracts continued to grow at a CAGR of 4.2%.

5.3 Occupation Class

Companies typically have their own occupation classes that are different from those of other companies, as well as different from the IDEC occupation classes.

The 1985 Commissioner's Individual Disability A (1985 CIDA) table was the first industry table to segment experience by occupation class. The occupation classes were labeled 1, 2, 3, and 4, which were defined similar to the IDEC occupation classes 1, 2, 3, and 4, except medical occupations were primarily assigned to occupation class 1. When the IDEC analyzed the 1990 – 2006 IDI experience prior to the formulation of the 2013 IDVT, it became clear that a separate occupation containing all medical occupations was necessary. Many companies assigned specific occupation codes, as well as the 1985 CIDA occupation classes, in their

policy data. This data allowed the IDEC to isolate the experience of medical occupations into occupation class M, as well as assign most sales-related occupations to class 2, regardless of how companies had assigned them to the 1985 CIDA occupation classes.

Table 5.4 shows the distribution of the AS inforce indemnity by study year throughout the 2006 - 2014 study period. The results for each study year include all AS policies that were inforce sometime during that year regardless of when they were issued. Occupation classes 3 and 4 are combined in this report due to the low volume of business issued to these occupation classes and because the occupations in these classes generally have similar characteristics.

Table 5.4
DISTRIBUTION OF AS INDEMNITY BY OCCUPATION CLASS BY STUDY YEAR

Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
2006	36.1%	56.4%	5.2%	2.3%	100.0%
2008	36.3%	56.2%	5.2%	2.3%	100.0%
2010	38.0%	54.7%	5.2%	2.2%	100.0%
2012	39.2%	53.6%	5.1%	2.1%	100.0%
2014	40.1%	52.5%	5.2%	2.1%	100.0%
2006-2014	38.0%	54.7%	5.2%	2.2%	100.0%

Occupation class 1 comprised the largest share of the AS inforce indemnity of the five IDEC occupation classes, but its share has declined from 56% in 2006 to 52% in 2014. Occupation class M is the next largest occupation class, and its share has been growing the fastest among the five occupation classes over this nine-year period, from 36% in 2006 to 40% in 2014. The other three occupation classes have a combined share of 7%, which has been generally stable over the nine-year period.

Table 5.5 compares the distribution of the AS indemnity by occupation class and issue year rather than by study year.

Table 5.5
DISTRIBUTION OF AS INDEMNITY BY OCCUPATION CLASS AND ISSUE YEAR

Issue Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
Pre-1990	43.4%	49.2%	4.9%	2.5%	100.0%
1990-1994	49.9%	45.1%	3.2%	1.8%	100.0%
1995-1999	38.0%	54.4%	5.0%	2.5%	100.0%
2000-2004	30.7%	60.8%	6.0%	2.4%	100.0%
2005-2009	31.9%	59.8%	6.2%	2.1%	100.0%
2010-2014	39.9%	53.3%	5.0%	1.8%	100.0%
Total	38.0%	54.7%	5.2%	2.2%	100.0%

Except for business issued in 1990 - 1994, occupation class 1 has been the prevailing IDEC occupation class. Occupation class M was the most prevalent occupation class during the 1990 - 1994 period with almost 50% of the AS indemnity. During the late 1990's, many companies took corrective actions in the marketplace and tightened their IDI product offerings available to doctors and surgeons. They focused their marketing efforts more on the nonmedical occupations. As a result, the share of the new AS indemnity issued to occupation class M dropped to 31% in years 2000 - 2004. With better pricing of the occupation class M IDI policies and renewed competitive attention to the medical market, the share of the new business issued to occupation class M has been growing, reaching almost 40% in the 2010 - 2014 period.

Table 5.6 shows the average AS policy size for the five IDEC occupation classes over the 2006 - 2014 period.

Table 5.6
AVERAGE AS POLICY SIZE BY OCCUPATION CLASS BY STUDY YEAR

Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
2006	\$3,476	\$2,688	\$1,762	\$1,187	\$2,758
2008	\$3,570	\$2,804	\$1,875	\$1,229	\$2,871
2010	\$3,698	\$2,905	\$1,948	\$1,252	\$2,987
2012	\$3,849	\$3,027	\$2,034	\$1,287	\$3,123
2014	\$3,962	\$3,130	\$2,135	\$1,389	\$3,237
2006-2014	\$3,715	\$2,906	\$1,948	\$1,264	\$2,992
CAGR	1.6%	1.9%	2.4%	2.0%	2.0%

Occupation class M has the largest average AS policy size among the five IDEC occupation classes, followed by occupation class 1, and then occupation class 2. The average AS policy size for occupation class 2 exhibited the largest CAGR (2.4%) among the five occupation classes.

Table 5.7 compares the average AS policy size for the five IDEC occupation classes by issue year period.

Table 5.7
AVERAGE AS FACE AMOUNT PER POLICY BY OCCUPATION CLASS BY ISSUE YEAR

Issue Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
Pre-1990	\$2,958	\$1,790	\$951	\$708	\$1,968
1990-1994	\$4,209	\$2,757	\$1,523	\$1,077	\$3,130
1995-1999	\$3,477	\$2,984	\$1,996	\$1,343	\$2,979
2000-2004	\$3,407	\$3,072	\$2,426	\$1,529	\$3,040
2005-2009	\$3,913	\$3,314	\$2,569	\$1,578	\$3,339
2010-2014	\$4,410	\$3,517	\$2,346	\$1,684	\$3,648
Total	\$3,715	\$2,906	\$1,948	\$1,264	\$2,992

The average AS policy size for occupation class M reached its low point for during issue years from 1995 through 2004, but has been climbing steadily since then. The average policy size for occupation classes 1 and 3 has increased steadily in successive issue year periods.

Table 5.8 compares the distribution of the BOE indemnity by occupation class and study year over the 2006 - 2014 period.

Table 5.8

DISTRIBUTION OF BOE INDEMNITY EXPOSURE BY OCCUPATION CLASS BY STUDY YEAR

Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
2006	71.3%	25.6%	2.2%	0.9%	100.0%
2008	72.1%	24.6%	2.4%	0.9%	100.0%
2010	73.3%	23.2%	2.5%	0.9%	100.0%
2012	73.9%	22.4%	2.8%	1.0%	100.0%
2014	74.1%	21.7%	3.2%	1.0%	100.0%
2006-2014	73.0%	23.5%	2.6%	0.9%	100.0%

Occupation class M had the largest share of the BOE indemnity, growing from 71% in 2006 to 74% in 2014. Occupation class 1 had the next largest share, which is approximately one-third of the share for occupation class M. The occupation class 1 share decreased over the nine-year period as the occupation class M share increased. Occupation classes M and 1 together comprised 96% of the total BOE indemnity exposure in 2014.

Table 5.9 compares the distribution of the BOE indemnity by occupation class and issue year over the 2006 - 2014 study period.

Table 5.9

DISTRIBUTION OF BOE POLICY INDEMNITY BY OCCUPATION CLASS AND ISSUE YEAR

Issue Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
Pre-1990	66.8%	30.6%	2.0%	0.5%	100.0%
1990-1994	72.0%	26.3%	1.2%	0.5%	100.0%
1995-1999	72.8%	24.2%	2.2%	0.8%	100.0%
2000-2004	75.2%	21.1%	2.6%	1.1%	100.0%
2005-2009	74.3%	21.0%	3.4%	1.3%	100.0%
2010-2014	74.5%	19.8%	4.5%	1.2%	100.0%
Total	73.0%	23.5%	2.6%	0.9%	100.0%

The share of the BOE indemnity attributable to occupation class 1 declined over the issue years from 31% during pre-1990 issue years to 20% during the 2010 - 2014 issue years, while the shares attributable to occupation class M increased from 67% for business issued prior to 1990 to 74% for business issued in years 2010 - 2014.

Table 5.10 provides the average BOE policy size for the five IDEC occupation classes over the 2006 - 2014 period.

Table 5.10
AVERAGE BOE POLICY SIZE BY OCCUPATION CLASS AND STUDY YEAR

Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
2006	\$9,161	\$5,782	\$3,430	\$2,272	\$7,546
2008	\$9,658	\$6,014	\$3,541	\$2,338	\$7,920
2010	\$10,246	\$6,273	\$3,369	\$2,435	\$8,339
2012	\$10,876	\$6,593	\$3,267	\$2,529	\$8,755
2014	\$11,459	\$6,936	\$3,283	\$2,637	\$9,130
2006-2014	\$10,233	\$6,272	\$3,366	\$2,441	\$8,309
CAGR	2.84%	2.30%	-0.55%	1.88%	2.41%

Occupation class M had the largest BOE average policy size among the IDEC occupation classes, exceeding 165% of the average BOE policy size for occupation class 1 in 2014. The average BOE policy sizes for occupation classes M, 1, and 3-4 have increased steadily during the nine-year period, while declining slightly for occupation class 2.

Table 5.11 shows the average distribution of indemnity by occupation class over the nine-year period for the other four contract types (excluding AS and BOE).

Table 5.11
AVERAGE DISTRIBUTION OF INDEMNITY EXPOSURE BY OCCUPATION FROM 2006-2014

Contract Type	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
Disability Buyout	28.6%	68.2%	2.8%	0.4%	100.0%
Accident Only	8.9%	36.3%	0.1%	54.7%	100.0%
Key Person	28.7%	69.8%	1.4%	0.0%	100.0%
Other	68.5%	20.2%	6.9%	4.3%	100.0%

Occupation class 1 has been the prevailing occupation class among DBO and KP policies. Occupation class 3-4 (mainly occupation class 3) has been the prevailing occupation class among AO policies, and occupation class M has been the prevailing occupation class among the Other policies.

5.4 Specific Occupations

Many companies capture specific occupation codes, as well as their company-specific occupation classes. In preparing the database for the 2006 - 2014 study, the IDEC mapped many of these occupations to a set of generic occupations. This effort was complicated by the lack of uniformity among companies in the coding or labeling of occupations. The IDEC attempted a similar exercise for prior studies, particularly with respect to medical occupations. Other than facilitating the creation of occupation class M and identifying sales-related occupations, the mapping of other occupations at that time was not considered comprehensive enough to warrant separate experience reporting by occupation. Our analysis represents the first time that industry IDI incidence experience by occupation is being reported.

Companies typically assign occupations to their own occupation classes based on their experience, as well as competitive considerations. Companies most likely assign their specific occupation classes to the IDEC occupation classes based on general definitions of the IDEC occupation classes (provided in Section 3). However, the assignment of occupations to the IDEC occupation classes can be inconsistent among the various contributing companies.

We limited our analysis by occupation to policies issued in 2000 and later because companies' occupation coding on new records began to improve around that time. Table 5.12 shows the distribution of the AS indemnity for occupation class M for all medical occupations identified in the IDEC database.

Table 5.12

PERCENTAGE OF AS INDEMNITY FOR OCCUPATION CLASS M BY MEDICAL OCCUPATION - AS POLICIES ISSUED IN 2000 AND LATER

General Practitioners	% AS Indemnity for Occupation
Physicians	56.1%
Dentists	16.0%
Other Medical Occupations	7.1%
Surgeons	5.0%
Anesthesiologists	2.9%
General Practitioners	2.6%
ER Physicians	2.1%
Pharmacists	1.8%
Nurses	1.8%
Other Medical - Residents/Students	1.5%
Veterinarians	1.5%
Psychologists & Psychiatrists	1.2%
Other Dental Occupations	0.2%
Chiropractors	0.2%
Total - Medical Occupations	100.0%

The "Physicians" category is the largest medical occupation category in terms of indemnity and dentists represent the second largest medical occupation category. Some companies label many of these medical occupations only as physicians or dentists, regardless of their specialty. Thus, the physician and dentist categories in Table 5.12 most likely include policies from other medical and dental specialties that were not labeled separately.

Table 5.13 shows the distribution of the AS indemnity for nonmedical occupations among occupation classes 1, 2, and 3-4 for policies issued during 2000 - 2014. An occupation is assigned under a prevailing occupation class if the percentage of the indemnity for all policies assigned to that occupation exceeds 50%. Service occupations and skilled trades do not appear to have an obvious prevailing occupation class. Table 5.13 also shows the percentage of the total AS indemnity among all nonmedical occupations regardless of the prevailing occupation issued during 2000 - 2014. Executives and managers comprise 45% of the total AS indemnity for all nonmedical occupations, and lawyers comprise 14%.

Table 5.13

DISTRIBUTION OF AS INDEMNITY FOR NONMEDICAL OCCUPATIONS BY OCCUPATION CLASS - AS POLICIES ISSUED 2000 AND LATER

Nonmedical Occupation	Distribution by Occupation Class				% Indemnity among All Nonmedical Occupations
	Occ Class 1	Occ Class 2	Occ Class 3-4	Total	
Prevailing Occupation Class 1					
Accountants & Actuaries	99.8%	0.1%	0.0%	100.0%	3.9%
Clerical	93.4%	5.5%	1.1%	100.0%	1.6%
Education	96.9%	2.2%	0.9%	100.0%	0.8%
Engineers & Architects	97.2%	2.0%	0.8%	100.0%	2.5%
Executives & Managers	97.4%	1.6%	1.0%	100.0%	45.2%
Lawyers	100.0%	0.0%	0.0%	100.0%	14.3%
Programmers & Analysts	99.6%	0.3%	0.1%	100.0%	0.8%
Other Occupations	82.3%	7.6%	10.1%	100.0%	9.8%
Other Professionals	97.7%	1.8%	0.5%	100.0%	1.7%
Other White Collar	97.2%	2.5%	0.3%	100.0%	1.8%
Unknown	79.4%	12.8%	7.8%	100.0%	9.9%
Prevailing Occupation Class 2					
Insurance Sales	6.3%	93.7%	0.0%	100.0%	0.7%
Other Sales	5.9%	94.1%	0.1%	100.0%	3.5%
Real Estate Sales	9.6%	90.4%	0.0%	100.0%	0.7%
Stockbrokers & Commodity Traders	3.8%	96.2%	0.0%	100.0%	1.0%
Prevailing Occupation Class 3-4					
Handlers & Laborers	18.0%	13.9%	68.1%	100.0%	0.6%
Police & Fire	11.4%	11.4%	77.2%	100.0%	0.0%
Transportation	11.9%	11.7%	76.3%	100.0%	0.1%
No Prevailing Occupation					
Service Occupations	30.8%	28.6%	40.6%	100.0%	0.2%
Skilled Trades	36.3%	16.3%	47.3%	100.0%	0.8%
Total - Nonmedical Occupations	87.9%	8.8%	3.3%	100.0%	100.0%

The number of occupations listed in Table 5.13 are far fewer than found in most companies' underwriting manuals. However, these occupations represent ones with the largest share of the indemnity in the IDEC database. The "other professionals" category includes professional occupations with volumes too small to be reported separately. The "other occupations" category includes non-professional occupations with volumes too small to be reported separately. The "unknown" occupation category includes all policies that had no occupation codes or useable occupation codes. The unknown category comprises 10% of the total nonmedical indemnity exposure. The unknown category represents only 5% of the total nonmedical indemnity exposure for all policies issued in 2010 and later, which indicates that companies are improving their ability to capture occupation codes in their policy data.

5.5 Gender

Male policies comprised the large majority of the IDI business, but the gender gap has been decreasing over time. The percentage of female policies varied by occupation class. Table 5.14 compares the percentage of AS indemnity from policies issued to females by occupation class and study year.

Table 5.14

PERCENTAGE OF FEMALE AS INDEMNITY EXPOSURE BY OCCUPATION CLASS AND STUDY YEAR

Study Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
2006	22.0%	18.1%	17.8%	8.4%	19.3%
2008	23.0%	18.6%	17.5%	8.7%	19.9%
2010	24.2%	18.8%	17.2%	8.9%	20.6%
2012	25.8%	19.2%	17.1%	9.4%	21.5%
2014	27.6%	19.7%	17.2%	10.3%	22.5%
Avg 2006-2014	24.6%	18.9%	17.3%	9.1%	20.8%
Increase from 2006 to 2014	5.6%	1.6%	-0.5%	2.0%	3.3%

When all occupation classes were combined, the female share of the AS indemnity had increased from 19% in 2006 to 23% in 2014. Occupation class M had the largest share of females with respect to the AS indemnity, reaching 28% by 2014. Occupation class 1 had the next largest share of females, but the increase from 2006 to 2014 was less than for occupation class M. The share of females in occupation class 2 decreased slightly over the nine-year period. Occupation class 3-4 had the lowest share of females.

Table 5.15 compares the female percentage of AS indemnity issued by occupation class and issue year.

Table 5.15

PERCENTAGE OF FEMALE AS INDEMNITY EXPOSURE BY OCCUPATION CLASS AND ISSUE YEAR

Issue Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
Pre-1990	13.2%	13.4%	12.8%	5.7%	13.1%
1990-1994	19.8%	18.2%	17.6%	6.9%	18.8%
1995-1999	23.4%	16.0%	15.7%	7.1%	18.6%
2000-2004	27.2%	19.2%	17.9%	9.5%	21.4%
2005-2009	30.1%	21.2%	18.6%	10.9%	23.7%
2010-2014	34.0%	22.2%	18.9%	15.3%	26.6%
Total	24.6%	18.9%	17.3%	9.1%	20.8%

The growth in the female share of AS indemnity is steeper by issue year than study year. The female share of occupation class M increased from 13% for business issued prior to 1990 to 34% for business issued during the 2010 - 2014 period. Since the 2005 - 2009 issue year period, the female share of new business increased significantly for occupation classes M and 3-4, while growing more slowly for occupation classes 1 and 2.

Table 5.16 compares the average AS face amount per policy by gender for the five IDEC occupation classes by study year.

Table 5.16

AVERAGE AS FACE AMOUNT PER POLICY BY GENDER, OCCUPATION CLASS AND STUDY YEAR

Study Year	Females				
	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
2006	\$2,774	\$1,988	\$1,356	\$1,042	\$2,173
2008	\$2,915	\$2,088	\$1,416	\$1,080	\$2,290
2010	\$3,090	\$2,184	\$1,443	\$1,086	\$2,425
2012	\$3,272	\$2,285	\$1,493	\$1,107	\$2,569
2014	\$3,414	\$2,371	\$1,572	\$1,220	\$2,696
2006-2014	\$3,110	\$2,181	\$1,454	\$1,108	\$2,433
CAGR	2.6%	2.2%	1.9%	2.0%	2.7%
Study Year	Males				
	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
2006	\$3,743	\$2,916	\$1,884	\$1,202	\$2,947
2008	\$3,826	\$3,042	\$2,013	\$1,246	\$3,064
2010	\$3,946	\$3,146	\$2,100	\$1,271	\$3,178
2012	\$4,101	\$3,281	\$2,197	\$1,309	\$3,319
2014	\$4,220	\$3,397	\$2,308	\$1,412	\$3,438
2006-2014	\$3,967	\$3,149	\$2,098	\$1,282	\$3,184
CAGR	1.5%	1.9%	2.6%	2.0%	1.9%
Female/Male	0.78	0.69	0.69	0.86	0.76

The average AS policy size has grown faster for females than males for all occupation classes except occupation class 2. After combining all occupation classes, the average AS policy size for females was 76% of the average AS policy size for males. This ratio varied by occupation class.

Table 5.17 compares the average AS policy size by gender for the five IDEC occupation classes by issue year.

Table 5.17

AVERAGE AS POLICY SIZE BY GENDER, OCCUPATION CLASS AND ISSUE YEAR

Issue Year	Females				
	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
Pre-1990	\$2,307	\$1,446	\$832	\$708	\$1,637
1990-1994	\$3,155	\$2,056	\$1,168	\$892	\$2,425
1995-1999	\$2,899	\$2,134	\$1,357	\$1,072	\$2,352
2000-2004	\$2,868	\$2,127	\$1,582	\$1,223	\$2,302
2005-2009	\$3,340	\$2,411	\$1,761	\$1,225	\$2,636
2010-2014	\$3,739	\$2,649	\$1,730	\$1,302	\$3,006
Average 2006-2014	\$3,110	\$2,181	\$1,454	\$1,108	\$2,433
Issue Year	Males				
	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
Pre-1990	\$3,091	\$1,859	\$971	\$708	\$2,030
1990-1994	\$4,586	\$2,984	\$1,630	\$1,094	\$3,356
1995-1999	\$3,703	\$3,230	\$2,187	\$1,370	\$3,172
2000-2004	\$3,664	\$3,434	\$2,745	\$1,570	\$3,330
2005-2009	\$4,225	\$3,685	\$2,870	\$1,636	\$3,639
2010-2014	\$4,859	\$3,880	\$2,558	\$1,778	\$3,955
Average 2006-2014	\$3,967	\$3,149	\$2,098	\$1,282	\$3,184

The average AS policy size in occupation class M was lowest in issue years 2000 - 2004 for both females and males, reflecting the general tightening of underwriting requirements for medical occupations at that time.

Table 5.18 shows the percentage of AS indemnity issued to females among medical occupations since 2000. The occupations have been sorted by the female percentages from lowest to highest.

Table 5.18

PERCENTAGE OF FEMALE AS INDEMNITY AMONG MEDICAL OCCUPATIONS ISSUED IN YEARS 2000 AND LATER

Medical Occupation	Female %
Surgeons	10.8%
Chiropractors	18.4%
ER Physician	23.1%
Anesthesiologist	23.6%
Dentists	27.6%
Physicians	28.8%
Executives & Managers	30.3%
Other Professionals	33.7%
General Practitioner	36.6%
Other Medical Occupations	40.3%
Other Medical - Resident/Student	40.5%
Veterinarians	41.3%
Psychologists & Psychiatrists	42.0%
Pharmacists	43.3%
Nurses	72.1%
Other Dental Occupations	89.8%
All Medical Occupations	30.2%

Among policies issued to medical occupations since 2000, surgeons had the lowest percentage of females at 11%, while other dental occupations (e.g., dental hygienists) had the highest at 90%.

Table 5.19 shows the percentage of AS indemnity issued to females among nonmedical occupations since 2000. The occupations have been sorted by the female percentages from lowest to highest.

Table 5.19

PERCENTAGE OF FEMALE AS INDEMNITY AMONG NONMEDICAL OCCUPATIONS ISSUED IN YEARS 2000 AND LATER

Nonmedical Occupations	Female %
Transportation	3.6%
Handlers & Laborers	5.9%
Stockbrokers & Commodity Traders	7.6%
Engineers & Architects	8.3%
Skilled Trades	10.5%
Insurance Sales	10.7%
Police & Fire	11.2%
Other Sales	14.4%
Programmers & Analysts	15.3%
Executives & Managers	18.8%
Lawyers	19.2%
Other Occupations	19.2%
Other White Collar	19.8%
Accountants & Actuaries	20.9%
Other Professionals	22.0%
Real Estate Sales	26.7%
Unknown	30.8%
Clerical	43.0%
Service Occupations	44.1%
Education	46.6%
All Nonmedical Occupations	20.1%

Among policies issued to nonmedical occupations since 2000, transportation (e.g., truck drives) had the lowest percentage of females at 4%, while education had the highest at 47%.

5.6 Attained Age

Table 5.20 shows the average age by occupation class for all AS business over the 2006 - 2014 study period.

Table 5.20

AVERAGE ATTAINED AGE BY OCCUPATION CLASS AND STUDY YEAR WEIGHTED BY AS INDEMNITY EXPOSURE

Study Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
2006	47.5	48.2	45.5	45.5	47.8
2008	48.0	48.9	45.8	46.2	48.3
2010	48.2	49.6	46.3	46.9	48.8
2012	48.1	50.1	46.6	47.3	49.1
2014	48.0	50.3	46.6	47.0	49.1
Total	48.0	49.5	46.2	46.6	48.7
Increase	0.5	2.1	1.1	1.4	1.4

The average age of the AS business has been increasing slowly over the years. It was 47.8 in 2006, increasing to 49.1 in 2014. Occupation class 1 had the oldest average attained age among the IDEC occupation classes, reaching 50.3 in 2014.

5.7 Smoker Status

Table 5.21 compares the percentage of smokers by study year among the five IDEC occupation classes. The smoker percentages are derived by dividing the indemnity for exposures for smokers by the sum of the indemnity exposure for nonsmokers and smokers. Policies with an unknown smoker status, which comprised less than 2% of the AS indemnity exposure over the 2006 - 2014 period, are excluded in the calculation of the smoker percentages shown in Table 5.21.

Table 5.21

PERCENTAGE OF SMOKERS (WEIGHTED BY AS INDEMNITY EXPOSURE)

Study Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
2006	2.8%	7.2%	9.6%	16.9%	5.9%
2008	2.5%	6.7%	8.9%	16.5%	5.5%
2010	2.2%	6.1%	8.0%	15.9%	4.9%
2012	2.0%	5.6%	7.5%	15.8%	4.5%
2014	1.9%	5.4%	7.3%	15.8%	4.3%
Average	2.3%	6.2%	8.2%	16.1%	5.0%
Increase	-1.0%	-1.8%	-2.3%	-1.1%	-1.7%

The percentage of smokers varied considerably among the five IDEC occupation classes, with occupation class M having the lowest percentage at less than 2% in 2014 and occupation class 3-4 having the highest at 16% in 2014.

Table 5.22 compares the percentage of smokers by issue among the five IDEC occupation classes.

Table 5.22

PERCENTAGE OF SMOKERS BY ISSUE YEAR (WEIGHTED BY AS INDEMNITY EXPOSURE)

Issue Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
Pre-1990	2.3%	6.4%	11.5%	17.9%	5.0%
1990-1994	2.3%	6.3%	8.9%	17.2%	4.6%
1995-1999	2.7%	6.6%	9.4%	17.0%	5.5%
2000-2004	2.4%	6.3%	7.0%	15.2%	5.3%
2005-2009	2.1%	6.0%	7.5%	15.5%	5.1%
2010-2014	1.6%	5.2%	7.6%	15.7%	4.1%
Total	2.3%	6.2%	8.2%	16.1%	5.0%
Decrease	-0.7%	-1.2%	-3.9%	-2.2%	-0.9%

The percentage of smokers has declined by issue year for all occupation classes.

5.8 Maximum Benefit Period

Table 5.23 shows the distribution of AS indemnity by maximum benefit period, occupation class, and study year over the 2006 - 2014 period.

Table 5.23

DISTRIBUTION OF AS INDEMNITY EXPOSURE BY MAX BP, OCCUPATION CLASS AND STUDY YEAR

Occupation Class M				
Study Year	Lifetime	To Age XX	Short Term	Total
2006	25.2%	65.5%	9.3%	100.0%
2008	23.5%	67.5%	9.0%	100.0%
2010	21.5%	70.0%	8.5%	100.0%
2012	18.9%	73.3%	7.9%	100.0%
2014	16.4%	76.5%	7.1%	100.0%
Total	20.9%	70.8%	8.3%	100.0%
Occupation Class 1				
Study Year	Lifetime	To Age XX	Short Term	Total
2006	10.4%	77.0%	12.7%	100.0%
2008	9.1%	78.3%	12.6%	100.0%
2010	8.2%	79.4%	12.4%	100.0%
2012	7.2%	81.0%	11.8%	100.0%
2014	6.2%	82.2%	11.6%	100.0%
Total	8.2%	79.6%	12.2%	100.0%
Occupation Class 2				
Study Year	Lifetime	To Age XX	Short Term	Total
2006	7.8%	70.0%	22.2%	100.0%
2008	7.1%	71.1%	21.8%	100.0%
2010	6.4%	72.2%	21.4%	100.0%
2012	5.6%	73.3%	21.1%	100.0%
2014	4.8%	73.9%	21.2%	100.0%
Total	6.3%	72.2%	21.5%	100.0%
Occupation Class 3-4				
Study Year	Lifetime	To Age XX	Short Term	Total
2006	1.1%	12.6%	86.2%	100.0%
2008	0.9%	12.4%	86.7%	100.0%
2010	0.8%	12.2%	87.0%	100.0%
2012	0.7%	11.9%	87.4%	100.0%
2014	0.5%	10.8%	88.7%	100.0%
Total	0.8%	12.0%	87.2%	100.0%
All Occupation Classes				
Study Year	Lifetime	To Age XX	Short Term	Total
2006	15.4%	71.0%	13.6%	100.0%
2008	14.0%	72.5%	13.4%	100.0%
2010	13.0%	74.0%	13.0%	100.0%
2012	11.5%	76.2%	12.3%	100.0%
2014	10.1%	78.0%	12.0%	100.0%
Total	12.7%	74.4%	12.9%	100.0%

The portion of the AS business with the lifetime maximum benefit period has been declining over the years, from 15% in 2006 to 10% in year 2014 since only a few insurance companies continued to offer lifetime in their product offerings after the mid-1990's. Occupation class M had the largest portion of lifetime represented in its total indemnity among the five IDEC occupation classes, although this share decreased from 25% in 2006 to 16% in 2014.

The To Age 65-70 (e.g., To Age 65, 67, 70) maximum benefit periods comprised the largest share of AS indemnity and increased over the years from 71% in 2006 to 78% in 2014 as the shares attributable to the lifetime and short-term maximum benefit periods have declined. Within occupation class 3-4, policies with To Age 65-70 maximum benefit periods represented 17% of the AS indemnity for occupation class 3 and less than 1% of the AS indemnity for occupation class 4.

Although policies attributed to the short-term maximum benefit periods represented only 12% of the total AS indemnity in 2014 when all occupation classes were combined, they represented 82% of the AS indemnity for occupation class 3 and over 99% of the AS indemnity for occupation class 4.

Table 5.24 compares the average AS policy size over the 2006 - 2014 period by maximum benefit period for the five IDEC occupation classes.

Table 5.24

AVERAGE AS POLICY BY MAXIMUM BENEFIT PERIOD AND OCCUPATION CLASS 2006-2014

Occupation Class	Lifetime	To Age XX	Short Term	Total
M	\$4,118	\$3,737	\$2,867	\$3,715
1	\$3,083	\$3,018	\$2,269	\$2,906
2	\$2,107	\$2,179	\$1,415	\$1,948
3-4	\$560	\$1,174	\$1,293	\$1,264
Total	\$3,578	\$3,159	\$2,039	\$2,992

The lifetime maximum benefit period for occupation class M had the highest average AS policy size among the three maximum benefit period categories. There was little difference between the average policy size and for lifetime and to age 65-70 for occupation classes 1 and 2. The short-term maximum benefit periods had the lowest average policy size among the three maximum benefit period categories for occupation classes M, 1, and 2, and the highest average face amount per policy for occupation class 3-4.

Table 5.25 shows the distribution of AS indemnity exposure by maximum benefit period, occupation class, and issue year over the 2006 - 2014 period.

Table 5.25
DISTRIBUTION OF AS INDEMNITY EXPOSURE BY MAXIMUM BENEFIT PERIOD, OCCUPATION CLASS AND ISSUE YEAR

Occupation Class M				
Issue Year	Lifetime	To Age XX	Short Term	Total
Pre-1990	39.3%	45.5%	15.2%	100.0%
1990-1994	39.8%	52.5%	7.7%	100.0%
1995-1999	16.3%	78.3%	5.3%	100.0%
2000-2004	11.6%	82.4%	6.0%	100.0%
2005-2009	9.9%	81.8%	8.3%	100.0%
2010-2014	3.4%	87.2%	9.4%	100.0%
Total	20.9%	70.8%	8.3%	100.0%
Occupation Class 1				
Issue Year	Lifetime	To Age XX	Short Term	Total
Pre-1990	25.6%	54.8%	19.6%	100.0%
1990-1994	23.7%	63.8%	12.5%	100.0%
1995-1999	6.1%	84.5%	9.4%	100.0%
2000-2004	3.2%	86.5%	10.3%	100.0%
2005-2009	1.9%	86.0%	12.0%	100.0%
2010-2014	0.5%	85.8%	13.6%	100.0%
Total	8.2%	79.6%	12.2%	100.0%
Occupation Class 2				
Issue Year	Lifetime	To Age XX	Short Term	Total
Pre-1990	12.5%	57.8%	29.7%	100.0%
1990-1994	15.2%	61.3%	23.5%	100.0%
1995-1999	7.5%	72.6%	19.9%	100.0%
2000-2004	5.1%	76.3%	18.6%	100.0%
2005-2009	3.3%	75.9%	20.7%	100.0%
2010-2014	0.9%	76.9%	22.2%	100.0%
Total	6.3%	72.2%	21.5%	100.0%
Occupation Class 3-4				
Issue Year	Lifetime	To Age XX	Short Term	Total
Pre-1990	5.7%	19.0%	75.3%	100.0%
1990-1994	0.7%	13.0%	86.3%	100.0%
1995-1999	0.0%	10.7%	89.2%	100.0%
2000-2004	0.0%	12.6%	87.3%	100.0%
2005-2009	0.0%	10.5%	89.5%	100.0%
2010-2014	0.0%	6.5%	93.5%	100.0%
Total	0.8%	12.0%	87.2%	100.0%
All Occupation Classes				
Issue Year	Lifetime	To Age XX	Short Term	Total
Pre-1990	30.4%	50.0%	19.6%	100.0%
1990-1994	31.1%	57.2%	11.7%	100.0%
1995-1999	9.9%	79.7%	10.4%	100.0%
2000-2004	5.8%	82.9%	11.4%	100.0%
2005-2009	4.5%	82.5%	13.0%	100.0%
2010-2014	1.7%	84.5%	13.8%	100.0%
Total	12.7%	74.4%	12.9%	100.0%

The share of the AS policies with a lifetime maximum benefit period dropped significantly for business issued in the 1995 - 1999 period compared to the 1990 - 1994 period as many IDI companies tightened their product offerings due to the financial losses in the 1990's and removed lifetime as a product option. The share of policies with the lifetime maximum benefit period has continued to drop in subsequent issue years.

5.9 Elimination Period

Table 5.26 shows the distribution of AS indemnity by elimination period, occupation class, and study year.

Table 5.26

DISTRIBUTION OF AS INDEMNITY EXPOSURE BY ELIMINATION PERIOD, OCCUPATION CLASS AND STUDY YEAR

Occupation Class M						
Study Year	Under 30 Days	30 Days	60 Days	90 Days	180+ Days	Total
2006	0.0%	3.1%	6.6%	78.7%	11.6%	100.0%
2008	0.0%	2.7%	5.9%	79.8%	11.6%	100.0%
2010	0.0%	2.3%	5.2%	81.5%	11.0%	100.0%
2012	0.0%	1.9%	4.4%	82.6%	11.1%	100.0%
2014	0.0%	1.5%	3.7%	83.5%	11.3%	100.0%
Total	0.0%	2.3%	5.1%	81.3%	11.3%	100.0%
Occupation Class 1						
Study Year	Under 30 Days	30 Days	60 Days	90 Days	180+ Days	Total
2006	0.1%	2.8%	4.7%	60.6%	31.9%	100.0%
2008	0.1%	2.4%	4.1%	60.2%	33.2%	100.0%
2010	0.1%	2.1%	3.7%	60.5%	33.6%	100.0%
2012	0.1%	1.7%	3.2%	60.5%	34.5%	100.0%
2014	0.6%	1.4%	2.7%	60.8%	34.5%	100.0%
Total	0.2%	2.1%	3.7%	60.5%	33.6%	100.0%
Occupation Class 2						
Study Year	Under 30 Days	30 Days	60 Days	90 Days	180+ Days	Total
2006	0.8%	6.6%	5.4%	67.2%	20.0%	100.0%
2008	0.7%	5.7%	4.7%	68.6%	20.3%	100.0%
2010	0.6%	5.0%	4.2%	69.8%	20.3%	100.0%
2012	0.6%	4.3%	3.7%	70.9%	20.5%	100.0%
2014	1.2%	3.6%	3.2%	72.0%	20.0%	100.0%
Total	0.8%	5.0%	4.2%	69.8%	20.2%	100.0%
Occupation Class 3-4						
Study Year	Under 30 Days	30 Days	60 Days	90 Days	180+ Days	Total
2006	2.7%	21.7%	11.5%	52.0%	12.1%	100.0%
2008	2.6%	20.0%	10.7%	54.7%	12.0%	100.0%
2010	2.6%	18.8%	10.2%	56.7%	11.8%	100.0%
2012	2.6%	17.2%	9.4%	59.0%	11.7%	100.0%
2014	6.5%	14.7%	8.2%	59.6%	11.0%	100.0%
Total	3.3%	18.5%	10.0%	56.4%	11.8%	100.0%
All Occupation Classes						
Study Year	Under 30 Days	30 Days	60 Days	90 Days	180+ Days	Total
2006	0.2%	3.5%	5.6%	67.2%	23.5%	100.0%
2008	0.1%	3.1%	5.0%	67.6%	24.2%	100.0%
2010	0.1%	2.7%	4.5%	68.9%	23.9%	100.0%
2012	0.1%	2.2%	3.8%	69.7%	24.1%	100.0%
2014	0.5%	1.8%	3.3%	70.5%	23.9%	100.0%
Total	0.2%	2.6%	4.4%	68.8%	24.0%	100.0%

The 90-day elimination period is the most prevalent elimination period, and its share has increased as a percent of the AS indemnity over the 2006 - 2014 period. Elimination periods of 90 days and 180+ days comprise at least 90% of the AS indemnity for occupation classes M, 1, and 2.

Table 5.27 compares the average AS policy size over the 2006 - 2014 period by elimination period for the five IDEC occupation classes.

Table 5.27

AVERAGE AS POLICY SIZE BY ELIMINATION PERIOD AND OCCUPATION CLASS 2006-2014

Occupation Class	Under 30 Days	30 Days	60 Days	90 Days	180+ Days	Total
M	\$309	\$2,054	\$3,006	\$3,921	\$3,420	\$3,715
1	\$1,349	\$1,228	\$2,048	\$2,918	\$3,332	\$2,906
2	\$664	\$801	\$1,212	\$2,243	\$2,164	\$1,948
3-4	\$779	\$834	\$1,164	\$1,590	\$1,368	\$1,264
Total	\$849	\$1,235	\$2,198	\$3,186	\$3,221	\$2,992

In general, the average AS policy size increased as the elimination period increased for policies with elimination periods under 90 days.

Table 5.28 shows the distribution of AS indemnity by elimination period, occupation class, and issue year over the 2006 - 2014 period.

Table 5.28

DISTRIBUTION OF AS INDEMNITY EXPOSURE BY ELIMINATION PERIOD, OCCUPATION CLASS AND ISSUE YEAR

Occupation Class M						
Issue Year	Under 30 Days	30 Days	60 Days	90 Days	180+ Days	Total
Pre-1990	0.1%	12.5%	18.6%	60.8%	8.0%	100.0%
1990-1994	0.0%	1.7%	9.0%	78.6%	10.7%	100.0%
1995-1999	0.0%	0.5%	1.8%	85.2%	12.5%	100.0%
2000-2004	0.0%	0.5%	0.8%	87.9%	10.8%	100.0%
2005-2009	0.0%	0.5%	0.8%	86.5%	12.2%	100.0%
2010-2014	0.0%	0.5%	0.8%	85.3%	13.4%	100.0%
Total	0.0%	2.3%	5.1%	81.3%	11.3%	100.0%
Occupation Class 1						
Issue Year	Under 30 Days	30 Days	60 Days	90 Days	180+ Days	Total
Pre-1990	0.4%	14.1%	16.9%	53.3%	15.3%	100.0%
1990-1994	0.0%	2.3%	8.2%	69.5%	19.9%	100.0%
1995-1999	0.0%	0.7%	1.7%	63.7%	33.9%	100.0%
2000-2004	0.0%	0.4%	1.3%	60.0%	38.3%	100.0%
2005-2009	0.0%	0.4%	0.9%	58.5%	40.3%	100.0%
2010-2014	1.0%	0.4%	0.6%	56.8%	41.3%	100.0%
Total	0.2%	2.1%	3.7%	60.5%	33.6%	100.0%
Occupation Class 2						
Issue Year	Under 30 Days	30 Days	60 Days	90 Days	180+ Days	Total
Pre-1990	2.8%	24.1%	16.8%	43.4%	12.7%	100.0%
1990-1994	0.4%	8.4%	9.9%	64.9%	16.4%	100.0%
1995-1999	0.1%	3.8%	3.0%	71.1%	22.1%	100.0%
2000-2004	0.6%	2.1%	1.6%	72.2%	23.5%	100.0%
2005-2009	0.5%	1.4%	1.4%	75.6%	21.1%	100.0%
2010-2014	1.3%	1.3%	1.1%	76.9%	19.3%	100.0%
Total	0.8%	5.0%	4.2%	69.8%	20.2%	100.0%
Occupation Class 3-4						
Issue Year	Under 30 Days	30 Days	60 Days	90 Days	180+ Days	Total
Pre-1990	8.7%	45.2%	16.9%	21.8%	7.5%	100.0%
1990-1994	1.5%	30.0%	18.9%	40.0%	9.6%	100.0%
1995-1999	0.5%	18.0%	10.4%	56.9%	14.2%	100.0%
2000-2004	2.6%	12.6%	7.8%	63.9%	13.1%	100.0%
2005-2009	1.8%	9.8%	5.9%	69.7%	12.8%	100.0%
2010-2014	9.0%	4.2%	2.9%	73.7%	10.3%	100.0%
Total	3.3%	18.5%	10.0%	56.4%	11.8%	100.0%
All Occupation Classes						
Issue Year	Under 30 Days	30 Days	60 Days	90 Days	180+ Days	Total
Pre-1990	0.6%	14.6%	17.6%	55.3%	11.8%	100.0%
1990-1994	0.1%	2.7%	8.9%	73.4%	15.0%	100.0%
1995-1999	0.0%	1.2%	2.0%	72.1%	24.7%	100.0%
2000-2004	0.1%	0.8%	1.3%	69.4%	28.3%	100.0%
2005-2009	0.1%	0.7%	1.0%	68.7%	29.6%	100.0%
2010-2014	0.8%	0.5%	0.8%	69.4%	28.5%	100.0%
Total	0.2%	2.6%	4.4%	68.8%	24.0%	100.0%

The percentage of policies with elimination periods under 90 days dropped significantly in issue years 1990 and later. In general, the distribution by elimination period for all occupations combined has not changed materially for business issued in 2000 and later. There is an unusual increase in policies issued with elimination periods under 30 days in years 2010 - 2014 for occupation class 3-4, but the reason is not apparent.

5.10 COLA Benefits

COLA benefits, which index the monthly benefit during claims, have become increasingly prevalent over the years. Table 5.29 shows the percentage of AS indemnity with COLA benefits by maximum benefit period, occupation class, and study year.

Table 5.29
PERCENTAGE OF AS INDEMNITY EXPOSURE WITH COLA BENEFITS BY MAXIMUM BP, OCCUPATION CLASS AND STUDY YEAR

Lifetime Maximum Benefit Period					
Study Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
2006	51.7%	42.7%	46.0%	15.0%	48.1%
2008	53.7%	43.9%	49.5%	15.8%	50.0%
2010	55.3%	45.0%	52.1%	15.7%	51.6%
2012	56.6%	46.1%	54.8%	17.6%	53.0%
2014	57.4%	47.0%	56.1%	19.2%	54.0%
Average (2006-2014)	54.9%	44.7%	51.4%	16.3%	51.2%
To Age 65-70 Maximum Benefit Period					
Study Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
2006	43.7%	38.1%	42.2%	20.3%	40.1%
2008	46.5%	40.0%	44.4%	21.6%	42.3%
2010	49.7%	41.3%	46.1%	21.9%	44.5%
2012	53.4%	42.8%	48.2%	22.1%	47.0%
2014	56.7%	44.6%	50.5%	22.6%	49.6%
Average (2006-2014)	50.6%	41.4%	46.4%	21.6%	44.9%
Short Term Maximum Benefit Period					
Study Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
2006	5.1%	11.5%	16.1%	14.6%	10.8%
2008	6.5%	13.2%	17.4%	16.5%	12.4%
2010	9.3%	14.8%	18.9%	18.1%	14.3%
2012	12.6%	17.2%	20.5%	20.6%	16.8%
2014	16.5%	19.3%	21.9%	22.9%	19.4%
Average (2006-2014)	9.8%	15.1%	19.0%	18.5%	14.7%
All Maximum Benefit Periods					
Study Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
2006	42.2%	35.2%	36.7%	15.3%	37.3%
2008	44.6%	36.9%	38.9%	17.1%	39.4%
2010	47.5%	38.4%	40.7%	18.6%	41.5%
2012	50.8%	40.0%	42.7%	20.8%	44.0%
2014	53.9%	41.8%	44.7%	22.8%	46.4%
Average (2006-2014)	48.1%	38.5%	40.8%	18.9%	41.8%

When all maximum benefit periods were combined, the percentage of the AS indemnity with COLA benefits had increased from 37% in 2006 to 46% in 2014. The percentage of the AS indemnity with COLA benefits increased over the 2006 - 2014 period in all occupation classes and maximum benefit periods.

Table 5.30 shows the percentage of AS indemnity with COLA benefits by maximum benefit period, occupation class, and issue year.

Table 5.30
PERCENTAGE OF AS INDEMNITY WITH COLA BENEFITS BY MAXIMUM BP, OCCUPATION CLASS AND ISSUE YEAR

Lifetime Maximum Benefit Period					
Issue Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
1990-1994	40.9%	33.3%	28.2%	15.0%	37.4%
1990-1994	51.1%	43.6%	49.5%	24.3%	48.5%
1995-1999	58.3%	51.8%	49.3%	0.0%	55.8%
2000-2004	72.6%	62.5%	63.1%	39.4%	68.7%
2005-2009	80.9%	69.2%	71.3%	1.1%	77.5%
2010-2014	78.3%	59.3%	79.6%	3.4%	75.1%
Total	54.9%	44.7%	51.4%	16.3%	51.2%
To Age 65-70 Maximum Benefit Period					
Issue Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
1990-1994	32.7%	26.0%	27.4%	14.1%	28.6%
1990-1994	35.2%	32.1%	29.2%	16.6%	33.4%
1995-1999	43.0%	41.2%	41.7%	21.8%	41.8%
2000-2004	54.7%	43.8%	48.9%	27.4%	47.4%
2005-2009	60.1%	44.8%	52.4%	25.3%	50.0%
2010-2014	65.5%	46.2%	58.2%	23.2%	54.7%
Total	50.6%	41.4%	46.4%	21.6%	44.9%
Short Term Maximum Benefit Period					
Issue Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
1990-1994	1.2%	3.0%	7.3%	4.9%	2.9%
1990-1994	2.3%	5.3%	9.1%	7.4%	4.8%
1995-1999	8.3%	14.3%	17.5%	15.2%	13.6%
2000-2004	11.3%	17.8%	20.8%	19.0%	17.2%
2005-2009	18.0%	22.8%	24.3%	25.0%	22.3%
2010-2014	23.3%	22.6%	29.1%	36.4%	25.0%
Total	9.8%	15.1%	19.0%	18.5%	14.7%
All Maximum Benefit Periods					
Issue Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
1990-1994	31.1%	23.3%	21.5%	7.2%	26.2%
1990-1994	39.0%	31.5%	27.5%	8.7%	34.7%
1995-1999	43.6%	39.3%	37.4%	15.9%	40.3%
2000-2004	54.2%	41.7%	44.4%	20.1%	45.2%
2005-2009	58.7%	42.6%	47.2%	25.1%	47.6%
2010-2014	62.0%	43.1%	51.9%	35.5%	50.9%
Total	48.1%	38.5%	40.8%	18.9%	41.8%

The percentage of AS indemnity with COLA benefits generally increased by issue year for all of the IDEC occupation classes and maximum benefit periods.

Table 5.31 shows that policies with COLA benefits typically have a higher average AS policy size.

Table 5.31
AVERAGE AS POLICY SIZE WITH AND WITHOUT COLA BENEFITS BY MAXIMUM BENEFIT PERIOD AND OCCUPATION CLASS FOR STUDY YEARS 2006-2014

Lifetime Maximum Benefit Period					
COLA	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
No	\$3,876	\$2,898	\$1,709	\$502	\$3,278
Yes	\$4,340	\$3,346	\$2,701	\$1,390	\$3,919
Yes/No	1.12	1.15	1.58	2.77	1.20
To Age 65-70 Maximum Benefit Period					
COLA	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
No	\$3,302	\$2,906	\$1,958	\$1,093	\$2,926
Yes	\$4,291	\$3,192	\$2,504	\$1,601	\$3,501
Yes/No	1.30	1.10	1.28	1.46	1.20
Short Term Maximum Benefit Period					
COLA	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
No	\$2,793	\$2,219	\$1,335	\$1,223	\$1,989
Yes	\$3,781	\$2,592	\$1,897	\$1,728	\$2,394
Yes/No	1.35	1.17	1.42	1.41	1.20
All Maximum Benefit Periods					
COLA	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
No	\$3,304	\$2,762	\$1,710	\$1,192	\$2,716
Yes	\$4,293	\$3,171	\$2,440	\$1,706	\$3,487
Yes/No	1.30	1.15	1.43	1.43	1.28

Policies with COLA benefits had a higher average AS policy size across all occupation classes and maximum benefit periods.

5.11 Markets

Table 5.32 shows the distribution of AS indemnity by market and study year.

Table 5.32
DISTRIBUTION OF AS INDEMNITY BY MARKET AND STUDY YEAR

Study Year	Individual	Association	Employer Sponsored	Total
2006	76.7%	4.4%	18.9%	100.0%
2008	75.2%	4.5%	20.3%	100.0%
2010	74.4%	4.7%	21.0%	100.0%
2012	72.4%	4.6%	23.0%	100.0%
2014	70.8%	4.4%	24.8%	100.0%
Average 2006-2014	73.8%	4.5%	21.6%	100.0%

The percentage of AS indemnity issued in the individual market steadily decreased from 77% in 2006 to 71% in 2014, while the employer-sponsored market increased from 19% in 2006 to 25% in 2014. The percentage of AS indemnity issued in the associations market remained quite level over this nine-year period.

Table 5.33 shows the average AS policy size by market and study year.

Table 5.33
AVERAGE AS POLICY SIZE BY MARKET AND STUDY YEAR

Study Year	Individual	Association	Employer Sponsored	Total
2006	\$2,679	\$4,540	\$2,834	\$2,758
2008	\$2,782	\$4,573	\$2,979	\$2,871
2010	\$2,880	\$4,663	\$3,152	\$2,987
2012	\$2,997	\$4,760	\$3,333	\$3,123
2014	\$3,109	\$4,832	\$3,438	\$3,237
Average 2006-2014	\$2,884	\$4,675	\$3,160	\$2,992
CAGR	1.88%	0.78%	2.45%	2.02%

The associations market had a significantly higher average AS policy size than the individual or employer-sponsored markets, reflecting the high proportion of associations policies issued to occupation class M.

Table 5.34 shows the distribution of AS indemnity by market by issue year.

Table 5.34
DISTRIBUTION OF AS INDEMNITY BY MARKET AND ISSUE YEAR

Issue Year	Individual	Association	Employer Sponsored	Total
Pre-1990	87.0%	4.7%	8.3%	100.0%
1990-1994	77.7%	9.3%	13.0%	100.0%
1995-1999	79.8%	4.1%	16.1%	100.0%
2000-2004	72.5%	1.9%	25.6%	100.0%
2005-2009	67.9%	3.8%	28.3%	100.0%
2010-2014	62.8%	3.7%	33.5%	100.0%
Total	73.8%	4.5%	21.6%	100.0%

The percentage of AS indemnity issued in the individual market dropped from 87% in issue years prior to 1990 to 63% in years 2010 - 2014, while employer-sponsored increased from 8% in issue years prior to 1990 to 33% in those same issue years. The percentage of AS indemnity issued in the employer-sponsored market jumped significantly from issue years 1995 - 1999 and 2000 - 2004 as more IDI carriers entered this market.

Table 5.35 shows the average AS policy size by market and issue year.

Table 5.35
AVERAGE AS POLICY SIZE BY MARKET AND ISSUE YEAR

Issue Year	Individual	Association	Employer Sponsored	Total
Pre-1990	\$1,857	\$4,681	\$2,816	\$1,968
1990-1994	\$2,907	\$5,454	\$3,695	\$3,130
1995-1999	\$2,901	\$3,888	\$3,214	\$2,979
2000-2004	\$3,107	\$3,469	\$2,840	\$3,040
2005-2009	\$3,402	\$4,528	\$3,090	\$3,339
2010-2014	\$3,615	\$5,386	\$3,582	\$3,648
Total	\$2,884	\$4,675	\$3,160	\$2,992

The average AS policy size for policies issued in the employer-sponsored market in years prior to 2000 was greater than for the policies issued in the individual market. In issue years 2000 and later, the average AS policy size in the individual market exceeded those in the employer-sponsored market, although the difference essentially disappeared in issue years 2010 - 2014.

Table 5.36 shows the distribution of the AS indemnity by market and occupation class over study years 2006 through 2014. The composition of the business in terms of occupation class, gender, benefit period, and elimination period varies among the three markets.

Table 5.36

DISTRIBUTION OF AS INDEMNITY BY MARKET, OCCUPATION CLASS AND STUDY YEAR

Individual Market					
Study Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
2006	34.8%	56.6%	5.8%	2.8%	100.0%
2008	35.3%	56.0%	5.9%	2.8%	100.0%
2010	36.6%	54.8%	5.9%	2.7%	100.0%
2012	37.6%	53.7%	6.0%	2.7%	100.0%
2014	38.0%	52.9%	6.2%	2.8%	100.0%
Average 2006-2014	36.5%	54.8%	6.0%	2.7%	100.0%
Associations Market					
Study Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
2006	78.1%	21.7%	0.1%	0.0%	100.0%
2008	79.8%	20.0%	0.1%	0.0%	100.0%
2010	81.6%	18.2%	0.1%	0.0%	100.0%
2012	82.5%	17.3%	0.2%	0.0%	100.0%
2014	82.8%	17.0%	0.2%	0.0%	100.0%
Average 2006-2014	81.1%	18.7%	0.1%	0.0%	100.0%
Employer Sponsored Market					
Study Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
2006	31.3%	64.0%	3.8%	0.9%	100.0%
2008	30.6%	64.9%	3.7%	0.8%	100.0%
2010	33.0%	62.6%	3.6%	0.8%	100.0%
2012	35.6%	60.4%	3.3%	0.7%	100.0%
2014	38.5%	57.6%	3.2%	0.7%	100.0%
Average 2006-2014	34.0%	61.8%	3.5%	0.7%	100.0%

Occupation class 1 is the prevailing occupation class in the individual and employer-sponsored markets, although the share for occupation class M is growing. Occupation class M has comprised over 80% of the AS indemnity in the associations market since 2010. The share of the associations market attributable to occupation classes 2 and 3-4 is negligible. The share of the employer-sponsored market attributable to occupation class 3-4 is negligible.

Table 5.37 shows the distribution of the AS indemnity by market and occupation class by issue year.

Table 5.37

DISTRIBUTION OF AS INDEMNITY BY MARKET, OCCUPATION CLASS AND ISSUE YEAR

Individual Market					
Issue Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
Pre-1990	40.6%	51.3%	5.3%	2.7%	100.0%
1990-1994	45.1%	49.0%	3.7%	2.2%	100.0%
1995-1999	35.5%	56.0%	5.5%	3.0%	100.0%
2000-2004	31.8%	58.4%	6.7%	3.1%	100.0%
2005-2009	31.6%	58.0%	7.6%	2.8%	100.0%
2010-2014	37.0%	53.7%	6.7%	2.6%	100.0%
Total	36.5%	54.8%	6.0%	2.7%	100.0%
Associations Market					
Issue Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
Pre-1990	78.3%	21.6%	0.0%	0.0%	100.0%
1990-1994	79.3%	20.6%	0.0%	0.0%	100.0%
1995-1999	70.7%	29.0%	0.2%	0.0%	100.0%
2000-2004	86.0%	13.6%	0.3%	0.1%	100.0%
2005-2009	88.7%	11.0%	0.2%	0.0%	100.0%
2010-2014	85.8%	13.9%	0.3%	0.0%	100.0%
Total	81.1%	18.7%	0.1%	0.0%	100.0%
Employer Sponsored Market					
Issue Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
Pre-1990	53.1%	42.6%	3.4%	0.9%	100.0%
1990-1994	57.6%	39.5%	2.3%	0.6%	100.0%
1995-1999	41.9%	53.5%	3.7%	0.9%	100.0%
2000-2004	23.5%	71.2%	4.4%	0.9%	100.0%
2005-2009	24.9%	70.6%	3.7%	0.8%	100.0%
2010-2014	40.2%	56.8%	2.5%	0.5%	100.0%
Total	34.0%	61.8%	3.5%	0.7%	100.0%

Occupation class M increased its share of the associations market significantly for business issued in 2000 and later. Occupation class M was the prevailing occupation class in the employer-sponsored market for business issued prior to 1995, but subsequently occupation class 1 had the largest share. Occupation class M increased its share of new business in the employer-sponsored market from 25% in 2005 - 2009 to 40% in 2010 - 2014.

Table 5.38 compares the average AS policy size by market and occupation class over the 2006 - 2014 study period.

Table 5.38
AVERAGE AS FACE AMOUNT BY MARKET AND OCCUPATION CLASS STUDY YEARS 2006-2014 COMBINED

Market	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
Individual	\$3,552	\$2,862	\$1,931	\$1,266	\$2,884
Associations	\$5,022	\$3,622	\$2,496	\$1,763	\$4,675
Employer-sponsored	\$3,864	\$3,007	\$2,053	\$1,241	\$3,160
All Markets	\$3,715	\$2,906	\$1,948	\$1,264	\$2,992

The associations market had the highest average AS policy size among the five occupation classes. The employer-sponsored market had higher average AS policy sizes than the individual market in all occupation classes, except occupation class 3-4.

Table 5.39 shows the percentage of the AS indemnity issued to females by market and study year.

Table 5.39
PERCENTAGE OF AS INDEMNITY ISSUED TO FEMALES BY MARKET AND STUDY YEAR

Study Year	Individual	Associations	Employer-sponsored	All Markets Combined
2006	18.1%	21.2%	23.7%	19.3%
2008	18.4%	23.1%	24.6%	19.9%
2010	18.8%	25.3%	25.8%	20.6%
2012	19.3%	26.2%	27.4%	21.5%
2014	20.0%	26.9%	29.1%	22.5%
Total	18.9%	24.7%	26.3%	20.8%

The female percentage of the AS indemnity in the associations and employer-sponsored markets has grown faster by study period than in the individual market.

Table 5.40 shows the percentage of the AS indemnity issued to females by market and issue year.

Table 5.40

PERCENTAGE OF AS INDEMNITY ISSUED TO FEMALES BY MARKET AND ISSUE YEAR

Issue Year	Individual	Associations	Employer-sponsored	All Markets Combined
Pre-1990	13.4%	11.8%	11.1%	13.1%
1990-1994	19.2%	17.8%	17.0%	18.8%
1995-1999	17.1%	29.4%	23.1%	18.6%
2000-2004	19.3%	34.1%	26.3%	21.4%
2005-2009	20.9%	33.7%	28.9%	23.7%
2010-2014	23.1%	31.3%	32.7%	26.6%
Total	18.9%	24.7%	26.3%	20.8%

Females comprised 33% of the employer-sponsored market, 31% of the associations market, and 23% of the individual market for business issued in 2010 - 2014. Since most IDI products in the employer-sponsored market have unisex premium rates, an increasing female percentage could negatively affect expected profitability unless premiums on new business are updated to reflect the change in the percentage of females.

Table 5.41 compares the average AS policy size by market and gender for all business in the 2006 - 2014 study period and just for business issued in years 2010 - 2014.

Table 5.41

AS POICY SIZE BY MARKET AND GENDER

Average 2006-2014			
Market	Male	Female	Female/Male
Individual	\$3,043	\$2,355	0.77
Associations	\$4,945	\$4,007	0.81
Employer-sponsored	\$3,530	\$2,442	0.69
Issued 2010-2014			
Individual	\$3,895	\$2,918	0.75
Associations	\$5,676	\$4,841	0.85
Employer-sponsored	\$3,949	\$3,006	0.76

The average AS policy size for females was lower than that for males in all three markets. However, the ratio of average face amount for females to the average face amount for males increased in the associations and employer-sponsored markets.

Table 5.42 shows the distribution of AS indemnity by maximum benefit period among the three markets by issue year. The distribution of maximum benefit periods and elimination periods varied among the three markets.

Table 5.42
DISTRIBUTION OF AS INDEMNITY BY MARKET, MAXIMUM BENEFIT PERIOD AND ISSUE YEAR

Issue Year	Individual Market			
	Lifetime	To Age 65-70	Short-term	Total
Pre-1990	28.90%	51.10%	20.00%	100.00%
1990-1994	29.00%	58.60%	12.40%	100.00%
1995-1999	10.00%	78.70%	11.30%	100.00%
2000-2004	7.50%	79.20%	13.30%	100.00%
2005-2009	6.10%	77.90%	16.10%	100.00%
2010-2014	2.40%	80.00%	17.60%	100.00%
Total	13.80%	71.50%	14.70%	100.00%
Issue Year	Employer-sponsored Market			
	Lifetime	To Age 65-70	Short-term	Total
Pre-1990	33.40%	46.50%	20.10%	100.00%
1990-1994	34.70%	54.30%	11.00%	100.00%
1995-1999	8.50%	84.80%	6.70%	100.00%
2000-2004	0.20%	93.50%	6.30%	100.00%
2005-2009	0.00%	93.60%	6.40%	100.00%
2010-2014	0.00%	93.00%	7.00%	100.00%
Total	6.10%	86.30%	7.60%	100.00%
Issue Year	Associations Market			
	Lifetime	To Age 65-70	Short-term	Total
Pre-1990	53.60%	36.80%	9.60%	100.00%
1990-1994	43.40%	49.20%	7.40%	100.00%
1995-1999	14.00%	80.20%	5.70%	100.00%
2000-2004	14.80%	79.70%	5.50%	100.00%
2005-2009	10.40%	81.80%	7.80%	100.00%
2010-2014	4.20%	84.00%	11.90%	100.00%
Total	27.40%	64.80%	7.80%	100.00%

After the mid-1990's, few companies offered the lifetime maximum benefit period on new business. The employer-sponsored market had virtually no lifetime business issued since 2000. The portion of employer-sponsored business issued with short-term maximum benefit periods was roughly half of that issued in the individual market. The association market had a higher portion of business with the lifetime maximum benefit period than the other two markets.

Table 5.43 shows the distribution of AS indemnity by elimination period among the three markets by issue year.

Table 5.43

DISTRIBUTION OF AS INDEMNITY BY MARKET, MAXIMUM ELIMINATION PERIOD, AND ISSUE YEAR

Individual Market						
Issue Year	Under 30 Days	30 Days	60 Days	90 Days	180+ Days	Total
Pre-1990	0.7%	15.5%	17.7%	54.1%	12.0%	100.0%
1990-1994	0.1%	3.1%	9.3%	72.0%	15.6%	100.0%
1995-1999	0.0%	1.4%	2.3%	71.8%	24.4%	100.0%
2000-2004	0.0%	1.1%	1.8%	74.0%	23.1%	100.0%
2005-2009	0.0%	1.0%	1.3%	73.5%	24.3%	100.0%
2010-2014	1.0%	0.8%	1.0%	72.5%	24.6%	100.0%
Total	0.2%	3.3%	5.1%	70.4%	20.9%	100.0%
Associations Market						
Issue Year	Under 30 Days	30 Days	60 Days	90 Days	180+ Days	Total
Pre-1990	0.3%	12.0%	22.7%	59.6%	5.4%	100.0%
1990-1994	0.0%	1.6%	9.5%	81.2%	7.6%	100.0%
1995-1999	0.0%	0.4%	1.5%	86.5%	11.5%	100.0%
2000-2004	0.0%	0.4%	0.7%	93.7%	5.2%	100.0%
2005-2009	0.0%	0.3%	0.8%	93.9%	5.1%	100.0%
2010-2014	0.0%	0.6%	1.5%	91.0%	6.9%	100.0%
Total	0.0%	2.1%	6.6%	84.1%	7.1%	100.0%
Employer-sponsored Market						
Issue Year	Under 30 Days	30 Days	60 Days	90 Days	180+ Days	Total
Pre-1990	0.1%	7.0%	14.0%	65.4%	13.6%	100.0%
1990-1994	0.0%	1.2%	5.8%	76.0%	17.0%	100.0%
1995-1999	0.0%	0.3%	0.6%	69.6%	29.4%	100.0%
2000-2004	0.4%	0.1%	0.2%	54.5%	44.8%	100.0%
2005-2009	0.2%	0.1%	0.3%	53.8%	45.6%	100.0%
2010-2014	0.3%	0.1%	0.2%	61.3%	38.1%	100.0%
Total	0.2%	0.5%	1.4%	60.0%	37.8%	100.0%

The 90-day elimination period was the prevailing elimination period, particularly in the associations market where the 90-day elimination period comprised over 90% of the AS indemnity of the policies issued after 2000. Policies with elimination periods under 30 days issued in 2000 and later comprised less than 3% of the individual market, less than 2% of the associations market, and less than 1% of the employer-sponsored market. Policies with elimination periods of 180+ days represented a much higher portion of the employer-sponsored business than seen in the other two markets.

5.12 Payor Segmentation of the Employer-sponsored Market

Table 5.44 shows the distribution of employer-sponsored AS indemnity by payor segment for business issued since 2000.

Table 5.44

DISTRIBUTION OF EMPLOYER-SPONSORED AS INDEMNITY BY PAYOR AND ISSUE YEAR (2000 AND LATER)

Issue Year	Employer	Employee	Unknown	Total
2000-2004	15.2%	67.7%	17.1%	100.0%
2005-2009	21.1%	62.5%	16.4%	100.0%
2010-2014	16.8%	65.9%	17.2%	100.0%
Total	18.1%	65.0%	16.8%	100.0%

The employee-payor segment comprised 65% of the AS indemnity of the employer-sponsored business issued since 2000. This percentage was relatively stable for business issued since 2000. The employer-payor segment and the unknown-payor segment comprised 18% and 17%, respectively. The unknown-payor segment contains business from both employer- and employee-payor segments.

Table 5.45 shows the average AS policy size of the employer-sponsored business issued since 2000 by payor segment.

Table 5.45

AVERAGE AS POLICY SIZE FOR EMPLOYER-SPONSORED BUSINESS ISSUED SINCE 2000

Issue Year	Employer	Employee	Unknown	Total
2000-2004	\$3,299	\$2,635	\$3,483	\$2,840
2005-2009	\$3,165	\$3,003	\$3,361	\$3,090
2010-2014	\$3,443	\$3,770	\$3,111	\$3,582
Total	\$3,262	\$3,018	\$3,331	\$3,109

The average AS policy size for the employee payor segment has been increasing in the more recent issue year periods.

Table 5.46 shows the distribution of the AS indemnity by occupation class among the three payor segments.

Table 5.46
 DISTRIBUTION BY OCCUPATION CLASS OF AS INDEMNITY FOR EMPLOYER-SPONSORED MARKET BY PAYOR SEGMENT - BUSINESS ISSUED IN 2000 AND LATER

Employer Payor					
Issue Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
2000-2004	27.4%	67.3%	4.1%	1.2%	100.0%
2005-2009	22.0%	73.4%	3.7%	0.9%	100.0%
2010-2014	22.2%	73.7%	3.3%	0.9%	100.0%
Total	23.5%	71.8%	3.7%	1.0%	100.0%
Employee Payor					
Issue Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
2000-2004	20.9%	74.0%	4.3%	0.8%	100.0%
2005-2009	22.5%	73.5%	3.4%	0.7%	100.0%
2010-2014	41.9%	56.0%	1.9%	0.2%	100.0%
Total	26.9%	69.2%	3.3%	0.6%	100.0%
Unknown Payor					
Issue Year	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
2000-2004	30.2%	63.7%	5.0%	1.0%	100.0%
2005-2009	38.0%	55.9%	5.1%	1.0%	100.0%
2010-2014	51.3%	43.3%	4.3%	1.2%	100.0%
Total	38.9%	55.2%	4.8%	1.1%	100.0%

The employer-payor and employee-payor segments had similar average distributions by occupation class over the 2006 - 2014 study period. Occupation class M grew steadily as a percent of the employee-payor and unknown-payor segments, reaching 41% and 51%, respectively, in issue years 2010 - 2014.

5.13 Underwriting Method

Since around 2000, companies in general have more reliably coded underwriting method information in their policy records for new business. As a result, the analysis discussed here is limited to IDI policies issued in 2000 and later.

Table 5.47 shows the distributions by underwriting method and market by issue year. The distribution of the AS indemnity by underwriting method varies considerably among the three markets. Guaranteed issue underwriting includes both GSI and GTI underwriting.

Table 5.47
DISTRIBUTION OF AS INDEMNITY BY UNDERWRITING METHOD AND ISSUE YEAR FOR EACH MARKET
(BUSINESS ISSUED IN 2000 AND LATER)

Individual Market						
Issue Year	Medically UW	GSI	GTI	GSI & GTI	GIO	Total
2000-2004	84.2%	10.6%	0.1%	10.7%	5.1%	100.0%
2005-2009	80.7%	14.4%	0.1%	14.4%	4.9%	100.0%
2010-2014	76.7%	17.4%	0.1%	17.5%	5.8%	100.0%
Total	81.3%	13.5%	0.1%	13.6%	5.2%	100.0%
Associations Market						
Issue Year	Medically UW	GSI	GTI	GSI & GTI	GIO	Total
2000-2004	92.8%	0.8%	0.9%	1.7%	5.5%	100.0%
2005-2009	95.3%	0.2%	0.0%	0.2%	4.5%	100.0%
2010-2014	94.6%	0.3%	0.0%	0.3%	5.1%	100.0%
Total	94.6%	0.3%	0.2%	0.5%	4.9%	100.0%
Employer-sponsored Market						
Issue Year	Medically UW	GSI	GTI	GSI & GTI	GIO	Total
2000-2004	41.5%	31.4%	25.5%	56.9%	1.5%	100.0%
2005-2009	36.7%	35.6%	26.0%	61.5%	1.7%	100.0%
2010-2014	42.1%	39.0%	16.0%	55.0%	2.9%	100.0%
Total	39.6%	35.1%	23.3%	58.4%	1.9%	100.0%

Medically underwritten business comprised 81% of the individual market, 95% of the associations market, and 40% of the employer-sponsored market for business issued since 2000. Guaranteed issue underwritten represented 58% of the employer-sponsored market. Business issued as the result of GIO elections represented approximately 5% of the individual and associations markets and less than 2% of the employer-sponsored market.

Table 5.48 shows the distribution by underwriting method by payor segment.

Table 5.48

DISTRIBUTION OF AS INDEMNITY BY UNDERWRITING METHOD AND ISSUE YEAR FOR EACH PAYOR SEGMENT IN THE EMPLOYER-SPONSORED MARKET (BUSINESS ISSUED IN 2000 AND LATER)

Employer Payor Segment						
Issue Year	Medically UW	GSI	GTI	GSI & GTI	GIO	Total
2000-2004	34.0%	15.7%	48.2%	63.8%	2.1%	100.0%
2005-2009	26.5%	28.6%	43.7%	72.3%	1.2%	100.0%
2010-2014	21.6%	37.0%	39.9%	76.9%	1.6%	100.0%
Total	27.4%	27.1%	44.0%	71.1%	1.5%	100.0%
Employee Payor Segment						
Issue Year	Medically UW	GSI	GTI	GSI & GTI	GIO	Total
2000-2004	34.9%	40.3%	24.7%	65.1%	0.1%	100.0%
2005-2009	28.9%	45.1%	25.7%	70.9%	0.2%	100.0%
2010-2014	37.4%	48.2%	13.7%	61.9%	0.7%	100.0%
Total	33.1%	44.3%	22.3%	66.6%	0.3%	100.0%
Unknown Payor Segment						
Issue Year	Medically UW	GSI	GTI	GSI & GTI	GIO	Total
2000-2004	74.6%	10.1%	8.5%	18.6%	6.8%	100.0%
2005-2009	79.8%	8.1%	4.1%	12.2%	8.0%	100.0%
2010-2014	80.3%	5.8%	1.6%	7.5%	12.2%	100.0%
Total	78.2%	8.2%	4.9%	13.1%	8.7%	100.0%

Medically underwritten business represented 27% of the employer-payor segment, 33% of the employee-payor segment, and 78% of the unknown-payor segment. Guaranteed issue underwritten business represented 71% and 67% of the employer-payor and employee-payor segments, respectively.

The unknown payor segment was significantly different from the employer and employee segments with respect to the method of underwriting, with a substantially higher portion of medically underwritten business and lower portion of guaranteed issue business. The percentage of business in the unknown segment issued via GIO was substantially higher than seen in the other two payor segments.

5.14 State of Issue

Appendix B contains policy and claim detail by state of issue for AS business issued for all issue years combined and for issue years from 2005 through 2014. Table 5.49 lists the ten states with the highest share of the AS indemnity when all issue years are combined and when only business issued from 2005 to 2014 is combined.

Table 5.49
PERCENTAGE OF AS INDEMNITY BY STATE OF ISSUE

Ranking	All Issue Years		Issued in Years 2005+	
	State of Issue	% AS Indemnity	State of Issue	% AS Indemnity
1	New York	11.7%	New York	12.1%
2	California	9.4%	California	8.6%
3	Texas	5.5%	Texas	6.2%
4	Illinois	5.2%	Illinois	5.8%
5	Pennsylvania	4.9%	Pennsylvania	4.8%
6	Florida	4.8%	Florida	4.4%
7	New Jersey	4.4%	New Jersey	4.0%
8	Ohio	3.6%	Massachusetts	3.7%
9	Massachusetts	3.6%	North Carolina	3.5%
10	Georgia	3.3%	Ohio	3.5%
	All Other States	43.6%	All Other States	43.5%
	Total	100.0%	Total	100.0%

New York had the largest share of the AS indemnity, followed by California. There were nine states (shown in red) that fell among the ten states with the highest share of the AS indemnity for all issue years combined and only for business issued in years 2005 - 2014.

5.15 Policy Size

Table 5.50 shows the distribution of the AS indemnity by policy size for the IDEC occupation classes. The policy size pertains to the AS policy and not to the amount of monthly benefit per insured. The database is at the policy level and does not provide any means to combine policies for each insured.

Table 5.50

DISTRIBUTION OF AS POLICIES AND INDEMNITY BY POLICY SIZE BAND AND OCCUPATION CLASS

Size Band	% AS Policies				
	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
Under \$2,500	43.6%	58.4%	75.1%	90.4%	56.9%
\$2,500-\$4,999	29.2%	23.9%	17.1%	8.9%	24.2%
\$5,000-\$7,499	15.5%	10.5%	5.1%	0.6%	11.1%
\$7,500-\$9,999	5.9%	3.6%	1.5%	0.1%	3.9%
\$10,000-\$14,999	4.8%	2.6%	1.0%	0.0%	3.0%
\$15,000-\$19,999	0.9%	0.7%	0.3%	0.0%	0.7%
\$20,000+	0.1%	0.2%	0.0%	0.0%	0.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%
Size Band	% AS Indemnity				
	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3-4	Total
Under \$2,500	15.6%	24.3%	40.0%	73.5%	22.9%
\$2,500-\$4,999	27.6%	28.6%	30.0%	22.4%	28.2%
\$5,000-\$7,499	24.5%	21.1%	15.4%	2.8%	21.7%
\$7,500-\$9,999	13.5%	10.2%	6.5%	0.4%	11.1%
\$10,000-\$14,999	14.7%	10.2%	5.7%	0.1%	11.5%
\$15,000-\$19,999	3.9%	3.9%	2.1%	0.0%	3.7%
\$20,000+	0.4%	1.6%	0.4%	0.8%	1.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Occupation class M had the largest percentage of AS policies with policy sizes of \$2,500 and higher among the IDEC occupation classes.

Section 6: Reliances and Limitations

No assessment has been made concerning the applicability of this experience to other purposes. In developing this report, the SOA relied upon data and information supplied by the participating company contributors. For each contributor, this information includes, but is not limited to, the data submission for claims experience and the responses to follow-up questions.

The results in this report are technical in nature and dependent on certain assumptions and methods. No party should rely upon these results without a thorough understanding of those assumptions and methods. Such an understanding may require consultation with qualified professionals. This report should be distributed and reviewed only in its entirety.

Appendix A: 2013 IDIVT Claim Incidence Modifiers

There are four kinds of claim incidence modifiers:

1. By contract
2. By smoker (i.e., all tobacco use) status
3. By maximum benefit period
4. By market and underwriting

The four sets of claim incidence modifiers are provided below and all types are multiplicative.

Claim Incidence Modifiers by Contract Type	
Contract	Modifier
AS	100.0%
BOE	66.9%
DBO	66.9%
KP	66.9%
Other	100.0%

Claim Incidence Modifiers by Smoker Status				
Occupation Class	Gender	Elimination Period (Days)	Nonsmoker	Smoker
M	F	30 & under	98.6%	135.2%
		60	99.0%	125.8%
		90 & over	98.8%	134.0%
	M	30 & under	99.4%	120.5%
		60	98.2%	154.8%
		90 & over	98.1%	166.4%
1	F	30 & under	99.3%	108.3%
		60	99.0%	111.2%
		90 & over	96.8%	135.5%
	M	30 & under	97.9%	131.9%
		60	96.3%	155.4%
		90 & over	96.2%	152.5%
2	F	All	98.4%	113.9%
	M	30 & under	99.0%	114.7%
		60	97.2%	132.4%
		90 & over	95.7%	149.4%
3-4	M&F	All	98.4%	113.9%

Claim Incidence Modifiers by Maximum Benefit Period				
Occupation Class	Elimination Period (Days)	Maximum Benefit Period		
		Lifetime	To Age 65-70	Short-term
M	30 & under	103.2%	101.7%	95.1%
	60	104.8%	100.9%	90.0%
	90 & over	118.9%	97.3%	88.7%
1	30 & under	106.7%	103.9%	92.7%
	60	115.8%	100.3%	90.2%
	90 & over	141.6%	96.2%	95.6%
2	All	117.2%	98.6%	98.7%
3-4	All	100.0%	100.0%	100.0%

Claim Incidence Modifiers by Market & Underwriting	
Market & Underwriting	Modifier
Individual – All Underwriting	105.3%
Associations – All Underwriting	105.3%
Employer-sponsored	
Medical Underwriting	81.2%
Voluntary GSI Underwriting	96.7%
Mandatory GSI Underwriting	57.4%

Appendix B: IDI Claim Incidence Experience Detail by State of Issue

All Issue Years Combined – AS Policies Only

State of Issue	Exposure - Indemnity	% AS Indemnity	Number of Claims	Modified A/E	Relative A/E	A/E Ranking	Exposure Ranking
Alabama	754,563,268	1.2%	1,515	69.2%	101%	17	25
Alaska	49,501,663	0.1%	97	65.6%	96%	20	51
Arizona	834,304,041	1.4%	1,749	77.1%	112%	6	24
Arkansas	281,998,115	0.5%	549	69.1%	101%	18	36
California	5,559,278,314	9.2%	14,090	88.6%	129%	2	2
Colorado	1,033,939,311	1.7%	2,048	65.4%	95%	22	20
Connecticut	1,455,321,754	2.4%	2,578	71.7%	104%	12	16
Delaware	172,141,965	0.3%	259	55.3%	81%	44	43
District of Columbia	381,604,181	0.6%	391	55.0%	80%	45	33
Florida	2,946,285,614	4.9%	6,549	76.0%	111%	7	5
Georgia	1,996,503,000	3.3%	3,270	62.3%	91%	32	10
Hawaii	223,430,662	0.4%	464	50.7%	74%	49	40
Idaho	164,963,449	0.3%	394	78.9%	115%	3	44
Illinois	3,141,467,350	5.2%	5,289	60.3%	88%	37	4
Indiana	1,027,131,809	1.7%	2,116	56.5%	82%	42	21
Iowa	689,354,662	1.1%	2,632	58.0%	85%	40	26
Kansas	551,846,650	0.9%	1,292	51.8%	75%	47	30
Kentucky	580,173,422	1.0%	1,631	77.2%	112%	5	29
Louisiana	853,253,288	1.4%	1,816	71.4%	104%	14	23
Maine	212,270,960	0.4%	810	71.1%	104%	15	41
Maryland	1,496,831,451	2.5%	2,523	56.7%	83%	41	14
Massachusetts	2,214,028,617	3.7%	4,568	63.3%	92%	27	8
Michigan	1,872,523,322	3.1%	4,636	72.8%	106%	9	12
Minnesota	1,492,086,817	2.5%	3,654	63.8%	93%	26	15
Mississippi	430,157,792	0.7%	833	70.9%	103%	16	31
Montana	110,285,945	0.2%	316	65.6%	96%	21	47
Montana	1,059,513,292	1.7%	2,021	62.6%	91%	29	19
Nebraska	414,929,284	0.7%	1,006	49.8%	73%	50	32
Nevada	259,555,294	0.4%	462	78.0%	114%	4	37
New Hampshire	238,472,165	0.4%	578	66.6%	97%	19	39
New Jersey	2,733,031,338	4.5%	5,796	72.3%	105%	11	7
New Mexico	150,471,760	0.2%	368	62.5%	91%	31	45
New York	6,898,180,227	11.4%	13,473	74.8%	109%	8	1
North Carolina	1,994,605,395	3.3%	3,342	64.2%	94%	24	11
North Dakota	80,240,097	0.1%	277	61.6%	90%	33	49
Ohio	2,192,688,047	3.6%	4,390	60.6%	88%	36	9
Oklahoma	343,725,013	0.6%	612	58.1%	85%	39	34
Oregon	603,372,829	1.0%	1,372	71.6%	104%	13	28
Pennsylvania	2,821,250,293	4.7%	6,672	64.1%	93%	25	6
Puerto Rico	73,566,705	0.1%	164	48.3%	70%	51	50
Rhode Island	259,193,616	0.4%	1,048	91.4%	133%	1	38
South Carolina	673,651,404	1.1%	1,136	61.6%	90%	34	27
South Dakota	124,642,153	0.2%	303	60.9%	89%	35	46
Tennessee	1,372,812,266	2.3%	2,702	62.7%	91%	28	17
Texas	3,365,983,942	5.6%	4,353	56.5%	82%	43	3
Utah	342,530,278	0.6%	394	51.6%	75%	48	35
Vermont	96,850,637	0.2%	289	54.6%	80%	46	48
Virginia	1,547,926,963	2.6%	2,945	62.5%	91%	30	13
Washington	989,968,461	1.6%	2,192	72.7%	106%	10	22
West Virginia	211,231,900	0.3%	450	58.5%	85%	38	42
Wisconsin	1,129,293,927	1.9%	4,499	65.3%	95%	23	18
Wyoming	41,907,819	0.1%	96	40.8%	60%	52	52
Total	60,544,842,528	100.0%	127,009	68.6%	100%		

Appendix C: List of Participating Companies

Ameriprise (RiverSource)

Ameritas

Assurity Life

Guardian

Illinois Mutual

Mass Mutual

Monarch

Northwestern Mutual

Penn Mutual

Principal

Standard

UNUM

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