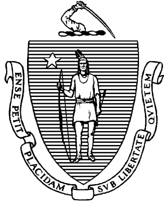

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OPINION, FINDINGS AND DECISION ON 2007 PRIVATE PASSENGER AUTOMOBILE INSURANCE RATES

December 15, 2006

Docket Nos. R2006-04
R2006-05
R2006-06
R2006-07

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I. INTRODUCTION

A. BACKGROUND AND PROCEDURAL HISTORY

This decision fixes and establishes private passenger motor vehicle insurance premiums for policies written during the one-year period April 1, 2007 through March 31, 2008. Under G. L c. 175, §113B and c. 175E, §5, the Commissioner of Insurance ("Commissioner") shall fix and establish motor vehicle insurance rates if she determines, after investigation and public hearing, that "with respect to any territory or to any kind, subdivision, or class of insurance, competition is either (i) insufficient to assure that rates will not be excessive, or (ii) so conducted as to be destructive of competition or detrimental to the solvency of insurers." The Division of Insurance ("Division") held a public hearing on the issue of competition in Boston on May 16, 2006. On August 10, the Commissioner determined that competition, if implemented in 2007, would be insufficient to assure that rates would not be excessive, and might be so conducted as to be destructive of competition. Therefore, she renewed the fix-and-establish rate setting procedure for the 2007 rates.

This year, before issuing a notice of hearing on the rate setting proceedings, the Commissioner held a meeting for all parties that have traditionally participated in those proceedings to establish in advance, insofar as possible, dates for the submission of filings and cross-examination of witnesses. On May 1, 2006, she issued a notice of hearing establishing four separate dockets, as follows: *Commission Allowances in Connection with the Issue of Motor Vehicle Insurance Policies*, Docket No. R2006-04 ("Agent Commissions"), *Underwriting Profits*, Docket No. R2006-05, *Cost Containment and Fraudulent Claims,* Docket No. R2006-06 ("Cost Containment"), and *Main Rate,* Docket No. R2006-07 ("Main Rate"). The notice invited interested parties to participate in these proceedings, and scheduled a public comment hearing at the Division for August 23.

Parties to all these proceedings were the Automobile Insurers Bureau of Massachusetts ("AIB"), represented by Michael B. Meyer, Esq., and Catherine J. Keuthen, Esq.; the State Rating Bureau ("SRB"), represented by Thomas F. McCall, Jr., Esq., and Matthew Mancini, Esq.; and the Attorney General ("AG"), represented by Peter Leight, Esq., Glenn Kaplan, Esq., Tom O'Brien, Esq., Hilary Hershman, Esq., Pamela

Meister, Esq., and Monica Brookman, Esq.[1] The Massachusetts Association of Insurance Agents ("MAIA"), represented by James K. Brown, Esq., and Pat A. Cerundolo, Esq., petitioned to intervene in the Agent Commissions proceeding.

Agent Commissions

Jean F. Farrington, Esq. and Stephen M. Sumner, Esq. presided over this matter. MAIA submitted an advisory filing on June 15, 2006. On June 29, the petitions to intervene filed by MAIA and the AIB were allowed and MAIA's witness was cross-examined. The AG submitted his advisory filing on Agent Commissions on July 12, and his witness was cross-examined on July 26 and August 10. The SRB did not submit an advisory filing. Briefs were filed on August 31.

Underwriting Profits

Jean F. Farrington, Esq. and Stephen M. Sumner, Esq. presided over this matter. The AIB submitted its filing on underwriting profits on July 10, 2006, and its witnesses were cross-examined on July 31. The AG and the SRB submitted their advisory filings on August 21. Cross-examination of witnesses for the AG and the SRB took place on September 7 and 8. The AG made a rebuttal filing on September 25, and his witness was cross-examined on October 3. At the close of the hearing, all exhibits were moved into evidence with the exception of page 15 of the AG's rebuttal filing, which the AIB moved to strike. On October 19, the parties submitted documents updating sections of the filings that they had anticipated updating when later information became available. Briefs were filed on November 3.

Cost Containment and Fraudulent Claims Payment

Jean F. Farrington, Esq., and Stephen M. Sumner, Esq. presided over this matter. The AIB submitted its filing on cost containment and fraudulent claims payment on June 30, 2006. A prehearing conference occurred on July 10. The AIB's witness was cross-examined on July 20. On July 25, 28, and August 4, five witnesses testified on behalf of five insurance companies. The AG made an advisory filing on August 16, and his witnesses were cross-examined on September 6. The AIB submitted a rebuttal filing on September 20 and its witness was cross-examined on September 26. The SRB made no

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[1] The AIB did not submit the initial filing in the Agent Commission case, but petitioned to intervene therein.

advisory filing on Cost Containment. Briefs were filed on October 23. On October 30, the AIB filed a motion to strike portions of the briefs submitted by the SRB and the AG. The AG and the SRB submitted their responses to the motion to strike on November 9. On November 10, an order issued denying the AIB's motion.

Main Rate

The Main Rate proceeding addresses losses, expenses, and several miscellaneous issues. Jean F. Farrington, Esq. and Stephen M. Sumner, Esq. presided over this proceeding. The AIB submitted its recommendations for the loss and expense components on August 11. The AIB's witnesses were cross-examined on September 12. The AG and the SRB submitted their advisory filings on September 27. Cross-examination of the AG's witness took place on October 11 and of the SRB's witness on October 12. The AG and the SRB submitted rebuttal filings on October 23, and their witnesses were cross-examined on October 26. The AIB submitted miscellaneous filings on the SDIP reconciliation and the insolvency assessment on October 27, which were entered into the record on November 2. The AG submitted a Supplemental Filing on October 30; on November 1, the AIB filed a motion to strike the AG's Supplemental Filing. The parties were ordered to respond to the AIB's motion by November 9; cross-examination of the AG's witness went forward on November 2. On November 7, the AIB submitted replacement pages for the Miscellaneous Filings, which were marked as Exhibit 39. Both the SRB and the AG submitted timely responses to the AIB's motion to strike the AG's Supplemental Filing. On November 10, an order issued denying the AIB's motion. A stipulation addressing some aspects of the class/territory relativities that are included in the AIB's Main Rate filing was approved on November 14. Briefs were submitted on November 15.

B. MISCELLANEOUS ISSUES

1. Seat Belt Usage

Chapter 387, §7 of the Acts of 1993 requires the Commissioner, in setting rates, to consider the extent to which Massachusetts residents wear seat belts, as reported in an annual survey of seat belt use conducted by the Governor's Highway Safety Bureau. The statute requires reductions in such premiums if at any time the safety belt use rate in the

Commonwealth exceeds the national average. On October 26, the 2006 Massachusetts Safety Belt Usage Observation Survey was entered into evidence in this proceeding as Exhibit 24. That survey reflected an increase from 2005 to 2006 in seat belt usage among front seat occupants, to 67 percent, but failed to compare Massachusetts use to other jurisdictions. To satisfy the statutory mandate, however, a comparison must be made between Massachusetts-specific and national data.

As of December 12, 2006, the National Highway Traffic Safety Administration of the United State Department of Transportation had published no 2006 national data on countrywide seatbelt use. The data for 2005, as noted in the *Decision on 2006 Rates*, showed a national safety belt usage rate of 82 percent. We conclude that it is reasonable, for comparison purposes, to rely on that value as the most recent data available. We find it unlikely that the national safety belt usage plummeted since 2005, and therefore conclude that, in 2006, seat belt usage in Massachusetts remains below the national average. Therefore we find, as last year, that the statutory requirements for a specific rate adjustment have not been met. We again note, however, that in accordance with the statutory mandate, the survey results will be considered as a criterion in setting rates on bodily injury coverages, and as additional support for the specific decisions made on those rates. For the reasons stated in last year's decision, we will make no specific adjustment to the 2007 rates based on seat belt usage in Massachusetts.

I. AGENT COMMISSION EXPENSE PURE PREMIUM

Pursuant to G.L. c. 175, §113B, decisions on private passenger automobile insurance rates include a specified dollar amount, the commission expense pure premium ("CEPP"), that insurers must pay to independent insurance producers. The CEPP is set at a level that will cover the reasonable expenses producers incur in connection with the sale of private passenger automobile insurance. *Decision on 2005 Rates, 55.* The set dollar CEPP is the basis from which, utilizing a weighting formula, commissions are developed as a percentage of premium for the various coverages available under the standard automobile insurance policy. *Id.* MAIA and the AG submitted filings and offered testimony relating to their recommended CEPPs for 2007. The SRB did not make an

advisory filing but addressed its recommendations in its brief. The AIB made no recommendation on the CEPP.[2]

For 2006, the *Decision on 2006 Private Passenger Insurance Rates ("Decision on 2006 Rates")* set the CEPP at $121.34. For 2007, MAIA recommends increasing the CEPP to $126.19, by trending forward the $121.34 CEPP. The SRB recommends no change from the current $121.34 CEPP, and the AG recommends decreasing the CEPP to $117. The AG, like MAIA, employs a trending methodology, but uses as the base point a value of $109.81, the Average Expense Per Policy ("AEPP") for 2004 as determined in the *Decision on 2006 Rates,* and develops the wage trend from countrywide wage indices rather than the Massachusetts-specific data relied upon by MAIA.[3]

MAIA also asks the Commissioner to find that any future cost study of agent expenses that is based on a sub-population of agents who, measured by exposures, produce 90 percent or more of relevant private passenger automobile insurance business is truly representative of the entire industry. The SRB opposes this request, and the AG takes no position.

A. THE CEPP FOR 2007

1. The Parties' Arguments

a) MAIA

The starting point for MAIA's proposal is the $121.34 CEPP approved in the *Decision on 2006 Rates.* That decision value was developed by applying MAIA-recommended trend factors to the 2004 AEPP of $109.81.[4] For 2007, MAIA applies a trend factor, developed by analyzing a series of individual expense components, to the 2006 decision value. The use of a trending methodology, MAIA argues, is consistent with the approach it has employed in past years when it did not conduct a cost study. It argues that its CEPP recommendation is the only value that will meet the statutory requirements of G.L. c. 175, §113B as "adequate, just, reasonable and nondiscriminatory."

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[2] In its rate filing, the AIB utilizes, *pro forma*, the CEPP approved last year.

[3] The parties use different terminology to refer to the $109.81 value that the Commissioner, in the *Decision on 2006 Rates*, found was the 2004 average expense per policy. MAIA and the SRB incorrectly refer to it as the 2004 CEPP, a phrase that was inadvertently used in the *Decision on 2006 Rates*, while the AG refers to it as the 2005 Cost Study data. For purposes of this decision, it will be referred to as the 2004 Average Expense Per Policy ("AEPP"). We note that, for setting the 2004 rates, the Commissioner selected a CEPP of $114.

[4] The 2004 AEPP itself was calculated by applying a methodology recommended by the SRB to data collected by MAIA in its 2005 Cost Study, which required participants to report expense data relating to their operations in calendar year 2004.

MAIA objects to the AG's proposal to trend the 2007 CEPP from the 2004 AEPP, characterizing his approach as an improper attempt to take a "second look" at the 2006 CEPP. It contends that even though the data now available tend to show that the trend factors used to set the 2006 CEPP were too high, the ultimate accuracy of those projections cannot be determined until final data are available in mid-2007. Further, MAIA argues, the Commissioner has, in the past, declined the industry's request to take a second look at rates for a past year to adjust for subsequent events that differed from a prediction or estimate made in connection with setting the rates for that past year. The effect of the AG's recommendation, it asserts, is to substitute a forecasted trend for the three-year period from mid-2004 to October 2007 for MAIA's one-year forecast that trends the 2006 CEPP forward for one year. In either case, MAIA argues, the forecast is an estimate, because the data that will show the actual trend will be available only in 2008.

MAIA develops the wage component of its trend factor based on Massachusetts wage data for "Insurance Agents, Brokers and Service Employees" published by the Commonwealth's Department of Workforce Development ("DWD").[5] It opposes the AG's proposal to change the methodology that it has used for many years and to substitute countrywide data for Massachusetts data as a basis for estimating the wage component. Responding to the AG's position that the use of countrywide data would be consistent with MAIA's approach to estimating other trend factor components, MAIA argues that it uses countrywide or regional data to estimate those other components because Massachusetts-only data are not available. It contends that, with respect to insurance agents, Massachusetts data and countrywide data both reflect a competitive marketplace.

MAIA disagrees with the AG's assertion that its wage factor is impermissibly based on an "internal trend." It argues that the AG's contention that it is "circular" to use DWD data to develop a wage trend because wages are ultimately funded by commissions and will therefore be affected by changes in the CEPP is based on incorrect hypotheses about the relationship between the CEPP and agency wage trends.[6] First, MAIA asserts, the DWD gathers data on over 22,000 employees, but only about 36 percent of those employees are engaged in selling and servicing private passenger automobile insurance. Within that group, it argues, only about 30 percent of their time is spend on private passenger automobile insurance. Therefore, MAIA concludes, only about eleven percent

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[5] The Department of Workforce Development was formerly known as the Department of Employment and Training.

[6] The AG characterizes the wage trend factor based on Massachusetts data as an "internal" rather than an "external" trend.

of any change in the DWD wage index would be affected by the CEPP, a level that does not constitute an "internal trend." MAIA argues that data comparing changes in the DWD wage index from 2000 through 2005 to changes in the CEPP over those years showed no positive relationship between them. It asserts that this result is reasonable because wages, in an industry with many participants, are a function of the competitive marketplace, in which firms of all sizes compete for employees with particular skill sets.

In response to the AG's argument that the correlation between the CEPP and the DWD wage index must be viewed on a cumulative basis, MAIA argues that the issue to be addressed is whether there is a causal relationship between two sets of numbers, in this case the DWD wage index and the CEPP, both of which increase over time. MAIA asserts that inflation, as measured by the Consumer Price Index ("CPI") is the driver that increases both wages and the CEPP over time.

b) The AG

The AG recommends that for 2007 the Commissioner decrease the CEPP from its current level to $117. He argues that the CEPP should be based on real data, rather than judgment, and that the Commissioner should therefore establish the 2007 CEPP based on MAIA's 2005 Cost Study, which she also relied on to develop the 2006 CEPP. The AG asserts that the standard actuarial procedure for developing an expected future value is first to analyze historic data and then to apply an appropriate trending procedure that reflects expected changes in the historical data. Because the historical data in this proceeding is the AEPP for 2004, that is the base point which, the AG contends, should be trended forward to the 2007 rate period. Trending from the 2006 CEPP, the AG argues, uses estimated, rather than actual, values as the base point and, further, relies on an inaccurate trend estimate. MAIA, he notes, admits that the more recent data is more reliable than and produces lower results than the trend predictions that were applied to develop the 2006 CEPP. According to the AG, applying the methodology used to estimate the 2006 CEPP, but substituting current data, would produce a 2006 CEPP of $116.62.

The AG asks the Commissioner to revise the methodology used to set the CEPP by utilizing nationwide wage data compiled by the Bureau of Labor Statistics ("BLS") to estimate the wage component of the trend factor that is applied to historical data. He argues that the use of statewide wage data to trend from the historic CEPP base distorts the rate because private passenger automobile insurance commissions are a large part of total commissions paid in the state. Therefore, the AG asserts, an increase or decrease in commissions in a particular year is likely to have an impact on the statewide average

commission that is used as a base for the following year's commission. In addition, he notes, contingent commission income exacerbates the effect on wages of yearly increases in the base commission. The use of nationwide data, he asserts, avoids this problem and is a more reliable source for determining an appropriate CEPP.

The use of nationwide indices, the AG argues, is more consistent with the decision methodology used to trend most other expense components in the rates, and allows the Commissioner to determine the values that would be produced in a competitive market. He asserts that the CEPP is not the product of a competitive market and is not indicative of prices when agent compensation is negotiated in the marketplace. That nationwide data has not been used in the past to develop the wage component of the CEPP does not bar its use in this proceeding, the AG asserts, because the parties have previously stipulated that prior methodologies used to fix and establish the CEPP would have no precedential value. Further, he argues, it is important to used nationwide data at this point because nationwide and statewide wage trends are increasingly growing apart. The use of nationwide data would, the AG notes, produce a 2007 CEPP of $113.54. However, because the regression on this data does not have a strong fit, he recommends that the Commissioner adjust the value upward to $117, which represents the midpoint between $113.54 and the CEPP that would result from using the methodology used to set the 2006 CEPP to set the 2007 CEPP.

c) The SRB

The SRB asks the Commissioner to deny MAIA's request for an increased CEPP for 2007, asserting that it is reasonable to use the current CEPP of $121.34 in setting the 2007 rates. The CEPP, it states, is intended to cover the reasonable expenses that producers incur in selling private passenger automobile insurance. The SRB argues that, on this record, MAIA's recommended CEPP is excessive and therefore does not satisfy the reasonability standard.

The SRB, while noting that MAIA uses a trend methodology to generate its recommended 2007 CEPP that is in accordance with the *Decision on 2006 Rates*, argues that MAIA's application of that methodology is not appropriate. Because MAIA bases its recommendation in part on the estimated trends incorporated in the calculation of the 2006 CEPP and in part on an updating of those trends, the SRB concludes that MAIA's requested CEPP of $126.19 is inflated and should be rejected. It contends that MAIA's calculation is incorrect because it does not consistently apply the most recent trend estimate to the historical experience, i.e., the $109.81 2004 AEPP. By applying its trend factor to the previously trended CEPP for 2006 instead of to the 2004 AEPP, the SRB

argues, MAIA has effectively ignored actual data available since the calculation of the 2006 CEPP, and created an inflated 2007 CEPP. The SRB agrees with the AG that MAIA's approach does not comply with Actuarial Standard of Practice 13, which provides that trending should reflect expected changes in the historical data between the experience period and the forecast period. For that reason, it concludes, MAIA should have trended forward from the 2004 AEPP, rather than from the 2006 CEPP.

The SRB argues, as well, that MAIA's recommendation should be rejected because it applies a trend factor to a previously trended value. The 2006 CEPP, it points out, was an estimate of the appropriate value, based on the then available historical index data which has since been updated. The SRB notes Ms. Barnes's testimony that, if she estimated the 2007 trend factor based on currently available data it would be under four percent, a lower value than that underlying the 2006 CEPP. It is not sensible, the SRB argues, in making a future estimate to ignore the trend supported by the updated data. Further, the SRB notes, the application of a trend based on the most current data to the base value of the 2004 CEPP would produce a 2007 CEPP of $121.34, unchanged from the 2006 CEPP.

The SRB argues that it is appropriate to use Massachusetts wage data, rather than countrywide wage data, to determine the 2007 CEPP, because the purpose of the CEPP is to cover the reasonable expenses incurred by Massachusetts producers in connection with selling private passenger automobile insurance. It contends that because wages represent over 65 percent of agency expenses, the Commissioner should continue to use wage data for Massachusetts workers. The SRB points out that a number of components of MAIA's expense trends, including rent/housing, food away from home, and services, are based on Bureau of Labor Statistics data for the Northeast urban areas, rather than on countrywide data. Therefore, it asserts, continued use of data from the Massachusetts DWD to develop the wage index in MAIA's trend is not problematic. Further, the SRB asserts, such data more accurately reflect agent expenses in Massachusetts.

The SRB urges the Commissioner to reject the AG's position that wages should not be trended based on Massachusetts only data because any change in the CEPP or the payment of contingent or override commissions for private passenger automobile business is likely to affect the statewide average wage. The SRB argues that the AG has offered no persuasive evidence of a direct correlation between the CEPP and wages.

2. Analysis and Discussion

On this record, we are persuaded that it is reasonable to use the 2004 AEPP as the base point for developing the 2007 CEPP, and to apply a trend factor to that value, rather

than to the 2006 CEPP. Our objective is to set a CEPP that is expected to cover the average reasonable expenses of the average agency statewide. The 2004 AEPP was derived from the then most recently reported data on the expenses producers incur in selling Massachusetts private passenger automobile insurance, and was considered a reliable starting point for determining the 2006 CEPP. No party argues that the reliability of that data point has since diminished. We conclude that, in the absence of any subsequent cost study data, it remains an appropriate base point from which to project a CEPP for 2007.

MAIA prefers, however, to trend from the 2006 CEPP, which was generated by applying a 4.7 percent trend factor to the 2004 AEPP. In support of its position, it contends that trending from a 2004 base point equates to taking a second look at the 2006 CEPP, an approach that the Commissioner has previously rejected. We do not find its argument persuasive. As support for its position MAIA relies on *Attorney General v. Commissioner of Insurance*, 370 Mass. 791 (1976), in which the court upheld the Commissioner's decision not to adjust 1976 automobile insurance rates to compensate insurers for allegedly inadequate 1975 rates, pursuant to a statute (since repealed) that permitted her to make such an adjustment if the premium charges for 1975 were found to be "excessive, unjust, unreasonable, discriminatory or inadequate." The court noted that the terms "inadequate" and "excessive" had no precise boundaries, and that no adjustment should be made unless experience showed that the rates for the current year showed an "egregious failing either way."

In this proceeding, however, no party seeks to reformulate the 2006 CEPP upward or downward. Further, they agree that, reconsidered in light of current data, the trend factor applied to the 2004 base point for the purpose of setting the 2006 CEPP was too high. The heart of the dispute, therefore, is the choice of the base point from which to trend the 2007 CEPP. MAIA elected not to conduct a cost study of 2005 agency expenses. We are persuaded that the goal of this inquiry, to set the CEPP at a level that will cover the reasonable expenses producers incur in connection with the sale of private passenger automobile insurance, is best achieved by trending forward from the most recently documented historical experience, i.e., the 2004 AEPP, using a trend factor

developed from data that reflect changes in expenses since that experience period.[7] It is reasonable to expect that using a trend factor that incorporates more recent data and the most recent historical base point, rather than one built on a later trended value that was based on concededly overestimated trends, will improve the accuracy of the estimated trend for 2007.[8]

The trend factor itself is a composite of indices developed for certain standard categories of business expenses, including an index for wages. The methodologies that MAIA applies to develop its indices and trend factor this year are consistent with those used in the past. Thirteen categories of expenses are trended separately and weighted to reflect the relationship between each expense category and total agency expenses; the ultimate trend factor is the sum of the weighted categories. The wage trend is developed from data published by the Massachusetts DWD; the trend in each other category is developed from BLS publications. Some, at least, of those BLS indices utilize data for the Northeast urban area, rather than countrywide values.[9] The AG does not object to those indices, and it is reasonable to expect that, because they are based on regional data, they will more accurately reflect trends for businesses in Massachusetts. For that reason, we do not find persuasive the AG's argument that the use of countrywide wage data is more consistent with the indices used to develop other components of the trend factor for the CEPP.[10]

In the *Decision on 2006 Rates*, the Commissioner rejected the AG's argument that she should use countrywide data to measure the CEPP wage trend because it is more objective than Massachusetts data. The AG's position is principally based on the premise that the Massachusetts data create a "circular" wage trend because increases in the CEPP

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[7] Our approach is consistent with past decisions, in which cost study results have been considered the best recent evidence available on agency expenses, even when the study itself was flawed. *See, Decision on 2003 Rates*, Docket No. R2002-03, 51. Further, the *Decision on 2005 Rates* rejected the suggestion that the 2005 CEPP be trended from the 2004 decision value, rather than selected with reference to MAIA's 2004 Cost Study.

[8] MAIA points out that the absolute correctness of any trend factor cannot be finally determined at this time. Even if its statement is accurate, it does not justify building a CEPP from a trend that has been shown to be excessive.

[9] See, Exhibits 16 and 17, the indices for Services and Food Away from Home. Ms. Gotham testified that she thought MAIA's data on rent and housing were not countrywide.

[10] The AG notes that countrywide data are used to develop insurance company expenses, because the Massachusetts market is noncompetitive for companies. He offers no persuasive argument that it should therefore be used to develop a CEPP for Massachusetts insurance producers.

produce increases in the Massachusetts wage factor. On this record, we are not persuaded that the use of countrywide data would resolve the AG's concerns about wage trends in Massachusetts. The AG's witness agreed that wage trends for Massachusetts agents are not driven only by increases in the CEPP, but that wages also reflect revenue from commercial and homeowners insurance, and could also be influenced by changes in the Consumer Price Index ("CPI"). The AG's witness testified that she thought that wage increases and increases in the CEPP were highly correlated, and that commission revenue would flow through directly to wages. In response to a request from MAIA she calculated, using two different approaches, the relationship between values set out in Exhibit 12 showing percentage changes in average annual wages and in the CEPP. The calculation, which was entered into evidence as Exhibit 18, includes two analyses, one of cumulative values of changes in the CEPP and Massachusetts wages for five years and one of incremental values. Ms. Gotham testified that the analysis of incremental values had a poor statistical fit and showed no relationship between the CEPP and Massachusetts wages, but that the cumulative values showed a high relationship between them. She also testified that an analysis of the cumulative values for countrywide wage increases and the CEPP produced no correlation between them. On this record, we are not persuaded that the AG's analysis based on cumulative values for Massachusetts wages, even if it produces a high R-squared value, therefore constitutes a reasonable basis for concluding that Massachusetts wage data is driven by changes in the CEPP. It is apparent from the data in Exhibit 12 that the wage data show increases even when the CEPP shows no change. In 2005, the only year in which the CEPP increased by a higher percentage than wages, the Commissioner judgmentally increased the CEPP in anticipation of reform efforts that might require agencies to incur additional expenses.[11]

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[11] MAIA and the AG dispute at length the question of the correlation between increases in the CPI and the CEPP. In response to Ms. Gotham's testimony that she thought they were highly correlated, MAIA asked her, in the course of the hearing, to perform a calculation relating to the relationship between values set out in Exhibit 12 showing percentage changes in average annual wages and in the CEPP. The calculation was not done, as anticipated, during a break at the hearing but was performed later and entered into evidence, as Exhibit 18, at an additional hearing on August 10. The exhibit contains two analyses, one based on cumulative values of changes in the CEPP and Massachusetts wages for five years and one based on incremental values. Ms. Gotham testified that the analysis of incremental values had a poor statistical fit and showed no relationship between the CEPP and Massachusetts wages, but that the cumulative values showed a high relationship between them. She also testified that she had performed an analysis based on cumulative values for countrywide wage increases and the CEPP that demonstrated no correlation between

We also do not find persuasive the AG's position that Massachusetts wage data should not be used to develop a trend because Massachusetts insurance agencies operate in a non-competitive market. Although overall commission payments reflected in the total CEPP are not the product of a completely competitive market, that does not lead to the conclusion that the wage component in the trend factor is not driven by market forces. The relevant market, for the purpose of considering whether competition exists, is not the insurance industry as a whole, but insurance producers who sell private passenger automobile insurance in Massachusetts. Further, there is no evidence that increases in the CEPP are principally allocated to wage increases, rather than used to pay for other agency expenses. In addition, although the AG questions the effect of contingent commissions on Massachusetts wages, he does not suggest that such payments are omitted from countrywide wage data.[12]

The AG's argument that no weight should be given to methodologies utilized in recent proceedings to determine the CEPP is not persuasive. That the parties agreed in a stipulation entered into over a decade ago, on or about October 25, 1995, that past practice

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them. Ms. Gotham also testified that the CPI could influence wage increases countrywide. MAIA then offered into evidence two documents, which it asked to be marked as exhibits 19 and 20, comparing wage increases to changes in the CPI and CEPP increases to the CPI. The AG objected, on the ground that no additional exhibits should be admitted because the only purpose of the August 10 hearing was to enter Exhibit 18 into evidence. MAIA made an offer of proof with regard to proposed exhibits 19 and 20, and they were marked as offers of proof 1 and 2. In its brief, MAIA argues that the offers of proof should have been admitted into evidence, that Ms. Gotham's calculations in Exhibit 18 incorporated an entirely new approach to finding a correlation between wages and the CEPP, and that it should have had the opportunity to cross-examine her more extensively. It also points out that the parties erroneously stated to the Presiding Officers that the CPI had not been considered in Ms. Gotham's July 26 cross-examination. The SRB agrees with MAIA's position. The AG argues that the offers of proof were properly excluded because they were untimely, irrelevant and immaterial to this proceeding. He reiterates his position that the August 10 hearing had a single purpose, to enter Ms. Gotham's calculations into evidence. The AG further argues that the Offers of Proof do not refute his position that the CEPP has some effect on agents' wages.

We have considered the parties arguments and conclude that the offers of proof should have been allowed into evidence. The AG's witness was asked and answered questions about the potential influence of the CPI on wages on July 26 and August 10. She also proffered a new statistical approach to support the AG's argument on the correlation between increases in Massachusetts wages and the CEPP. The offers of proof specifically addressed the relationship between changes in the CPI and annual average wages and the CPI and the CEPP. On this record, however, we have not found it necessary to rely on the information in the two offers of proof as support for our decision. We are not persuaded that the AG's calculations, even if a single analysis based on cumulative values has a reasonable statistical fit, demonstrate a causal relationship between changes in Massachusetts wages and the CEPP.

[12] The AG's wage trend is developed from five years of data, rather than the two years that has been used in the past and which, according to his witness, is her preferred approach, because the two-year analysis produced a poor statistical fit. She also testified that she had prepared a trend analysis using two years of Massachusetts wage data, which produced a reasonable r-squared value, a measure of statistical fit.

would not be precedent, does not mean that methodologies adopted since that time have no precedential value, nor does it relieve any party from its burden of demonstrating that a proposed new methodology is superior to what has been used in the past.[13] On this record, we are again not persuaded that the use of countrywide data to develop the wage component of the trend factor is superior to the use of Massachusetts wage data. We will therefore approve the trend factors proposed by MAIA for use in developing the 2007 CEPP. The result of applying those factors to the AEPP is a CEPP of $121.34.[14]

B. STANDARDS FOR FUTURE COST STUDIES

1. The Parties' Arguments

MAIA requests a finding on a numerical parameter for determining when a cost study is representative of the universe of producers placing private passenger automobile insurance, to address a concern expressed in the *Decision on 2006 Rates* that a study performed only on MAIA members would exhibit some degree of bias. That concern emanated from the *Decision on 2006 Rates*, which noted that about 72 percent of all Massachusetts agencies producing such coverage were MAIA members. MAIA states that a subsequent review of data from Commonwealth Automobile Reinsurers on insurance agencies writing private passenger automobile in 2004 and 2005 indicated that the data significantly overstated the number of separate agencies writing such business on a retail basis. The correct number of agencies, it asserts, is 1,751 rather than 2,208 and, of that number, 86.9 percent are MAIA members which write 94.1 percent of all private passenger auto exposures produced by Massachusetts agencies. A survey that is based on exposure data from a subpopulation of agents that captures 90 percent or more of the relevant exposures, MAIA argues, is representative of the industry as a whole and will not contain any significant bias. Therefore, it seeks a finding that, so long as MAIA members write at least 90 percent of private passenger auto exposures, cost studies based on data only from MAIA members will be representative and show no material bias.

The SRB opposes MAIA's request, arguing that it is inadvisable for the Commissioner to make a general finding about a level of MAIA membership that would presumptively determine that a future cost study is representative of the industry and free of significant bias. It contends that any future MAIA cost study should be evaluated on its

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[13] The stipulation on which the AG relies was entered in the Proceeding to Set 1996 Private Passenger Automobile Insurance Rates, Docket No. R95-14. The *Decision on 2006 Rates*, in approving MAIA's trend factor, noted that its methodology was consistent with what was used in the past year.

[14] The AG's witness testified that this value for the CEPP is at the upper end of the range that, in her opinion, the Commissioner should consider.

own merits, including an independent evaluation of whether the sample is unbiased and sufficient to represent the entire industry. Further, the SRB argues, MAIA has failed to show in this proceeding that sampling from a population that represents 90 percent of the total population will not, in general, cause any significant bias, or to address the question of whether the expenses of agents who are not members of MAIA differ systematically from the expenses of those who are members. Bias created by limiting a study to MAIA members cannot be determined, the SRB asserts, without knowing the expense experience of producers who are not members. A future cost study based on a partial sample of the producer population, the SRB asserts, is not a sound basis for calculating a CEPP for all producers. The AG, as noted above, takes no position on this issue.

2. Discussion and Analysis

We are not persuaded that MAIA's request for a ruling on a standard for determining when a cost study sample is representative of a larger population is reasonable. A finding that a cost study would show no significant bias, provided that MAIA members write more than 90 percent of private passenger automobiles exposures in Massachusetts, could impose inappropriate constraints on the analysis of future cost studies. We agree with the SRB that cost studies must be evaluated on their own merits, and that failure to address comparable data from non-MAIA members is inherently problematic. As noted in the *Decision on 2006 Rates*, 87, a study based only on MAIA members requires us to assume that non-member agencies have the same expenses as member agencies. Further, to the extent that such a ruling might be construed as giving an imprimatur to a particular cost-study based methodology, it would be inconsistent with our past position, expressed in the *Decision on 2006 Rates*, urging MAIA to consider developing different approaches to setting the CEPP. We therefore reject MAIA's request for a ruling on acceptable parameters for future cost studies.

II. UNDERWRITING PROFITS

A. Introduction and Background

The underwriting profit component of private passenger automobile rates is intended to address two goals: 1) to compensate investors in the insurance business fairly for risks associated with that investment; and 2) to ensure that the rates charged to policyholders reflect insurers' total income, both premium-related and from investments. Ratemaking must balance those goals equally. Absent an adequate return on capital invested in the Massachusetts private passenger automobile insurance market, insurers

will choose to invest their capital in other enterprises, thereby potentially harming consumers by reducing the product choices available to them.

The standard for a fair return in a regulated industry, the AIB points out, is articulated in two cases, *Federal Power Commission, et al. v. Hope Natural Gas Co.*, 320 U.S. 591 (1944), and *Bluefield Waterworks and Improvement Co. v. Public Service Commission of West Virginia, et al.*, 262 U.S. 679 (1923). The *Hope Natural Gas* decision, in summary, states that from the investor's point of view: 1) revenue must be sufficient to cover both operating expenses and the capital costs of the business; 2) return to the equity owner should be commensurate with returns on investments in other enterprises of comparable risk; and 3) the return should be sufficient to assure confidence in the financial integrity of the enterprise, in order to maintain its credit and attract capital.[15] The Massachusetts standard, the AIB states, is identical to the federal standard. Further, it argues, the right in Massachusetts to a fair and adequate return on an investment in a regulated enterprise is a constitutional right.

The fixed-and-established rates are expected to cover losses and expenses that relate to policies written during a one-year (twelve month) period.[16] Because some of those losses and expenses will be paid in the years following the year in which the policy is issued, insurers hold premium income in reserve accounts from which they pay expected future claim costs; they also hold surplus funds that they are, by statute, required to keep in order to cover unforeseen liabilities. Insurers invest premiums they receive until such time as those funds are needed to pay claims and expenses, thereby earning investment income on both premiums received and surplus funds.[17] Historically, underwriting profits provision modelling has reflected, among other things, items such as

[15] The earlier *Bluefield Waterworks* case, the AIB argues, also promulgates a standard of fair return for a utility that is based on return to the firm.

[16] Historically, the rates were set annually for policies that would be written during the following calendar year. As a result of legislation passed in 2004, the rates set in 2005 for 2006 remain in place through March 31, 2007. The rates set in 2006 will be effective for policies written in the twelve month period beginning on April 1, 2007 and continuing through March 31, 2008.

[17] The length of time an insurer holds reserves and must maintain surplus to cover liabilities varies with the type of coverage provided. As an example, in private passenger automobile insurance, bodily injury claims are resolved more slowly than claims for physical damage. Insurers receive less investment income on reserves for physical damage claims because they hold the funds for a relatively short time. Therefore, underwriting profit provisions are calculated separately for bodily injury, property damage liability, and physical damage coverages; a final recommendation is then developed based on a weighted average of these provisions.

investment and other income, including finance charge income, that may increase insurers' total receipts, and factors such as earned but uncollected premium ("EBUP") that reduce their expected income. Although the rates set in this proceeding will be effective on April 1, 2007 for policies written for the twelve-month period ending March 31, 2008, the financial structure described above remains applicable.

Since 1976, underwriting profits provisions have been set by applying mathematical models to financial data relating to the property casualty insurance industry. The Capital Asset Pricing Model ("CAPM"), a method for determining the risk adjusted return which investors require to compensate them for the systematic risk of their investment, was introduced in 1976 to determine profit needs. The resulting risk adjusted return, together with other mathematical models, is then applied to data reflecting the experience of the property casualty industry, as a whole, to calculate the underwriting profits provision in the rates.[18] The Myers Cohn discounted cash flow model, first proposed for use in the proceedings on rates for 1982, was used continuously, with some modifications, to determine the underwriting profits provision from1990 through 2003.[19] For each of the three subsequent years, the Commissioner adopted an internal rate of return ("IRR") model as the basis for estimating underwriting profits, but declined to commit to its future use.

For 2007, the AIB again recommends use of an IRR model to develop the underwriting profits provision, offering the testimony of two witnesses, Kim Scott, FCAS, MAAA and Dr. Richard Derrig, in support of its proposed model. The SRB also supports continued use of an IRR model, albeit with different inputs than those the AIB proposes. It specifically recommends different physical damage cash flows and other model inputs. The SRB's expert witnesses in this proceeding were David Parcell, M.A., M.B.A., a principal in the consulting firm Technical Associates, Inc. ("TAI"), and Cara Blank, FCAS, MAAA, an actuary for the SRB. The AG urges adoption of a calendar year accounting model ("CYAM") as an alternative methodology that, he claims, is superior to

[18] The "whole," for purposes of these proceedings, has no single definition. Estimates of the beta of equity, for example, traditionally rely on countrywide data for publicly traded property and casualty insurance companies; cash flows, however, may look only at the experience of companies offering private passenger automobile insurance in Massachusetts.

[19] The Myers Cohn model is generally considered a net present value model, in which the present value of premiums is equal to the present value of losses, expenses and taxes. The CAPM formula is used to calculate a risk adjustment to the risk-free rate.

the IRR; he also recommends changes and alternative inputs to the AIB's IRR model. One witness, Allan I. Schwartz, FCAS, MAAA, testified for the AG.

As presented in its advisory filing, the AIB's recommended underwriting profits provisions, calculated using an IRR model, are as follows:[20]

BI	+2.06 percent
PDL	+2.08 percent
Phys Dam	+6.60 percent
Overall	+3.50 percent

The AG, based on a CYAM, recommends an underwriting profit provision of -3.8 percent. His estimate of the underwriting profit provision that would result from applying the CDM to the data is -1.46 percent.[21] The SRB did not put on the record the overall profit provision it calculated based on its recommendations.

This year, the disputes over the underwriting profits provision again relate to the choice of a model, the structure of an appropriate IRR model, and some of the particular inputs that should be used in the chosen model. The parties agree that the finance charge revenue should be set at 1.59 percent and that the value of EBUP should be 0.27 percent. With the exception of a dispute over investment expenses, the parties do not challenge the spot yield data, methodology and calculations in the AIB's filing.

B. THE CHOICE OF AN UNDERWRITING PROFITS MODEL

1. The Parties' Recommendations

a) The AIB

The AIB again recommends the use of its IRR model to develop the underwriting profits provision in the 2007 rates. It argues that the Commissioner should use its model, possibly as modified by two adjustments proposed by the SRB, for three reasons: 1) no party has criticized the basic structure of the AIB IRR model, including the algorithms and algebraic formulas used in it; 2) the model is the same as that used to set rates for 2004, 2005 and 2006, and is well understood by the parties and the Commissioner; and 3) as a

[20] In addition, the AG calculated underwriting profits provisions using a Calendar Year Accounting Model ("CYAM"). The AIB reports that the AG's underwriting profit recommendations, based on application of that model, would be -5.24 percent for "other liability," -2.4 percent for Personal Injury Protection ("PIP") and -0.5 percent for physical damage, with an overall result of -3.3 percent. The AIB also commented that the SRB's IRR accepts some of the AIB recommendations for finance charge and other income.

[21] By individual coverage, the estimate is -3.23 percent for bodily injury, -0.77 percent for property damage liability, and –0.39 percent for physical damage liability.

cash flow net present value model, it complies with modern financial theory, equating the expected return on an investment to the required cost of capital.

The AIB opposes the use of a Calendar Year Accounting Model ("CYAM") to set rates for 2007, as recommended by the AG. It characterizes the AG's CYAM as "crude and primitive," arguing that it was developed long before the advent of modern financial theory and violates basic principles of finance. The AIB enumerates a series of alleged problems with CYAMs, including assertions that they are based on a single year of surplus commitment, ignore the time value of money, look backward at past accounting results instead of forward to expected cash flows, use embedded asset yields, and ignore the length of premium, loss and expense flows. In addition, it asserts, they have no underlying financial rules or principles, but use inherently arbitrary input values. The AIB notes that the SRB recognizes the superiority of IRR models over accounting models. It asserts that a CYAM has not been used to set Massachusetts private passenger automobile insurance rates at least since the adoption of a net present value model in the early 1980s, and that a reversion at this time to such a theoretically deficient model would generate significant regulatory risk.

Specifically addressing the AG's recommended CYAM, the AIB argues that it generates profit provisions for four groups of coverages that differ from the three traditional Commissioner's Decision Methodology groupings.[22] The AIB argues that even if the AG's methodology results from the format of his accounting data sources, formatting is not a sufficient reason to change the traditional groupings. Further, the AIB argues, there is no evidence that the AG's CYAM is used anywhere else, or that it is equivalent to the model used in North Carolina or the ISO State X model.

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[22] The concept of the Commissioner's Decision Methodology arises from the regulatory framework for conducting hearings on private passenger automobile insurance rates. 211 CMR 77.05 (6) allows presiding officers to rely on prior rate decisions as precedent and, in the absence of significant new evidence or other good cause to preclude the parties from relitigating facts or issues, including methodological issues, decided in previous decisions. A party is to identify in its filings aspects of methodologies used in the prior year's decision that it recommends not be used in the then current proceeding and to state with specificity each recommended methodological alternative. The CDM, therefore, refers to the methodology approved in the past year's rate decision. The underwriting profit model has historically calculated separate underwriting profit provisions for bodily injury coverages, including liability, personal injury protection ("PIP"), medical payments and uninsured and underinsured motorist, for property damage liability, and for physical damage, including collision and limited collision, and comprehensive. In contrast, the AG's model generates separate profit provisions for PIP, physical damage, and "other liability," a category that includes bodily injury and property damage liability.

b) The SRB

The SRB supports the use of an IRR model for determining the underwriting profits provision, suggesting that the AIB's model, with certain amendments and inputs, may reasonably be used for that purpose. It argues that an IRR model should be used for three reasons: 1) its inputs are prospective in nature, which is the proper perspective to use when setting rates for a future period; 2) it recognizes the time value of money, a major consideration for any company conducting insurance operations in Massachusetts; and 3) it provides a more objective result for making investment decisions and helps companies understand the difference between a good project and good management. A net present value model, such as an IRR, the SRB asserts, is critical in determining whether a company should invest in a particular enterprise. For those, reasons, it contends, an IRR model is a superior to other models for calculating underwriting profits, and has been so used for over twenty years.

The SRB points out that the Supreme Judicial Court, in a decision upholding the use of an IRR model to calculate underwriting profit provisions, recognized that it is compatible with accessible aspects of corporate finance, a factor that is significant in the context of the declining number of insurers in the market and with the goal of encouraging new participants in that market.

The SRB argues that an IRR is superior to the CYAM, as proposed by the AG, for three principal reasons. First, it takes an economic view of a business, recognizing that decisions to commit capital to a market are ongoing, and treats each project with its associated cash flows independently, recognizing the time value of money. Second, the SRB argues, an IRR is a total return model which considers investment returns on both policyholder supplied funds and surplus. In contrast, it contends, the CYAM is an operating return model that focuses only on investment income associated with policyholder supplied funds. Third, the SRB asserts, an IRR model captures the shape of the flow of funds prospectively rather than, like the CYAM, using only the average duration of cash flows. The allegedly greater simplicity of the CYAM, it argues, is a flaw, rather than a strength.

The SRB argues that even if individual companies more commonly use CYAMs rather than IRR models to support their individual rate filings elsewhere, those companies

have greater latitude in pricing, underwriting and marketing there than they do under the fix-and-establish system in Massachusetts. That system, it asserts, requires greater specificity. The SRB distinguishes filings made for rate approval from the analysis that is applied when making a decision whether to write a policy at a predetermined rate. For companies deciding whether to write private passenger automobile insurance in Massachusetts, it asserts, the relevant decision is whether the rate charged will be profitable based on a net present value analysis. The SRB contends, as well, that there is no evidence that the CYAMs that such companies use are the same as that proposed by the AG in this proceeding.

Further, the SRB argues, what the AG considers a flaw in the IRR model, that it follows the movement of cash flows for a single non-recurring policy, is actually an advantage because it provides a more objective approach for making an investment decision and better helps companies to make those decisions. It considers that a CYAM ignores the fact that a prudent insurer, in making investment decisions, will consider the marginal value of the next policy written, rather than past underwriting results by state.

The AG argues that the IRR model adopted by the Commissioner in past rate decisions should be rejected because it produces for 2007 an expected return to investors that exceeds the cost of capital, a result that, he contends, is improper. The cost of capital, he asserts, equals the return on surplus, which is the sum of the return on invested assets and underwriting return. On a countrywide basis, he argues, and in Massachusetts for the past twenty-five years, the underwriting profit provision in the rates has been negative.[23] The source of positive returns on surplus is the return on invested assets, and the market value of an insurer is a function of the invested assets that it holds. As the amount of a

[23] The AG's filing comments that the underwriting profit provision he proposes, based on a Calendar Year Accounting Model, -3.8 percent, is close to the average annual underwriting profit on private passenger automobile insurance for the property-casualty industry over the years 1978-2004. In contrast, the AG asserts, the AIB's proposed profit of +3.50 percent is higher than in 26 of the 27 years in that period. We note that the AG's rebuttal filing included a document that, among other things, compares countrywide and Massachusetts underwriting profits for the years 1978 through 2004. The AIB moved to strike the exhibit, a position that the SRB supported. We have reviewed the transcript of Ms. Blank's cross-examination and are not persuaded that the exhibit is responsive to her testimony. However, the AIB, after moving to strike, proceeded to cross-examine Mr. Schwartz about the exhibit. We will therefore not allow the motion to strike. We note, however, that the substance of the information in the exhibit was put on the record in the AG's initial filing. Therefore our decision on the motion to strike has little, if any, practical effect on the content of the record.

company's invested assets increases, the AG comments, its return on surplus increases as well.

c) The AG

The AG argues that the AIB's IRR model is flawed because it omits invested assets associated with surplus, and therefore requires a higher profit provision. In the real world, he argues, companies fully invest their reserves. The model, he states, reflects a return on $2.16 of invested assets associated with each dollar of surplus, while the insurers actually hold $2.69 in assets for each dollar of surplus. The AG argues that a return on surplus that exceeds the cost of capital would result if the return on those assets were included with the return on assets acknowledged in the model. The AG asserts that the $2.69 value is based on financial statement data reported in *Best's Aggregates and Averages* and is based on the companies' ongoing operations. He points out that the reserve to surplus ratio, which determines the amount of invested surplus, a key input in the IRR model, is developed from the same balance sheet data as the dollar value of assets for each dollar to surplus. Regardless of the date on which the balance sheet is created, the AG argues, it represents continuous operations. Further, he contends, the use of a single policy model does not justify the AIB's inclusion of $2.16 in invested assets, when the total amount of assets per dollar of surplus is $2.69. The AG concludes that the profit provision in the AIB IRR model, together with the return on reserves that is not included in the model, provides a return to investors of 12.71 percent, while the CDM cost of capital is 9.65 percent.

He asserts as well that a CYAM is preferable to an IRR for developing the underwriting profits provision because it is almost uniformly used by individual companies and state regulators to determine profits for private passenger motor vehicle insurance, is simpler, and provides a more accurate representation of the insurance business. The AG argues that the AIB concedes that an IRR model based on a single policy does not accurately model the business of insurance, because it treats an ongoing business as a start-up company. In reality, insurers write policies continuously, carry over invested assets, and do business over many years. The AG argues that, in contrast to the IRR model, the CYAM provides a realistic representation of the insurers' financial condition and reflects the continuous writing of policies and payment of losses over time.

He asserts that even though calendar year data are used in both the IRR model and a CYAM, they produce consistent results when used in a CYAM but a mismatch that produces anomalous results when used in an IRR model.

The AG argues that a CYAM satisfies the Commissioner's preference, set out in her decision on 2004 rates, for a simpler, less theoretical underwriting profits model. He asserts that the CYAM is more transparent than an IRR, can be calculated on a single page, using one equation and fewer than 50 numbers, and satisfies the goal of developing accessible rating systems. It is widely used by insurers in other states to calculate profit provisions in rates, and by regulators who set profit provisions in rates.[24] The IRR model approved for use in Massachusetts, he states, is not and never has been used by insurers or regulators in other states. The AG argues that the use of net present value models to make internal business decisions is not a reason to use an IRR model for ratemaking. Further, he asserts, the evidence for business use of an IRR is thin and, even if a company used such a model to determine a future course of action, it would almost certainly use a CYAM to determine the profit input to that model. The AG concludes that adopting a CYAM would help to achieve the goal of encouraging new companies to enter the market.

The AG argues that regulatory ratesetting is intended to produce a profit that mimics the operation of the competitive market, noting that the Supreme Judicial Court has stated that the reasonableness of a target underwriting provision can be determined by comparing it to long-term historical data on underwriting margins in competitive markets nationwide. The AG asserts that, while data on underwriting profits nationwide collected by the NAIC show a long-term competitive market underwriting profit of -3.2 percent, the IRR models used to set rates for 2004 through 2006 produced outcomes that were about 2.5 percent lower than the average nationwide competitive market profit. Therefore, he asserts, it is unreasonable to use the IRR model. Further, he notes, the profits generated by the IRR model in those three years remained the same, even though one-year interest rates increased.

The AG contends that past criticisms of the CYAM are either not applicable to his filing this year or represent misunderstanding of the model. He points out that in the past

[24] The AG notes that only one state other than Massachusetts, North Carolina, actively regulates automobile insurance rates.

the AIB objected to a CYAM because the AG offered two models in his filing; this year he includes one model, currently used by the North Carolina Department of Insurance to set profit in North Carolina rates. Further, he asserts, the CYAM recognizes the timing of cash flows through adjusting the level of invested reserves, and does it more accurately than the IRR model. The AG points out that the profit provisions in the AIB IRR model are virtually identical for the bodily injury and PDL coverages, even though the duration of the cash flows for these coverages is quite different, while the CYAM shows a wide spread in the profit provisions for the various coverages that is responsive to the cash flow durations. In response to a comment from the AIB that accounting models look backward rather than forward to estimate cash flow, the AG points out that both the CYAM and the IRR model use historical data to estimate an expected future outcome. The AG asserts that the characterization of the CYAM as an *ex post* model and the IRR as an *ex ante* models in the discussion of the CYAM in the *Decision on 2006 Rates* is incorrect for the same reason. Further, he argues, the CYAM is used by both companies and regulators to look forward. The use of a CYAM use in states that mandate, or have recently mandated, profit models is, the AG asserts, demonstrates that it is suitable for use in a fix and establish rate environment. Similarly, its use in environments where insurers may vary rates for competitive reasons supports its use in Massachusetts where companies may choose to discount or deviate from the Commissioner's rate.

2. Analysis and Discussion

This year the Commissioner has been presented with two models for calculating the underwriting profits provision: an IRR model, recommended by the AIB and generally supported, with modifications, by the SRB, and a CYAM, recommended by the AG. The AG also offers inputs to the IRR model. The arguments for and against the two models are virtually identical to those made in past years. To the extent that they repeat positions that the parties have taken in the past, and reiterate issues that have been raised and decided in past rate decisions, we incorporate the reasoning of those decisions into our decision this year.[25] We remain unpersuaded that an operating profits model, such as a CYAM, no matter how extensively used by individual insurers, or by regulators in states

[25] The initial choice of an IRR model, made in the *Decision on 2004 Rates,* was upheld on appeal by the Supreme Judicial Court. Both the *Decision on 2005 Rates* and the *Decision on 2006 Rates* also addressed the choice of a model.

where rates are competitive, is appropriate for developing an underwriting profits provision in the fix-and-establish environment. That individual insurers might utilize CYAMs as a basis for determining whether to offer discounts or to deviate from the fixed-and-established rates does not translate into evidence that it is a suitable model for industry-wide ratemaking.

Further, in prior decisions we have noted that the selection of a model, while it may be intensely contested, addresses only one aspect of setting an underwriting profits provision.[26] We are therefore not inclined to dismiss a particular model out of hand without considering whether the disputed issue is a matter of the model structure or the inputs that a party has chosen. Model outputs vary significantly depending on the input values; historically, the parties to this proceeding have strongly disagreed on those inputs, even when there was agreement on the model. In this year's proceeding, all parties have offered evidence on inputs to and commentary on proposed adjustments to the AIB's proposed IRR model. No comparable record exists with respect to a CYAM. We would not find it reasonable to adopt a new model and inputs to it without a record that reflects careful analysis by all parties. Even though the parties have been encouraged for many years to develop a model that is acceptable to all, it appears that no progress has been made. On this record, we will again adopt an IRR as the basis for the underwriting profits provision in the 2007 rates.

B. INPUTS TO THE IRR MODEL

1. The cost of capital

The cost of capital represents the expected profit level to be earned on the capital that investors provide. The AIB and the SRB again calculate the initial cost of capital as the average of the results of applying two longstanding analytical methods, the Capital Asset Pricing Model ("CAPM") and the Discounted Cash Flow ("DCF") model to financial information published by the Value Line Investment Survey ("Value Line") on a proxy group of companies for which capital market information is available.[27] The AIB and the SRB both use a group of 30 companies, 27 of which are classified by the Value

[26] It was noted, in the *Decision on 2004 Rates*, that the choice of model was less important than the inputs to it.
[27] Mutual companies or closely held companies whose shares are not traded on the market are therefore excluded from proxy groups.

Line Investment Survey ("Value Line") as a property/casualty industry group and three of which are in its diversified financial services industry group, as their proxy group. The Commissioner adopted the averaging approach in the *Decision on 2004 Rates*, which approved the use of an IRR model to set the underwriting profits provision, and it has been utilized in both subsequent decision approving the use of an IRR model to set the underwriting profits provision. It is therefore now considered part of the Commissioner's Decision Methodology ("CDM").

The AIB recommends a cost of equity of 13.68 percent. The SRB recommends a Weighted Average Cost of Capital of 10.19 percent. The AG, calculating the cost of capital according to the CDM, produces a value of 9.65 percent which is, he argues, comparable to values calculated by Ibbotson Associates.

a) The CAPM Analysis

The results of the analyses performed by the SRB and the AIB are not identical because of differences in their specific implementation of these two approaches. First, the AIB recommends basing the cost of capital analysis on annual data averaged from Value Line reports for four quarters rather than, as the SRB recommends, three-month data from the most recent quarter. It argues that annual data is consistent with the spot yield calculation of the risk-free rate, more stable than quarterly data, and will preclude gamesmanship on the issue of updating material in a filing to incorporate reports published later. The AIB also asserts that recent fluctuations in short- and long-term interest rates support using annual data, arguing that stability is of greater value than responsiveness in this aspect of ratemaking. Concurrent with its recommendation for the use of annual data, the AIB suggests that the parties file routine updating of their recommendations after Value Line data for the third quarter of 2006 are available, regardless of whether the Commissioner chooses to rely on full year data or the most recent quarter. To that end, it notes that it and the SRB each filed updated calculations in October.

The SRB argues that the use of the latest edition of Value Line, i.e., the latest available as of the date of its filing, provides appropriate data from which to develop the cost of capital and is more likely to provide an accurate estimate. It notes the testimony of its witness, Mr. Parcell, that the older Value Line editions do not add significant value to

the AIB's calculations. The AG argues that the Commissioner has rejected the AIB's averaging method in the past, and that it has submitted no new materials in its filing this year to support its approach.

The second issue raised is whether the 2007 rates should be developed from Value Line data used in the filings or updated to reflect the latest information available when the rates are actually calculated. Although Mr. Parcell testified that from an economic standpoint, the latest information should be used, he pointed out that, absent rebuttal and surrebuttal filings, such data might not be on the record. The AIB has asked for a statement about routine updating of recommendations after Value Line data for the third quarter are available, regardless of whether the Commissioner uses a full year or a quarter of data.

In the *Decision on 2006 Rates*, the Commissioner chose to adopt the SRB's methodology and to base the cost of capital analysis on three-month data published in the most recent issue of Value Line. We found persuasive the SRB's argument that the older data did not contribute significantly to the calculations, and that use of the more recent data improved responsiveness. We are not persuaded to change that conclusion this year. The most recent issue of Value Line, for purposes of this proceeding, is that relied on by the SRB in its advisory filing. We decline to set a rule relating to the specific time period that should be considered in developing the underwriting profits provision. We are not persuaded that it is appropriate to rely in ratemaking on material that is, even by agreement of the parties, submitted after the record is closed absent a clear prior understanding that it is to be used in the calculation of rates.[28]

Both the AIB and the SRB CAPM calculations utilize three different time horizons. However, the SRB develops its risk-free rate as an average of values for each horizon. This methodology, which is consistent with that adopted in the *Decision on 2005 Rates*, is again approved for 2007.

[28] For example, the parties have agreed that it is appropriate to use data from the most recent annual edition of *Best's Aggregates and Averages*, which may not have been published before the hearings were concluded.

b) The Beta of Equity

The CAPM requires the selection of an equity beta as an element of calculating the cost of capital. The AIB asks the Commissioner to use the adjusted equity beta published by Value Line, arguing that such betas are theoretically correct because they take into account the principle that equity betas tend to regress toward a mean value of 1.00, are more stable than raw betas, and are widely used by investors and regulators. It asserts, further, that adjusted betas do not over-reflect the financial dislocation caused by 9/11 and the collapse of the high-technology stock bubble, and their use produces a result that is improperly low. The AIB argues that the SRB's witness, Mr. Parcell, has recommended the use of adjusted betas; it notes that the use of a single raw beta in the CAPM calculation produces a result far outside what Mr. Parcell considers a range of reasonableness. If the Commissioner does continue to use a raw beta in the cost of equity calculation, the AIB urges that she use a 36-month beta produced by Yahoo rather than the 60-month beta produced by Standard and Poors. It notes that the 36-month value no longer includes data from 2001.[29]

The SRB concurs with the AIB's recommendation, noting Mr. Parcell's testimony that Value Line adjusted equity betas are the most commonly used in the CAPM context. It recognizes that the CDM balances Value Line estimated equity betas with equity betas provided by Standard & Poors. The SRB recommends using the single Value Line estimate because of Mr. Parcell's empirical experience but in the alternative recommends that the Commissioner, if she uses both adjusted and unadjusted equity betas, average Value Line with a single set of unadjusted betas as published by Standard & Poors.

The AG states that the standard method for calculating the equity beta is to perform a regression on five years of monthly stock market data, noting that a number of

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[29] The AIB argues that Value Line publishes an average current equity beta of 0.82 for public utilities, thereby indicating that they are viewed as substantially less risky than the stock market as a whole. In contrast, its average beta for the property and casualty insurance industry is 0.98, a value that is about average compared to the market as a whole. Other calculations of the beta of equity, for different time periods, the AIB argues, also show that the insurance industry is riskier than the public utilities industry. As expected, it asserts, calculations of the simple CAPM cost of equity produce a lower value for the public utilities industry than for property and casualty insurers. The AIB argues that because past rate decisions have granted lower costs of equity to insurers than utility regulators have given to less risky public utilities, they violate the standards set out in *Hope Natural Gas and Bluefield Waterworks*, supra. The AIB asserts that the Commissioner has erroneously stated that equity returns for Massachusetts automobile insurers cannot be compared to other regulated industries, asserted that the equity beta is not the only measure of risk, and denied the AIB's request for a small stock premium as a measure of risk. Its witness testified, however, that the purpose of this analysis was to show that public utility regulators apparently did not use an equity beta that included a raw beta in their calculation.

commercial services calculate equity betas. Some of those services report the results of those regressions, while others adjust the results and report adjusted betas. The AG points out that in the last seven rate decisions the Commissioner has averaged betas from different sources to obtain the value used in the CAPM, rejecting proposals from the AIB and the SRB to rely exclusively on the adjusted equity beta published by Value Line. The AG characterizes the Value Line adjusted beta as an extreme value, noting that it is significantly higher than Value Line's own unadjusted five year beta, and the three other adjusted betas in the record. It is unreasonable, he argues, to use a single five-year beta that is vastly higher than all other five-year values.

The AG identifies, as a second problem with the Value Line adjusted equity beta, that it cannot be replicated using any known adjustment formula. Further, he asserts, investors rely on numerous beta sources, including the various beta estimates that Value Line itself calculates.[30] He points out that the SRB's witness testified that the CDM methodology is reasonable. Averaging the Value Line five-year adjusted beta with the Standard & Poors five-year beta produces a CAPM estimate for the cost of capital that is closer the DCF outcome than the CAPM result using only the Value Line adjusted beta. The AG argues that the reasons for using equity betas based on multiple sources were addressed in the *Decision on 1999 Rates*, and that those reasons remain applicable. He further observes that if betas are to be averaged, both should be five-year betas.

The AG comments, as well, that the betas for companies of various sizes as calculated in the Cummins and Phillips article cited by the AIB show lower betas for small companies, and CAPM costs of capital for such companies that are consistently lower than the CAPM cost of capital for large companies. The article, he argues, shows that the Value Line betas used in the CAPM calculations should be decreased to represent lower risk of companies that are smaller than the average Value Line insurer.

The parties continue to disagree about the choice of an equity beta for use in the CAPM calculation. The *Decision on 2006 Rates* carefully reviewed the arguments made by each party, and adopted an equity beta produced by averaging the five-year estimates published by Value Line and Standard & Poors. We have been presented with no new argument that would support adoption of a different methodology this year.

The AIB suggests that, if an averaging technique is used, the second beta value should be a three-year Yahoo beta that does not include the year 2001. Mr. Parcell

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30 The AG notes that Value Line prints out data that include four different values for the equity beta, ranging from .44 through .85.

testified that if one is to use two beta estimates, they should both be five-year betas. The reason for developing an equity beta from data produced by more than one source is to reduce the bias that might result from using a single value, particularly in circumstances where the published values show a wide range. We agree with the SRB's witness that the averaging approach should use betas developed from historical data for the same time periods, and therefore reject the AIB's suggestion that the Commissioner, if she averages two equity betas, utilize one three-year and one five-year estimate.

C) THE MARKET RISK PREMIUM.

The AIB recommends, as it has in the past, a simple arithmetic average of the Ibbotson Market Risk Premium data series, that now covers the eighty years from 1926 through 2005, instead of the weighted approach adopted in recent decisions.[31] It argues that use of the full series is superior because no one has successfully justified the actual weighting of the data in that approach which the AIB characterizes as arbitrary and irrational.

The SRB, like the AIB, uses the Ibbotson data series as the base for projecting the market risk premium, but recommends weighting the averages of data from two periods, giving 75 percent weight to data for 1975-2005 and 25 percent to data for the entire 1926-2005 series. It points out that this approach gives greater weight to the last three business cycles, as well as the current cycle, and is consistent with the CDM. The AG points out that the Commissioner has rejected the AIB's methodology in past decisions, and argues that it has submitted no new materials in this year's filing to support its recommendation. He recommends continuing to use the CDM to estimate the components of the cost of capital.

The methodology for estimating the Market Risk Premium for use in the CAPM remains disputed this year. The SRB recommends continuing the weighted averaging approach approved in the *Decision on 2006 Rates*. The reasons for adopting that choice were fully addressed in that Decision and need not be repeated here. We are persuaded that it remains appropriate to give greater weight to data from the three most recent business cycles than to the earlier data. The Market Risk Premium for the 2007 underwriting profits provision will therefore be based on the series published in the

[31] The Ibbotson Yearbook, issued annually, publishes this information

Ibbotson Yearbook, giving 75 percent weight to the average for the years 1975 through 2005 and 25 percent weight to the average of the entire series.

d) *THE DISCOUNTED CASH FLOW ANALYSIS*.

The SRB recommends a 10.80 percent cost of equity based on its application of a DCF analysis to the Value Line group, noting that the AIB's DCF analysis estimated the cost of capital at 11.90 percent. There are two differences in their application of the DCF approach. The SRB estimates dividend yields based on an average in a three-month period, while the AIB looks at "spot" (single day) yields over a twelve-month period. However, the primary difference between their analyses, according to the SRB, is the averaging methodology applied to the data. The SRB utilizes a straight average of the DCF results for the proxy companies, while the AIB applies a weighted averaging methodology. The SRB states that the Commissioner adopted the procedure it uses in the *Decision on 2006 Rates* and that the AIB's proposal therefore represents a change from the CDM. Because the AIB has not met its burden of proving that its proposed change is reasonable and superior to that now in place, the SRB argues, the AIB's methodology should be rejected. The AG expressed no opinion on this issue.

In her *Decision on 2006 Rates*, the Commissioner adopted the SRB's approaches. We have been presented with no persuasive argument that would support reversal of that decision, and incorporate by reference our reasoning in that decision.

e) The small-size stock premium

The AIB recommends that the Commissioner adjust the cost of capital recommendation generated by averaging the AIB's estimated CAPM and DCF results by adding a small size stock premium of 1.90 percent. Its recommendation would bring the total cost of equity to 13.86 percent. It argues that a small size premium adjustment is proper because, on average, insurers writing Massachusetts automobile insurance are smaller than the group of companies in the Value Line sample group and, all else equal, smaller capitalization companies have higher costs of equity than large companies.

The AIB observes that the goal of this case is to set rates for Massachusetts private passenger motor vehicle insurance, not in looking at profitability levels for the national auto insurance industry. It also asserts that, all else equal, leverage (reserve to surplus) ratios and equity returns should be set consistently. The AIB argues that if the Commissioner approves the SRB's proposal on calculating the leverage ratio she should add a small stock size premium to the otherwise-determined cost of equity, and should

weight the Value Line data used in the cost of equity calculations by auto premium, as proposed by the AIB.

The AIB argues that it is well-established that a single-variable CAPM does not adequately explain equity returns, and widespread agreement that size, measured by market capitalization, is an explanatory variable for differences in market returns. In support of its position, it cites to the Fama-French three-factor model, discussions in the Ibbotson Yearbook, and a recent article by Cummins and Phillips included in its filing. It argues, as well, that the AG's filing shows that the CAPM cost of equity increases when the size premium is added and that the Fama-French three-factor cost of equity exceeds the simple CAPM cost of equity. The AIB further asserts that it has produced a straightforward calculation, which no party criticized, of its recommended small stock premium. The addition of a small stock premium, it concludes, is necessary to avoid setting an unreasonably low cost of equity in the 2007 rates. It is, the AIB further argues, consistent with Value Line projection of three to five year equity returns.

The SRB opposes addition of a size premium to the otherwise estimated cost of capital, arguing that the AIB's proposal is neither justified nor appropriate. It points out that prior rate decisions have consistently rejected any notion of a size premium, noting that two years ago the Commissioner found no evidence that the small size effect exists, and last year commented that the AIB had made no new arguments supporting adoption of a small size premium. The SRB concludes that the AIB has not met its burden of proving that adding a small size premium to the otherwise estimated cost of capital is reasonable and superior to the methodology now in place, and recommends that the Commissioner deny the AIB's proposal.

The AG points out that the Commissioner rejected the small size premium in her decisions on rates for 1994, 1999, 2001 and 2003-2006, and that there is no evidence that any insurance or utility regulator in any jurisdiction has used a small size premium in ratesetting. A small size premium, the AG argues, is a measure of unsystematic risk that should not be compensated in the rates. In support of his position, he cites to prior decisions of the Commissioner as well as decisions of the Supreme Judicial Court.

Further, the AG argues, the small size premium is unreasonable and inappropriate for use in Massachusetts ratesetting. He states that there is no evidence of any link between the size and profitability of insurers that are not publicly traded, a group that includes most of the insurers in Massachusetts, or that such a premium could be accurately calculated for non-traded insurance companies. With respect to companies that are traded,

the AG asserts that the evidence shows that between 1983 and 2005 large insurers had a higher return on net worth than average insurers. In addition, he notes, the AIB assigns insurers in capitalization groups according to their statutory surplus, not their market value, which measures a different quantity. The AG argues that if the small size effect exists at all it is a stock market effect; because of the thinner market for smaller companies analysts do not follow them and their stock costs less. He contends that the Cummins and Phillips article that the AIB cites does not address the small size effect but focuses on the cost of equity for different lines of insurance, and finds that the Fama-French model for estimating the cost of capital, which includes a small size effect, produces higher estimated results than the CAPM. However, the AG points out, the Fama-French model has never been used to estimate the cost of capital in these proceedings.

The AG points out in his brief that Ibbotson Associates, the source of the AIB's size premium, adds what is called an "Industry Risk Premium" to its estimated cost of capital. It calculates the industry risk premium at -3.03 percent, which, even if netted against the AIB's proposed size premium, would reduce the cost of capital by -1.13 percent. The AIB should not be allowed to use an Ibbotson adjustment that increases the cost of capital while omitting the adjustment in the Ibbotson formula that would reduce that cost.

The AIB's proposed addition this year of a small stock premium to the otherwise calculated cost of capital reiterates its long-standing position that the simple CAPM is insufficient to reflect the cost of capital of smaller firms. The arguments it makes this year generally restate those made in prior rate proceedings. The SRB and the AG, consistent with their past responses to the AIB's proposal, oppose the addition of a small size premium. Although the AIB complains that the Commissioner has not given adequate attention to the article by Cummins and Phillips which, it asserts, demonstrates that a small stock effect exist, we note Mr. Parcell's testimony that the article compares the Fama and French three factor model, which includes a beta for small size, to the single factor CAPM, and concludes that a three-factor model produces a higher cost of equity than a single factor model. He stated, as well, that a three-factor CAPM that substantially increases the estimated cost of equity over the single factor CAPM model and the DCF model might become an outlier. He concludes, further, that any additional risk associated with small size is already incorporated into stock prices.

The reasons for declining to add a small stock premium to the otherwise calculated cost of capital have been addressed at length in prior rate decisions and need not be repeated here. This year, the AIB has again provided no new argument that persuades us to reverse our conclusions. Its recommendation to add small-size premium to the otherwise calculated cost of capital is rejected.

f) The Debt/Equity Ratio

The inputs to the underwriting profits provision have been adjusted for many years to reflect the role of debt in the capital structure of insurance holding companies. The AIB recommends an equity debt ratio of 88 percent to 12 percent for calculating the overall cost of capital that takes into account equity and long-term debt but excludes short-term debt. This method, it argues, is consistent with the two most recent rate decisions issued on this matter, even though the calculations used to determine the rates included short-term debt.

The SRB recommends an 80 percent/20 percent equity debt ratio, based on Mr. Parcell's analyses of the actual capital structures of the proxy group used in his CAPM and DCF analyses. It argues that its recommendation is correctly based on book value capital, while the AIB's equity debt ratio is based on "market value" capital. The use of book value is correct, the SRB contends, because it reflects the actual dollars of capital that are available for investment. The values which the SRB recommends for the cost of debt are 3.78 percent pre-tax and 5.71 percent post-tax. Application of the SRB's recommendations produces a weighted average cost of capital of 10.19 percent.

The AG states that the AIB proposes a new methodology for calculating the capital structure of the insurance industry that eliminates various Value Line companies from the calculation and basing it on "market value" capital. He argues that there is no apparent justification for removing companies from the proxy group, and that the use in the CDM of book value to calculate the equity/debt ratio reflects the quantity that the calculation is trying to measure: the actual dollars of capital that are available for investment. The AIB's proposed method is not superior to the CDM, the AG argues, and should be rejected.

The SRB estimates the debt-equity ratio by looking at the relationship between debt, including long-term and short-term debt, and common stock at the holding company level. It does not include preferred stock in its calculation. The AIB's assertion that past decisions limited the calculation of the debt-equity ratio to long-term debt is incorrect. It

appears to confuse the calculation of the debt-equity ratio with the estimate of the value for the cost of debt, which is based on data on long-term debt as published by Value Line. The SRB's methodologies for determining the debt-equity ratio and the cost of debt are again adopted for use in calculating the underwriting profit provision, and its recommended values are to be used in calculating the underwriting profits provision.

2. Asset Returns

The AIB recommends a net return on investments of 4.41 percent, while the SRB recommends a net return of 4.98 percent. Their recommendations reflect differences in the proposed values for estimated total return, the historical data period to be used in calculating returns, investment expenses and the applicable tax rate.

The AIB argues that it developed a straightforward asset return for use in setting 2007 rates, using the actual asset distribution published by the National Association of Insurance Commissioners [sic] and twelve-month trailing historical risk-free spot yield calculations to produce consistent returns for each type of asset.[32] It then proposes an overall stock investment tax rate of 31.0 percent, a value that includes a stock capital gains rate of 33.6 percent. It used pre-tax investment expenses of 0.32 percent and reduced investment income in dollars to reflect that in the real world 100 percent of assets are not invested.

The SRB, like the AIB, develops its asset return calculations from countrywide data on property and casualty insurers reported by *Best's Aggregates and Average,* using the same categories of investment and amount of assets in each category as does the AIB.[33] However, the AIB calculates asset returns based on a twelve-month trailing historical risk-free spot yield, while the SRB recommends calculating asset returns for each class of security, except for common stock, on the basis of a three-month average yield for the period May through July 2006. The AIB reiterates its preference for annual data, arguing that it is more stable. The SRB argues that the Commissioner adopted a similar proposal it made in the proceeding to set 2006 rates, stating that asset returns should be responsive to current conditions and emphasize more recent data. We again

[32] The AIB, in its filing, uses the all company asset distribution reported in the 2005 edition of Best's Aggregates and Averages, recommending that the data be revised when the 2006 edition of Best's is available.

[33] Both the AIB and the SRB used the data reported in the 2005 edition of Best's, expecting to update it when the 2006 edition was published. The appropriate pages from Best's were submitted on October 19, 2006 with the request that they be marked as Exhibit 33. The final asset return calculations should utilize the asset distribution data reported in the 2006 edition of Best's.

find it preferable to rely on more recent data, and adopt the SRB's methodology again to determine the underwriting profits provision in the 2007 rates.

a) Bond yields

The parties disagree on the methodology for estimating returns on bonds. The AIB argues that the correct measure of bond duration is the current time to maturity of the bond, not the time to maturity measured as of the date it was purchased, and that projected yields should be based on current bond yields. Arguing that there is no theoretical or empirical basis for assigning a ten-year yield to all bonds with durations between one and ten years, it asserts that the SRB's estimated bond returns are based on inflated durations and upwardly bias yields. Further, the AIB contends, past rate decisions have erroneously estimated bond yields based on embedded yields (*i.e.*, those in place when the bond was issued) instead of current yields (*i.e.*, the return that company would receive if it purchased a bond this year.)

The SRB recommends the use of ten-year maturities for intermediate-term bonds and twenty-year maturities for long-term bonds. Further, it measures maturities from the date of issue of the bond and estimates yields based on the terms of the bond when issued. The SRB argues that the Commissioner's decisions in the last three automobile insurance rate proceedings have rejected the AIB's proposed methodology, and that the AIB has presented no reason to reverse those decisions this year. It recommends that the Commissioner adopt the SRB's proposed bond yields.

The AG argues that the AIB's methodology for measuring bond duration is incorrect. He asserts that the inclusion in insurers' annual statements of a report of time to maturity provides a picture of the stability of their bond portfolios, it is irrelevant to a determination of the actual duration of the bonds or the investment yields they provide to companies. The AG also argues that the AIB's approach is incorrect because it treats insurers as if they turned over their entire bond portfolio each year and purchased new bonds, a scenario that does not occur in the real world.

The AIB's arguments on bond yields this year are identical to those that have been consistently rejected in the past. For the same reasons set out in prior decisions, we again do not find them to be persuasive. The bond yields in the underwriting profits provisions shall be developed using the methodology recommended by the SRB.

The SRB recommends using ValuBond as the source of yields for intermediate and long-term bonds, while the AIB recommends using Wall Street Journal data. The

SRB points out that Mr. Parcell used ValuBond data in last year's ratemaking proceeding, and the Commissioner accepted the use of that source. It argues that the AIB has offered no reason for changing the data source, and that the Commissioner should continue to use ValuBond data. We have approved the use of ValuBond yields in the past and have been presented with no argument that persuades us to change that decision.

b) Adjustment for Uninvested Assets

The AIB recommends adoption of a methodology for calculating asset returns that reduces investment income by the percentage of assets that is not invested, a value that it estimates, averaged over five years, to be 2.9 percent of surplus. It argues that although the SRB and the AG disagree with the AIB's proposed adjustment, they concede that not all assets are invested and that assets exceed invested assets. Because the current decision methodology, the AIB asserts, ignores the fact that not all assets are invested, the Commissioner should approve its proposal.

The SRB opposes the AIB's methodology, arguing that it is based on the premise that a portion of company surplus that represents the difference between balance sheet surplus and the surplus shown as the result of subtracting reserves for unpaid losses, loss adjustment expenses and unearned premium reserves from invested assets, is not available to generate investment income. The SRB argues that the IRR model generates prospective underwriting profit based on prospective commitment of capital and that, to the extent that surplus acquired as a result of prior insurance operations is recommitted to future operations, the surplus is available for investment.

We have considered the arguments of the parties and are not persuaded that the AIB's proposed adjustment should be adopted. The SRB's position appears to reflect more accurately the investment income that insurers can expect to receive on surplus dedicated to future operations. We therefore reject the AIB's recommendation.

c) Adjustment for Extra Assets

The AG argues that the AIB's IRR model is flawed because it omits invested assets associated with surplus, and therefore requires a higher profit provision. In the real world, he argues, companies fully invest their reserves. The model, he states, reflects an investment return on $2.16 of invested assets associated with each dollar of surplus, while the insurers actually hold $2.69 in assets for each dollar of surplus. The AG asserts that the $2.69 value is based on financial statement data reported in *Best's Aggregates and Averages* and is based on the companies' ongoing operations. He points out that the

reserve to surplus ratio, which determines the amount of invested surplus, a key input in the IRR model, is developed from the same balance sheet data as the dollar value of assets for each dollar to surplus. Regardless of the date on which the balance sheet is created, the AG argues, it represents continuous operations. Further, he contends, the use of a single policy model does not justify the AIB's inclusion of $2.16 in invested assets, when the total amount of assets per dollar of surplus is $2.69. The AG does propose a specific method for adjusting the IRR model to incorporate the assets that, he alleges, are omitted.

The AIB opposes the AG's proposal that adds assets and, therefore, additional asset returns, to his calculation of the bodily injury underwriting profits provision. It argues that the assets that the AG proposes to add are retained earnings from prior operations, rather than funds from the premium or surplus flow that are being modeled in the AIB's IRR, which uses cash flows from the average policy. The inclusion of returns from assets that are not associated with the policy that is being priced, the AIB argues, violates the underlying theory and assumptions of the IRR model. Each year of an insurer's operations, it contends, is intended to be self-sustaining. Further, the AIB asserts, in running its IRR model it used a reserve to surplus ratio of 1.72 to 1, based on a methodology proposed by the AG's witness. Therefore, the AIB argues, the AG's proposal to add extra assets repudiates the calculation performed in the 2003 rate case. Finally, the AIB asserts, an adjustment for extra assets violates the principle that the underwriting profits provision should result in a rate at which insurers are indifferent to expanding or contracting their Massachusetts automobile insurance business. The extra assets adjustments it argues, by adding asset returns from assets that are unrelated to the current policies, penalizes insurers by overstating the overall returns on assets and reducing the otherwise-determined current rates.

The AG argues that it is necessary to correct the IRR because the ratio in the model of invested assets to surplus is less than the corresponding ratio in the industrywide balance sheets. We are not persuaded that the AG's argument supports rejection of the IRR model or an adjustment to its inputs. The essence of his position is that company assets exceed what the AIB assigns to investable assets for the policies that will be written during the upcoming policy year. The ratio of invested assets to surplus, as shown on the aggregated balance sheet, is higher than the ratio in the AIB's IRR model. However, underlying the AG's position is the assumption that assets from policy premiums and surplus commitments are available to support the level of invested assets found in the aggregated balance sheets. However, in the single policy model, the available funds come

from the premium and surplus flows. That past operations have generated assets is not itself a reason to assign those assets to a particular policy.

d) Using CAPM Equity Returns in the Asset Return Calculation

The AIB points out that, to determine the cost of capital, the CDM equally weights the results of CAPM and DCF calculations. However, in the overall asset return calculation, the parties have used only the CAPM estimate. The AIB argues that this methodology demonstrates selectivity bias because the weighting used to determine the cost of capital produces, all else equal, a lower cost of equity and a lower underwriting profit provision than would result from the sole use of the CAPM estimate. However, in the asset return calculation, for the equity investment return portion of the total asset return, the sole use of the CAPM calculation produces, all else equal, a higher asset return and a lower underwriting profit provision. In both instances, the AIB argues, the choice produces a lower underwriting profit provision. Therefore, it asserts, the Commissioner should take appropriate action to ensure that the calculations are done consistently.

The SRB's witness, when questioned about using a CAPM estimate of stock returns, stated that he used the same procedure followed by the AIB. The AIB does not propose to change its own methodology; its contention that the failure to estimate stock returns by averaging CAPM and DCF results demonstrates bias is not persuasive.

e) The Leverage (Reserve to Surplus) Ratio

The AIB, following the CDM, initially recommended a countrywide all lines leverage ratio of 1.72 to 1, calculated using data for 2001-2004, which was to be updated when the 2006 edition of *Best's Aggregates and Averages* was published.[34] The AG used the same value in his analysis of the IRR model. The SRB, however, in a departure from the CDM, recommended developing a leverage ratio from data on insurers listed in *Best's Aggregates and Averages* as companies whose writings are predominantly private passenger automobile or private passenger automobile and homeowners, but excluding data on the State Farm Insurance Company ("State Farm"). Using those data, it proposes a leverage ratio of 1.53.

[34] The updated page from Best's, filed by the AIB on October 19, 2006, noted that the reported leverage ratio for 2005 was 1.63, identical to the ratio for 2004. Therefore, it did not change the 1.72 average calculated in the AIB's filing.

The SRB argues that the subset of data that it proposes to use is, in effect, countrywide data, noting that the companies in these two groups include 14 of the 19 insurers currently writing private passenger automobile insurance in Massachusetts. It describes its change as one that gives the best of both worlds: countrywide data that reflects the Massachusetts market. Asserting that its methodology will result in a more accurate leverage ratio, the SRB argues that calculating a leverage ratio based on the experience of all lines of insurance is of questionable value. It notes that the AG's witness could not state why the experience of companies writing professional liability insurance is relevant to insurers writing private passenger automobile insurance in Massachusetts. The SRB explains that it omitted State Farm from the Best's data set because, although it is the largest provider of private passenger automobile insurance in the United States it writes less than five percent of the Massachusetts market.

The SRB contends that the use of countrywide all lines data has only been in place since 2003, when the IRR model was first employed to calculate the underwriting profits provision. Its recommendation this year, it asserts, is responsive to the Commissioner's goal of using consistent countrywide data for IRR model inputs and makes the model reflect more accurately the experience of Massachusetts insurance company experience.

The AIB objects to omitting State Farm data from the leverage ratio calculation, pointing out that the company's reserve to surplus ratio is not dissimilar from other insurers writing private passenger automobile insurance in Massachusetts, that State Farm is the competitive market in many states, and that it is currently included in the CDM leverage ratio calculation. In addition the AIB, after the SRB made its recommendation, averaged five years of data only for insurers writing Massachusetts automobile insurance and produced a leverage ratio of 1.55 to 1. Ultimately, the AIB argues that it would find reasonable a leverage ratio of either 1.53 or 1.55 to 1, either of which, it contends, would be consistent with a cost of capital calculated for private passenger auto insurers countrywide.

The AG argues that the SRB's proposal to determine the reserve to surplus ratio in the IRR on data from data on a limited group of insurance companies is erroneous because it is inconsistent with the sample of companies used to determine the cost of capital and asset return. He asserts that the cost of capital and the reserves to surplus ratio are closely related, because companies with higher reserve to surplus ratios have higher costs of capital. The AG states that this relationship has been noted in the literature from the Casualty Actuarial Society, and that the SRB's proposal fails to recognize that

relationship. The AG points out, as well, that the Commissioner, in the proceeding to set 2005 rates, rejected a similar proposal made by the SRB.

The leverage ratio has, historically, been developed from countrywide data on reserves and surplus on all lines, as reported in *Best's Aggregates and Averages*. The *Decision on 2004 Rates* concluded that this methodology is consistent with the use of countrywide, all lines data for input values into the IRR model, and that the five-year averaging provides greater rate stability. It specifically rejected suggestions from both the SRB and the AIB to use various subsets of companies that either wrote business in Massachusetts or predominantly wrote auto insurance. In the *Decision on 2005 Rates*, we also rejected a proposal from the SRB to use a limited sample that also omitted State Farm.[35] We have been presented with no argument this year that persuades us to reject our past decisions. The cost of capital and the asset return components used to develop the underwriting profits provision are all based on all lines, countrywide data, and it is reasonable to calculate the reserve to surplus ratio on a comparable basis.[36] We will therefore continue to calculate the leverage ratio as the five-year average of values reported by Best's for the years 2001 through 2005.

F) THE INVESTMENT TAX RATE ("ITR")

Except for the tax rate on stock capital gains, the parties do not contest the AIB's investment tax rate ("ITR") recommendations. The AIB proposes actual stock investment tax rates of 33.6 percent for stock capital gains and 14.2 percent for dividends, producing an overall common stock ITR of 31.0 percent. It argues that its stock capital gains ITR is based on a uniform annual deferral of 50 percent of unrealized capital gains, a value that is derived from a study of stocks sold by Massachusetts auto insurers in 2004 that showed a turnover rate, as defined in the study, of 52 percent. The AIB objects to the use of a 17.5 percent ITR for stock capital gains, arguing that although it has been used for several years, it has always been incorrect. In support of its position, the AIB asserts that no other party has criticized the AIB's proposed 33.6 percent stock capital gains ITR, the 2004 stock turnover study, or the alternative mathematical calculations the AIB offered to prove that insurers cannot achieve a 17.5 percent stock capital gains ITR. Further, it contends, no other party has suggested a way to calculate a 17.5 percent stock capital gains ITR or identified an investment strategy that would produce that result.

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[35] The SRB's witness testified that two years ago it recommended that the Commissioner not use the calculation that it proposes this year.
[36] Although Value Line data are a proxy for the entire property/casualty industry, practical considerations it would not be possible to provide the same information reported therein for the entire industry.

The SRB recommends following the CDM and retaining the 17.5 percent stock capital gains ITR. It argues that this year, as in past years, the AIB has failed to provide any new or persuasive evidence that the use of a 17.5 percent stock capital gains ITR is no longer appropriate. Therefore, it recommends for 2007 the continued adoption of a 17.5 percent tax rate.

The AG concurs that the 17.5 percent tax rate approved by the Commissioner in her decisions on the 1999, 2001, 2003, 2004, 2005 and 2006 rates should be used to set rates for 2007. The AIB's proposed composite tax rate, he asserts, is slightly lower than the 35 percent marginal rate that would apply if all gains, including unrealized gains, were realized every year and no gain was deferred or sheltered. The AG argues that neither the AIB's stock turnover study nor its hypothetical calculation of taxes that would be paid, assuming that insurers sell half their stock portfolios each year, supports the AIB's proposed ITR. The stock turnover study, he points out, does not determine the average holding period for a company's entire stock portfolio, but only for stocks sold in 2004. It does not determine what portion of the industry's stock was sold during the year. The AG notes that instead of including data on one company that sold no stock in 2004 in its calculations, the AIB omits it entirely.[37] In addition, the turnover study provides no information on the tax effect of the sales, including whether they generated any capital gain and, if so, was it actually taxed. The AIB's hypothetical calculation, the AG argues, does not reflect that the typical insurer has a portfolio of taxable and non-taxable investments, and employs tax management strategies to shelter otherwise taxable income with, for example, carryforwards and offsetting losses. He asserts that it is unreasonable for the AIB to assume that insurers mechanically liquidate half their portfolios each year without any planning to minimize their tax liabilities. The 17.5 percent ITR, therefore, remains a reasonable estimate of insurers' effective tax on stock sales.

The AIB has long opposed incorporating an estimated tax on stock capital gains that is less than the marginal rate. However, again we have been provided with no evidence that insurers no longer have available to them tax strategies that permit them to shelter capital gains income or do not choose to utilize such techniques. The reasons for adopting a lower value have been addressed in prior decisions, are equally applicable this year, and need not be repeated here. We will therefore, consistent with the CDM, continue to incorporate into the calculation of the investment tax rate a 17.5 percent tax rate on stock capital gains.

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37 Including zero turnover for that company would reduce the industry "average" turnover.

f) Investment Expenses

The AIB recommends a 0.32 percent investment expense adjustment to both the spot yield curve and asset returns, a value that is the sum of interest expense and investment expense. It objects to the lower investment expense provisions recommended by the AG and the SRB, asserting that the former unjustifiably excludes interest expenses from the total and that the latter excludes investment taxes, licenses and fees, items that have always been included in investment expense. The AIB argues that no party has challenged the accuracy of its calculations, and that its recommendation reflects the expected future costs to insurers of investment and interest expenses. It asserts that there is no reason to include interest income that insurers receive in the rates but to exclude interest expense that insurers pay.

The SRB and the AG use a 0.26 investment expense in calculating their asset returns. The AG states that this is the value reported in *Best's Aggregates and Averages*, the value that has been used in the CDM, and the value that should be used in calculating 2007 rates. He argues that the interest expense that the AIB adds to the reported investment expense should not be allowed because, if it is interest on debt, it is already captured in the cost of debt. To the extent that it is paid in connection with other transactions, he contends, the AIB has not met its burden of showing what it is for and why it should be included in the rates. The SRB's witness testified that he had never seen investment taxes, licenses and fees, reported by companies on Line 12 of their annual statement, included in the investment expenses that are recognized in setting rates.

The CDM incorporates the investment expense ratio that is calculated from data reported on Line 11 of the company annual statements. We have been presented with no persuasive argument that the investment expense ratio should be based on data in addition to that reported on Line 11 of the company annual statements, as compiled and published in *Best's Aggregates and Averages*. We therefore approve the investment expense value of 0.26 percent.

3. Cash Flows and Related Issues

a) Loss Flows for the Physical Damage Coverage

The AIB recommends that in setting 2007 rates the Commissioner use gross loss flows and gross salvage and subrogation flows, rather than a single net loss flow, for the physical damage coverages in the IRR model. It objects to the AG's recommendation to

use loss flows that are net of salvage and subrogation, and the SRB's proposal to set salvage and subrogation flows at zero. The AIB argues that the SRB has admitted that inclusion of negative flows in the IRR model is a problem, but that its "capital constraint" solution addresses only one of six problems with negative lows and amount. Any negative flows and amounts in the IRR model, the AIB contends, are improper.

The AIB argues that past criticism of the AIB's use of separate gross flows for losses and salvage and subrogation under the physical damage coverage is incorrect and misleading and should be reconsidered. It asserts that its gross loss flows correctly account for the large timing difference between the payment of losses and the recovery through subrogation and, unlike net flows, produce reasonable results that "square" with past national experience for physical damage coverages.

The SRB argues that, in accord with the CDM, loss flows for physical damage should be net of salvage and subrogation. It notes that in past rate decisions the Commissioner has rejected the AIB's use of separate gross physical damage flows. Net flows, the SRB asserts, properly reflect an insurer's actual liability and are used to develop loss flows for bodily injury and property damage liability flows. Although the AIB bases its use of gross loss on a perceived time lag in receiving subrogation and salvage payments, the SRB points out that over half of such payments occur in the same calendar year as the physical damage loss payment. The AIB's position, the SRB argues, artificially increases the calendar quarter underwriting result in quarter zero, raises the shareholder capital requirement and thus creates a higher underwriting profit provision. The SRB asserts that the AIB bears the burden of proving that its methodology is superior to that currently in place, and has failed to provide any additional evidence that gross physical damage loss flows should be used in its IRR model.

The AG opposes the AIB's physical damage cash flows, noting that the Commissioner has twice before rejected its proposed methodology. He argues that the AIB's calculation of the surplus needed to support the physical damage coverage should be rejected because its approach, by ignoring expected salvage recoveries and subrogation payments, is incorrect, contradicts other portions of the model and is inconsistent with the treatment of such payments by regulators and by insurers themselves. He notes that subrogation recoveries are about one quarter of total physical damage losses and expenses, so that the AIB's methodology greatly inflates its recommended profit provision. The AG points out that the issue of subrogation arises in connection with the bodily injury coverages, noting that the AIB calculates losses on a gross basis for the physical damage coverage, but on a net of subrogation basis for PIP and bodily injury coverages. He

characterizes the AIB's methodology as unreasonable, arguing that the "cash deficiency" in the AIB's IRR model does not exist in the real world, and that, by ignoring salvage and subrogation recovers, the AIB has inflated the policy holder account balance in the model.

Rates are made, the AG argues, on a net basis that recognizes subrogation payments that insurers make and receive, and that are an expected aspect of the insurance transaction. He contends, as well, that no accounting or reporting system, whether the Generally Accepted Accounting Principles ("GAAP") or statutory accounting for insurance companies, or accounting for federal tax purposes, reflects physical damage loss reserves on a gross basis, ignoring anticipated salvage and recovery payments. In response to the AIB's contention that its IRR model is not analogous to financial statements, the AG argues that, to produce reasonable results, financial models must represent the actual insurance transaction. The AIB's methodology relating to the physical damage coverage, he asserts, does not reflect that principle. The historical loss data demonstrates that a pattern of salvage and subrogation payments exists, can be expected to continue, and should be included in the calculations of the required policyholder account balance and determination of surplus related to the physical damage coverage. Further, the AG argues, on an industry-wide basis subrogation creates no systematic insurance risk and does not affect losses, because subrogation payments by PDL insurers are the same as the subrogation payments that physical damage insurers receive. The AIB's methodology, he asserts, breaks this transaction into two components, treats them inconsistently, and in effect counts subrogated physical damage losses twice, in the loss reserves for both PDL and physical damage coverages.

The AG argues that the negative values produced by treating physical damage loss flows on a gross basis should be viewed as evidence that the IRR model is flawed, because it does not represent the insurance transaction. The AIB's model, he asserts, produces negative values that exist only in the abstract world of a model involving a single insurance policy. In the real world, however, policies are written on a continuous basis, and there are no negative values. Further, negative values do not exist when physical damage coverage is viewed as one aspect of an entire insurance transaction involving cash flows for all coverages.

The AIB's approach to developing cash flows for the physical damage coverages that separately consider loss payments and subrogation and salvage recoveries has been consistently rejected for reasons set out fully in prior decisions. We have been presented with no persuasive reason to reverse our decision that it is appropriate to combine those

flows to reflect the net value of payments and recoveries. Therefore, we adopt the SRB and AG's position on the use of "net" loss flows for the physical damage coverage.

b) Negative Physical Damage Surplus Flow

The SRB proposes two adjustments to the AIB's IRR model. The first would limit the values in the surplus account calculation for the physical damage coverage to non-negative numbers. The SRB argues that zero should be substituted for the negative numbers in the AIB's surplus account calculation for physical damage because that is a more rational approach to calculating shareholder commitment to the insurance enterprise. The negative numbers that appear in the AIB's model for the fourth through 20th quarters, it asserts, imply that shareholders must invest additional funds to achieve the desired return on their investment. The SRB argues that substituting zeros for the negative numbers achieves two goals: nullifying the implied need for additional shareholder funding and returning funds to the shareholder more quickly. Even though the AIB's IRR model returns the initial shareholder contribution by quarter five, the SRB contends, the subsequent quarters show a negative flow from the shareholder to the company. The implied need for more capital, it argues, could make a difference for an investor who must decide whether to invest in a project.

The AIB, characterizing the SRB's proposal as a "capital constraint adjustment" asserts that it recognizes and corrects only a small part of the problem of negative flows for physical damage coverage in the CDM. Replacing negative values with zeroes, the AIB argues, solves one, but not the other five parts, of a multi-part problem. It identifies five other negative values that result from the use of net physical damage loss flows that are not corrected by the SRB's proposed adjustment. The AIB concludes that the SRB's proposal should be adopted because it is preferable to the CDM, but argues that it remains inferior to the AIB's position that using gross low flows is the appropriate solution for correcting negative values relating to the physical damage coverage in the CDM.

The AG opposes the SRB's proposal, arguing that it is based on two erroneous statements: 1) the negative flows, from a shareholder perspective, imply an additional capital need in the AIB IRR model; and 2) the removal of the negative flows returns funds to shareholders faster than the current IRR model. The AG asserts that the negative cash flows in the physical damage coverage represent subrogation payments from the property damage insurer to the physical damage insurer, and some salvage payments. The values are negative because, the AG argues, the model places a minus sign in front of funds received and a plus sign in from of funds paid by an insurer. He asserts that subrogation

payments affect surplus in the model in two ways: 1) as property damage liability ("PDL") payments they are viewed as losses, which must be backed by surplus provided by shareholders; and 2) they reduce physical damage losses, thus reducing or removing the need for surplus contributions from shareholders.

According to the AG, an IRR model requires two surplus entries for each subrogation dollar, one related to the PDL coverage and one in the physical damage coverage. Calculation of the PDL surplus, done by applying a factor to the PDL loss reserves, includes a value for surplus backing all expected subrogation payments. These same subrogation payments affect the physical damage surplus by offsetting physical damage losses and reducing the surplus by the same amount as the PDL surplus is increased. The net effect on the total need for surplus is zero. The AG argues that the SRB's proposal improperly removes this balance, analogizing its effect to the AIB's proposal to calculate physical damage surplus without regard for the receipt of subrogation payments but to calculate PDL surplus on an amount that reflects its payment of subrogation amounts. He points out that subrogation is simply a transfer of funds among insurers, requires no payment to policyholders, and assumes no new risks.

The AG notes that in its filing for 2006 rates, the SRB stated that negative net flows do not create a practical problem. He asserts that the shareholder's initial capital contribution to the physical damage coverage is never exceeded because the model begins to repay the surplus immediately. When the expected subrogation receipts exceed expected loss payments, the company pays a portion of those funds to the shareholder. Eventually, the AG states, the subrogation amounts over and above the shareholder's initial contribution are returned to the company, so that the cash flows balance to zero. Although the model represents some of these returns as negative numbers, the values represent the resolution between the company and the shareholder of subrogation funds, rather than needed capital contributions.

The AG further asserts that the SRB's proposal would delay the return of surplus funds to shareholders and, because policyholders "pay" to rent those surplus funds, increases the underwriting profits provision. He argues that the current IRR model actually returns funds to shareholders about one-fourth of a quarter earlier than under the SRB proposal. He concludes that the SRB's proposal should be rejected.

The essence of the SRB's proposal is to substitute zeroes for the negative values in the surplus column, to show that shareholder capital is no longer required. The issue of negative values in the surplus column for physical damage coverage arises in connection

with the treatment of loss flows on a net basis, and reflects the delay between payments for the physical damage claims and the receipt of subrogation payments from PDL insurers. They do not reflect a need for additional surplus, but balance charges to surplus related to the PDL coverage. Past rate decisions have concluded that the negative values generated as a result of adopting the net methodology for estimating physical damage cash flows were not a cause for concern, because the purpose of surplus is to cover expected losses. The negative values in the loss flows for the physical damage coverage do not represent expected losses, because they will be offset by recoveries from salvage and subrogation. Ms. Blank testified that it is reasonable to assume that the surplus requirements for losses that are subrogation payments and for the receipt of subrogation payments would be about equal and offsetting. Theoretical issues surrounding the inclusion of negative cash flows in a model must be reviewed in light of the context in which they arise. Because subrogation relates both to the surplus needs of the physical damage and PDL coverages, a discussion of surplus requirements should address their interaction. At this time, we are not persuaded that the SRB's proposal is an improvement to the current methodology, and will not adopt it this year.

c) Converting Single Policy Flows to Policy Year Flows

The SRB's second proposal would convert single policy flows to single year policy flows. It seeks to update cash flows developed for use in the single-policy Myers-Cohn model, arguing that its proposal will better reflect the cash flows in an IRR model. It recommends converting premium, company expense, commission and premium tax flows from single policy flows to policy year flows before using the IRR to calculate an underwriting profits provision. The SRB argues that single policy flow inputs are not appropriate for use in an IRR model because it is designed to calculate the quarterly underwriting cash flows associated with premiums, expenses and losses based on those payment patterns. It asserts that its proposal is consonant with the methodology adopted by the Workers Compensation Rating and Inspection Bureau ("WCRIB") in its 2003 rate filing. The SRB asserts that its proposal does not, as the AG contends, create a mismatch between loss flows and policy year premium flows, because it continues to model a single accident year. Further, it argues, it does not require extensive additional adjustments in addition to its recommendations for modeling these four particular cash flows. The SRB believes that its proposal will improve the accuracy of the IRR model.

The AIB takes no position on the SRB's proposal, but considers that the results generated by its application provide substantial evidence that the current CDM implementation of the IRR model produces an outcome that is substantially too low. It contends that in large measure that is the result of using net rather than gross loss flows for physical damage, and that the SRB's proposal provides support for the AIB's argument for using gross loss flows.

The AG argues that, because the SRB's proposal does not convert the accident year loss flow to a policy year, it creates an inconsistency and is therefore erroneous. He asserts that mixing a single year policy loss flow and policy year premium and expense flows has never before been used or proposed in Massachusetts, or elsewhere. Currently, the AG argues, the single policy premium and expense payment patterns are already comparable to the loss pattern based on accident year data. He contends that the SRB's proposal creates a mismatch between policy year and accident year data, and effectively delays the receipt of premium by six months. The result, when put into the IRR model, the AG argues, reduces the investment income that companies earn. The AG points out that although the SRB's witness referred to a lack of data in the past, the data in this proceeding do not support conversion. Further, he argues, the 2003 rate filing of the Workers' Compensation Rating and Inspection Bureau does not support the SRB's proposal, because the WCRIB converted all flows, including loss flows, to a policy year basis. The AG asserts, in addition, that using policy year premium and expense flows would require additional adjustments to the IRR model.

The issue of using a single policy model or a policy year model in the IRR was first raised in 2004. The *Decision on 2004 Rates* concluded that, as a practical matter, either, if properly implemented, should give the same result. The *Decision on 2006 Rates* again determined that it is reasonable to use a single policy model, despite the AG's argument that it does not reflect the ongoing nature of the insurance business. The SRB proposes this year to retain the single policy model but to convert premium and expense cash flows to a policy year basis. It uses as its model for this approach a rate filing made by the Workers' Compensation Rating and Inspection Bureau that uses an IRR model to determine the underwriting profits provision.

Cash flows are significant in the IRR model for a number of reasons. They are the basis for determining the surplus needed to support the policy over time and a factor in determining the funds available for investment. However, policies that are written in a particular policy year, even if premiums are fully paid during that year, will incur claims over a far longer period. Establishing a consistent set of cash flows is a challenging

exercise. The SRB's proposal would convert premium and expense flows to a policy year basis, but not the accident year flow. Its witness testified that she did not perform any conversion of the accident year flow from a single policy to a policy year, because she did not believe there would be a significant difference between them; she also noted that her calculations were done on quarterly data, when monthly data would be preferable. The goal of the SRB's proposal, she testified, is to model a profits provision that reflects the loss flows, not to make rates.

Our concern is that the underwriting profits model does have an effect on rates, and that a change to the current single policy approach should not be adopted without a careful analysis of the entire relationship of that decision to the IRR model itself and the effect on the rates that result from the use of that model.[38] We note Ms. Blank's testimony that she had not calculated the specific effect of her recommendations for cash flows on the underwriting profits as compared to the AIB's cash flows. That data is now available that permits a more precise analysis of policy flows supports further investigation into whether the policy year approach is an improvement over the current single policy structure. We are not persuaded that the SRB's proposal should be adopted this year, but encourage further consideration of this issue in the future. As Ms. Blank stated, IRRs are works in progress and more research can be done on this issue.

4. Other Revenue and Other Investment Expense

The AIB calculated a value for "Other Revenue" of 0.17 percent and an estimate of "Other Investment Expense" of either 0.15 percent or 0.31 percent; the former is based on a Massachusetts premium-weighted average while the latter is based on countrywide all lines data. It recommends no adjustment for other revenue, on the ground that it is cancelled out by other investment expense. The "other investment expenses" that it considers offset other revenue are those reported by insurers on lines 13, 14 and 15 of the investment income exhibit to their annual statements. The AIB argues that addition of other revenue and omission of other investment expense creates bias in the rates.

The AIB has not specifically identified the items reported on lines 13, 14 and 15 of the investment income exhibit. The *Decision on 2004 Rates* found that items that are reported on annual statements as interest expense, real estate depreciation and "aggregate write-ins" for deduction from investment income do not constitute investment expenses. It therefore declined to adopt the AIB's recommendation that they be incorporated into the

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[38] We note the AG's comments on the relationship between the single policy model and the assignment of assets that support the policy.

rates as an offset to other revenue. Those principles were reiterated in the *Decision on 2005 Rates*. On this record, the AIB has not demonstrated that the items it proposes to incorporate into the rates to offset "other revenue" are items that should be characterized as investment expenses. We will therefore not adopt its recommendation, but will include in the underwriting profits provision a 0.17 value for other income.

III. COST CONTAINMENT

A. Introduction and Background

As part of the proceedings to set rates for private passenger automobile insurance, G.L. c. 175, §113B requires the AIB to submit a filing that addresses the adequacy of industry cost containment programs. The statute states that, at a minimum, the programs should be designed to have a material impact on premium charges by reducing costs and expenses. *See Decision on 1999 Rates* (describing the purpose of Chapter 622 of the Acts of 1986). 211 CMR 93.00, promulgated pursuant to §113B, states that the Commissioner must "determin[e] whether the insurers' cost and expense containment efforts are adequate and reasonable."

211 CMR 93.00 requires submission of a filing that provides data on industry practices and cost containment programs, as evidenced through the data from a representative group of companies. In particular, the AIB is to address cost and expense containment programs for bodyshop payments, voluntary and ceded claims handling, fraudulent claims, expenses, and glass claims payments. The Commissioner must assess the adequacy and reasonableness of insurers' programs based on the "filings made and the evidence introduced at the hearing to fix and establish motor vehicle insurance rates." 211 CMR 93.05(1).

The regulation directs the AIB to provide a narrative description of the insurers' cost containment programs that, *inter alia*, identifies the person responsible for the program and the number of staff; sets out the form of the program and the coverages and losses that it affects and explains mechanisms to audit, monitor and evaluate the program. For all programs, the AIB must present the expense data for the prior year, the current year and estimates for the next year. The filing must demonstrate that each program results in authentic savings or cost containment.

Briefly summarized, the parties take the following positions this year. The AIB argues that the Commissioner can only, legally, order a downward rate adjustment for cost containment if the otherwise determined rates increase, a result that no party recommends this year. Further, it asserts, both its filing and insurers' efforts to contain costs and expenses and to avoid payment of fraudulent claims are adequate, so that no downward rate adjustment is appropriate. The AG argues that the AIB's filing is inadequate and that insurers are not effectively using special handling techniques or developing new programs to handle claims more efficiently and fight fraud, and recommends a one percent downward adjustment to be applied to all coverages. The SRB did not make a filing, but recommends a reasonable rate adjustment that is less than the AG's recommendation, but is sufficient to address the inadequacies that it has identified in its brief.

1. The Parties' Arguments

a) The AIB

The AIB argues the Commissioner has no jurisdiction to order a negative cost containment rate adjustment in addition to an otherwise determined rate decrease. It asserts that the statutory language in c. 175, §113B that allows her, if she determines that the cost containment filing is deficient or programs are inadequate, to limit the amount of any adjustment in premium charges based upon changes in costs and expenses applies only if the adjustment to the premium charges is positive. Similarly, the AIB contends, 211 CMR 93.06 (1) further constrains her discretion in this regard. Specifically, it provides that the Commissioner, if she determines that the industry's cost and expense containment programs are inadequate, to refuse to allow any increase in premium charges that it recommends in its rate filing. This year, the AIB points out, all parties to this proceeding have recommended a rate decrease. Therefore, it argues, the Commissioner is precluded from ordering a negative cost containment adjustment.

The AIB argues that its filing was prepared in accordance with the statutory and regulatory requirements, and follows the approach used for the past two years. No more than the narrative report prescribed by the regulation is necessary, it asserts, to support the AIB's filing. The AIB points out that, in addition to describing the activities of representative insurers relating to bodyshop payments, bodily injury claim payments, fraudulent claims issues, glass claim payments and any differences claims handling for

voluntary and ceded claims, it has addressed issues relating to personal injury protection ("PIP") claims. The AIB argues that the AG's witness could not identify any specific deficiencies in its filing, and that his criticisms do not relate to the filing requirements.

The AIB asserts that the *Decision on 2006 Rates* erroneously relied on "concerns" and "questions" that the SRB raised about the AIB's filing in last year's rate proceeding as a basis for finding that its filing was inadequate. None of those concerns or questions, the AIB argues, was supported by facts in the record. Issues relating to the adequacy of its filing, it contends, are questions of both fact and law, and no findings should be made based on unsupported statements. The AIB argues that the AG has not substantiated his argument that insurance companies have not taken all appropriate measures to control losses, expenses and fraud, or his requested cost containment adjustment. It asserts that the SRB, because it made no filing on cost containment issues, established no factual basis for any argument it might make on the adequacy of the AIB's filing or the industry's program cost containment programs. Therefore, the AIB concludes, the SRB's arguments should be discredited.[39]

The AIB asserts that the regulatory requirements prescribe the contents of its filing, but incorporate no substantive requirements or standards for evaluating insurers' programs. Criticism of its filing, it asserts, focuses on random facets of its programs, and changes unpredictably. It is therefore impossible, the AIB argues, for it to anticipate and respond to every issue relating to cost containment or fraudulent claims. This year, the AIB points out, the AG has faulted the AIB for its purported failure to address areas such as public education relating to various facets of driving behavior that have not been raised in previous proceedings and which are not required by the regulations. The introduction of new issues, it argues, creates an elusive and unobtainable concept of adequacy.

The absence of regulatory standards for evaluating cost containment programs, the AIB asserts, allows the AG and the SRB to criticize the insurers with impunity. It points out that the regulation requires the AIB to demonstrate that insurers are making "reasonable" efforts to contain costs and expenses. The AIB objects to the downward adjustments made in the past that, it asserts, offer no guidance to companies for future

[39] We note that while it is preferable for a party to submit a filing on an issue about which it intends to opine, it is not mandatory that it do so. A party may voice its opinion based on the record, regardless of whether it submitted a filing.

improvements that would ensure compliance with a standard that it characterizes as "extremely subjective." It states that although there is always room for improvement in cost containment, that fact alone does not establish that current programs are inadequate.

The AIB argues that its filing and the testimony of its witness, E. Michael Sloman, Esq., as well as testimony from the company witnesses, shows the successful efforts of Massachusetts automobile insurers to control costs and expenses in many areas, including the payment of fraudulent claims. Those efforts, it asserts, have resulted in a significant reduction in losses. Cross-examination of the AIB's witness and the witnesses from the representative companies, the AIB asserts, resulted in no serious challenge to the insurers' cost containment efforts. Although each insurer manages claims somewhat differently, the evidence shows that each of the representative insurers is making reasonable efforts to contain costs. The AIB identifies testimony from the witnesses confirming that handling techniques, such as special investigations, independent medical examinations ("IMEs") and medical audits are effective for reducing claim fraud and build-up, and that the use of such techniques has a deterrent effect on fraud. In addition, companies study loss data to identify suspect claims and fraud rings, and work with the Insurance Fraud Bureau ("IFB") and other agencies to investigate and take action against participants in fraudulent claims. The AIB points out that the Community Insurance Fraud Initative ("CIFI") task forces established in eight communities, and the contributions of some insurers' SIUs to those task forces, has played a role in decreasing fraud. The evidence also addresses company efforts to control glass claim costs, both through preventing illegitimate claims, obtaining reasonable discounts and labor rates, and increasing the percentage of claims that are resolved through repair, rather than replacement, of the damaged glass.

The AIB argues that the testimony confirms the commitment of the representative companies to cost containment, and demonstrates that the differences among individual company practices are not significant. Further, it asserts, no evidence was presented that would show any material errors, gaps or omissions in insurers' efforts to control costs and expenses. For those reasons, it argues, no rate adjustment should be made.

The AIB asserts that the AG has identified two feasible measures as approaches to reducing losses and fraud: specialized units to handle low impact claims; and the use of preferred provider organizations ("PPOs"). Because of differences in company size,

corporate structure and business mix, the AIB argues that it is not surprising that not all companies utilize these approaches. It asserts that the AG's focus on possible savings for the industry from the use of these units erroneously focuses on the existence of a "unit" rather than on the practice of giving heightened scrutiny to low impact claims. Thus, the AIB argues, even though the representative insurers do not have specialized low impact claim units, each of them has systems in place to give appropriate attention to suspicious claims. Further, the AIB points out, its witness testified that the use of specialized claim units is constantly evolving, with some companies initiating and others discontinuing them. It noted that the AG's witness acknowledged that low-impact claim units are not the only way to achieve prompt and heightened scrutiny of soft tissue claims.

With respect to the use of PPOs, the AIB argues that even if it is an effective tool for some companies, because of differences among companies it is not necessarily one that could or should be used by all insurers. It notes Mr. Sloman's testimony that the representative companies have considered the possible benefits of using a PPO and reached different conclusions. The AIB points out that the witness from the Commerce Insurance Company ("Commerce") testified that the combination of its size and the potential for exposure to litigation prevented it from using a PPO, and further notes that the AG's witness conceded that potential litigation might affect company decisionmaking. A company's exercise of business judgment regarding the use of a PPO should not, the AIB argues, be viewed as an indication that it is less committed to cost containment. In addition, it observes, in the *Decision on 2004 Rates* the Commissioner acknowledged that the use of PPOs would not be appropriate for all companies. The AIB asserts that the AG's witness recognizes that PPOs are not the only way to control medical costs, commenting that other effective tools, used by some representative companies, include bill repricing software.

The AIB argues that the AG, although he alleges that the companies lack innovation in the area of cost containment programs, suggests no new programs and was unable to identify any written materials that would identify such programs. It asserts that if companies had improved cost containment measures available, they would gladly implement them; instead, they are working to improve and refine existing techniques. The AIB points to, among other things, enhanced fraud training, improved work flow systems,

and efforts to reducing cycle times for physical damage claims, as evidence of ongoing steps to improve claims handling.

The AIB also asserts that the AG's criticism of the insurance industry's utilization of St. 2004, c. 464 (the so-called "runner"law) is without merit, arguing that it is not one of the cost containment activities that, under 211 CMR 93.00, must be addressed in the industry's filing.

b) The SRB

Although the SRB failed to make its own filing, it expresses a number of concerns about the contents and sufficiency of the AIB's cost containment filing. The filing, it asserts, is technically deficient because the five companies in the company sample do not represent 50 percent of the market, as required by 211 CMR 93.03. The SRB argues that there is no legal support for the AIB's argument that a sample that reflects a 49.69 percent market share, if that value is rounded upward, satisfies the requirement, noting that, by adding a sixth company to the mix, the AIB would have satisfied the statutory guidelines. It questions the qualifications of the AIB's witness, Mr. Sloman, noting that he has no personal knowledge of claims handling and is not an economist.

The SRB argues that the AIB's cost containment filing this year is, in some respects, less extensive than its filing for 2006 rates. It notes that the AIB used two, rather than the three years of data it has used in past years, to measure company performance, and questions why using less data is a better measure of performance. The SRB points out that the filing is based on a review of an extremely small sample of company claim files that examined SIU files only if they were included in that sample. Some of those files related only to BI or PIP claims, while some included both. The SRB criticizes the AIB's cost projections, noting the judgmental addition of a 33 percent overhead factor, and the use, for three companies, of a 4.41 percent trend, without evidence that those values reflect the unique expense structure of each company. Commerce and Liberty Mutual, the SRB points out, provided their own cost projections. It also questions the accuracy of the data, and the lack of explanation for large year-to-year changes in savings from medical audits. Further, it argues, if the data showing decreases in savings from medical audits for the year 2005 is accurate, it demonstrates a lack of due diligence by the companies in meeting their statutory obligations. The SRB notes that the AIB supports its conclusions

on the use of IMEs with references to papers that are based on ten-year old data, and questions whether that data is relevant.

The SRB argues that company compliance with the CAR Performance Standards, as measured in CAR's *2005 Annual Report of Compliance with Claim Handling Performance Standards* ("Compliance Report") is not a sufficient indictor of the industry's cost containment efforts, because CAR measures compliance with a small number of those standards. It notes that the performance standards prescribe minimum requirements necessary for the routine investigation and disposition of every claim, and for the special attention required for fraudulent claims. The SRB states that, although the Compliance Report is based on a review of 3,710 claim files from 20 carriers, approximately 27 percent of the sample were claims filed on commercial policies. It notes that the Performance Standards identify approximately 100 distinct activities or functions that companies are required to perform, but that those functions are not assigned weights that indicate their relative importance in the claim handling process. The SRB points out that, because the Compliance Report measured compliance with only eight specific standards, its review considered less than that 20 percent of the actions or tasks required from companies. As such, it argues, it offers little information on companies' actual overall compliance with the minimum standards.

The SRB notes that, in addition to measuring compliance with eight specific standards, CAR reviewed claim handling practices to verify that the company controls costs and fraud. Although the review included physical and property damage claims to determine whether appropriate referrals were made to the IFB, as well as various aspects of bodily injury and PIP claims, including SIU referrals, the SRB argues that the Compliance Report provides little detail on the scope of the reviews and how they were performed, and therefore offers little evidence of the companies' performance in the areas of cost containment and fraud prevention.

The SRB comments that CAR, in conducting its review of insurers' SIUs, considered a total of 911 files from 15 carriers, but provided little detail on the scope of the examination and did not report individual company compliance with the SIU-specific standards. Further, the SRB asserts, the Commissioner stated, in the Decision on 2006

Rates, that she did not view the CAR Report on 2004 compliance with the performance standards as evidence of the adequacy of company cost containment programs.

The SRB points out that the AIB filing states that insurers have specialized units devoted to handling claims arising from low impact collisions with soft tissue injuries only. That statement, it argues, implies that the representative companies have such units when, in fact, none of them do. The SRB expresses additional concerns about the sufficiency an adequacy of industry cost containment efforts, noting that, based on its analysis of the testimony of the company witnesses, it appears that companies do not refer possibly fraudulent cases to the IFB in a consistent manner on a uniform basis. The 2005 Compliance Report, the SRB points out, showed a decreased compliance rate in three of the eight categories CAR measured. In addition, it notes, applying NAIC guidelines for compliance rates, rather than the 80 percent compliance threshold set by CAR, would also show deficient performance in three of the eight categories. As further evidence of unsatisfactory claim handling practices, the SRB also identifies areas in which CAR's file review identified specific practices which appeared to be appropriate but were not followed by the company, as well as other shortcomings in individual company performance.[40]

The SRB asserts, as well, that a large part of the significant decrease in losses in 2005 resulted from CIFI activities in various communities. It questions why, given the significant amount of fraud that has recently been detected and removed from the system, the companies have not been able to detect and eliminate more fraudulent claims. The SRB argues that the dramatic decrease in losses is evidence that some significant level of fraud exists that the companies are failing to address through their existing cost containment programs. Testimony from the witnesses for the three representative companies that use PPOs, the SRB points out, shows that they are an effective cost containment tool that generates savings for those companies. It argues that the failure of

40 As examples, CAR's review identified 61 files for bodily injury claims and 95 PIP claim files that might have warranted SIU handling, but that only 54 percent of the bodily injury files and 65 percent of the PIP files were actually referred. CAR found that one carrier did not have a formal evaluation plan for its adjusters to use in settling bodily injury claims, and that at another company adjuster's did not follow a plan that was in place. The SRB comments that the companies referred fewer physical damage claims to their SIUs in 2005 than in 2004, and that the savings from SIU cases were also reduced. It points out that the reasons for the decreases are not clear on the record, but should be considered in evaluating company efforts in the areas of cost containment and fraud prevention.

the two other representative companies, which together write over a third of the market, to use PPOs is significant. The SRB questions the rationale for the decision of the Commerce Insurance Company not to use a PPO, pointing out that Liberty Mutual, a large national company utilizes such a network. With regard to glass claims, the SRB observes that the glass repair rates for the representative companies vary significantly, and concludes that the variance is evidence that more could be done to reduce overall glass claim costs by increasing the percentage of repairs compared to replacements. It suggests that the ongoing relationships, whether or not contractual, between glass shops and the companies, provide a basis for increasing the repair rate.

The SRB concludes that, given its concerns about the sufficiency of the AIB's filing and the adequacy of the industry's cost containment efforts, it recommends a cost containment adjustment under the statute. However, because the extent to which company cost containment activities, rather than other factors, contributed to the reductions in 2005 losses cannot be determined at this time, it recommends an adjustment that is less than the AG's proposal for a one percent adjustment on all coverages but is adequate to reflect the SRB's concerns. It also recommends that the Commissioner urge increased diligence by all companies to contain costs and reduce fraudulent claims in 2007.

c) The AG

The AG argues that the applicable statute and regulations place the burden squarely on the AIB to demonstrate that insurers are making reasonable efforts to contain costs and expenses. Further, he notes, the statute permits the Commissioner, if she determines that the AIB's filing is deficient or its programs are inadequate, to "limit in any manner [s]he determines to be appropriate the amount of any adjustment in premium charges based upon changes in costs and expenses." The applicable regulation, the AG notes, also allows the Commissioner to make "such other adjustments in premium charges to reflect the adequacy or inadequacy of insurers' cost and expense containment programs based on the evidence introduced during the hearing to fix and establish motor vehicle insurance rates as [s]he determines to be appropriate." The AG argues that, contrary to the AIB's position, the governing statute and regulations provide that the Commissioner may make a downward cost containment adjustment, even if the AIB were not

recommending increases in coverages. He notes that the AIB, although it objects to the downward cost containment adjustment included in the *Decision on 2006 Rates* on the ground that such an adjustment cannot be made when rates decrease, it did not appeal that decision.

The AG argues that the AIB's filing, because it only provides information from five companies whose premium volume is 49.69 percent of the market, fails to meet the regulatory standard, which requires the representative group of insurers to be at least 50 percent of the market by premium volume.[41] Therefore, the AG argues, the filing denies relevant information to the Commissioner and the other parties. Because the AIB failed to follow the regulatory requirements, he asserts, the Commissioner should make a downward rate adjustment.

Further, the AG notes, the AIB's filing does not comply with many of the requirements in 211 CMR 93.00. With respect to addressing the handling of claims arising from voluntary and ceded policies, the AIB contends that all claims are treated equally, relying on statements in the CAR Compliance Report that no differences exist. It fails to compare the handling of voluntary and ceded claims, but references the use of statistical testing in CAR claims audits. However, no results of an audit utilizing that testing had been reported when the filing was made. Further, the testimony indicates that claims adjusters have access to information on whether a claim arises from a retained or ceded policy, a factor that might affect their handling of that claim. In addition, the AG argues, the AIB has failed to provide the detailed information on its expenses required by regulation, and should not be allowed to ignore those requirements.

The AG asserts that the AIB's filing contains inconsistent and incorrect data, arguing that its use of different trend factors to determine future costs and savings prevents an accurate comparison of costs and savings information. The AG notes that three of the representative companies used a 4.41 percent trend, based on the Decision on 2006 Rates; one used a 7.5 percent trend factor for costs, and one used its own budget projections or internal expense reports. Like the SRB, the AG questions some of the savings data in the filings, particularly differences in the savings from medical audits

41 The AG also questions the basis for the AIB's claims that the five representative companies actually represent 49.69 percent of the market, noting that it is not consistent with the written premium, earned premium or loss figures that appear on page 9 of the AIB's filing.

between 2004 and 2005. He points out that the AIB had no explanation for the changes in results. The AG asserts that other errors identified in the course of the testimony, together with the likelihood that they signal undiscovered errors, undermine the reliability of the data.

The AG argues that the AIB continues to stress the importance of compliance with the CAR Performance Standards as a measure of insurers' cost containment efforts, notwithstanding the fact that its position has been rejected by the Commissioner and the Supreme Judicial Court. He asserts that while adherence to the performance standards may shed some light on the adequacy of such efforts, it is not dispositive of the issue. The AG concludes that, because the AIB's filing is inadequate overall and fails to comply with the applicable regulations, the Commissioner should make a downward rate adjustment.

The AG further argues that the companies are not adequately using special handling techniques and other methods to control costs and reduce fraud. He contends that it is undisputed that special investigations, medical audits and IMEs are effective methods to discover and reduce fraud and claim build-up, but that the Detail Claims Database ("DCD") and testimony from the company witnesses demonstrate that companies have not been fully using these techniques to the extent. As evidence, the AG points to inconsistencies among companies in the frequency of using special handling techniques to resolve claims.

Further, he asserts, carriers in the aggregate do not sufficiently use well-established and effective cost savings techniques. The AG points out that while the AIB's filing refers to the establishment of special claim handling units and the use of seasoned adjusters to handle claims arising out of low impact collisions and involving only soft tissue injuries, the company witnesses testified that none of their companies had such a unit, and four stated that soft tissue/ low impact claims were not always assigned to experienced claims adjusters.

The AG argues that IMEs are an effective tool for containing costs and identifying and reducing fraud, especially in cases involving soft tissue injuries and claims for ongoing disability or permanent injury. He notes the testimony of his witness, Michael Frustaci, D.C., that insurers do not use IMEs as effectively as they could, particularly with regard to timing of the examination, because its value diminishes over time. The AG

points out that, according to Dr. Frastaci, insurers tend to use IMEs to provide a treatment end-point that will allow them to discontinue PIP benefits, rather than as a means to assess whether there is a causal connection between the claimed injury and the accident. He asserts that insurers often fail to provide the examiner with clinical data, do not provide on-line access to documents related to the accident, and have not developed reliable methods to ensure that claimants bring medical records to an appointment for an IME. The AG argues that, based on Dr. Frustaci's testimony, making accident and clinical data available to the examiner on a more timely basis would allow the examiner to note inconsistencies between the objective data and subjective reports from the claimant, and to form a more accurate and in-depth opinion about causation and diagnosis. Responding to the AIB's assertion that carriers provide clinical and accident information to examiners to the extent that it is "available," the AG argues that, to ensure that the IME effectively provides meaningful information, insurers must make consistent efforts to gather and transmit appropriate information to the examiner before the IME.

Medical fee review software is another technique that, the AG argues, is an effective but underutilized cost containment tool. Two witnesses testified that their companies saved millions of dollars in medical fees over the expense of running the software, but one company does not use this approach, using a vendor to review bills only when the claim adjuster questions the charges. The AG asserts that the DCD data suggest that medical reviews or medical audits, though done less frequently than IMEs, result in far more savings per claim. Further, he argues, their effectiveness is not limited by the time elapsed since the injury, or the claimant's availability or willingness to participate in an IME. The AG points to the testimony of his witness that medical audits should generally be performed when the claimant does not notify the insurer until treatment has been completed, and should consider both the clinical data and accident reports, in order to form an accurate opinion about causation and reasonableness of treatment. For those reasons, the AG argues, insurers should perform far more medical reviews.

The AG argues that the companies do not make appropriate use of the batch processing option for submitting claims to the DCD; two stated that were constrained from such participation by their information systems. He points out that the AIB filing considers staff nurses to be a valuable source of information for claims adjusters, because

they can help claims personnel interpret medical records and address other issues relating to medical treatment. Nevertheless, three of the five representative companies do not employ staff nurses. The AG points out that Chapter 427 of the Acts of 1996, Section 13(e) requires insurers to report fraudulent insurance transactions to the IFB within thirty days after it has determined that a transaction may be fraudulent. However, the company witnesses admitted that they do not report all potentially fraudulent transactions to the IFB.[42] In addition, the AG argues that the companies have not responded to the *Decision on 2006 Rates*, which encouraged insurers to develop techniques that utilize technological advances and can be shown to reduce claim costs. Most of the company witnesses, he points out, testified that their companies had not initiated any new cost containment programs in 2006.

The AG points out that, pursuant to 211 CMR 93.05 (1) the Commissioner may consider, in addition to current company cost containment programs, alternative programs which exist elsewhere or programs which she finds could reasonably be implemented. He argues that alternative programs should include accident prevention efforts in areas such as drunk driving, occupant protection, speed management, road safety and driver behavior. The AG asserts that all carriers could improve their activities in these areas, notably by sponsoring programs to increase public awareness of these issues. He acknowledges that the AIB, in its rebuttal filing, submitted evidence of carrier efforts to reduce accidents and injuries, particularly through distribution of driver education materials and promotion of advanced driver training, but argues that its witness did not know how much each representative company spends on public education as to safety issues. Further, the AG comments, much of the material included in the AIB's rebuttal filing is published by government agencies or other organizations or obtained from government or other websites. He argues that the documents do not provide information on insurer efforts to provide them to policyholders or the public, or to refer policyholders to particular websites. In any event, the AG contends, relying on the availability of materials on the Internet to demonstrate insurer efforts to educate policyholders about

42 The reasons for failure to refer include less than egregious instances of claim build-up, attempted fraud, or instances where fraud is clear but the amount involved is small.

issues related to accident and injury prevention questionably presupposes that consumers have computers and can use the Internet effectively.

The AG argues that insurers are not making adequate efforts to encourage rapid expansion of CIFI task forces, even though, according to the company witnesses, insurers consider the CIFI program to be an effective cost containment tool. He points out that, as of July 2006, eight task forces were operating in nine communities, and that only two of those had been established since October 2004. One new task force was expected to begin operation in 2006, and negotiations were under way to establish another. However, the AG argues, many other communities meet the principal criterion for evaluating the suitability of a task force: a high ratio of personal injury protection claims to physical damage claims. He asserts that insurers bear some responsibility for the lack of forward momentum in establishing task forces, noting that the CIFI program is run by the IFB, an organization in which the insurance industry, *i.e.*, the AIB, plays a large role. For that reason, the AG argues, the AIB has both the ability and the responsibility to expand the CIFI. The AIB's comments on the AG's participation in the CIFI task forces are, he argues, both factually incorrect and irrelevant in a proceeding that is designed to examine the *industry's* cost containment efforts.

The AG contends that insurers could reduce fraud by changing their claim review practices and improving claim forms. He recommends that insurers automate the review process to reduce staff time spent screening claims. On the issue of forms, the AG points out that testimony from the AIB's witness demonstrated how changes in forms can reduce fraud, pointing out that police reports of accidents are now required to list all individuals in a vehicle that is involved in an accident. He argues that even though the AIB, through its Rules and Forms Committee, can play a role in recommending changes to forms mandated by the Commissioner, insurers have not focused on ways to revise forms to reduce fraudulent or exaggerated claims.

2. Analysis and Discussion

We note, at the outset, that the AIB states that its silence on any issue raised by another party should not be construed as agreement with the position of such party. It asserts that its brief incorporates by reference each and every evidentiary point and argument in its filings. The AIB has made similar disclaimers in the past, generally when

briefs have been due in a relatively short time after conclusion of evidentiary hearings. The *Decision on 2003 Rates*, at 59-60, citing the *Decision on 1999 Rates*, at 71, reiterated that

> "[w]e are aware of no precedent supporting the AIB's theory that briefs need not address issues which a party believes are significant, or a corollary that would allow it effectively to transfer to the presiding officers responsibility for identifying its arguments. We note that the Commissioner, in the *Decision on 1984 Rates*, refused to consider a proposal, which a party did not pursue in its brief.

We have not been presented with any reason to revise that earlier conclusion. The AIB must therefore again bear responsibility for the omission of any arguments from its brief.

Further, under the statute the AIB has the burden of demonstrating that its cost containment efforts are adequate. It is responsible for developing programs and for ensuring that the content of its filing conforms to the statutory and regulatory requirements. Historically, the AIB has shown considerable disdain for this statutory mandate and has consistently complained about the regulation that governs its filings. It expresses concerns about the alleged lack of standards for evaluating its programs. Further, the AIB's position that it has fully complied with the regulation ignores the provision in 211 CMR 93.04 (2) that permits the Commissioner to consider, in addition to current cost containment programs, alternatives which could reasonably have been implemented. The AIB has failed to take the initiative to identify any such programs.[43]

The AIB's argument that the Commissioner can make an adjustment based on cost containment only when rate increases are proposed is incorrect. The statute allows her to "limit in any manner [s]he determines to be appropriate the amount of any adjustment in premium charges based upon changes in costs and expenses." The word "adjustment" is not modified in any way that would support the AIB's position that it refers exclusively to upward changes in premium charges and does not apply to downward departures.

Both the SRB and the AG question the adequacy of the AIB's filing on the basis of the sample size which represents less than fifty percent of the market.[44] The AG points to discrepancies in the data underlying the AIB's selection of representative companies that

[43] That regulatory provision also permits the Presiding Officer to limit the specific areas which the AIB must address in any particular year's hearing. The AIB did not request any such limits.
[44] However, curiously, neither moved to strike the filing for such reason.

call into question whether those companies represent even 49.69 percent of the market. That, combined with the AIB's failure to present any argument supporting its apparent rounding up of data to satisfy its regulatory obligations, persuades us that the AIB's filing is inadequate. That inadequacy reduces the value of the AIB's filing as a credible representative sample of the industry.

That conclusion is supported by other aspects of the filing. For example, the AIB's representations on the use of specialized claim units to handle low impact claims are not supported by the testimony of the company witnesses, all of whom stated that their companies did not have such units.[45] The variance between the filing and the testimony on this issue calls into question the accuracy of representations made in the filing. The failure to address obvious issues, such as the reasons for wide differences from year to year in a company's reported savings, similarly weakens the filing's value as a source of reliable information on the adequacy of the industry's cost containment efforts. The AIB's position that all differences in company performance are the result of reasonable differences among companies is insufficient, and does not address questions about the differences in year-to-year performance of an individual company.

The AIB's argument that "concerns" expressed by the SRB and the AG about the adequacy of its filing do not provide an adequate basis for making findings is not persuasive. As noted above, the burden is on the AIB alone to demonstrate that its cost and expense containment efforts are adequate and reasonable. The evidence presented by the AG will be carefully evaluated to determine whether it supports his arguments. That the SRB did not make a filing in this case does not invalidate arguments that it makes with regard to the AIB's filing. The AIB's argument that the AG's filing is somehow defective because it does not suggest new programs is unpersuasive. The AIB asserts that its members would be willing to implement improved cost containment measures if available, but are now working to improve and refine existing techniques.

The AIB continues to argue that compliance with the CAR Performance Standards is sufficient to demonstrate that their claims handling is adequate. Both the SRB and the

[45] The AIB downplays this issue, arguing that because of factors such as differences in company size, corporate structure and business mix it is not surprising that their approaches to handling low impact claims are different. Its argument ignores the very obvious discrepancy between the representations in its filing and the testimony.

AG identify problems with measuring the adequacy of cost containment programs by compliance with the CAR standards. The SRB points out that the *Decision on 2006 Rates* specifically rejected the AIB's position. We have been presented with no evidence this year that persuades us to change that conclusion.

The AIB filing contains information on various techniques, such as IMEs, PPOs and medical bill review software that are available to insurers to control costs associated with medical claims and are, according to the company witnesses, effective in reducing claim fraud and build-up and have a deterrent effect on fraud. The AG expresses concerns about the extent to which insurers use IMEs, pointing to testimony from his witness, Mr. Frustaci, that insurers do not use IMEs as effectively as they could, in part because they do not rely on them to determine the causal connection between the accident and the injury, and in part because they do not provide the examiner with clinical data and accident information. Although the AIB contends that carriers provide examiners with information to the extent that it is available, the AG argues that insurers should make consistent efforts to collect and transmit appropriate information to the examiner before the IME. The SRB comments that the AIB's assertion that the industry's use of IMEs is appropriate is based on ten-year old data, which may no longer be relevant.

Medical fee review software is, according to the AG, an effective, but underutilized cost containment tool that, even if performed less frequently than IMEs, produces far more savings per claim. His witness testified on circumstances when such reviews should be initiated, and on the materials that should be provided to the reviewer in order to determine the relationship between the injury and the accident. The SRB questions both the accuracy of the reported data and the large year-to-year changes in savings from medical audits, arguing that if data showing decreased savings is accurate, it demonstrates insurers' lack of due diligence in meeting their obligations.

The SRB points out that PPOs are an effective cost containment tool for companies that utilize them, questioning the rationale for the Commerce Insurance company's failure to use a PPO. Similarly, the AG notes that staff nurses help claims examiners interpret medical records and address issues related to medical treatment, but that three of the five representative companies do not employ such personnel.

The AIB's position that differences in the use of these techniques among companies are to be expected is insufficient to justify a conclusion that companies should therefore not be expected to utilize techniques that demonstrably result in cost savings. It is reasonable to expect companies to make decisions on the use of these tested techniques based on an analysis of the costs and savings for that particular company. On this record, we find problematic the industry's failure to use medical fee review software consistently. Unlike establishment of a PPO, utilization of this technique should not involve costs that cannot be easily and immediately measured against savings.

The AG's comments on the use of IMEs to a large extent address ways to improve the effectiveness of the process rather than the frequency of use. It is axiomatic that clinical records should be made available to an examiner who is expected to comment on the need for further treatment, and that access to accident records is appropriate if the examiner is asked to form an opinion on the relationship between the injury and the accident. What is not apparent from the record is the customary scope of IMEs. For that reason, we form no conclusion as to the whether, in general, companies maximize the benefits of conducting IMEs. We recommend, however, that companies consider implementing procedures that are appropriately responsive to the concerns expressed by the AG's witness.

The IFB and the CIFI Task Forces are both dedicated to investigating and prosecuting fraudulent insurance claims, with the goal of reducing fraud in the system. The SRB and AG argue that testimony from the company witnesses demonstrates that they do not report all potentially fraudulent transactions to the IFB, even though the statute creating the IFB requires them to do so. It is apparent from the record that companies do not employ uniform practices with regard to fraudulent claim referrals. It is essential, to control fraud, for companies to take appropriate steps, once a claim is considered suspicious, to develop a claim file and to refer it appropriately. We are persuaded that this is an issue where all companies should follow uniform standards.

The development of CIFI task forces raises two separate questions: 1) the level of participation that it is reasonable to expect of insurers; and 2) the extent to which insurers have considered the work of the task forces as a platform on which to evaluate their current claim handling procedures and to make appropriate revisions to improve the

identification of fraudulent claims in all parts of the state. On the first issue, even though the AG argues that insurers are making inadequate efforts to encourage expansion of the CIFI programs, no party has argued that specific obligations have been imposed on insurers to fund the CIFI Task Forces or that they are expected to participate at a particular level. No evidence suggests that insurers have rejected requests for assistance from the CIFI Task Forces.

The second issue, however, raises concerns about the industry's responsiveness to an initiative that has uncovered a significant amount of fraud in the system. The SRB questions why, given the significant amount of fraud that has been removed from the system through the CIFI Task Forces, companies were not able to detect and eliminate more fraudulent claims. It considers that the dramatic decrease in losses is evidence that company cost containment programs did not effectively address fraud. There is no evidence that the insurers have independently applied the criteria used to determine the suitability of establishment of a task force in their claims handling procedures, or have considered whether the adoption of other facets of the task force approach would improve their claim practices. Even though three years have passed since the establishment of the first CIFI Task Force, the company witnesses testified that their claims procedures have not changed.

Particularly in a jurisdiction with an accident rate that is historically higher than other states, programs targeted toward reduction of that rate may prove useful. We are persuaded that it is reasonable to view initiatives undertaken as preventive measures as cost containment programs. We are mindful, however, that it is virtually impossible to quantify savings that are linked to such programs, just as it proved difficult in the past to estimate savings resulting from changes in automotive safety features, such as high brake lights. We encourage insurers to continue to utilize programs to educate policyholders, as well as the public in general, about issues such as the benefits of using occupant restraints, including child booster seats, the dangers of driving while impaired by drugs or alcohol and engaging in driving behavior, such as tailgating, that increase the risk of accident or injury. Further, we expect that insurers will make every effort to cooperate with local officials as needed on projects such as the identification of hazardous intersections.

However, based on this record, we decline to make any rate adjustment based on insurers' alleged failure to implement adequate public education programs.

On this record, we find that the AIB's filing is deficient under the statutory and regulatory standards. We further conclude, as we did last year, that insurers' cost and expense containment efforts are not adequate and reasonable. We remain troubled that the screening and investigative procedures that insurers follow, which were inadequate to identify and prevent payment of fraudulent claims, have not changed significantly since the CIFI Task Forces began operations and that no new programs have been initiated. The data also indicate that insurers are not taking proactive approaches to using techniques, such as medical bill reviews, that have been demonstrated to save claim costs.

Based on those conclusions, we find that it is appropriate to adjust the otherwise determined rate, but we will not adopt the AG's recommendation for an adjustment to all coverages. As we did in the *Decision on 2006 Rates*, we find that it is appropriate to adjust PIP and bodily injury loss pure premiums, for both basic and increased limits, downward by one percent. For these coverages, increased use of techniques and programs that have been demonstrated to achieve claim savings and more rigorous efforts to identify fraudulent claims may reasonably be expected to reduce losses. Because two of the adjustments we order are to mandatory coverages, all policyholders in Massachusetts will benefit.

V. MAIN RATE

The Main Rate portion of the proceeding to fix and establish rates addresses a wide range of issues related to losses and loss adjustment expenses, company expenses, rate relativities, factors such as the SDIP reconciliation, the insolvency assessment and motorcycle rates. This year, the parties dispute four aspects of the AIB's filing: 1) basic limits loss development factors (LDFs); 2) loss pure premium trend factors; 3) inclusion of contingent commissions and override commissions (competitive commissions) in the company expenses to be compensated in the rates; 4) proposals to increase the multi-car discount and the methodology for off-balancing that discount; and 5) a proposed new continuous insurance coverage discount. In addition to addressing each of those issues, our decision comments on two other matters raised in the course of this hearing:

1) possible changes to the method of calculating model year/symbol relativities; and 2) changes to the discounts for anti-theft devices.

The SRB and the AG do not challenge the AIB's recommendations on the following aspects of the rates: 1) the 2005 loss pure premium; 2) claims adjustment expense factors; 3) the company expense pure premium and trend factor; 4) increased limits factors, 5) the SDIP reconciliation and the MIIF assessment; 6) motorcycle rates; and 7) substitute transportation. We therefore adopt the AIB's recommendations on these matters. Aspects of class/territory relativities were resolved in a stipulation approved on November 14 that was entered both in the Proceeding to Approve Territorial Relativities for 2007, Docket No. R2006-03 and in the Main Rate proceeding.

A. LOSSES

Ratesetting relies on loss data from previous accident years. Because the number of claims and the final value of each claim that is submitted in a given policy year may not be known for years to come, that final value is estimated using a methodology that "develops" losses to their ultimate value. For 2007 rates, calculation of the loss pure premium for AY 2005, the most recent complete year, provides the starting point from which to develop ultimate losses. Loss data changes over time, as more recent information on claims and claim payments becomes available. Loss development involves the review of loss reports at different reporting periods in order to determine changes from one report to the next. See, e.g., *Decision on 1999 Rates* at 7-8 (describing loss report layout and loss development). Once losses are projected by calculating the loss pure premium and loss development factor for each coverage, they are trended forward to estimate what losses may be expected for 2007.

For 2007 Rates, the parties do not dispute the LDFs produced by application of the CDM two-year averaging methodology to loss data for property coverages, including property damage liability (1.0425), collision (0.9102), limited collision (0.5835), and comprehensive (1.0127). We therefore adopt these factors. At issue are the loss development factors ("LDFs") that for coverages A-1/B, A-2 (PIP), U-1 (Uninsured motorist) and MedPay.

1. Loss Pure Premium

Loss development begins with initial establishment of the loss pure premium for the base year, in this case 2005. That pure premium is calculated based on industry wide data on reported losses and case reserves for a certain period of time. The parties do not dispute the 2005 loss pure premium to be utilized in setting 2007 Rates, as calculated by the AIB. Accordingly, that value is hereby accepted as the starting point for the loss development process.

2. Basic Limits Loss Development Factors

Historically, the CDM to calculate LDFs for the basic limits coverages has been to average the two most recent age-to-age development factors for incurred losses, generally giving 50 percent weight applied to each.[46] Last year, the Commissioner determined that a departure from the loss development CDM was required because of extraordinary changes in the loss results for injury coverages in certain cities and towns; those changes were attributed to the success of Community Insurance Fraud Initiative ("CIFI") Task Forces launched in 2004, particularly for claims in the residual market.[47] Specifically, the *Decision on 2006 Rates* stated:

> The Accident Year 2004 data produces difficulty in accurately predicting losses because of its rather extreme nature. One of our goals in ratesetting is to smooth out data from these extreme years such that we don't have erratic spikes and dips in rates that ultimately prove to be one-time aberrations.....
>
> While we are mindful that the method introduced by the SRB is complicated and not as easily reproduced as the AIB's modified CDM version, we are nonetheless persuaded that the SRB's method is the most thorough, accurate and superior methodology under these unusual circumstances due to the high uncertainty surrounding the Accident Year 2004 data. We adopt this method only for this rate year, as we acknowledge the difficulty in accurately reproducing it in the future. Accordingly, we adopt the SRB's LDFs with regard to A-1/B, A-2, U-1 and PDL coverages for this rate year only, making no change to the CDM.

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[46] In recent years, the Commissioner has at times applied company adjustment to the LDFs to account for individual company reserving practices and changes in company market shares. The AIB and the AG do not make such adjustments this year; the SRB did perform a calculation of the effect of company mix on LDFs.

[47] CIFI Task Forces were launched in Boston, Brockton, Lowell, Lynn, Springfield and Holyoke after a joint task force formed in 2003 made progress fighting fraud in Lawrence. Randolph and Chelsea were added in late 2005.

This year, the AIB and the AG advocate different methodologies for deriving LDFs for these coverages. The SRB makes no specific recommendations, but generally concurs with the reasonableness of the AIB's recommendations. Because the data from AY 2005, as they did for AY 2004, show significant improvement in losses for certain injury claims, we must again determine how best to interpret and use this data to reliably project future losses, bearing in mind that our goals are to set a rate that is fair and accurate, and avoids extreme spikes and dips from year to year.

The AIB derived age-to-ultimate LDFs for basic limit coverages for the bodily injury (A-1/B) and uninsured motorists' coverage (U-1), (A-2), and $5,000 medical payments (D) using the following steps:

1. calculating age-to-age development factors using both incurred and paid data;

2. selecting incurred and paid data age-to-age factors using a two-year average of the current and first prior factors in order to be responsive to the most recent experience available;

3. selecting incurred and paid age-to-age factors using an average of the five most recent factors, excluding the highest and lowest factors;

4. Compiling four sets of age-to-age ultimate development factors from these factors and using them to develop four estimates of the ultimate loss for each coverage;

5. Taking the average of the four ultimate loss estimates as the best estimate for each coverage; and

6. Deriving the selected age-to-ultimate factors as the ratio of the ultimate loss estimate divided by the corresponding reported incurred losses.

Based on this methodology, the AIB recommends LDFs of 0.9811 for A1-B, 0.6166 for PIP, 0.9683 for U-1 and 1.3447 for MedPay.

The AG, in accordance with the CDM, averaged the two most recent loss development diagonals of incurred loss data, without adjustments for market share changes or changes in company reserving practices. He recommends LDFs of 0.9638 for A1-B, 0.6098 for PIP, 1.0057 for uninsured motorist and 1.3562 for MedPay.

The SRB did not submit for consideration its own LDFs for the injury coverages, but SRB compared the AIB results with the results produced by the CDM. It analyzed various factors that could impact the ultimate value of Accident Year 2005 losses for bodily injury, PIP and uninsured motorist coverages to derive its best estimate of the appropriate development factors. This undertaking yielded results which were substantially similar to the factors derived by the AIB. Consequently, without endorsing the AIB's methodology, the SRB concluded that the AIB's factors were reasonable and appropriate for setting 2007 rates.

The AIB argues that its multi-part methodology produces stable LDFs and protects the industry from the results of employing a methodology that overweights extreme values, such as the 2005 loss results. Use of the CDM, it asserts, gives too much weight to the most recent diagonal which it characterizes as biased low. The AIB points out, in its filing, in that after 15 months development, the change in 2005 pure premium is -10.6% for bodily injury, -12.5% for PIP and -18.1% for U-1. It asserts that, when compared to historic pure premium data, these values qualify as outliers according to the two standard deviation test, adopted by the Commissioner in the *Decision on 2004 Rates*. Consequently, the AIB believes that it is important that the most recent diagonal for these coverages not be given excessive weight.

The AIB notes that the SRB's analysis of recent development factors focuses on differences in loss development in municipalities with CIFI Task Forces and those without such task forces. The results of that analysis, the AIB argues, show that claims in the pipeline when the CIFI Task Forces were initiated developed downwards, on average, more than claims from other communities. Pointing out that opportunistic claims cannot be removed from the system twice, the AIB argues that these results support its contention that the most recent diagonal for the injury coverages is biased low. Further, it contends, differences in the development of high and low severity claims will alter future development patterns.

The AIB argues that its methodology utilizes all available data to estimate ultimate losses for more recent accident years and attempts to minimize potential distortions, balance the stability of loss projections and increase the responsiveness to recent changes

in the underlying data. Its approach uses (1) incurred and paid ratemaking data to establish a broad base to estimate ultimate losses, and (2) a development factor weighting method to provide both a measure of responsiveness and protection from extreme values that may result during this period of rapidly changing experience. The AIB believes that its calculations give appropriate weight to the most recent diagonal, while the CDM gives it excessive weight.

The AG argues that the AIB has not met its burden of showing that its proposed new methodology is superior to the CDM.[48] Characterizing it as the AIB's attempt to reproduce the method proposed by the SRB in 2005, the AG points out that that methodology produced an estimate of the 2004 data point that was five percent higher than the AIB's current estimate, and seven percent higher than the value resulting from application of the CDM. The AG argues that the methodology utilized by the Commissioner in 2006 provided an inaccurate and inflated estimate of loss development for 2006 rates, and that in hindsight, the CDM actually provided a more accurate estimate of the losses as they have developed to date. In comparison, the AG notes that the value derived by the CDM for 2006 rates, which analyzed the 2004 data point, was only two cents off of the AIB's current estimate for that data point ($159.90 versus $159.92) and only two percent higher than the current CDM estimate of the 2004 data point.[49] Because the methodology that the AIB now proposes to use in this proceeding produced inaccurate results last year, he asserts, it is unreasonable and should be rejected.

The AG also argues that development factors primarily affect the most recent data point, noting that data for earlier years is sufficiently complete that further development is typically immaterial. Therefore, he asserts, the AIB's five-year average, excluding the highest and lowest values ("5 Year ex Hi/Lo method"), is improper, and produces values

[48] In his brief, the AG states that, "The Commissioner should also use the CDM loss development for the Medical Payments and Uninsured Motorists coverages. These are small coverages, and the impact of the different methods is slight."

[49] The AG points out that one of the justifications for the method used for 2006 rates was to bring paid data into the calculation. Citing to the AIB filing, he observes that "the paid development indication in the 2006 proceeding was vastly inaccurate" whereas the incurred, i.e. the CDM, estimate was almost exact based on the AIB's current estimate of the 2006 data point. He concludes, therefore, that the inclusion of paid data contributed to the inaccuracy of the 2006 LDF method.

that exceed those produced by the CDM.[50] The AG points out that it does not reflect a downward trend in loss development and, for most coverages, excludes the latest data point because it is the lowest in the series. Further, he argues, the method is inconsistent with the AIB's position on changes in loss development, giving too much weight to data for periods before the shift in claims distribution. Concerns for stability, the AG contends, do not offset the use of incorrect development factors. Use of the most current data, he argues, will provide the best estimate of future loss development.

As noted above, the SRB did not make independent recommendations but analyzed the reasonableness of the AIB's method and results for bodily injury, PIP and U-1 coverages.[51] The SRB comments that the AIB's LDF methodology is based on the shift in distribution of claim severities, because of the CIFI Task Forces, and effect of that shift on future expected development patterns. The development factors that the SRB calculated were based on its consideration of three elements that it thought would affect ultimate losses for the injury coverage: 1) differences in loss development patterns for CIF and non-CIFI communities from 15-24 months; 2) the effect of company mix on the age-to-ultimate development factor for the industry as a whole; and 3) the extent to which individual company claims reserving practices affect that factor for the industry as a whole. The company mix adjustment included both paid and incurred losses; the paid data is intended to be responsive to changes in loss development.

The SRB analysis found that the loss development factors for CIFI cities at 15-24 months were both "considerably and consistently" lower than for non-CIFI communities, fact that, it notes, complicates its previous approach to account for changes in company mix and claims practices "because the effect of CIFIs on individual company results varies significantly, increasing the risk that estimates of ultimate losses using two-year average age-to-ultimate factors for incurred losses will be distorted for some companies."[52] It therefore calculated separately two-year average ultimate incurred losses

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[50] The AG states that the CDM produces an ultimate 2005 value of approximately $574 M for BI, while the 5 Year ex Hi/Lo method produces ultimate estimates of about $586 M (incurred) and $614 M (paid). The AG characterizes those figures are unreasonably high, noting that they, respectively, exceed the CDM by $12 Million and 40 Million.

[51] It accepted the AIB's recommended LDF for Medpay.

[52] In the Decision on 2005 Rates, the SRB "looked at accident year histories for both the industry as a whole and for individual companies, and concluded that consolidation has affected relative case reserve

for the six largest companies and for the remainder of the industry in the aggregate. It also amended the company mix adjustment adopted by the Commissioner in previous proceedings to include paid losses, citing to testimony of its witness, Ms. Blank and Mr. Scully that it is appropriate to use paid data to develop losses.

The results of the SRB's calculations were LDFs of .9664 for bodily injury coverages, .6226 for PIP coverage, and .9527 for uninsured motorist coverage. It points out that, for PIP, the result it produces is almost identical to the result of the two-year average of age-to-age development factors. The similarity of the SRB's results to the AIB's recommendations led the SRB to conclude that the AIB's recommendations are reasonable. Although not utilized by the SRB in its filing, Ms. Blank acknowledged during the hearing that the AG's recommended LDF for bodily injury coverage (0.9638) would be "as reasonable" as the AIB's recommendation insofar as the factor fell within two percent of Ms. Blank's own calculation. However, the AG's PIP loss development factor was more than two percent lower than the SRB's factor, and the AG's U-1 factor was more than two percent higher than the SRB's

The CDM for determining LDFs for the various coverages available in the standard automobile insurance policy is the averaging of the last two sets of reported data on loss development. Adjustments have sometimes been made to the reported data to reflect changes in company reserving practices and the mix of company business. The weights given to the values to be averaged have also been adjusted on occasion. In 2006, in light of data showing a steep decline in 2004 losses, the Commissioner utilized a complex process recommended by the SRB to set the LDFs for the four bodily injury coverages (bodily injury, PIP, uninsured motorist, and MedPay) also at issue in this proceeding. The *Decision on 2006 Rates* acknowledged that this method was adopted only for that rate year, and did not change the CDM.

This year, in response to a continued decline in 2005 losses, the AIB has, in essence, revived the methodology used in the *Decision on 2006 Rates*. The AG utilizes

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adequacy in recent years. It noted that the principal reason for its results is the increase in the total market share of the Commerce Insurance Company. The SRB's approach was to add the 50/50 weighted ultimate loss levels for each company, as calculated in the Commissioner's ratemaking database, and to estimate the all-industry first report to ultimate factor as the ratio of the totaled "ultimate" to the total first report losses." *Id.* at page 7-8.

the CDM, without adjustments for company mix or reserving practices. The SRB, after performing calculations comparable to those used to adjust loss development data in the past, declines to adopt the AIB's methodology but concludes that its recommendations are reasonable.

It is apparent from the analysis of current reported loss development that the methodology employed last year produced ultimate values for 2004 losses that exceed what the data now show as correct. The AG notes that application of the CDM would have produced, for the bodily injury development factor an ultimate value that is virtually identical to that calculated by the AIB this year. We are not persuaded, on this record, that it is appropriate to adopt, to set rates for 2007, a methodology that has been demonstrated to produce inaccurate results. Because SRB did not present the results of its calculations as recommendations this year, we do not have the benefit, unlike in past proceedings, of an evidentiary record that addresses the appropriateness of its adjustments to the loss development data. We have concluded then, that it is appropriate to adopt LDFs for use in calculating the 2007 rates that are produced by applying the CDM to industry data. That methodology averages the last two diagonals, giving equal weight to each value.

3. Loss Pure Premium Trend Factors

Loss trending is the process by which ultimate loss pure premiums developed for the latest experience period are trended forward to the average accident date in policy year 2007. The estimate of losses that are likely in a given year is factored in as part of the ultimate rate determination for that year. It is well recognized that predicting pure premium levels almost two years into the future is challenging. Careful evaluation of the evidence is required in order to reach an accurate result. For loss trending purposes, coverages may be grouped together or considered separately.

The parties' loss trend recommendations have historically been developed using one of three methodologies: 1) linear regressions on data sets covering time periods of varying lengths; 2) averages of data sets, also representing time periods of different lengths; and 3) judgment. In addition to performing linear regressions or averaging on data sets of varying length, parties sometimes omit a particular data point or substitute a "dummy variable" on the grounds that the data point is anomalous and that its use would

skew the result. Because loss trending is done separately for the various coverages, the parties may in a given year apply one or more of these methodologies, choosing the one that they deem most appropriate for each particular coverage.

This year the parties dispute trend factors for all coverages except Uninsured Motorist ("UM"). For UM, all parties agree on a unity trend of 1.000, and we adopt their unanimous recommendation. The key issue this year, as last year, is the optimal manner in which to evaluate, in determining trend factors, the reductions in losses that occurred in 2004 and 2005. The parties disagree on the interpretation of the data and its proper use in forward trending.

a) A-1/B("BI") and A-2 ("PIP") Coverages

The AIB, based on judgment, recommends a loss pure premium trend factor of 1.0000 for both the A-1/B, ("BI") and A-2, ("PIP") coverages. That recommendation, it states, is based upon a review of claims ratios at both the statewide and territory levels, a review of frequency and severity results at the territory level, a multivariate trend analysis, a review of the current claims environment in Community Insurance Fraud Initiative ("CIFI") communities, and consideration of what the AIB terms the "halo effect" beyond the CIFI communities. This combined approach to the data, the AIB asserts, shows that the current BI and PIP claims environment has changed substantially from Accident Year ("AY") 2003 to AY2005. It argues that its BI and PIP loss trends properly recognize that it is highly likely that a turning point in the loss experience will be reached some time between the experience period (January 1, 2005 to December 31, 2005) and the policy (exposure) period (April 1, 2007 to March 31, 2009).[53]

As reasons for this outcome, the AIB posits that 1) BI/PDL and PIP/PDL claims ratios have reached historic lows in the last three years and history indicates that the limit on improvements is likely to be near at hand; 2) the best, earliest data for CIFI improvements, relating to Lawrence, Haverhill and Methuen, show that those improvements dried up within one to two years; and 3) it is rational, based on the experience of Randolph and Chelsea, to expect that future CIFI-related improvements will

[53] The AIB refers to the "policy period" as the last date on which an accident can occur that will be covered by a policy issued during the period governed by this rate decision. A better term might be "exposure period."

be less than what has been observed to date. The AIB argues that a unity trend factor reflects the potential for continued improvement while also recognizing that a turning point has been reached.

The AIB points out that BI severities began to decline in 1995, but since 2003 have begun to increase in almost all territories. It asserts that this increase in severities is consistent with a statewide shift in claims distribution away from smaller, opportunistic strain and sprain claims to larger, more serious claims and, furthermore, is consistent with the goal of the CIFI task forces to eliminate organized and opportunistic claims, which tend to be of low severity. The AIB argues that data show that improvements in BI and PIP claims have occurred not only in communities with CIFI programs, but also in surrounding towns, a purported phenomenon it labels the "halo effect." The AIB argues, however, that improvements due to CIFI activities are a one-time, non-recurring event, after which claims will revert to a long term trend pattern, which should be consistent with historical patterns. It claims that the loss data already show a slow-down in improvements in Lawrence, Methuen and Haverhill. The AIB states that the expected pattern for BI claims is short periods of upward and downward changes over time, resulting in a relatively flat longer-term frequency. The combination of this relatively flat longer-term frequency pattern and the expectation of a slightly increasing severity, it argues, anticipates a turning point in the experience. The AIB contends that its trend selection is consistent with its analysis of the overall pattern.

The SRB, contending that it is inappropriate in this proceeding to use standard regression techniques to project future BI and PIP costs, judgmentally selected loss pure premium trend factors of 1.0640 for BI coverage and 1.0853 for PIP coverage. These values equal the AY2004 loss pure premium plus one-third of the improvement currently indicated between 2004 and 2005. The SRB argues that its approach acknowledges that the 2005 data point for BI is a statistical outlier, that the 2005 point for PIP, while not technically an outlier, is the lowest value in 16 years, and that both represent losses that are in the first phases of development.[54] The SRB asserts that its recommendation provides a realistic expectation of future cost changes that are likely to affect the private

[54] In the current BI and PIP claims environment, the SRB argues, it is inappropriate to use the mean squared error methodology to develop loss trends for those coverages.

passenger automobile insurance market. It argues that its trend recommendations are reasonable, conservative, responsibly recognize the improvements to losses in recent years, and also reflect the need for adequacy in the rates.

The AG recommends loss pure premium trend factors of 0.9277 for BI and 0.9592 for PIP based on a series of regressions regarding pure premium, frequency and severity. He argues that the Commissioner has historically relied on regression methodologies to establish BI and PIP loss trends. His approach this year involved performing simple regressions on pure premium, frequency and severity, simple regressions on CIFI/non-CIFI pure premium, frequency and severity, and multiple regressions against time and claims ratio and quarterly rolling regressions. He asserts that all simple regressions for BI show a decrease in pure premium and frequency, with the more current data showing the steepest declines, and also show a decline in PIP pure premium and frequency and severity. He argues that the data, the statistical methods and the causative factors all show that the BI losses and claims frequencies are trending down and that the 2007 values will be lower than the 2005 values. The AG also argues that 2007 PIP losses will be lower than 2005 losses based on the data, asserting that virtually all regressions and causative factors show that PIP losses and frequencies are trending down. He contends that his recommendations are supported by the fact that, in many territories with CIFI programs that were implemented in 2004, the reduction in 2005 BI frequencies was greater than that from 2004. The AG asserts that nothing demonstrates that these values are trending up.

In addition to simple regressions on statewide data, the AG performed four, five and six-year simple regressions on pure premiums and frequency and severity using statewide data but excluding data from communities in which CIFI programs operate ("non-CIFI data"). For both BI and PIP, the regressions on the non-CIFI data produce higher projections than the simple linear regressions, according to the AG. The intent of performing the non-CIFI loss projections was to adjust the data by eliminating the direct impact of the CIFI program on trend so as to obtain a trend primarily affected by factors other than CIFI fraud reduction.

The AG asserts that the data show that personal injury claims per accident for both BI and PIP are twice as high in non-CIFI cities, which he declares is evidence that frequency and loss decreases between 2003 and 2005 in non-CIFI cities were not the

result of fraud reduction. The AG disputes the existence of a CIFI "halo effect" based on its four, five and six-year simple regressions on pure premiums, frequency and severity using statewide data but excluding data from communities in which CIFI programs operate ("non-CIFI data").

The AG ultimately selected an average of the four through six-year non-CIFI linear projections applied to the total market with the four through six-year multiple regressions against time and count ratios for his frequency, severity and pure premium projections. The AG states that his data show that the reductions in 2004 and 2005 losses are largely the result of decreases in frequency, arguing that this demonstrates the importance, in this proceeding, of separately projecting frequency and severity. He argues that, because he alone makes such separate frequency projections, his trending methodology is therefore superior to the methodologies used by other parties and should be adopted by the Commissioner. The AG urges the Commissioner to consider six-month data from 2006 in his supplemental filing; he argues that these data continue to show a downward trend.

In addition to the CIFI programs which, the AG contends, will continue to have a substantial effect on BI and PIP losses, a number of other factors will contribute to the reduction of losses. Some of those factors, the AG notes, are countrywide while others are specific to Massachusetts. He argues that increased attention to drunk driving in Massachusetts and higher gasoline prices are factors that will reduce injury losses in 2006 and 2007 and that the aging of the driving population, improvements in vehicle safety, and increased seatbelt use will improve loss experience. He asserts that undisputed data demonstrate that declines have occurred consistently over a four-year period. According to the AG, the duration and magnitude of the declines show that they are not random and that there is no uncertainty in the direction of the movement; he predicts that losses will decrease in the next policy year. He reiterates his position that the six-month accident data for 2006 show loss declines in all coverages.

The SRB opposes the AIB's recommended unity trend, arguing that it primarily reflects the AIB's conclusion that the loss improvements generated by the CIFI programs are time-limited. It agrees that the data show a leveling off between 2004 and 2005 of claim frequency counts in Lawrence, where the first CIFI program began in 2003, and in

the surrounding communities of Methuen and Haverhill, but criticizes the AIB's proposed trend on the ground that, by putting too much emphasis on the current data points, it will lead to inadequate rates. The SRB further argues that the AIB's trend factor presents a significant risk of error that may affect insurers' decisions to offer rate deviations or discounts.[55]

The AG argues that the AIB's unity trend factors for BI and PIP are based on the incorrect premises that there is no indication of a potential for further savings between the 2005 experience year and the 2007 rate year, and that the improvement in claims attributable to reductions in organized claims and deterred opportunistic claiming behavior is a one-time, non-recurring event. He asserts that, to the contrary, the causative factors pushing BI and PIP losses down in the historical data will continue to reduce losses in 2006 and 2007. Furthermore, the AG criticizes the AIB's failure to make frequency projections for BI and PIP when, he asserts, the reductions in 2004 and 2005 losses are largely the result of decreases in frequency.

The AG argues that the SRB's high positive trends for BI and PIP have no evidentiary support in the record and will provide the insurance companies with even more revenue than the companies believe they need to cover their losses. He criticizes the SRB for, like the AIB, not making separate frequency projections for BI and PIP. He asserts that it is improper for the SRB to set 2007 rates higher in order to prevent increases after 2007, and that the SRB improperly considered discounts in determining its trend recommendations. The AG points out that the SRB agrees that losses may continue to decrease, even though at a slower rate, an admission that, he argues, is consistent with the AG's more moderate downward trend, but is inconsistent with the SRB's projected substantial increase. He further asserts that the factors causing the decrease in losses in 2004 and 2005 are not cyclical, as the SRB argues, and that, even if they were cyclical, the cycle does not support the SRB's upward trend. In addition, the AG states that the SRB's recommendations are based on judgment, and are not supported by any calculational methodology.

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[55] The SRB does not argue that its higher trend recommendation would enable companies to offer discounts.

The AIB and SRB urge rejection of the AG’s approach to trending BI and PIP, arguing that he inappropriately constructs trend lines across data that contain major discontinuities, such as those resulting from the CIFI initiatives, described by the AIB as a “sea change” in claims. The AIB asserts that these loss reductions are essentially one-time events similar to those that result from law or regulatory changes. Performing regressions across such discontinuous data confuses one-time changes with trends, contends the AIB, and improperly turns a one-time change into a prediction of continued future changes. Both the AIB and the SRB argue that in these circumstances, the use of multiple regressions over the same data points does not solve the problem.

The AIB also asserts that the AG has taken inconsistent positions in rate hearings with regard to his BI and PIP recommendations. It argues that the AG agrees that it would be improper to perform regressions across data that reflects a law change, testifying in this proceeding that the CIFI initiative is not necessarily akin to a law change. However, the AIB contends, the AG's witness testified in last year’s rate case that the CIFI initiative is analogous to a reform law change.

The AIB asserts that the AG inconsistently accepts the existence of the “halo effect” for Haverhill and Methuen, but assumes no “halo effect” around the other CIFI towns. It argues that the data plainly show a CIFI “halo effect.” According to the AIB, “[b]y applying trends derived from non-CIFI towns only to all Mass data (CIFI plus non-CIFI), the AG assumes that the decreases observed in the non-CIFI towns will be repeated in the future.” (AIB’s brief at 36). The AIB contends that this is impossible if the “halo effect” is non-zero. Furthermore, it asserts that the AG’s anti-“halo” assertion is derived from immature, six-month data. Finally, the AIB alleges that the factors other than CIFI to which the AG attributes improvements in the non-CIFI Massachusetts data, such as demographic data on aging and gasoline price projections is “an odd hodge-podge of the irrelevant and the erroneous.”

The AIB attacks the AG’s use of multivariate regressions, asserting that, in his time and claim count regressions for BI and PIP, the AG often uses the same quantity (BI and PIP claim frequencies) in both the independent and dependent variables. According to the AIB, regressing a variable upon itself tends to produce an erroneously high R-squared value; thus it characterizes the AG’s apparently high R-squared values and his

apparently high adjusted R-squared values as "spurious and erroneous."[56] The AIB comments that the AG committed an "obvious statistical error." The AIB also complains that the AG claims to have no opinion concerning when the reductions in losses will cease, although his BI and PIP regression methodologies assume that the reductions will not cease.

Additionally, the AIB claims that the AG discounts much of his own analysis by claiming that he did not rely upon it and that it did not even color his judgment, but rather only informed his judgment. The AIB scoffs at the AG's claims that he did not rely on any of his numerous separate frequency and severity regressions, or on any of his 18 snowfall regressions, in concluding that claims disparities for certain years can be accounted for by severe winter weather. Furthermore, the AIB rebukes the AG for employing different methodologies, reflecting quite different assumptions about snowfall effects and how to measure them, in his filings for 2005, 2006 and 2007. The AIB also dismisses the AG's claim not to have relied on four BI regressions and four PIP regressions for comparing 2006 to 2007, while relying on those same regressions for comparing 2005 to 2006.

The SRB argues that the AG ignores the need for rate adequacy and overemphasizes the most current data by performing a series of regressions that trend across the 2003 through 2005 data points. In the SRB's view, the AG's approach values responsiveness but ignores stability and gives too much weight to the recent data points. It asserts that his methodology does not reflect a shift in the trend curve and also fails to consider that the 2005 data points for BI and PIP are "statistically extreme" and in the earliest phases of development. The SRB argues that using a linear regression over a period of steep decline produces an inaccurate and inadequate forecast. Further criticizing the AG's methodology, the SRB asserts that it is actuarially inappropriate to use regressions that are made on the same data with different time periods, and that this approach violates an actuary's responsibility to understand what constitutes a proper experience period.

B) MEDICAL PAYMENTS COVERAGE ("MEDPAY")

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[56] R-squared, also known as the coefficient of determination (R), represents the proportion of variation in the dependent variable that has been explained or accounted for by the regression line. *Decision on 2005 Rates*.

The AIB, based on judgment, recommends a MedPay loss trend factor of 1.0850. It claims that MedPay severities generally have been increasing since 1997, and that since 2003 MedPay frequencies have started to increase, after a period of prior declines. It contends that the long term decreases in MedPay loss pure premiums from 1997 to 2003 have now ceased, and that the loss pure premiums have increased from 2003 to 2005. In the AIB's view, the MedPay loss data in the record shows a turning point for MedPay losses in 2003. The SRB concurs with the AIB's trend recommendation on the ground that its assumptions are reasonable.

The AG, based on judgment, recommends a unity trend of 1.000 for MedPay. He claims that the data show a general downward movement since 1997, although the last two data points have been slight increases. Regressions on pure premium and frequency/severity, the AG argues, all show downward trends. However, he asserts, the SRB and the AIB ignore the regressions and rely only on the increases between 2003 and 2005 to project an upward trend. Because no calculation produces an upward trend, the AG argues that the AIB's recommendation is unreasonable. His unity trend, he asserts, is reasonable.

The AIB asserts that the AG's recommendation ignores the fact that MedPay severities have been increasing both over the long term and the short term, and that MedPay frequencies and MedPay loss pure premiums are both increasing now. It urges rejection of the AG's recommendation because he fails to recognize that a turning point has been reached.

c) Property Damage Liability Coverage (PDL)

The AIB recommends a trend factor of 1.0380 for property damage liability coverage ("PDL"), based on a six-year regression, which the AIB characterizes as the CDM for PDL. It claims that PDL coverage has a relatively stable and smoothly increasing severity, but that frequencies are less stable than severities. The AIB points out that the PDL data show a notable frequency-driven spike in 1996 and a drop in 2004. It argues that, while the frequency increases in 1996 are generally understood to have occurred due to severe winter weather, the 2004 decreases cannot be attributed entirely to weather. The AIB points to the CIFI program in Lawrence to account for a decrease in frequency there. The AIB claims that its territory-specific analysis has demonstrated for

both PDL and Collision that recent frequency drops were caused in part by CIFI, and also must include in part a "halo effect" beyond CIFI towns. It therefore urges that these recent frequency drops should properly be considered non-recurring events.

The SRB agrees with the AIB's recommended trend factor of 1.0380 for PDL coverage. It reached the identical result, based upon a six-point regression, selected after it performed four, five and six-point linear regressions on the most recent pure premium points. It notes that the six-point progression, which produces the 1.0380- trend factor, also has the smallest mean-squared error ("MSE").[57] The SRB notes that its approach is consistent with the trending methodology approved by the Commissioner in the *Decision on 2006 Rates*.

The AG judgmentally selected a trend factor of 1.0077 for PDL coverage. He performed multiple regressions of four, five and six-year simple linear regressions and, to test the results, performed regressions that include snowfall as a variable, simple linear regressions on quarters 2 through 4 and quarterly rolling regressions. The AG contends that only the four-year multiple regressions have a good fit. The four-year regression is most responsive to the recent data, according to the AG, and projects a moderate downward trend, while the five and six-year regressions show upward trends. As the five and six year regressions show upward trends, the AG averaged the three regressions to permit the projection to reflect both the downward trend of the four year data and the less responsive longer term trends.

The AG argues that the property coverages are more sensitive to weather than are injury coverages, that higher snowfall generally increases property losses, and therefore he performed multiple regressions, adding snowfall data, to check on the simple linear results. These multiple regressions, he contends, show reversals in that the five and six-year multiple regressions are similar to the simple regressions, while the four-year regression produces a lower indication. The AG asserts that the simple regressions reflect a weak trend in the historical data, and that his judgmental recommendation is within the range of data. The AG argues that the narrow range of data, the weakness of the trend indications, the reversal of the four and six-year trends, the results of multiple regressions,

[57] In basic terms, the MSE is the average of the "squared difference of the fitted value from the actual value." *Decision on 2005 Rates*.

the second through fourth quarter regressions and the rolling quarterly regression all show that a modest increase in this trend is reasonable.

The AIB asserts that the AG acted arbitrarily when he averaged the results of three regressions, despite the "obvious error" that this approach weighted more recent experience more heavily than older experience by an implicit weighting scheme. The AIB argues that it has shown a high correlation between the PDL and Collision loss pure premiums that should be taken into account in determining the trend factors, and faults the approaches taken by both the AG and the SRB for ignoring this correlation. It also contends that the AG has not studied what the AIB terms a contradiction in the AG's data, that an increase in snowfall leads to increases in PDL severity, but leads to decreases in collision severity.

The SRB argues that the AG judgmentally selected its PDL trend factor using a proposed new methodology that involved performing various regressions and then judgmentally selecting and averaging selected regression values. In contrast, it notes, the AIB uses a methodology that is consistent with the methodology used by the Commissioner for this coverage in the past three rate decisions. As with the AG's approach to BI and PIP loss trends, the SRB argues that his methodology is not actuarially appropriate because he improperly averages regressions that were made on the same data with different time periods. The SRB urges the rejection of the AG's method because it is both unreasonable and has not been shown to be demonstrably superior to the CDM.

The AG argues that the SRB and AIB projections for PDL are excessive. He criticizes the SRB for using the MSE method to project both PDL and collision trends, noting that it abandoned that approach to trending the injury coverages. He asserts that the MSE method is particularly unreasonable for PDL, which the SRB does not consider to be cyclical. The AG contends that the SRB's MSE method selects the six-year regression that is the least responsive to a turning point in the data that began to occur in 2003. He argues that the MSE methodology is unreasonable because it incorrectly chooses long term regressions that miss the turning points in data, projects values that reflect the trend that occurred prior to the turning point and ignores the trend in the data after the turning point. The AG asserts that the MSE methodology should be rejected

because it has been shown to be is an inaccurate predictor of PDL losses, overstating those losses in both 2004 and 2005.

D) COLLISION AND LIMITED COLLISION COVERAGE[58]

Based on judgment, the AIB recommends a collision loss trend factor of 1.0790. It claims that the collision coverage has a relatively stable and smoothly increasing severity, but less stable frequencies. The AIB states that the collision data had a notable frequency-driven spike in 1996 and a drop in 2004. It attributes recent frequency drops to the CIFI program and argues that they should be considered a non-recurring event. The AIB notes the similarities between the Collision and PDL experience, even though Collision shows more variability, and contends that PDL and Collision historically have behaved in a statistically similar manner. It argues that the correlation between the pure premiums of the two coverages is almost perfect at 0.99. The AIB proposes that, because the two coverages are so highly correlated, that PDL loss pure premium trends can properly be used to help predict Collision loss pure premium trend when the history of Collision loss pure premiums is less clear. Based on the asserted correlation between Collision and PDL loss pure premiums, the AIB believes that Collision loss pure premiums have not yet resumed their expected long term trend upwards. It therefore selected a judgmental 1.0790 loss pure premium trend factor. The AIB comments that any volatility observed in the 2005 data point will be overcome in the longer term as the Collision data returns to a course consistent with the PDL data.

The SRB recommends a Collision trend factor of 1.0132. It performed linear regressions on the most recent four, five and six-year pure premium points and selected the six-point regression value. The SRB argues that its methodology is consistent with the Commissioner's *Decision on 2006 Rates*, and that, furthermore, the six-point regression produced the forecast with the smallest mean squared error.

The AG recommends a trend factor of 0.9669 for Collision. His recommendation results from averaging four, five and six year simple regressions, which he claims properly reflects both the more responsive recent data and the less responsive longer-term trends. The AG states that the six-year regression on the collision data produces a poor

[58] The AIB in its brief notes that "[b]y longstanding convention, and by agreement of all three parties again this year, the otherwise-determined collision pure premium trend factor should also be used for limited collision."

fit, with a low R-squared value, but that the four-year regression has a better fit. The AG also performed a series of other regressions which, he argues, support his three percent downward trend. The AG states that all of the regressions he averaged have negative slopes and that the negative slopes, coupled with the results of the multiple regressions and other information, show that an annual reduction in this trend is reasonable.

The AIB faults the SRB's approach, arguing that it did not take into consideration the high correlation between the PDL and Collision loss pure premium. Similarly, it asserts that the AG's arbitrary average of three regression results also ignores that purported correlation.

The AIB alleges that the AG's method for arbitrarily averaging the results of three regressions inappropriately weights the more recent data more heavily than the older data. As noted above, the AIB points out an alleged contradiction in the AG's approach to determining the effect of snow on PDL and Collision; that an increase in snowfall leads to increases in PDL severity but leads to decreases in Collision severity.

The SRB opposes the AIB's recommendation, arguing that its trend projections are not consistent with the recent data for the Collision coverages. It asserts, as well, that the AIB has failed to demonstrate that its new methodology for Collision is demonstrably superior to the established methodology. The SRB asserts that the AG's method is actuarially inappropriate because it averages regressions that were made on the same data with different time periods.

The AG agrees that the AIB has proposed a new method for projecting Collision losses, using its PDL projection to calculate its Collision trend rather than rely upon the Collision data itself. He asserts that the AIB also applied a judgmental adjustment to inflate the 2005 Collision data point. The AIB's approach, the AG argues, assumes that the PDL projection is totally accurate, when the low R-squared value of the PDL regression shows a large amount of uncertainty in the prediction of PDL losses. That uncertainty, he asserts, should not be transported into the collision trend projection. Further, the AG asserts, even though the AIB finds a high correlation between PDL and Collision for the period from 1990 through 2005, the more recent data for the six-year regression period from 2000 through 2005 show a poor correlation. A high correlation in earlier years, the AG contends, is of little relevance to predicting Collision losses in 2007.

However, the AG notes, the data from 2000-2005 demonstrate a downward trend in Collision relative to PDL, a relationship that occurs both in Massachusetts and countrywide.

The AG also argues that the AIB's correlation analysis is faulty because it omits the time variable. With respect to the AIB's adjustment of the 2005 collision data point, the AG points out that the AIB made no comparable adjustments to the 2000 and 2001 data points in prior rate proceedings, even though those points were about as far from the AIB's correlation line as the 2005 point is from the line this year. He argues that the AIB's new method should not be adopted solely to increase the trend indication. The AG argues that the AIB has not met its burden of showing that its new methodology is superior to the regression analysis of collision data. The AG also objects to the SRB's use of the MSE test to project a collision trend.

e) Comprehensive Coverage

The AIB recommends a Comprehensive trend factor of 0.9500, based on a six-year regression covering AYs 1999-2005, but excluding the AY2001 data point. The AIB argues that it is appropriate to exclude the AY2001 data because, measured by the Commissioner's ± 2 standard deviation test, it is a plain outlier.[59] The AIB argues that its recommendation is the most reasonable of the three Comprehensive trend factors proposed in this proceeding and properly deals with the aberrantly high AY2001 data point.

The SRB recommends a Comprehensive trend factor of 0.8940, slightly lower than the AIB's recommendation. The SRB performed linear regressions on loss data from the years 2000 through 2005, excluding the 2001 data point, as did the AIB. Its actual linear regressions, therefore, were done on four and five-points. In addition, it removed from the loss data two-thirds of the $3.5 million reported as "excess" glass claims because, the SRB argues, they are non-recurring losses based on poor road conditions on I-95, that have been remedied since 2005. The SRB contends that inclusion of these excess glass claims artificially raises the trend value. Using the adjusted loss data as the basis for its

[59] The test is described in the SRB's filing.

regression analysis, the SRB's Comprehensive trend factor recommendation is based on a five point regression that, it asserts, has the smallest mean squared error.

The AG recommends a Comprehensive trend factor of 0.8963, a value that is less negative than the trend factors proposed by the AIB and the SRB. He characterizes Comprehensive losses as volatile, in part because they combine losses from unrelated coverages and in part because glass coverage has not been stable, but has generally trended down since 2001.[60] The AG performed separate projections on glass and other types of claims within the Comprehensive coverage. He argues that the removal of glass claims eliminated much of the volatility in the data and better addresses the random fluctuations in the data on Comprehensive coverage. The AG points out that the SRB reached an almost identical trend recommendation using different means.

The AIB opposes the SRB's recommendation, characterizing its downward adjustment to AY2005 glass claims as "idiosyncratic." It further criticizes the SRB's value as result-oriented, because it incorrectly implies that situations like the paving problem on Route I-95 in Northeastern Massachusetts have occurred only in the past and cannot be expected to recur in the future. Although the AIB agrees with the SRB's omission of the AY2001 data from its calculation, it criticizes the SRB for not compensating for this omission by adding AY1999 into its calculation.

The AIB opposes the AG's recommendation, arguing that he has used a totally unprecedented methodology that trends glass judgmentally and separately trends the non-glass portions of the Comprehensive coverage. It objects to the AG's trending methodology because he did not exclude the outlier 2001 data from his calculations. The AIB argues that the AG improperly capitalized on the high 2001 data point to increase the resulting downward slope of the trend. It alleges that the AG never fully describes the methodology used to calculate his Comprehensive trend and that, based on the record, the actual calculation is unknowable. The AIB argues that the Commissioner cannot adopt a trend factor that is misunderstood and incorrectly described by the AG, when his calculation cannot be determined based on the record.

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[60] Data on losses under the Comprehensive coverage includes losses for fire, theft, glass, malicious mischief and vandalism, windstorm, flood and rising water, and unidentified "other" perils.

The SRB disagrees with the AIB's use of a six-point regression that excludes the 2001 data but adds 1999 loss data as a substitute. It argues that inclusion of the 1999 data is erroneous because it produces a value that is not sufficiently responsive to the current data. Further, the SRB contends, the AIB's methodology does not reflect inclusion in the Comprehensive loss data of glass claims that the SRB characterizes as non-recurring.

The AG objects to the AIB's recommendation, arguing that the Commissioner has never employed a seven-year period for a regression and that a seven-year regression is too stale to be sufficiently responsive to the changes in more recent data. The AG also contends that the AIB has failed to demonstrate the superiority of its method.

f) Analysis and Conclusions

As was the case last year, the main issue to be decided with regard to the trend factors this year, particularly for the BI and PIP coverages, is the interpretation and application of the data for AYs 2004 and 2005, which show significant losses in comparison to the data from earlier years. Last year, due to the nature of the 2004 loss data, we elected to adopt a unique approach for calculating the loss trend factors in order to appropriately consider the 2004 data while also using the data from prior years. Losses continued to improve in 2005, albeit at a lesser rate than in 2004. We have carefully considered all the methodologies used by the parties this year.

The parties agree on a unity trend factor of 1.000 for uninsured motorist coverage; accordingly, that factor is hereby adopted.

(1) BI and PIP

The parties offer three different recommendations for the BI and PIP trends. The AIB and the SRB base their recommendations on judgment; the AG bases his on a complex regression analysis. We have carefully considered the factors underlying the exercise of their judgment and the results they produce. On this record, we find that the unity trend proposed by the AIB appropriately balances the recent declines in losses with an assessment of the extent to which those reductions will continue in 2007. That losses have decreased in 2004 and 2005, both in communities where the CIFI Task Forces are operating and elsewhere, is not disputed. Predicting the effect on future losses of the factors that led to those reductions is complicated. The AIB's witness testified that while

he could find no indication of a potential for further savings, he also made no assumption that CIFI programs would not continue to have an effect on losses. We note as well Ms. Blank's testimony that she could not predict whether losses would go up or down. For some CIFI communities where the high losses were primarily related to fraudulent claims, it is reasonable to expect that the steep declines in past losses will not recur; the more important question is whether the environment that produced those reductions in losses will remain effective. The CIFI programs are still relatively young, and their impact of future losses is difficult to quantify.

We are not persuaded that the SRB's approach adequately responds to the recent declines in BI and PIP losses. The rationale for its use of a loss trending methodology which, in essence, weights the 2004 and 2005 data points, is also unclear. Ms. Blank testified that she had not performed any statistical test or data analysis to support that choice. For these reasons, we will not adopt its recommendation.

The AG relies on the outcome of his regressions to develop his recommendations and supports the result of those calculations with early data for the first six months of 2006 that, he points out, continue to show reductions in losses. Two experts testified that the AG's approach was not actuarially sound and produced an inaccurate result. Based on the record, we are not persuaded that the AG's approach represents an actuarially appropriate and reliable method for predicting BI and PIP loss trends. Further, as we have noted in the past, the six-month data is undeveloped and is unreliable for predicting current year losses. As the SRB points out, the 2005 data points for BI and PIP are low and in the earliest phases of development. If the 2005 data is in its earliest phases of development, the 2006 data is even less developed.

We therefore adopt a unity trend for the BI and PIP coverages.

(2) MedPay Coverage

For MedPay, we have been presented with two options, a 1.0850 factor that the AIB recommends and with which the SRB agrees, and a unity trend of 1.00 proposed by the AG. All three are judgmental. The basis for the AG's selection appears to be the combination of regression, which shows a downward trend, and data from 2003 through 2005, which show increases in pure premium. Because MedPay data appears to exhibit

flat or stable frequency, but increased severity, factors that reflected in the recommendations of the AIB and the SRB, we are persuaded that it is appropriate to adopt the 1.085 MedPay trend factor for 2007 that they recommended.

(3) PDL Coverage

The AIB and the SRB produce an identical 1.0380 trend factor for PDL, while the AG recommends a trend of 1.0077. The AIB and the SRB utilize a six-point regression methodology that is consistent with the trending methodology approved for this coverage in the *Decision on 2006 Rates*. The SRB determined that the 1.0380 trend factor also had the smallest mean squared error, which made it appropriate for use in setting the 2007 rates. Both the SRB and the AIB have identified a number of issues relating to the actuarial aspects of the AG's methodology. On this record, we are not persuaded that the AG's new methodology, which selectively averages the results of a series of four-year regressions, is superior to straightforward trending of the historical data. We therefore adopt the 1.0380 trend recommendation proposed by the SRB and the AIB.

(4) Collision and Limited Collision Coverage

The AIB judgmentally selected its recommended 1.0790 trend factor based on the assumption that over the long term, PDL and Collision trends are correlated. The SRB's recommendation of 1.0132 is based on a six-point regression of the Collision data points; it selected that value after performing four, five and six-point regressions, and determining that the mean squared error test supported use of the six-point regression. Its methodology is consistent with that approved in the *Decision on 2006 Rates.* The AIB has not demonstrated that its proposed new methodology is superior to that methodology; further, the recent data do not support the underlying premise that trends in PDL and Collision are correlated.

The AG utilized a new methodology for Collision that matches his approach to trending PDL. As with his calculation relating to PDL, the SRB and the AIB have identified issues relating to the AG's approach, and our concerns about its utilization to develop a PDL trend factor are equally applicable here. On this record, we are not persuaded that it is superior to trending the historical collision experience. We therefore adopt the 1.0132 trend recommended by the SRB.

(5) Comprehensive Coverage

The SRB recommends a trend factor of 0.8940 for Comprehensive, developed from a regression of five of the past six data points, and an adjustment to the data to reflect what it considers to be non-recurring glass claims. The SRB excludes the 2001 data point as an outlier, as did the AIB. The AIB performs a regression, but uses six data points out of the seven points for the years 1999 through 2005. We find that the AIB's addition of the 1999 data point places excessive emphasis on past losses instead of on more recent experience. The AG utilizes a new methodology, performing separate regressions on glass claims and non-glass claims. We are not persuaded that his methodology is superior to the SRB's approach.

The SRB's six-year regression methodology is consistent with that utilized for comprehensive coverage in the *Decision on 2006 Rates*. We find the SRB's omission of the 2001 data point and its reduction of the historical data to account for excess glass claims are appropriate adjustments to an accepted methodology which will produce a more accurate result for 2007. We will therefore adopt the SRB's 0.8940 trend factor for comprehensive coverage.

4. The Inclusion of Competitive Commissions (Contingent and Override Commissions) in the Company Expense Provision

The only aspect of company expenses that the parties contest this year is the AIB's proposal to allow contingent commissions and override commissions (collectively "competitive commissions"). Pursuant to G.L. c. 175, § 113B, a commission allowance is incorporated into the fixed and established rates. This year, the commission expense pure premium ("CEPP") was the subject of an independent portion of the proceeding to fix and establish rates for 2007, Docket No. R2006-02; our conclusion on that matter begins on page xx of this decision. However, G.L. c. 175, §162D ("§162D") in addition to allowing insurers to vary commissions paid to producers by plus or minus ten percent, permits them to compensate producers "in the form of commission overrides, bonuses, profit sharing benefits and expense reimbursement." For the fifth consecutive year, the AIB asserts that the Commissioner should include competitive commissions in company expenses that are reimbursed in the 2007 rates. Both the SRB and the AG oppose inclusion of such commissions.

The AIB argues that competitive commissions should be included in the 2007 rates because they comprise "a completely proper component of expenses." It asserts that such commissions are a legitimate and expected cost of doing business, and that no party has suggested otherwise. The AIB argues that the National Association of Insurance Commissioner, ("NAIC") accepts the validity of competitive commissions by including them on the Insurance Expense Exhibit ("IEE") of company annual statements. It asserts that excluding competitive commissions from rates results in a rate provision for total acquisition expenses that is "plainly inadequate," for agency companies, non-agency companies, and the industry as a whole.

The AIB dismisses conclusions to the contrary reached in past decisions as "simply erroneous or irrelevant." Responding to a comment in the *Decision on 2004 Rates,* the AIB asserts that there is evidence that acquisition costs for direct writers exceed the provision allowed in the rates. The AIB claims that the much higher level of business written through agents in Massachusetts (over 75 per cent) compared to countrywide (one-third) proves that agents' services are valued both by insurers and by insureds and demonstrates that statements in past decision that there is no evidence that competitive commissions are linked to higher service levels are incorrect. With regard to statements in past decisions that putting competitive commissions into rates might lead to a "windfall" for some insurers who do not use the funds to pay such commissions, the AIB counters that they totally ignore the principle that the goal in this proceeding is a correct statewide average rate. The AIB also dismisses the concern expressed in past decisions that competitive commissions might be partially based upon sales of other lines of insurance, arguing that it does not consider a possible symmetrical effect: competitive commission expenses included in insurance rates for other lines of insurance might just as well be partially based upon sales of private passenger automobile insurance.

The AIB's overarching argument is that excluding competitive commissions from rates violates the statutory command that rates not be excessive, inadequate or unfairly discriminatory as required under c. 175, §113B. It argues that omitting one cost element from rates automatically produces inadequate rates. Further, AIB asserts that excluding competitive commissions from rates violates the most basic ratemaking precept -- that rates should be set equal to expected costs -- because competitive commissions can be

reasonably expected to be paid in the future just as in the past. Moreover, the AIB argues that excluding competitive commissions from rates ignores the problem that is created by excluding from the estimate of the CEPP three categories of costs: 1) federal income taxes on agency net income, 2) state income taxes on agency net income and 3) after-tax agency net income. Observing that agencies must earn net income somehow, and that they must pay their federal and state income tax liabilities with "real cash" that comes from somewhere, the AIB concludes that it is "hardly surprising" that agencies are able to demand competitive commissions in a market in which agencies on average earn zero net income through ordinary commissions on private passenger automobile insurance business.

The AIB dismisses as "devoid of analytical content" the observations that competitive commissions are "voluntary" or "discretionary." It compares competitive commissions to Xerox machines, computers and claims adjusters salaries as equally "voluntary" or "discretionary." Just as with these expenses, the AIB asserts that insurers pay competitive commissions because to do so makes sound business sense. To exclude what it asserts as legitimate expenses by labeling them as "voluntary" or "discretionary" in the AIB's view is "to improperly reduce ratemaking to an unanalytical exercise of arbitrary labeling of categories of legitimate, proper, and expected business expenses." Finally, it asserts, Massachusetts cannot attract national private passenger automobile insurers if competitive commissions are excluded from rates, because new entrants to the Massachusetts market will particularly need to use competitive commissions to attract business.

The SRB notes that the AIB has made the same recommendation about inclusion of competitive commissions five times. It points out that the impact of including these payments would be substantial; citing to testimony from the AIB's actuarial witness estimating that including competitive commissions in the rate would add two per cent to the overall rate level. The SRB, citing 211 Code Mass. Reg. 77.05(6), argues that because the AIB has not offered any "significant new evidence or other good cause" in this proceeding that would support the adoption of methodologies that differ from those adopted by the Commissioner in the *Decisions* on 2003, 2004, 2005 and 2006 rates, it should be foreclosed from relitigating this issue this year. Turning to the merits of the

AIB recommendation, the SRB asserts that it has the same deficiencies this year as has in years past.

The SRB argues that the record is devoid of anything that allows the Commissioner to determine whether the "amounts and grounds for the competitive commission expenses which the companies wish to include in the rates" are reasonable. It claims that the AIB merely states that "there is no evidence that (competitive commissions) are unreasonable," an approach that shifts the burden of proof to the wrong party.

The SRB also contends that adopting the AIB's recommended approach would conflict with and nullify the Commissioner's power to set a CEPP, because under the AIB's proposal all commission payments made, no matter how excessive or unreasonable, would automatically go into the rate to be paid by policyholders. In effect it would enable insurers to disregard the amount that the Commissioner sets as a CEPP, pay any amount that they choose, and to include that expense, no matter how excessive, in the expense base used to calculate rates in subsequent years. The SRB characterizes this as an unreasonable and inequitable result. It dismisses the AIB's arguments that contingent and override commissions are valid expenses that are not addressed in the CEPP and that agents could not survive financially without the receipt of these types on commissions, asserting that they 1) are not sufficiently supported on the record and 2) do not address the reality that agents may generate profit in ways other than receiving contingent and override commissions, for example, by receiving increased commissions, as permitted by law.

The SRB notes that the Commissioner has stated that it is reasonable to expect that competitive commissions should represent some benefit to consumers, over and above the services compensated through the CEPP that companies must pay to producers, if policyholders are to pay for them through the rates. The SRB dismisses as specious the benefits that the AIB claims inure to policyholders by reason of competitive commissions. It dismisses out of hand the argument by the AIB that "agents must be providing value to policyholders to generate that level of market share," noting no articulation of such benefits or why a marketing decision made by insurers should have any beneficial effect on policyholders. The SRB labels as totally unclear what benefit supposedly inheres in

the nature of the insurance business, who receives the benefit whether the policyholder finds this "benefit" valuable. With respect to the AIB's argument that the "agency system" allows policyholders to choose an agent who provides the level of expertise and service that the policyholder wants, as well as a company that provides the insurance product that a policyholder wants, the SRB asserts that the AIB has not demonstrated any correlation between the level of service that an agent provides to its policyholders and the amount of competitive commissions an agent receives. With respect to the AIB's attempt to make an analogy between competitive commissions and other "discretionary" expenditures such as the purchase of a computer system, the SRB argues that such a discretionary purchase would provide a tangible benefit to the consumer in the form of faster claims processing or the like. The SRB declares that competitive commissions inure directly and solely to the agent/producer.

The SRB alleges that the AIB has submitted no evidence that supports the assumption that the competitive commissions paid are "not based in part on sales of other lines of insurance or relate to characteristics of the particular producer's book of business." In fact, the SRB contends, the AIB's actuary confirmed the opposite; that companies pay competitive commissions in order to retain agents whose books of business have a lower than average loss ratio and in order to encourage "cross selling," the selling to a customer of coverage with one insurer in more than one line of insurance.

Because the payment of competitive commissions is discretionary, the SRB argues that competitive commissions by their very nature lead to windfalls for those companies that do not make such payments, such as direct writers who do not use producers. The windfall results because the companies that do not pay competitive commissions will be compensated in the rate for expenses that they do not actually incur. The discretionary nature of the competitive commissions, moreover, further underscores the issue of how the Commissioner is to determine whether the "amounts and grounds for the competitive commission expenses which the companies wish to include in the rates" are reasonable. Under the AIB's proposal, the SRB declares, once a company exercises its discretion and decides to make competitive commission payments, the Commissioner would have no ability to determine whether the amount paid is reasonable or unreasonable, excessive or not excessive; under the AIB's proposal all commission payments made, no matter how

excessive or unreasonable, would automatically go into the rate and be paid by policyholders. This obviously is undesirable, the SRB concludes.

The SRB recommends that the Commissioner continue to exclude competitive commissions and commission overrides from the rate level because they are wholly discretionary and the AIB has not established that it is proper to pass these types of expenses on to policyholders.

The AG argues that Massachusetts insurance law distinguishes between the payment of the CEPP as established by the Commissioner and other types of compensation that insurers may offer their agents. He points out that §113B directs the Commissioner to fix and establish "adequate, just, reasonable and nondiscriminatory premium charges including commission allowance to be used and charged by companies," and §162D provides that insurers "shall pay each agent the indicated expense premium commission as established by the commissioner in [her] opinion, findings and decision on automobile insurance rates . . .." However, the AG notes that §162D also provides that "[n]othing in this act shall prevent any insurer from paying any additional compensation in the form of commission overrides, bonuses, profit sharing benefits and expense reimbursements." Taking these provisions together, the AG asserts that the companies must pay each agent the CEPP "as established by the Commissioner" and may pay, in addition, excess commissions. The AG analyzes §162D as distinguishing between the "commission allowance" set by the Commissioner in 113B rates and "commission overrides, bonuses, profit sharing benefits and expense reimbursements," which are not "the indicated expense premium commission as established by the commissioner in [her] opinion, findings and decision on automobile insurance rates." Thus, he avers, the §113B rate is the rate policyholders must pay, and this includes the "commission allowance" and does not include "excess commissions" (the AG's term for competitive commissions), which the AG asserts are not "the commission established by the commissioner" under §113B. The AG argues that the CEPP is fixed and established in a §113B proceeding, and excess commission are not referred to in 113B and are explicitly distinguished from the "commission established by the commissioner" in §162D.

The CEPP, the AG argues, fully compensates agents for the reasonable costs of writing and servicing private passenger automobile insurance, and no additional

compensation is necessary in the rates for this purpose. When setting the CEPP, the Commissioner includes compensation for the expenses of all services performed by agents in connection with private passenger automobile insurance; there is no exclusion of the cost of services, if any, compensated by excess commissions. The AG asserts that the AIB has not presented any evidence that policyholders benefit from excess commissions; arguing that competitive commissions do not benefit policyholders. The AG argues, further, that their inclusion in the rates would be unfair to consumers because it would constitute a double payment, requiring consumers to pay twice for the services that are covered through the CEPP. Excess commissions, in the AG's view, are a form of profit sharing between companies and agents. The AG points out that the AIB concedes that competitive commissions are discretionary and might be used by companies 1) to retain agents whose business has lower than average loss rations or 2) to encourage cross-selling of multiple insurance lines in addition to Massachusetts private passenger automobile insurance. Finally, noting that the AIB has acknowledged that it has offered no new facts or circumstances to justify including competitive commissions this year, the AG recommends that competitive commissions should not be included in the rate.

The *Decisions* on rates for 2003, 2004, 2005 and 2006 all rejected proposals by the AIB to include override and contingent commissions as company expenses, concluding that the inclusion of such commissions failed to comply with the Commissioner's statutory duty to set "adequate, just, reasonable and nondiscriminatory rates." Again, this year, the AIB has offered no new evidence to warrant a departure from our prior decisions, and no party claims that changes have occurred in the marketplace since the *Decision on 2006 Rates* was issued that would support such a departure. To the extent that the AIB argues that companies require an expense component for competitive commissions to reward agents appropriately, we note that the statute instructs the Commissioner to include in the rates a commission expense allowance to be used "in connection with the issue or execution of motor vehicle liability policies or bonds." That expense allowance, in the form of the CEPP, is available to all insurers and represents the amount that agency companies must distribute to producers. Read in conjunction with §162D, we find that it is apparent that insurers have some discretion in allocating the commission allowance. The AIB's arguments this year are not materially different from

those offered in past years, and do not persuade us to reach a contrary conclusion. Again, the AIB has offered no new studies or legal arguments to support its recommendation. Therefore, for the reasons set forth herein and set forth in greater detail in our prior decisions referenced above, the relevant portions of which are incorporated here, competitive commissions will be excluded from the company expenses that are used to determine the company expense pure premium in the 2007 rates.

5. Other Issues

a) Multi-car Discount

The AIB recommends that the multi-car discount available to policyholders in all driver rating classes on the A-1/B, A-2, PDL, collision, limited collision and comprehensive coverages be increased from its present value of five per cent to ten per cent based on an actuarial study that supported such a change.[61]

The AG agrees that the data appear to support the AIB's recommended increase in the multi-car discount. However, he questions the effect on policyholders of the methodology used to implement the discount, arguing that it is based on an incorrect assumption that the proportion of exposures receiving the discount is the same in each territory. The AG notes that in order to ensure that the multi-car discount is revenue neutral, a single off-balance factor is applied in all territories. That factor increases the rates for all policyholders' rates to fund the discount. The AG asserts that certain territories contain a smaller percentage of multi-car discount exposures than the average, while other territories contain a larger percentage. As a result of applying a single off-balance factor, policyholders in territories that under-utilize the multi-car discount pay more through the increase in their overall rates than they receive in multi-car discount reductions. The AG argues that the effect of this overcharge is significant in some territories and, to correct this situation, proposes calculating an off-balance factor for each territory, based on the multi-car/single car exposures split separately by class and by territory for each applicable coverage. He recommends that the Commissioner not increase the multi-car discount unless it is off-balanced by territory. In the alternative, the

61 The discount is described in the Massachusetts Private Passenger Automobile Insurance Manual, Rule 19.

AG supports the SRB's recommendation to postpone implementation of the proposed change to the multi-car discount.

The SRB does not disagree that the recommendations made by the AIB and the AG are based on sound data and analysis, but does not support implementing either of their recommendations for 2007. Its opposition is based on the fact that, with the exception of SDIP, discounts have never been off-balanced on a territorial basis, primarily because historically such detailed data were not readily available. The SRB contends that before expanding the off-balance methodology to the territorial and class level for the multi-car discount, it should be considered for all discounts. It expresses concern that changing the off-balancing technique could have unintended consequences and possibly introduce unintended subsidies in the rate because off-balances affect the manual rates and, therefore, the application of inter-class constraints. The SRB recommends that both the AIB's proposed increase to the multi-car discount and the AG's recommendation to off-balance this discount by driver class and territory be deferred until next year, after a thorough and complete evaluation of the proposal and its consequences can be prepared.

The AIB states that, as a matter of general actuarial principles, it does not oppose balancing the multi-car discount by class and territory. However, it criticizes the AG's proposal for three reasons. First, the AIB complains that the AG's proposal would add another layer of complication to a rate calculation process that already is very complicated. It contrasts the simple act of making a proposal with the development, testing and validating of spreadsheets needed to implement correctly the proposed new balancing methodology. Second, it observes that the AG wants to balance the multi-car discount by class and territory but does not recommend changing the low-mileage discount in a similar fashion. The AIB submits that better ratemaking procedure might be to treat the two discounts in a similar fashion. Finally, the AIB argues that no party has made a systematic study of discount off-balancing, characterizing the AG's proposal as based upon a result-oriented analysis of who is advantaged and who is disadvantaged by the multi-car discount off-balancing methodology. It asserts that balancing the multi-car discount by territory would benefit urban insureds while balancing the low-mileage discount by territory would benefit rural insureds.

The AIB also rejects the SRB's recommendation to postpone implementation of the proposed change to the multi-car discount. First, it claims that the SRB's made its point too late because its response to the AIB's multi-car discount proposal should have been in the SRB's initial filing rather than its rebuttal filing. The AIB further asserts that it is illogical to delay an improvement to the ratemaking process just because another, unspecified improvement is not also being made.

The AIB's proposal to double the multi-car discount is based on analysis of data; neither the AG nor the SRB contest the accuracy of that analysis or the conclusion that it supports an increase in the discount. The AG, however, asserts that the number of policyholders eligible for the discount varies considerably by territory and driver class. Because the discount is off-balanced on a statewide basis, he questions the overall effect of this increase on policyholders, particularly those in territories where, in the aggregate, premiums are increased by more in off-balance factors than decreased by the discount. The SRB does not object in principle to developing off-balance factors by territory and driver class, asserting that data is now available that makes this approach possible, but questions whether such a change should be limited to only one of the discounts available to Massachusetts policyholders. In the absence of systematic study of off-balancing discounts, we are reluctant to institute this change with respect to a single discount. We encourage the parties to conduct appropriate studies and to present evidence of the total effect of off-balancing each discount on a class/territory basis. We will make no change to the multi-car discount for 2007.

b) Continuous Insurance Coverage Discount

The SRB proposes a continuous coverage discount that would reduce rates for policyholders whose vehicle, including a replacement vehicle, has been insured without a lapse in coverage for the 12 months preceding the policy effective date. The SRB describes the discount as similar to one that State Farm Fire and Casualty Company ("State Farm") makes available to policyholders in New York State. The SRB asserts that such a discount is supported by State Farm countrywide data that indicate that "drivers who maintained continuous coverage over the 12 months preceding the policy effective date merit a rate that is 20% less than … those drivers who do not maintain continuous coverage." The discount would apply to the bodily injury, personal injury protection,

property damage liability, comprehensive and collision coverages and be implemented on a revenue neutral basis. The SRB recommends that, for the first few years of implementation, the off-balance be calculated statewide, rather than by territory. The SRB proposes that the discount initially be set at ten (10) per cent because no statistical data is specifically available for Massachusetts. It asserts that its proposal is reasonable and consistent with sound public policy and the objective of affording good drivers the best rate possible. It projects that 93 per cent of all Massachusetts drivers would benefit from its proposed discount.

The AIB concedes that the State Farm discount appears to be supported by countrywide State Farm data, but argues that because no Massachusetts-specific data is available, no actuarial data exists to support the SRB's proposal. However, it comments that it would not be surprised if such a discount were found to be justified in Massachusetts. The AIB offers several practical reasons to eschew approving any continuous coverage discount for 2007, including the lack of a rule in the Massachusetts private passenger automobile insurance manual to address such a discount. It points out that it may prove challenging to identify the detailed procedures needed to apply a continuous coverage discount. It also posits that, because a continuous coverage discount is unlikely to be available to many inexperienced drivers and drivers coming into Massachusetts, it might cause unforeseen underwriting and rate equity problems. Although some information about the existence of previous insurance is available through the Registry of Motor Vehicles, the AIB questions the ease of access to that data. It further asserts that it is not clear what impact the adoption of the SRB's continuous coverage discount would have upon: 1) policy issuance and provisional bills for April 1, 2007 renewals; 2) company operations and attendant company expenses; 3) interactions with other rating variables, such as the inexperienced driver class, relating both to new drivers and to foreign drivers coming into Massachusetts from other states and countries; 4) accuracy in underwriting practices in light of a private passenger automobile insurance manual rule that is not in existence. Despite the possibility that the SRB's proposed continuous coverage discount may make some actuarial sense, the AIB recommends that practical considerations argue against implementing such a discount for policy year 2007.

The AG asserts that the SRB's proposal is not really a discount. Because insurance discounts received by some Massachusetts policyholders must be paid for by other policyholders, he characterizes it, rather, as a surcharge. The AG calculates that, to fund the continuous coverage discount, rates for all policyholders would need to be increased by 10.3 per cent. The 93 per cent of policyholders who will be eligible for the continuous coverage discount would then see a rate reduction of about 0.8 per cent overall; whereas the seven percent of policyholders who would not receive the discount would pay the full increased rate, a 10.3 percent surcharge.

The AG also argues that the proposed continuous coverage discount is inadequately supported because there is no Massachusetts data offered in support. He points out that the 2003 State Farm filing in New York, on which the SRB relies, contains no data, nor does any appear elsewhere in the record of this proceeding. This lack of data, the AG contends, is problematic because without such data it cannot be determined whether the proposed continuous coverage discount is independent of or duplicates what he refers to as other "surcharges" in the Massachusetts rates, such as garaging location, years of driving experience and driving record.

The AG asserts, furthermore, that there is no information about how State Farm implements the continuous coverage discount for their policyholders. He posits that State Farm may implement the continuous coverage discount as a reduction from its own rate level that ultimately reduces its aggregate revenue. Such a voluntary discount, the AG states, is analogous to group discounts or rate deviations that companies offer in Massachusetts. He argues that there is no evidence that State Farm implements its continuous coverage discount by adjusting rates for all policyholders to cover premium reductions offered to some policyholders. The AG lists other open issues related to a continuous coverage discount that, he asserts, would need to be addressed before considering such a discount. Those issues include the impact of the continuous coverage discount on company expenses and the issue of provisional billing, and potential market disruption.[62] The AG notes, further, that the SRB does not know how the continuous

62 The AG notes that if company expenses increase by even a small amount, the estimated 0.8 per cent discount will disappear.

coverage discount would affect drivers new to Massachusetts, be implemented for newly licensed drivers, or be applied to the coverage for new vehicles.

A proposal to implement a discount that would affect every Massachusetts policyholder is worthy of careful consideration. It should not, however, be adopted without a showing that Massachusetts data support a continuous coverage discount, and a sound analysis of its effect on Massachusetts policyholders. A discount that is appropriate for an individual company to offer in a state with competitive rating may not be so easily imported into a fix and establish rate environment which considers a wide range of factors in determining rates. We are wary, therefore, of introducing an industry-wide continuous coverage discount in Massachusetts based solely on a filing made by one company in another state.[63] The record of this proceeding is insufficient to persuade us to institute a new discount that would have the wide-ranging impact that the SRB projects without any Massachusetts-specific data. We encourage the parties to give further consideration to such a discount, and to analyze the full range of its potential affects on the Massachusetts market for private passenger automobile insurance.[64] We will not approve it, however, in this proceeding.

c) Model Year/ Symbol Relativities

Model year/symbol relativities are incorporated in setting rates for physical damage coverages. *Decision on 2003 Rates*, page 52. The AIB's filing this year proposes to use the same methodology for model year/symbol relativities as it has for the past several years, but contains no actual calculation of the relativities. The SRB, questioning the accuracy of the estimates produced by the AIB's methodology, recommended a change to that methodology in its Advisory Filing, but withdrew them in its surrebuttal filing. It commented that it had reexamined the AIB's calculation of the model year/symbol relativities for accident years 2003-2005 as submitted by the AIB and concluded that they were based on exposure counts for the most recent 12 model years instead of for all model years from 1990 forward. The AIB and SRB both agree that the SRB's original recommendation for change is therefore not before the Commissioner.

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63 We note that State Farm writes very little business in Massachusetts.
64 It is not clear whether the State Farm discount in New York is unique to that company. We note that G.L. c. 175, §113B allows for rate deviations by individual companies.

The AG in his brief treats these comments by the SRB, and certain testimony by Ms. Blank quoted in his brief, as if the SRB were proposing a change in the calculation of model year/symbol relativities. The AG argues that the SRB's symbol drift change should not be adopted for 2007 rating. The AIB, on the other hand, states that it "does support the SRB's constructive point … that the current Commissioner's method for off-balancing model year/symbol relativities be improved to utilize all exposures so that it perform[s] as always intended, that is, to balance to 1.00."

Because the SRB withdrew its recommendation to modify the calculation of model year/symbol relativities, the only proposal before us is the AIB's methodology, which is virtually identical to that it has made in past years, and is hereby approved. We note that, as stated in the SRB's brief, it is axiomatic that, by definition, off-balancing requires that relativities be off-balanced to 1.00. We expect the parties to keep this principle in mind when the actual model year/symbol relativities are calculated.

d) Anti-theft Device Discounts

The AIB proposes to decrease discounts for Category II and Category III anti-theft devices, based on its analysis of data. However, the amounts for these discounts are governed by the applicable regulation, 211 CMR 86.00, *et seq*. Modifications to the discounts should be sought through amendment of the governing regulations.

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Jean F. Farrington, Esq.	Stephen M. Sumner, Esq.

VI. CONCLUSION

The premium rates, classifications and ruling reflected in this decision are hereby promulgated in accordance with the authority granted to me by Section 113B of Chapter 175 and other sections of the Massachusetts General Laws. As ordered, rate manuals are to be prepared in conformity with the instructions specified in this decision.

Any person or organization aggrieved by any part of this decision may, within twenty days of the date hereof, file a petition for review by the Supreme Judicial Court as provided in Section 113B of Chapter 175 of the Massachusetts General Laws.

This decision has been filed on this 15th day of December, 2006 in my office and with the Secretary of State as a public document.

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Julianne M. Bowler
Commissioner of Insurance