OPINION, FINDINGS AND

DECISION ON

2006 PRIVATE PASSENGER

AUTOMOBILE INSURANCE RATES

December 15, 2005

Docket Nos. R2005-09
R2005-10
R2005-11

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INTRODUCTION

A. Background and Procedural History

This decision fixes and establishes private passenger motor vehicle insurance premiums for policies written during calendar year 2006. 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, 2005. On June 16, the Commissioner determined that competition, if implemented in 2006, 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 2006 rates.

The rate setting proceeding is divided into several parts. On June 27, 2005, the Commissioner issued a notice of hearing establishing three separate dockets, as follows: *Underwriting Profits*, Docket No. R2005-09 ("Underwriting Profits") *Cost Containment and Fraudulent Claims,* Docket No. R2005-10 ("Cost Containment"); and *Main Rate,* Docket No. R2005-11 ("Main Rate"). The notice invited interested parties to participate in these proceedings, and scheduled a public comment hearing at the Division for August 22, 2005.

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., Elizabeth Brodeur, Esq., and Matthew Mancini, Esq.; and the Attorney General ("AG"), represented by Peter Leight, Esq., Glenn Kaplan, Esq., Tom O'Brien, Esq., Quentin Palfrey, Esq., Hilary Hershman, Esq., Pamela Meister, Esq., and Monica Brookman, Esq. The Massachusetts Association of Insurance Agents ("MAIA"), represented by James K. Brown, Esq., and Pat A. Cerundolo, Esq., petitioned to intervene in the Main Rate case on behalf of its members.

followed by analysts. For companies that are not publicly traded, including most Massachusetts insurers, he asserts, there is no evidence linking size and profitability, or of any effect of size difference.

The AG agrees with the SRB that the AIB's analysis of comparative company size incorrectly looks at statutory surplus, rather than market value. He also argues that the AIB's formulation largely depends on its selected form of averaging; a simple average, he asserts, does not show such different results.

Discussion and Analysis

The issue of a size premium has been raised in prior ratesetting proceedings, and has been consistently rejected, on the ground that there is no evidence that the small size effect exists for Massachusetts automobile insurers. An extensive discussion of the reasons for rejecting such an adjustment appears in the *Decision on 2003 Rates*. Although that decision did not address a small stock premium in the specific context of an IRR model, we are not persuaded that the AIB's arguments for adoption of such an adjustment differ significantly this year. We conclude that our discussion and analysis in the *Decision on 2003 Rates* is equally applicable to the AIB's proposal this year. We note, further, that following rejection of its proposal in the *Decision on 2003 Rates*, the AIB attempted to link a size premium to a decision on a debt equity adjustment in the proceeding to set rates for 2004, and sought a size premium in the proceeding to set rates for 2005 only if the Commissioner declined to use a single Value Line estimate for the CAPM equity beta. In neither year did the Commissioner follow the AIB's recommendation. The AIB has made no persuasive argument for a size adjustment this year that persuades us to depart from our past decisions. We note, particularly, Dr. Derrig's testimony that he had not studied the issue of size and profitability for Massachusetts automobile insurers.

We will therefore make no adjustment to the cost of capital to reflect differences in the size of insurance companies.

2. Asset Returns

Insurer revenues include returns on their investments as well as premiums from policyholders. If investment yields are understated, the underwriting profits provision will increase, and policyholders will pay more in premium. To produce rates that comply with

the statutory standards, the Commissioner must review the evidence to determine what level of asset returns is realistic. Asset distributions are taken from countrywide data published in *Best's Aggregates and Averages*. Per $1,000 of invested assets, approximately sixty-six percent is invested in bonds, twenty percent in stocks, and the remainder in mortgages, real estate, and cash.

The updated exhibit provided by the AIB shows an initial overall asset return of 5.47 percent, which is then adjusted downward to 5.11 percent to reflect investment expense of 0.35 percent, and ultimately to 3.71 percent to reflect investment tax rates. The SRB recommends asset returns of 5.65 percent before taxes and expenses and 3.95 percent post-tax and expenses. The AG recommends a pre-tax investment return of 6.2 percent and an after-tax value of 4.7 percent.

a. The AIB

The AIB asserts that the parties generally agree on the calculation of asset returns, with the exception of the SRB's methodology for calculating bond durations and, therefore, bond yields. The AIB opposes the SRB's approach to calculating bond durations, which estimates durations from the time of purchase to the time of maturity rather than from the date of the insurer's current balance sheet to maturity. The SRB's methodology, the AIB argues, inflates the calculation of current bond yields because the resulting durations are longer. It contends that it improperly assigns different yields to identical bonds based on the date when the current holder purchased the bond. The AIB asserts that this approach is inconsistent with the price of securities in the real world market which does not depend on the identity of the seller or the seller's original purchase date. The AIB argues that bond durations should be measured according to the NAIC approach that determines time to maturity as of the date of the balance sheet that is under examination. It asserts that if the Commissioner's adoption of the SRB's approach in the *Decision on 2005 Rates* is viewed as approving the use of embedded yields, it is incorrect because current, not embedded yields are appropriate for use in an IRR model.

The AIB recommends an actual stock investment tax rate of 34.1 percent for stock capital gains, and of 14.2 percent for stock dividends. Those values produce an overall common stock investment tax rate of 30.9 percent. It opposes the 17.5 percent common stock investment tax rate proposed by the SRB and the AG, arguing that the SRB's

witness is simply using a value from past decisions and has, in rate proceedings in another state, used a 26.67 percent stock investment tax rate. The AIB argues that the 17.5 percent rate, although used for several years in rates, has always been wrong, and has no evidentiary support in this record. It asserts that no party has offered any criticism of the AIB's calculation of an actual stock investment tax rate of 30.9 percent. Referring to the stock turnover study that it conducted in 2004, it argues that the results of that study demonstrate a turnover rate that results in a common stock capital gains tax rate of 34.1 percent. It concludes that the stock study shows that Massachusetts insurers held stock for an average of only three years, a very short period for deferring capital gains. Further, the AIB asserts, it has offered mathematical proof that, even with an unrealistic stock holding period, a tax rate of 17.5 percent cannot be produced. No other party, it argues, has been able to show how to calculate a stock investment tax rate at that level.

b. The SRB

The SRB utilizes a four-step process to estimate the asset returns for its IRR model, relying in each case on Mr. Parcell's testimony to support its recommendations. The SRB, like the AIB, bases its calculations on consolidated property/casualty industry group data on insurers' investment portfolios, as reported in *Best's Aggregates and Averages,* using the same categories of investments and the same allocations of assets to each category to develop its asset return recommendations.

The SRB asserts that it and the AIB generally agree that the calculation of asset returns should be based on fair estimates of returns on the typical insurer investment portfolio for 2006. However, the SRB recommends calculating asset returns for each class of security, except for common stock, on the basis of a three-month average yield, from May through July 2005, while the AIB uses a twelve-month trailing historical average for the risk-free spot yield. The SRB argues that in the *Decision on 2005 Rates*, the Commissioner adopted a proposal similar to its recommended approach.

The SRB and the AIB also differ on the estimates of current yields for intermediate-term and long-term bonds. As it did last year, the SRB recommends use of ten-year maturities for intermediate and twenty-year maturities for long-term bonds, while the AIB defines intermediate-term bonds as those with maturities of one to ten years and long-term bonds as those with maturities of more than ten years. The SRB argues that the

crux of the disagreement is whether expected bond yields should be based on their actual maturities, as measured by the date of purchase or as measured by the remaining time to the maturity date, regardless of the purchase date. The SRB asserts that it utilizes appropriate yields in its asset return analysis and applies those yields to a maturity structure that more appropriately reflects the expected structure of a property and casualty insurer's asset portfolio.

The SRB argues that the Commissioner should adopt its recommendation because she adopted a similar recommendation in the *Decision on 2005 Rates* and has specifically rejected the AIB's methodology. The AIB, it argues, has presented no reason to reverse those decisions. It argues that the Commissioner should adopt its recommendations this year because, with the exception of using a three-month average to estimate current yields, it is similar to the recommendation she adopted in the *Decision on 2005 Rates.*

The SRB also recommends using ValuBond as the source of yields for intermediate and long-term bond maturities to be used in calculating the asset rate of return. In contrast, it asserts, the AIB uses the Wall Street Journal as the source of yields for bond maturities greater than one year. ValuBond data is, the SRB points out, the source that it used in the proceeding to fix-and-establish rates for 2005. It argues that the AIB has offered no reason to use Wall Street Journal data instead of ValuBond.

c. The AG

The AG observes that the SRB agrees with the premise articulated by the Supreme Judicial Court almost twenty-five years ago, that insurers typically earn profit on investments, not underwriting. Therefore, the AG argues, it is important that the investment rate of return in the profit model be fair and reasonable. The AIB's IRR model, the AG argues, did not reflect the correct ratio of invested assets to surplus, because it initially understated the assets that insurers invest, and was inconsistent with reported data on companies' average invested assets and surplus. However, the AG points out, data in the AIB's filing demonstrate that the insurance industry's invested assets are virtually identical to the sum of reserves and surplus. Therefore, the model should include a value for invested assets that is consistent with those data. Understating the invested assets reduces the expected investment income, and results in a higher underwriting profits provision.

The AG argues that if the Commissioner adopts the recommendation to rely solely on Value Line data to calculate the cost of capital, she should also use Value Line data to estimate the 2006 asset return. Citing to testimony from the SRB's witness, he asserts that the Value Line data and projections that are used in the cost of capital calculations are in part based on Value Line companies' investment returns, and on asset return projections made by Value Line analysts based on their idiosyncratic views of future returns. In addition, the AG notes that the Value Line companies are a small group that includes few Massachusetts insurers and also may differ from the average property/casualty insurer. If data from this group are used to calculate the cost of capital, the AG argues, data from the same companies should be used to calculate the asset rate of return. He asserts that this consistency is important in the IRR and CYAM models because it is the spread between the target and the asset return, not the absolute value of the target, that determines the underwriting profit provision. Further, the AG argues, to the extent that investors are presumed to rely on Value Line data, they may also be presumed to rely on Value Line asset returns. Therefore, he asserts, it is unreasonable to assume that investors rely on Value Line financial reporting data, but not on its estimated asset returns. The AG concludes that the average of Value Line's reported historical and projected investment returns is 6.3 percent, higher than the values estimated by the CDM.

The AG argues that the AIB's modeled bond distribution is incorrect, because it classifies bonds according to the time to maturity rather than their actual durations. He points out that although insurers report time to maturity on their annual statements, the information provides a snapshot of the stability of their portfolios but has nothing to do with the duration of the bonds or the investment returns that companies receive. He asserts that returns on bonds that insurers hold do not change when the time to maturity change. The assumption underlying the AIB's model, that insurers turn over their entire bond portfolio each year and purchase new bonds with the maturity date indicated on the annual statement is, the AG argues, not consistent with the real world. It assumes that insurers will invest premiums and surplus in the same historical portfolio of assets as in the past. This method, the AG argues, misstates asset portfolios. The issue, he states, is not a choice between embedded or current yields; it is how the distribution of assets is

described. The AG asserts that the AIB's method underestimates the average maturity of the bonds that insurers hold, and therefore underestimates their average yield.

Discussion and Analysis

a. The time period for estimating asset yields

To estimate asset yields, the SRB generally uses three months of data from the period May through July, 2005. For United States Government bonds Mr. Parcell relies on Federal Reserve Statistical Releases, and for other bonds on ValuBond, a reporting service. The common stock he relies on a three-horizon CAPM, with a beta of 1.0. Preferred stock data are taken from the Mergent Bond Record.[31] For all types of bonds, the AIB averages twelve months of data taken from the Wall Street Journal. Like the SRB, it estimates returns on common stock from its three-horizon CAPM estimates, and preferred stock from the Mergent Bond Record.

The sources that the SRB uses this year are consistent with its recommendations that were adopted in the *Decision on 2005 Rates*.[32] Its use of three months of data on asset yields is consistent with our conclusion in that Decision that the methodology for estimating asset returns should be responsive to current conditions and emphasize more recent data. We will therefore adopt the data sources and time periods utilized by the SRB to estimate asset returns.[33]

b. Bond maturities and yields

The AIB, as it did in the proceedings to set rates for 2004 and 2005, again estimates bond yields by calculating bond maturities as the time remaining on the bond as reflected in insurers' 2004 annual statements, and adopting as bond yields the current market yield for bonds of that maturity. That approach, it argues, is consistent with the NAIC approach to evaluating company portfolios. The *Decision on 2004 Rates* and the *Decision on 2005 Rates* rejected the AIB's methodology, finding that it would significantly understate what insurers would reasonably expect to earn on investments that they hold, not what they might earn if they purchased the investments at this time. It

[31] The preferred stock estimate is based on data for the period January-March 2005.

[32] We note that last year the AIB recommended the same twelve-month period to calculate bond yields as well as the cost of capital. Our decision this year is consistent with the position that both should reflect similar time periods.

[33] Because we do not rely exclusively on the Value Line estimate of the equity beta, we need not consider the AG's recommendation for use of Value Line data on asset returns.

remains appropriate for the asset rate of return that is incorporated into the underwriting profits provision for 2006 to reflect a reasonable expectation of income from fixed rate securities, such as bonds. We have been presented with no reason to reverse our prior decisions on this issue. Both the SRB and the AG agree that the AIB's methodology should not be adopted. We will adopt, for purposes of this proceeding, as the intermediate and long-term bond yields for all bond asset classes, the average of three months of data as estimated by Mr. Parcell.

c. The Investment Tax Rate

The AIB recommends that the Commissioner use an average investment tax rate on equities of 30.9 percent. That value is comprised of a 14.2 federal tax rate on dividends and a capital gains tax rate of 34.1 percent. The AIB argues that it calculated its capital gains component from a real-world portfolio turnover rate of 36 percent for an actively managed portfolio. The AIB contends that the 17.5 percent tax rate on equities, as recommended by the SRB and the AG, is incorrect because it is a fabricated number with no basis in reality and could not be realized by holding stocks for many years. It asserts that it has never been, and could never be, defended on the merits, observes that the SRB's witness, David Parcell, offered no evidentiary support for a 17.5 percent rate, and notes that Mr. Parcell has previously estimated the appropriate tax rate on equities, based on actual data, to be 26.67 percent.

The SRB recommends an overall tax rate of 23.46 percent on insurers' investment income. On common stock, it and the AG recommend an investment tax rate of 17.5 percent. The SRB refers to that value as the CDM. Arguing that the AIB has, as in prior years, failed to provide any new or persuasive evidence that the continued use of a 17.5 percent tax rate for common stock is no longer appropriate, the SRB urges that the Commissioner adopt a common stock tax rate of 17.5 percent.

The AG, characterizing the AIB's investment tax rate as inflated, argues that the tax rate should be determined in accordance with the CDM. Addressing the AIB's stock turnover study, he points out that it does not determine the average holding period for any company's stock, the portion of stock that a company sold during the year, or the tax effect of the sales. Companies, the AG asserts, manage their taxes, and concludes that 17.5 percent remains a reasonable tax rate on common stock.

Discussion and Analysis

The question of an appropriate tax rate on common stock has been raised in past years. The *Decision on 2005 Rates*, citing to the *Decision on 2004 Rates*, noted that the reasoning underlying the estimate of a 17.50 percent investment tax rate on common stock had been extensively addressed in other years. In brief, because the tax code taxes capital gains when gain is actually realized, and permits gains to be offset by losses, insurers can make investment decisions that will minimize the tax effect of changes to their stock portfolios. We have been provided with no new argument and no persuasive evidence this year that insurers no longer have the opportunity through tax planning to reduce capital gains taxes below the 35 percent marginal rate. We therefore approve the continued use of a 17.50 tax rate on stock transactions to calculate the investment tax rate. We will adopt the AIB's proposed values for the investment tax rate on other asset yields.

d. Investment Expense

Two issues have arisen this year in connection with insurer investment expenses: 1) the use of the same expense provision to reduce both the risk-free rate and the asset return rate; and 2) the selection of the actual expense provision. On the first issue, the AIB applies a value of 0.35 value to adjust both the risk-free return and the overall asset returns; the AG also applies a single, but lower, value to adjust both the risk-free return and all asset returns. The AIB argues that it and the AG both agree that it is correct to use the same value in both places. It characterizes as an oversight the use of two different values in the *Decision on 2005 Rates*, and urges the Commissioner to use the same investment expense value in both places.

On the second issue, the AIB argues that its recommendation reflects the actual investment and interest expenses associated with insurance company investment portfolios, and that no party has challenged the accuracy of its calculation. It asserts that this value is an unbiased estimate of the expected future cost of investment expenses to insurance companies. It opposes the AG's omission of the interest expense component of the AIB's estimate of investment expense.

The AG argues that the companies' investment expense for 2004, as reported by Best's Aggregates and Averages, is 0.28 percent, further noting that the Commissioner has used this value in past rate decisions. He asserts that the AIB increases the investment

expense to 0.37 percent by incorrectly adding interest expense. The AG argues that, to the extent that the reported interest is interest on debt, it is already captured in the cost of debt, and to the extent that it is not, the AIB has not met its burden of showing what it is and why it should be included in the rates. The SRB concurs with a 0.28 adjustment to asset returns to reflect investment expense.

As noted in the section on adjustments to the risk-free rate, in calculating the underwriting profits provision for 2006, we have allowed an adjustment of 0.28 percent to the risk-free rate, while declining to adopt a rule that identical investment expense adjustments should always be made to the risk-free rate and to asset returns. On the second issue, the *Decision on 2005 Rates* rejected the inclusion of interest expense as an element of insurer investment expense. The AIB has offered no persuasive reason to depart from that decision. We will therefore again approve an investment expense provision of 0.28 percent as an adjustment to insurers' overall asset returns and, as stated earlier, will apply the same expense provision to the risk free rate.

3. Other Issues

a. Premium Cash Flows in the IRR Model

The AIB's 2006 IRR model assumes that all premium is received at policy inception. However, the record includes a summary of a 2005 Premium payment study that summarizes all payment flows. The AIB's witness testified that, in preparing his analysis, he omitted data from one insurance company that appeared to be anomalous. Because we decline to adopt the AIB's assumption on receipt of premium, premium flows will again be used to calculate the underwriting profits provision for 2006. Consistent with statements in the *Decisions* on 2004 and 2005 rates that premium flow studies should be conducted periodically, to capture the effect of changes in the marketplace and of the payment choices that insurers offer to consumers, the results of the 2005 study reflecting combined premium and finance charge flows will be used to develop the underwriting profits provision for 2006.[34] Because the record is insufficient to establish that it is reasonable to exclude from the survey data from the Amica Insurance Company, we

[34] We note, for example, that although the issue of payment through electronic fund transfers has been periodically raised in these proceedings, no study has been undertaken to determine the effect of that option on collections.