

RETAINED ASSET ACCOUNTS AND INVESTOR STRATEGY

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ABSTRACT

A variety of research has investigated the impact of rating changes on stakeholder and firm behavior. This paper provides a unique setting to analyze the effect for both stock and mutual firms and with a class of non-traditional investors, owners of retained asset accounts (RAA). These individuals become investors in the insurer upon receipt of life insurance proceeds. The proceeds in the form of funds in an RAA are held in the general accounts of the insurer with limited guarantee fund and no FDIC protection thus subjecting the RAA owner to the financial risk of the insurer. However, some owners of RAAs may not understand the risk, thus it is unclear if these owners act as other investors to changes in the financial stability of the insurer. This provides a setting to analyze reaction to firm risk, as reflected in ratings changes, to stakeholders other than stockholders or customers. We find that owners of retained asset accounts do act in a manner consistent with traditional investors. Specifically, we find that abnormal retention in the retained asset accounts of life insurers indicates significant declines in the level of accounts open and funds deposited in the year following a major downgrade (falling below an A-) of the A.M. Best rating. No significant increase in retention is found following an upgrade.

INTRODUCTION

The impact that financial ratings have on investor behavior has been a topic of significant research over the past several decades. Some research has shown that ratings, specifically insurance company financial ratings, are driven by information that was previously available to investors and has little impact on the returns of publicly-traded stock companies (Singh and Power, 1992). On the other hand, more recent research has shown that such ratings do have an impact on the returns of publicly-traded insurance companies and that downgrades result in significant negative returns whereas upgrades have varying impact on positive returns (Halek and Eckles, 2010).

We extend this line of literature with a non-traditional type of investor, the owners of retained asset accounts (RAAs). Prior to 1984, life insurers paid beneficiaries via a lump sum or by a specified period or specified amount. After 1984, some insurers began offering retained asset accounts, which allowed the insurer to retain the life insurance proceeds and utilize this capital in their operations (Lauria, 1997). A retained asset account is an account established for the settlement of proceeds payable under a life insurance policy. The insurer retains the death benefit proceeds in its general account for the benefit of the beneficiary and credits interest on the money being held in the account. These accounts are held in the general account of the insurer, leaving them subject to the financial strength and claims-paying ability of the insurer and, more importantly, the proceeds are subject to the creditors of the insurer (Evans, 2010). The accounts receive limited protection from the individual state guaranty funds and no protection from Federal Deposit Insurance Corporation (FDIC). In essence, when a beneficiary leaves their funds with an insurer through a retained asset account, they are choosing to invest in that insurer's ongoing operations. Whether or not these beneficiaries understand their role as an investor is unclear. Since their inception, the use of retained asset accounts has grown significantly.

This research provides an important extension to the literature related to changing investment patterns related to A.M. Best rating changes. It is one of the first papers to quantify whether the reaction is consistent for different types of investors beyond traditional stockholders, bondholder and customers. This provides insight into the potential reactions of other stakeholders that are not typically tractable. Similarly, the analysis is able to be conducted over a sample of both stock and mutual insurers, whereas many related studies can only focus on investor reactions in publically traded firms due to data limitations. Further, there are significant public policy concerns related to this group of perhaps unintentional investors. As Goldsholle and Price (1996) point out, for beneficiaries, the time following the death of loved one can be fraught with emotion and many believe that this is not necessarily the time to be making financial decisions. However, it is at this time when the owners of retained asset accounts become investors of the insurer. The main question of this research is whether these owner/investors act as informed investors by reacting to changes in the A.M. Best (Best) rating of the life insurer holding the funds.

Specifically, we test whether an increase (decrease) in financial rating is associated with increased (decreased) levels of retention of RAAs. Following prior literature, we use the changes in the A.M Best

rating of life insurers domiciled in the U.S. as the basis of our analysis.¹ Information related to RAAs is taken from the Notes to Financials in the insurers statutory financial statements.² From this data, we analyze whether there is an abnormal retention (a retention that varies from insurers with retained asset accounts without a Best Change) for those insurers that have a change in Best rating.

As a preview to the results, we find consistent with Halek and Eckles (2010), owners of retained asset accounts do react similar to stockholders when there is a change in the A.M. Best rating. Specifically, a change in the A.M. Best rating of insurers utilizing retained asset account does not necessarily affect the level of investment in these accounts. However, when the rating falls from an A- or higher to something below an A-, the investors reduce the number of accounts open and the funds held in open accounts. On the other hand, an upgrade from a rating below A- to a rating of A- or higher does not modify the investment level or the number of the retained asset accounts.

The remainder of this paper is arranged as follows: The next section describes the previous literature and is followed by a section that explains the data and methods used. The empirical analysis and results are presented in the next section. The conclusion is shown in the final section.

LITERATURE REVIEW

There are two streams of literature which specifically address the issues of this study. The first addresses the use of insurance company ratings and the impact on investors' decisions. The second focuses on the history of and uses of retained asset accounts as a settlement option for life insurance proceeds.

A.M. Best Ratings and Investor Returns

The impact of rating agency activity on the performance of stocks has been a focus in finance research for many years. Holthausen and Leftwich (1986) look specifically at the effect of corporate bond rating changes on the stock price. They find that a downgrade in bond rating results in a significantly negative

¹ We use A.M. Best ratings for several reasons. First, A.M. Best Company is the oldest insurance rating agency with the broadest coverage of companies (Epermanis and Harrington, 2006). In addition, Pottier and Sommer (1999) and Ambrose and Seward (1998) find that Best's ratings are better at predicting insurer insolvencies than other screening systems in the U.S. The Best rating ranges from A++ (superior) to F (in liquidation). Halek and Eckles (2010) utilize the A.M. Best rating as a measure of financial strength as they investigate the impact of A.M. Best rating changes on insurance company stock price. They find that investors do react to a downgrade in rating. When A.M. Best reviews ratings they can retain the previous rating, upgrade the rating, or downgrade the rating for an insurer. While Best's updates ratings throughout the year, most rating changes occur between January and July with a significant portion in June (Epermanis and Harrington, 2006). These changes can signal investors about the risk of investing in such a firm. Therefore, we identify those insurers with Best rating changes during our period under review.

² Changes in reporting requirements for retained asset accounts in 2009 allows for such data to be collected from 2010 to 2013 only.

price reaction whereas an upgrade results in no significant change in bond performance.³ There also has been extensive research on insurance ratings and their impact to stockholders and operations (Pottier, 1998; Pottier and Sommer, 1999; Doherty and Phillips, 2002; Epermanis and Harrington, 2006; and Halek and Eckles, 2010).

The A.M. Best Company (Best) has been the leader in rating the financial strength of insurers for decades (Singh and Power, 1992). The primary objective of the rating is to provide an opinion of the insurer's ability to meet its ongoing insurance policy and contract obligations (Halek and Eckles, 2010). In early research, Denenberg (1967) found that a Best rating provides a signal for eventual solvency in property and liability insurers. Ambrose and Seward (1988) also found that the Best rating performs as well as other ratios in distinguishing between solvent and insolvent insurers; however, they admit that neither is perfect in doing so. Pottier and Sommer (1999) found that insurer's actually seek to be rated in order to reduce *ex ante* uncertainty regarding their financial stability. Once an initial Best rating is established the process is reviewed, generally on an annual basis. As a result of this review process, Best may determine a change in rating is necessary. These changes may result in an upgrade (more financially stable), a downgrade (less financially stable), or the rating may be confirmed and retained.

For publicly-traded stock insurers, the change in Best rating may result in a change in strategy for investors. Sclafane (2000) found that potential investors look to the ratings of the insurers as an indicator of investment risk. In fact, insurance companies advertise their ratings through marketing material as a way to differentiate themselves from their competition and as a signal to capital markets (Doherty and Phillips, 2002). Consumers also consider the ratings of insurers in their purchasing decisions (Halek and Eckles, 2010).

Other than the direct impact to stock returns, a change in A.M. Best rating can result in changes to other aspects of an insurers operation which could indirectly impact investors. In their analysis, Epermanis and Harrington (2006) find that A.M. Best changes and premium growth are positively correlated. Specifically, they find that there is a significant decline in premiums written in the year of and the year following a Best rating downgrade. The declines were more significant for insurers losing an A- rating. Upgrades in Best rating had limited impact on premium growth, most notably for insurers with relatively low ratings (Epermanis and Harrington, 2006).

To determine if the insurance ratings of A.M. Best impacts the strategy of investors, research has focused on changes to the Best rating and whether these changes resulted in abnormal stock returns. Initial research determined that A.M. Best is a monitoring agency of information that is already publicly known and that the rating does not disseminate any new information to the capital markets (Singh and Power, 1992). In other words, this early research determined that a change in Best rating did not change the investment strategy of the investors.

³ Additional research on bond rating changes is extensive and includes works by Weinstein, 1977; Pinches and Singleton, 1978; Zaima and McCarthy, 1988; Cornell, Landsman, and Shapiro, 1989; Goh and Ederington, 1993; and Matolcsy and Lianto, 1995.

In the early 1990's A.M. Best changed the volume and informational content used in their rating strategy (Halek and Eckles, 2010). Following this change, Bouzouita and Young (1998) found a movement towards lower ratings for property and liability insurers. In addition, Halek and Eckles (2010) took another look at whether changes in Best rating impacted stock returns. They found that a downgrade results in significant negative abnormal returns; however, an upgrade in rating does not necessarily result in an increase in returns which may indicate that the A.M. Best rating downgrade did release information to the public and acted as a signal of financial instability. This result is consistent with the results found by Holthausen and Leftwich (1986) in their investigation of bond ratings.

Retained Asset Accounts

A retained asset account (RAA) is a generic name for an account established by a life insurer with the established account representing the insurer's obligation to a beneficiary for the proceeds of a life insurance policy (NOLHGA, 2011). The death proceeds from a life insurance policy are retained by the insurer and are held in its general account (NAIC, 2011). The funds left on deposit with the insurer are then invested in order to gain a profit for the account holder and the insurer. The profit to the insurer is derived from the gross earnings on the amounts in the retained asset accounts less interest paid to the account owner (beneficiary) and less any expenses to operate the account (Goldsholle and Price, 1996). The funds held in retained asset accounts are not insured by the Federal Deposit Insurance Corporation (FDIC), however, they are protected, at least partially, by the individual state guaranty funds (NOLHGA, 2011; Evans, 2010). As previously indicated the funds in retained asset accounts are held in the general account of the insurer and, are therefore, subject to the financial strength and the investment risk associated with the underlying insurer. If the insurer becomes insolvent, the funds in retained asset accounts could be subjected to claims by creditors and therefore, the beneficiary may not end up collecting all of their funds (Murray, 2001). Due to the nature of these accounts, when a beneficiary leaves their funds with an insurer through a retained asset account, they are essentially choosing to invest in that insurer's ongoing operations. Bisco and McCullough (2014) show that the interest rate paid to the investors is positively correlated with the financial risk of insurer holding the funds. In addition, because these accounts are investments for the beneficiaries of the life proceeds, insurers are faced with a cost associated with acquisition and retention of these funds.⁴

The retained asset account holder can withdraw all the funds at any time; however, only about three percent of the accounts are closed through an immediate withdrawal of funds (Lauria, 1997). On average, fifty percent of all funds put on deposit remain with the insurer for at least ten weeks (Goldsholle and Price, 1996). In their analysis, Goldsholle and Price (1996) and Murray (2001) reported that after one year; fifteen percent of the original account balance is still on deposit. Over the past decade and since this early literature on retained asset accounts, the retention of the number of retained asset accounts by insurers and the retention level of the funds in these accounts appear to be increasing. Table 1.A. shows the percentage of the retained asset accounts that are still active after specified timeframes. For example,

⁴ Acquisition and retention costs include such expenses as disclosures to the beneficiaries as well as administrative costs of establishing, maintaining, and reporting the retained asset accounts.

of the accounts established during 2010, 56.94 percent are still active at the end of 2010. The percentage of those accounts retained is reduced to 38.05, 31.99 and 24.91 percent at the end of 2011, 2012 and 2013, respectively. Table 1.B. shows the retention of the funds held in the retained asset accounts in terms of the dollar value retained. Of the funds deposited sometime in 2010, 43.34 percent of the deposits remain in the accounts at the end of 2010. In 2011, 2012, and 2013 these amounts are reduced to 25.79, 20.50, and 15.61 percent, respectively. The trend indicates that insurers are retaining more accounts and a higher percentage of the funds for longer periods. While any balance of the account is retained by the insurer, the insurer can make use of the funds by investing it in projects or investment vehicles.

Initially, the retained asset account was one of many settlement options from which the beneficiary selected. In the early days, the beneficiary had to actively select the retained asset account. However, by 1985, some companies started making the retained asset account the default selection for life settlements (Goldsholle and Price, 1996). By 1997, retained asset accounts became the default life insurance settlement option for nearly all life insurance companies that offered them (Lauria, 1997). In 2010, news media presented negative commentary on the use of retained asset accounts for military beneficiaries (Evans, 2010; Sturdevant, 2010).⁵ As a result several states changed their rules regarding the use of retained asset accounts as the default settlement option.⁶ Appendix A provides a summary of the states and whether they permit the insurer to make the retained asset account the default settlement option. The impact of the use of the RAA as the default settlement option is included in our analysis.

Over the past few years, the utilization and number of retained asset accounts, as well as their use as the default settlement option have been affected. By the end of 2010, only 49 percent of the insurers offering retained asset accounts elected to make them their default settlement method for life insurance. In 2012, this number had increased to almost 60 percent; however, in 2013, only 42 percent of insurers made the retained asset account the default settlement option. Table 2 shows the number of insurers electing to make the retained asset account the default settlement option, when permissible by law.

Insurers may believe that by making the retained asset account the default settlement option, they are increasing the funds that will be held on deposit, making these funds available for the insurer to invest or utilize for projects. To evaluate the impact to the retention for insurers that make the retained asset account the default settlement option versus those that do not, we separate the accounts based on this criteria. The results can be found in Tables 3.A and 3.B. and Tables 4.A. and 4.B. Tables 3.A and 3.B. show the levels of retention for the number of retained asset accounts for those insurers that make the retained asset account the default settlement option and those that make it optional. This analysis shows that insurers that make the retained asset account the default settlement option actually had a lower

⁵ The Department of Veterans Affairs, the Federal Deposit Insurance Corporation and the National Association of Insurance Commissioners investigated the use of retained asset accounts and the disclosures utilized by life insurers. Model legislation and disclosures were created and sent to insurers (Evans, 2010; Holm, 2010; Sturdevant, 2010).

⁶ Alaska and New Mexico stopped permitting the retained asset account to be the settlement option during 2011 and California and New York stopped in 2012.

retention of the retained asset accounts established. Tables 4.A. and 4.B. show the level of retention for the funds held within the retained asset account. Again, this shows that investors withdraw a greater percentage of their funds when forced into the retained asset accounts.

Traditional investment principles would suggest that when there is increased uncertainty for investors, the levels to which they are willing to invest will be lower (Caballero, 1991).⁷ For publically traded insurers, Halek and Eckles (2010) documented this with an event study which found that any marginal downgrade in A.M. Best rating results in significant and negative stock returns. However, there is no opposite reaction for a rating upgrade. For retained asset accounts owners, there may be differences based on the mental state of the owners at the time. It is possible that these beneficiaries may not understand the mechanism of retained asset accounts or the risks associated with this type of account.⁸ As such, the beneficiary may not completely appreciate their role as an investor of the insurer and therefore, may not react to changes in the financial stability of the insurer.

To investigate whether these investors follow previously documented investor behavior, this research investigates whether a change in the A.M. Best rating impacts the number of retained asset accounts open or the retention of the funds in these accounts.

DATA, EMPIRICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

This section briefly describes the data utilized in the empirical study and provides some initial observations as to the reaction of retained asset account owners to changes in the insurers A.M. Best ratings. The section concludes with a discussion of the measures for the retention of retained asset accounts as well as the variables used in the analysis. Incorporated in this analysis of the variables is the explanation and justification for the hypotheses proposed.

Data

To test the change in retention of retained asset accounts following a change of the A.M. Best rating, we create a sample of life insurer financial data from the National Association of Insurance Commissioners

⁷ The ultimate level to which a person invests generally depends on the person's attitude toward risk (Dow and Werlang, 1992).

⁸ Beneficiaries have filed several cases against retained asset accounts; however, most of these cases have been dismissed. In several cases, the courts have found that the beneficiaries were simply uninformed regarding the nuances of retained asset accounts. For instance, in *Clark v. Metropolitan Life Insurance Co.*, No. 08- cv-158 (D. Nev.) a class action brought by beneficiaries charged that Metropolitan Life had withheld funds from the beneficiaries. On September 10, 2010, U.S. District Judge Larry Hicks found that the beneficiaries had not been injured through the use of retained asset accounts and dismissed the case against the company. However, in his ruling, he indicated that Metropolitan's marketing of their retained asset account was "inherently deceptive" as the company did not explain that the retained asset accounts were not protected by the Federal Deposit Insurance Corporation (FDIC). In *Edmondson v. Lincoln National Life Ins. Co.* No. 2-10-cv-04919, Connie Edmondson argued that the insurer's use of retained asset accounts violated consumer protection laws and sought to obtain the additional profit that Lincoln National Life Insurance received from the use of the funds (i.e. the spread). The United States Court of Appeals for the Third Circuit disagreed and found in favor of Lincoln National Life on August 7, 2013.

(NAIC) from 2007 to 2013 (2007 to 2009 are included for lagged variables). The insurer Best's Ratings are collected from A.M. Best from 2010 to 2013. The initial sample includes all U.S. domiciled life insurers. We collect the data specific to retained asset accounts from the Notes to Financial Statements of the statutory annual statement.⁹ The detailed reporting of the number of retained asset accounts and the amount of assets in the accounts were not readily available until 2010, when the statutory annual statement was modified to include specifics on the use of these accounts. Therefore, the period of analysis for this research is limited to 2010 to 2013. Insurers with missing observations for the needed variables are excluded.

The percentage of U.S. life insurers utilizing retained asset accounts has grown over the past few years. However, the number of companies utilizing the accounts has remained rather stable. In 2010, only 20.13 percent (161 insurers) of life insurance companies offered this settlement option, however, by 2013 that had grown to 21.72 percent (162 insurers). For the period under review, the balance in retained asset accounts has remained rather flat with approximately \$32 billion. See Table 5 for detail regarding the number of insurers with retained asset accounts and the number and average size of the accounts open during the years under review.

Consistent with Epermanis and Harrington (2006), we drop insurers that are rated as "poor" (D) which eliminated ten observations. We also exclude observations where the insurer was rated as "under regulatory scrutiny" (E) which reduced our sample by twelve observations. We had no insurers rated as "in liquidation" (F) during our sample. Some insurers are not assigned an A.M. Best rating for various reasons including a failure to submit financial statements, insufficient size, or because the company has requested not to be rated (Epermanis and Harrington, 2006). Similar to Epermanis and Harrington (2006), we will only use insurers with A.M. Best ratings, which further reduces our observations by 2100.

In order to determine if a change in the A.M. Best rating has an impact on the retention of accounts and the funds held in retained asset accounts, we utilize a panel model with year and fixed effects. We test for autocorrelation utilizing the Wooldridge test and there is no evidence of autocorrelation. We also test for multicollinearity. The variance inflation factors are below 2.0 for the variables in the models presented. We also test for heteroscedasticity which is present and is corrected using robust standard errors.

The level of the impact, if any, is estimated by the following model:

⁹ The Financial Condition Committee of the National Association of Insurance Commissioners proposed annual statement disclosures which would provide transparency regarding the retained asset accounts held by insurers. The new disclosure was implemented for the 2010 annual statements and includes the number and balance of retained asset accounts in force at the end of the current year and the prior year. In addition, the amount in the retained asset accounts is segregated into aging categories, based on how long the money has been held in the retained asset accounts (NAIC, 2010).

$$\text{Abnormal Retention}^* = \alpha + \beta_1 \text{AM Best rating change}^{**} + \beta_2 \text{investment yield} + \beta_3 \text{premium to surplus ratio} + \beta_4 \text{BCAR} + \beta_5 \text{default} + \beta_6 \text{NY domiciled} + \beta_7 \text{stock} + \beta_8 \text{group} + \beta_9 \text{size} + \beta_{10} \text{LOB HHI} + \beta_{11} \text{years in operation} + \varepsilon \quad \text{Eq(1)}$$

*Retention will be calculated for the number of RAA accounts as well as the funds in the accounts.

**Upgrades and downgrades will be analyzed separately.

Abnormal retention rates are calculated by comparing the level of retention of the retained asset accounts for those insurers with a Best change to a control group of those insurers with a retained asset account but without a Best rating change.¹⁰ We use two measures of retention for retained asset accounts, 1) the number of accounts and 2) the level of funds deposited in the accounts. In each case, we calculate the percentage of retention at the end of the initial year the account was established and at the subsequent year end. We calculate abnormal retention for insurers with rating changes for the year of the rating change (year 0) and for the year following the rating change (t + 1). Similar to Epermanis and Harrington (2006), abnormal retention is calculated by deducting the mean retention for the insurers without rating changes from each downgraded or upgraded insurer's retention. In addition to the change in A.M. Best rating, we also include controls for factors likely to impact the retention of accounts or funds deposited in retained asset accounts. The explanation of each of these variables is included in the following paragraphs. Table 6 summarizes the variables which have been defined in the following section as well as the expected sign for each variable in the models.

Hypothesis Development

The use of and unique characteristics of retained asset accounts provides an opportunity to test several hypotheses regarding the reaction of investors to a signal indicating a change in the financial stability of a stock or mutual insurance company. In order the test for the potential change in retention levels surrounding a ratings change, we control for a variety of factors also likely to impact changes in RAA retention.

Best Rating Variables

Our primary focus is the impact in the change in firm risk. Similar to Epermanis and Harrington (2006) and Billet, Garfinkel, and O'Neals (1998) we utilize the A.M. Best rating change as a proxy for changes in the insurer's default risk. As with Epermanis and Harrington (2006) and Halek and Eckles (2010) we look at both positive and negative changes. As noted by Halek and Eckles (2010) the reaction of investors in not consistent with both upgrades and downgrades. They find that stock prices of an insurer decrease with any marginal downgrade of the A.M. Best rating; however, there is no significant change in stock price for an upgrade in the rating. In an effort to test whether RAA account owners act similarly to

¹⁰ Similar to Epermanis and Harrington (2006), which investigated premium growth around Best changes, we analyze changes at the individual insurer level because it is subject to less noise and bias from mergers and acquisitions.

traditional investors, we test the hypothesis that if a firm has an increase (decrease) in rating their level of abnormal retention of RAAs should increase (decrease) if investors are rational.

In addition, we also test for the fact that not all ratings changes are of equal importance in the mind of investors. Halek and Eckles (2010) find that when an insurer drops to an A.M. Best rating of A- or lower there is a large and significant negative reaction to their stock returns. This reaction is larger than that seen from a marginal downgrade. Brokers and agents may bypass insurers with no ratings or insurers with ratings below some threshold of financial strength (Pottier and Sommer, 1999). Epermanis and Harrington (2006) investigate the change in premiums written following an A.M. Best rating change and find that insurers dropping below a rating of A- saw the greatest decline in premium written. Some policyholders may also be restricted from placing their business with an insurer with a rating below an A- (Souter, 2000) or, in the case of some commercial accounts, with an insurer with a low rating (Pottier and Sommer, 1999). Combined, these may cause investors to view the insurer as even more financially unstable. An opposite reaction may occur for insurers that see an increase in their rating. Given this, we expect the reaction is likely to be most significant to a major rating downgrade from above A- to below. It is not clear if a major upgrade would have a similar significant impact since both types of upgrade would indicate financial stability to investors and we expect to see an increase in both retention measures for these insurers.

In order to investigate the impact a change in A.M. Best rating has on the retention of retained asset accounts and the funds held in these accounts, we include four measures. Each measure is evaluated separately. The measures are: 1) a dummy variable to indicate an increase in the insurers A.M. Best rating during the year, regardless of the level of the change;¹¹ 2) a dummy variable to indicate a decrease in the insurers A.M. Best rating, regardless of the level of the change; 3) a dummy variable for insurers that have a major upgrade (move from below an A- rating to an A- rating or better); and 4) a dummy variable for insurers that have a major downgrade (move from a rating of A- or above to a rating below an A-).

The number of total A.M. Best changes for the life insurers included in the sample is shown in Table 7. The number of total upgrades in a given year ranged from a high of forty-five in 2012 to a low of only eighteen in 2013. On the other hand, the number of downgrades was highest in 2010 when there were twenty-six and was lowest in 2013 when there were only nine. Due to the limited timeframe of our review, the number of changes in Best rating for those insurers offering retained asset accounts is small. The number of upgrades for insurers with retained asset accounts was highest in 2011 when there were thirteen and lowest in 2012 when there were only four. There were nine downgrades for insurers offering retained asset accounts in 2002, the most for such insurers in any year under review. Downgrades for these insurers were at its lowest in 2013 when there were only four. Finally, the table shows the

¹¹ A.M. Best updates the financial rating of insurers throughout the year, however, a substantial portion are evaluated prior to August (Epermanis and Harrington, 2006). Therefore, consistent with Epermanis and Harrington (2006) we treat a rating change from August of year $t - 1$ through July of year t as a rating change in year t .

percentage of the changes which can be attributed to those insurers offering the RAA.¹² Table 8 indicates the number of major upgrades and downgrades to A.M. Best ratings during the sample period. The number of these major changes for insurers with retained asset accounts and the percentage of the major upgrades and downgrades attributed to these insurers are also included.

If the owners of retained asset accounts act as informed investors, we hypothesize that there will be a negative investor reaction to an A.M. Best downgrade and therefore retention in both the number of retained asset accounts and the amount of funds held in such accounts will decline. An opposite reaction will occur for Best rating upgrades (an increase in retention).

RAA Account Variables

If permitted by law, insurers may have the option to make the retained asset account the default settlement option for beneficiaries. Requiring funds to be placed in the retained asset account may lead to greater overall funds and better retention as not all beneficiaries choose to access the funds of life insurance immediately. The initial analysis of the data, however, indicates that making the retained asset account the default settlement option for beneficiaries' results in a lower retention for insurers.¹³ To investigate, in a multivariate framework the impact that making the retained asset account the default settlement option has on the retention within these accounts, we include a dummy variable to distinguish between insurers that do and those that do not use the RAA as the default settlement option. No *a priori* prediction is made.

An insurance company that offers retained asset accounts utilizes the funds of the owner/investor and compensates them through the payment of interest. Bisco and McCullough (2014) find that there is a positive correlation between the interest paid and the financial stability of the insurer. In other words, insurers that are more financially stable will pay a lower interest rate. All else equal, investors would normally select the investment with the greatest return. For retained asset accounts, as the average interest rate paid on retained asset accounts increases, the level of the retention of the funds also increases (Bisco and McCullough, 2014). To control for the rate of return to the investor, an average retained asset account interest variable is included.¹⁴

Regulation Variable

¹² Some insurers are not assigned a rating by A.M. Best for several reasons including failure to submit an NAIC annual statement, insufficient size, or company request. Consistent with Epermanis & Harrington (2006), we omit these from our analysis.

¹³ Refer to Tables 3.A., 3.B., 4.A., and 4.B.

¹⁴ The interest rates paid by the insurers in this sample show either a flat rate for all retained asset accounts or a variable interest rate based on the amount of funds on deposit. No insurer offered variable interest rates based on the length of time the account was open. Insurers may have changed the interest rate credited to the account one or more times during each year of the sample period. Therefore, to measure the level of interest, we take the average of the low interest and the high interest paid by the insurer during each year in the sample.

In the insurance industry, the degree of regulatory scrutiny varies by state and life insurance companies chartered to operate in New York face particularly stringent regulatory and capital adequacy requirements (Brewer III, Monschean, and Strahan, 1997). Previous literature has shown that life insurers domiciled in the state of New York are subject to more restrictive regulation than insurers domiciled in other states (Weisbart, 1976; Pottier and Sommer, 1997; Krishnaswami and Pottier, 2001). Specific to the use of RAAs, the attorney general in New York launched an investigation into retained asset accounts in August of 2010 which led to a circular letter being issued on February 2012. The circular letter indicated that retained asset accounts could not be the default option for settlement and it must be actively selected by a beneficiary (Sturdevant, 2010; Postal, 2012). For all of these reasons, to control for regulation, we include a dummy variable indicating those insurers that are domiciled in New York. Due to the stringent regulation in New York and the investigation by the attorney general, we hypothesize that the level of retention in retained asset accounts, for both accounts and funds in these accounts, will be lower for those insurers domiciled in New York.¹⁵

Firm Characteristic Variables

Specific characteristics of the insurers also may impact the retention of the number of accounts and the level of funds held in retained asset accounts. For instance, life and health insurers are generally organized as stock companies or mutual (Pottier and Sommer, 1997). There are differences in how these firms operate. Pottier and Sommer (1997) find that stock companies write more group insurance and, as a percentage their business, more life insurance. In their analysis of property-liability insurers, Lamm-Tenant and Starks (1993) find that stock insurers are associated with riskier activities. Managers of mutual insurers may also avoid risks that threaten their jobs and therefore, may avoid some positive net present value projects that are considered more risky. Furthermore, the managers of stock insurers may engage in more complex activities because stockholders have greater mechanisms for controlling managers (Cummins, Philips and Smith, 2001). As a result, managers of mutual insurers exhibit greater risk-averse behavior (Cummins, Philips and Smith, 2001).

In addition to the risk factors mentioned, mutual insurers are limited in their ability to raise new capital (Cummins, Tennyson, and Weiss, 1999). This limited access to capital may make the use of retained asset accounts more attractive to mutual insurers and may provide incentive for them to work towards greater retention. Coupled with the riskier activities of stock companies, RAA investors in stock companies may

¹⁵ New York has an extraterritorial aspect to its regulation which states that an insurer licensed to do business in New York must comply with all requirements applicable to domestic insurers in every state in which the insurer does business (Pottier and Sommer, 1998). In other words, the laws applicable to a company licensed in New York must be applied to all states that the insurer operates in. To control for this added aspect, research may include a dummy variable indicating whether the insurer is licensed in New York (e.g. Wells, Cox, and Gaver, 1995; Brewer, Monschean, and Strahan, 1997; Pottier and Sommer, 1997).

For robustness, we replace the variable indicating New York domicile with a variable indicating whether the insurer is licensed in the state of New York. The results are positive and significant for all the iterations of the model, indicating that insurers licensed in New York have a greater retention in their retained asset accounts. All other results remain consistent.

reduce their retention in these accounts. For these reasons, we expect that mutual insurers will see a greater level of RAA retention.

Unaffiliated insurers, unlike members of a group, are unable to protect their capital from risks by sharing or transferring these risks to an affiliate, however, group members have the ability to isolate risks in subsidiaries which means consumers may be exposed to greater insolvency risk when purchasing from a member of a group, all else equal (Cummins, Phillips and Smith, 2001). However, Pottier and Sommer (1997) indicate that it is possible that insurers may benefit from being a member of a group of insurers and it is important to control for the benefits from this systematic relationship. Therefore, to control for this aspect of the insurers operation, we include a dummy variable indicating whether the insurer is a member of a group. We make no *a priori* prediction for this firm characteristic.

Larger insurers are considered to have a lower level of insolvency risk and therefore are safer or restated, smaller insurers have a greater probability of insolvency (BarNiv and Hershberger, 1990; Sommer, 1996; and Grace, Harrington, and Klein, 1998)). Consistent with these studies, we expect that larger life insurers are more likely to remain solvent. The investors/owners of retained asset accounts, seeking safety, may elect to keep the retained asset account and the funds deposited with these insurers for a greater length of time, increasing overall retention. Therefore, we hypothesize that there will be a positive correlation with the size of the insurer and the level of both retention measures. The log of total assets is used as a measure of size.

Most life insurance companies write in more than one line of business (Greene and Segal, 2004). Insurers that are more diversified have a lower insolvency risk than insurers that write in only one or two lines of business (Cummins and Nini, 2002). Greater diversification allows insurers to limit the impact of a shock that may occur in a single line of business (Fier, McCullough, and Carson, 2013). The line-of-business Herfindahl (HHI) is used to measure the concentration of the lines of business written. For the industry as a whole, the HHI remains relatively constant over time (Cummins, Tennyson and Weiss, 1999). We include the line-of-business Herfindahl to control for the diversification of the insurance company. An *a priori* prediction is not made.

Consistent with Pottier and Sommer (1997) we include the number of years the firm has been in business. Older firms are more likely to be those that have successfully selected positive net present value projects and less risky investments (Krishnaswami and Pottier, 2001). These selections may make these insurers more profitable over time. To control for the age of the insurer, the number of years the insurer has been in operation is included and is expected to be positively correlated with the retention of both the number of accounts and the funds held in retained asset accounts.¹⁶

Investment/Profitability Variables

We also include several variables related to key aspects of the firms overall performance with the expectation that higher levels of firm performance and safety will lead to higher levels of retention. First,

¹⁶ For robustness, the log of the number of years in operation was used and the main results remained consistent.

we control for the net investment yield on the assets invested by the insurer. This indicates the insurers' ability to produce a profit from existing capital. Authors such as BarNiv and Hershbarger (1990) found that the investment yield was significantly larger for solvent insurers (in comparison to insolvent insurers). Thus we expect a positive correlation with RAA levels.

The premium to surplus (P/S) ratio is included as a measure of the insurers' level of growth. Large P/S ratios can indicate excessive growth and may lead to an insurer's inability to pay claims. Insurers that have become insolvent tend to have larger P/S ratios than insurers that remain solvent (BarNiv and Hershbarger, 1990). Utilizing the P/S ratio as a measure of financial leverage, Carson and Hoyt (1995) find that the premium to surplus ratio is positively correlated with a higher propensity for failure. In this case, since an increasing premium to surplus (P/S) ratio is an indication of insolvency concerns (i.e. higher risk), we expect that there will be a negative correlation between the premium to surplus (P/S) ratio and the levels of RAA retention.

The Best's Capital Adequacy Ratio (BCAR) is a measure of insurer risk.¹⁷ The BCAR is a tool used to "provide a quantitative measure of the risks inherent in a company's investment and insurance profile relative to its statutory capital and surplus" (A.M. Best, 2004). The BCAR is a multidimensional risk measurement that captures various aspects of an insurer's risk (Cole, He, McCullough, Semykina, and Sommer, 2011). For life insurers, the BCAR measures the risks of asset, mortality and morbidity, liability and reinvestment, and miscellaneous risks (i.e. legal, regulatory and competitive risks) (A.M. Best, 2004). It also incorporates an insurer's capitalization level. A higher BCAR represents lower firm risk; therefore, we expect a positive correlation between the BCAR and the level of retention of retained asset accounts.¹⁸

RESULTS

In order to understand the full scope of how a change in the A.M. Best rating influences the investors of retained asset accounts, we utilize four measures for the A.M. Best change. Table 9 shows the results of our model for the retention in the number of accounts and for the retention of funds held in the accounts for those insurers with an A.M. Best rating change. All four rating changes are shown on this table (decrease, increase, major downgrade and major upgrade). The results indicate that there is no significant change in the number of retained asset accounts open or the balance of funds held in the retained asset account when there is an increase or decrease in the Best rating. However, to account for the fact that all A.M. Best rating changes may not be evaluated the same by investors, similar to Epermanis and Harrington (2006) and Halek and Eckles (2010) we look to those insurers that have a rating downgrade from above to something below an A- (major downgrade) and those insurers that have a rating below an A- upgraded to a level of A- or better (major upgrade). We find that for a major downgrade of the Best

¹⁷ The BCARs are not normally distributed in our sample; therefore, we use the natural logarithm instead in order to reduce the skewness of the distribution.

¹⁸ For robustness, the model is run excluding the variables for premium to surplus ratio (P/S) and the Best's Capital Adequacy Ratio (BCAR) and the results remain consistent.

rating, the investors reduce the number of accounts open and the level of funds retained in any open accounts. These results may indicate that similar to brokers and agents, investors may bypass insurers with ratings below a specified threshold of financial strength (i.e. below an A-). No significant change occurs when there is a major upgrade of the rating. These results are consistent with the results of Halek and Eckles (2010) indicating that the owners of retained asset accounts do react similar to stockholders when there is a change in the A.M. Best rating.

Results indicate that other factors impact the retention of the number of retained asset accounts open and the funds on deposit in these accounts. Consistent with Bisco and McCullough (2014), we find that the level of accounts remaining open and the balance in these accounts are positively correlated with the average interest rate paid on the retained asset accounts. The increased compensation encourages investors to leave accounts open and to maintain deposits in the accounts.

Consistent with the earlier data analysis, insurers electing to make the retained asset account the default settlement option have a lower retention, both in the number of accounts open and in the balances retained. If insurers are trying to increase the funds they retain on behalf of the beneficiary, making the RAA the default settlement option is not having the desired results. Consistent with our hypothesis and the fact that larger insurers are generally considered less risky (BarNiv and Hershberger, 1990), results indicate that larger insurers retain a greater number of accounts, however, there is no indication that they maintain higher balances in these accounts. Contradictory to expectation, the results indicate that older insurers actually have lower abnormal retention, both in the number of accounts open and the balances in such accounts.

CONCLUSION

Changes in financial ratings can act as a signal to policyholders and investors regarding the financial stability of a company (e.g. Denenberg, 1967; Ambrose and Seward, 1988; Scalfane, 2000; Epermanis, and Harrington, 2006; and Halek and Eckles, 2010). To understand how a newer class of investors react to this signal, this research investigates the reaction of investors in retained asset accounts to A.M. Best changes in order to determine if these investors react similar to more traditional investors. The characteristics of the retained asset account and how life insurance beneficiaries become investors of the insurer provide a unique opportunity to consider how these investors react to the financial ratings of life insurers. Whereas the previous research investigating investor reaction to A.M. Best rating changes was limited to the reaction of bondholders and stockholders in publicly-traded companies, this research investigates the reaction of these investors in both stock and mutual insurers.

There are several public policy concerns regarding the owners of retained asset accounts, specifically whether they understand their role as an investor in the insurer holding the funds. Beneficiaries become investors during an emotional time when many believe financial decisions should not be made

(Goldsholle and Price, 1996). Also, in several cases, courts have found that beneficiaries were uninformed regarding the nuances of retained asset accounts.¹⁹

Our results indicate a downgrade from an A.M. Best rating above A- to an A- or below results in reduced investment in retained asset accounts. Some may view this as a threshold between what is considered an acceptable and unacceptable security level (Bradford, 2003). With no significant change in RAA retention for an upgrade (whether a major change or not), our results show that retained asset account owners do act similar to other investors. Our results are consistent with prior literature which considered the reaction of investors to changes in financial ratings (e.g. Holthausen and Leftwich, 1986; Halek and Eckles, 2010). The issues related to retained asset accounts and investor reactions impact beneficiary/owners, insurers and regulators. Beneficiary/owners become investors of the funds in retained asset accounts immediately upon the deposit of funds into the accounts. Bisco and McCullough (2014) find that the interest rate paid to investors is positively correlated with the risk of the insurer holding the retained asset account. Combined with the results from this research, these results indicate that retained asset account owners understand their role as investors and are able to interpret their risk by reacting to major downgrades in A.M. Best rating and by demanding higher interest to compensate for the risk. Understanding that the owners of these accounts are acting as investors, at least in respect to changes in the financial stability of the insurer, should provide added support for the continued use of retained asset accounts as a settlement option for insurers.

Regulators continue to look at the use of retained asset accounts in order to ensure that the beneficiary/owners of such accounts are protected and understand their role as investors. Acknowledging that these investors react as other investors may indicate that current disclosures are sufficient in educating beneficiaries about the characteristics of the retained asset account.

¹⁹ Refer to footnote 8.

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Table 1.A.

Retained Asset Accounts – Retention – Number of Accounts

End of: Year Deposited	Current Year	2nd Year	3rd Year	4th Year
2010	56.94%	38.05%	31.99%	24.91%
2011	59.00%	39.92%	32.33%	
2012	57.03%	40.95%		
2013	61.77%			

This table presents the retention percentages of the number of retained asset accounts. The year indicates the year in which the retained asset account was first opened.

Table 1.B.

Retained Asset Accounts – Retention – Dollars Invested

End of: Year Deposited	Current Year	2nd Year	3rd Year	4th Year
2010	43.34%	25.79%	20.50%	15.61%
2011	44.42%	26.13%	21.14%	
2012	44.68%	26.38%		
2013	47.51%			

This table presents the retention percentages of the funds deposited in retained asset accounts. The year indicates the year in which the retained asset account was first opened.

Table 2

Retained Asset Account as Default Settlement Option

	2010	2011	2012	2013
No. of Insurers	800	789	738	746
No. of Insurers with RAA	161	167	162	162
# of companies electing default	80	87	95	69
% electing default	49.69%	52.10%	58.64%	42.59%

This table indicates the number of insurers electing to make the retained asset account the default settlement option, when permitted by law.

Table 3.A.

Retained Asset Accounts – Retention – Number of Accounts (when default settlement option)

End of: Year Deposited	Current Year	2nd Year	3rd Year	4th Year
2010	51.56%	32.45%	26.45%	21.25%
2011	53.38%	34.93%	27.14%	
2012	50.24%	33.95%		
2013	54.96%			

This table presents the retention percentages of the number of retained asset accounts for insurers that make the retained asset account the default settlement option. The year indicates the year in which the retained asset account was first opened.

Table 3.B.

Retained Asset Accounts – Retention – Number of Accounts (when NOT default settlement option)

End of: Year Deposited	Current Year	2nd Year	3rd Year	4th Year
2010	63.35%	43.84%	37.04%	29.97%
2011	66.06%	46.14%	38.38%	
2012	61.88%	47.22%		
2013	68.36%			

This table presents the retention percentages of the number of retained asset accounts for insurers that do not make the retained asset account the default settlement option. The year indicates the year in which the retained asset account was first opened.

Table 4.A.

Retained Asset Accounts – Retention – Dollars Invested (when default settlement option)

End of: Year Deposited	Current Year	2nd Year	3rd Year	4th Year
2010	39.31%	22.12%	17.58%	13.36%
2011	39.77%	22.10%	16.18%	
2012	38.37%	21.13%		
2013	41.43%			

This table presents the retention percentages of the funds deposited in retained asset accounts for insurers that make the retained asset account the default settlement option. The year indicates the year in which the retained asset account was first opened.

Table 4.B.

Retained Asset Accounts – Retention – Dollars Invested (when NOT default settlement option)

End of: Year Deposited	Current Year	2nd Year	3rd Year	4th Year
2010	49.18%	30.24%	23.86%	18.76%
2011	52.73%	32.12%	26.94%	
2012	50.57%	31.25%		
2013	53.49%			

This table presents the retention percentages of the funds deposited in retained asset accounts for insurers that do not make the retained asset account the default settlement option. The year indicates the year in which the retained asset account was first opened.

Table 5

Summary of Retained Asset Accounts (as of year-end)

	2010	2011	2012	2013
No. of Insurers	800	789	738	746
No. of Insurers with RAA	161	167	162	162
Percentage with RAA	20.13%	21.17%	21.95%	21.72%
Total No. of Open Accounts	1,084,386	1,045,749	1,004,838	957,073
Total Value in Accounts	32,153,286,598	32,014,755,674	31,729,846,956	31,984,925,763
Avg. \$ per Acct	29,651.15	30,614.19	31,577.08	33,419.53

Table 6
Explanation of Variable Specification

Variable	Definition	Expected Sign
<u>Retained Account Retention Measures</u>		
Abnormal Retention - balance	% of RAA funds remaining open at end of the year - Average Retention of Funds for All Life Insurers	
Abnormal Retention - count	% of RAA accounts remaining open at end of the year - Average Retention of Accounts for All Life Insurers	
Retention at Year End - balance	% of RAA funds remaining open at end of the year $t, t+1, t+2, t+3, t+4$	
Retention at Year End - count	% of RAA accounts remaining open at end of the year $t, t+1, t+2, t+3, t+4$	
<u>Best Rating Variables</u>		
AM Best Rating Change	A dummy variable of 1 if insurer has a downgrade (upgrade) and a 0 otherwise	-
Major Best Upgrade	A dummy variable of 1 if insurer was upgraded to A- or better	+
Major Best Downgrade	A dummy variable of 1 if the insurer was downgraded to B++ or lower	-
<u>RAA Account Variables</u>		
Default	A dummy variable of 1 if the company utilizes RAA as the default, if allowed, and a value of 0 otherwise	+/-
Average RAA Interest Rate	Average of High and Low Interest Paid on RAA	+
<u>Regulation Variable</u>		
NY Domiciled	A dummy variable of 1 if the insurer's state is NY and a 0 otherwise.	-
<u>Firm Characteristic Variables</u>		
Stock	A dummy variable of 1 for stocks and a value of 0 otherwise.	-
Group Member	A dummy variable of 1 for group members and a value of 0 otherwise	+/-
Size	Log of net total assets	+
Line of Business HHI	Line of Business Herfindahl Index	+/-
Years in Operation	Number of years the company has been in operation	+
<u>Investment/Profitability Variables</u>		
Investment Yield	Investment return (percentage)	+
Premium to Surplus Ratio	Premium to Surplus Ratio	-
BCAR	Log of the Best Capital Adequacy Ratio	+

Table 7
Summary of A.M. Best Rating Changes

	2010		2011		2012		2013	
	Upgrade	Downgrade	Upgrade	Downgrade	Upgrade	Downgrade	Upgrade	Downgrade
No. of A.M Best Changes	37	26	37	19	45	15	18	9
No. of Insurers with RAA	10	9	13	5	4	8	10	4
Percentage with RAA	27.03%	34.62%	35.14%	26.32%	8.89%	53.33%	55.56%	44.44%

This table shows the number of A.M. Best changes for all life insurers followed by the number of these changes to insurers which also offered retained asset accounts in the year of the rating change. The percentage of the changes that apply to insurers offering retained asset accounts is included.

Table 8
Summary of Major Upgrades and Downgrades to A.M. Best Ratings

	2010		2011		2012		2013	
	Upgrade	Downgrade	Upgrade	Downgrade	Upgrade	Downgrade	Upgrade	Downgrade
No. of A.M Best Changes	9	7	3	4	17	2	5	3
No. of Insurers with RAA	1	3	1	1	2	1	3	2
Percentage with RAA	11.11%	42.86%	33.33%	25.00%	11.76%	50.00%	60.00%	66.67%

This table shows the number of life insurers that had a major upgrade or major downgrade during the year indicated. A major upgrade is indicated when an insurer's A.M. Best rating moved from a rating below an A- to an A- or better. A major downgrade is indicated when an insurer's A.M. Best rating moved from a rating of an A- or better to a rating below an A-. The number of insurers with a major upgrade or downgrade and that offered retained asset accounts is also included. The percentage of the insurers that offered retained asset accounts and had a major upgrade or downgrade is also included.

Table 9
Model Output – Retention

VARIABLES	Abnormal Retention							
	(1) Count	(2) Count	(3) Count	(4) Count	(5) Balance	(6) Balance	(7) Balance	(8) Balance
Decrease in Best Rating	-0.019390 [0.028]				-0.037794 [0.024]			
Increase in Best Rating		-0.012941 [0.055]				0.008522 [0.066]		
Major Best Downgrade			-0.075638*** [0.021]				-0.066532*** [0.020]	
Major Best Upgrade				-0.184492 [0.170]				-0.131662 [0.089]
Average RAA Interest	8.878976*** [1.022]	8.905403*** [1.025]	8.904488*** [1.025]	9.001814*** [1.020]	10.726616*** [1.079]	10.778626*** [1.081]	10.766860*** [1.083]	10.836540*** [1.085]
Default	-0.097866*** [0.020]	-0.097113*** [0.020]	-0.097078*** [0.020]	-0.096533*** [0.020]	-0.066175*** [0.019]	-0.065412*** [0.020]	-0.064959*** [0.019]	-0.064608*** [0.019]
NY Domiciled	0.039349 [0.027]	0.039261 [0.027]	0.038897 [0.027]	0.039004 [0.027]	0.005631 [0.020]	0.005921 [0.020]	0.005619 [0.020]	0.005775 [0.020]
Stock	-0.028624 [0.031]	-0.026881 [0.031]	-0.027054 [0.031]	-0.024790 [0.031]	-0.001455 [0.027]	0.001185 [0.027]	0.001478 [0.027]	0.003071 [0.027]
Group Member	-0.001564 [0.066]	0.000661 [0.065]	0.000700 [0.065]	-0.012085 [0.062]	-0.023814 [0.059]	-0.019534 [0.059]	-0.019713 [0.059]	-0.028852 [0.058]
Size	0.013038** [0.006]	0.012961** [0.006]	0.013073** [0.006]	0.013330** [0.006]	-0.006532 [0.006]	-0.006333 [0.006]	-0.006305 [0.006]	-0.006130 [0.006]
Line of Business HHI	0.064784 [0.049]	0.065146 [0.049]	0.065546 [0.049]	0.067544 [0.049]	0.018698 [0.041]	0.019939 [0.042]	0.020022 [0.041]	0.021487 [0.041]
Years in Operation	-0.000626*** [0.000]	-0.000614*** [0.000]	-0.000617*** [0.000]	-0.000619*** [0.000]	-0.000352* [0.000]	-0.000327* [0.000]	-0.000331* [0.000]	-0.000332* [0.000]
Investment Yield	0.011145 [0.009]	0.011590 [0.009]	0.011514 [0.009]	0.011273 [0.009]	0.005615 [0.009]	0.006276 [0.009]	0.006386 [0.009]	0.006213 [0.009]
Premium to Surplus Ratio	-0.001083 [0.006]	-0.000848 [0.006]	-0.000987 [0.006]	-0.000986 [0.006]	-0.001097 [0.004]	-0.000619 [0.004]	-0.000709 [0.004]	-0.000691 [0.004]
BCAR	0.001037 [0.033]	0.003943 [0.033]	0.002795 [0.033]	0.006696 [0.033]	0.005332 [0.028]	0.010546 [0.028]	0.010441 [0.027]	0.013269 [0.027]
Constant	-0.299242 [0.239]	-0.322351 [0.235]	-0.317188 [0.234]	-0.332435 [0.233]	-0.018201 [0.199]	-0.066796 [0.190]	-0.065904 [0.189]	-0.077071 [0.189]
Observations	342	342	342	342	344	344	344	344
R-squared	0.332	0.332	0.332	0.337	0.384	0.382	0.383	0.385

***, **, and * indicate significance at 0.01, 0.05, and 0.10 levels respectively.
Robust standard errors in brackets.

Appendix A: States Permitting the Retained Asset Account to be the Default Settlement Option

State	2010	2011	2012	2013
Alaska	Yes	No	No	No
Alabama	Yes	Yes	Yes	Yes
Arkansas	No	No	No	No
Arizona	Yes	Yes	Yes	Yes
California	Yes	Yes	No	No
Colorado	Yes	Yes	Yes	Yes
Connecticut	No	No	No	No
Washington DC	Yes	Yes	Yes	Yes
Delaware	Yes	Yes	Yes	Yes
Florida	Yes	Yes	Yes	Yes
Georgia	Yes	Yes	Yes	Yes
Hawaii	Yes	Yes	Yes	Yes
Iowa	Yes	Yes	Yes	Yes
Idaho	Yes	Yes	Yes	Yes
Illinois	Yes	Yes	Yes	Yes
Indiana	Yes	Yes	Yes	Yes
Kansas	No	No	No	No
Kentucky	Yes	Yes	Yes	Yes
Louisiana	No	No	No	No
Massachusetts	Yes	Yes	Yes	Yes
Maryland ¹	No	No	No	No
Maine	Yes	Yes	Yes	Yes
Michigan	Yes	Yes	Yes	Yes
Minnesota	No	No	No	No
Missouri	Yes	Yes	Yes	Yes
Mississippi	Yes	Yes	Yes	Yes
Montana	Yes	Yes	Yes	Yes
North Carolina	No	No	No	No
North Dakota	Yes	Yes	Yes	Yes
Nebraska	Yes	Yes	Yes	Yes
New Hampshire	Yes	Yes	Yes	Yes
New Jersey	Yes	Yes	Yes	Yes

Each states Department of Insurance was contacted directly to determine whether the retained asset account was permitted to be the default settlement option for each year under review. In order for a state to be marked "Yes" they must have permitted the use of retained asset accounts as the default settlement option for life insurance for the entire year.

1 Maryland stopped permitting the retained asset account from being the default settlement option on July 1, 2010.

Appendix A: States Permitting the Retained Asset Account to be the Default Settlement Option (Cont'd)

State	2010	2011	2012	2013
New Mexico	Yes	No	No	No
Nevada	Yes	Yes	Yes	Yes
New York	Yes	Yes	No	No
Ohio	Yes	Yes	Yes	Yes
Oklahoma	Yes	Yes	Yes	Yes
Oregon	Yes	Yes	Yes	Yes
Pennsylvania	Yes	Yes	Yes	Yes
Rhode Island	Yes	Yes	Yes	Yes
South Carolina	No	No	No	No
South Dakota	Yes	Yes	Yes	Yes
Tennessee	No	No	No	No
Texas	Yes	Yes	Yes	Yes
Utah	Yes	Yes	Yes	Yes
Virginia	Yes	Yes	Yes	Yes
Vermont	Yes	Yes	Yes	Yes
Washington	Yes	Yes	Yes	Yes
Wisconsin	Yes	Yes	Yes	Yes
West Virginia	Yes	Yes	Yes	Yes
Wyoming	Yes	Yes	Yes	Yes

Each states Department of Insurance was contacted directly to determine whether the retained asset account was permitted to be the default settlement option for each year under review. In order for a state to be marked "Yes" they must have permitted the use of retained asset accounts as the default settlement option for life insurance for the entire year.