CENTER FOR INSURANCE POLICY AND RESEARCH

NAIC NATIONAL ASSOCIATION OF INSURANCE COMMISSIONERS

Journal of Insurance Regulation

Volume 45, Number 1

DOI: https://doi.org/10.52227/27290.2026

Are Consumers Aware of State Insurance Guaranty Protections?

David Blanchett
Michael Finke
Michael Guillemette

Journal of Insurance Regulation: A Forum for Opinion and Discussion of Major Regulatory and Public Policy Issues in Insurance

The Journal of Insurance Regulation (JIR) strives to make state insurance departments more aware of the cutting-edge, high-quality research occurring in the regulatory arena. All authors having articles that deal with insurance regulation are invited to submit manuscripts to the Journal for review. Before appearing in the Journal, each article is rigorously evaluated by the JIR Editorial Review Board to ensure that all information provides a true benefit to its readers and is of the utmost quality. The ideas expressed in the Journal are not endorsed by the NAIC, CIPR, the Journal's editorial staff, or the Journal's board.

NAIC NATIONAL ASSOCIATION OF INSURANCE COMMISSIONERS

The NAIC is the authoritative source for insurance industry information. Our expert solutions support the efforts of regulators, insurers and researchers by providing detailed and comprehensive insurance information. The NAIC offers a wide range of publications in the following categories:

Accounting & Reporting
Information about statutory accounting principles and the procedures necessary for filing financial annual statements and conducting risk-based capital calculations.

Consumer Information
Important answers to common questions about auto, home, health and life insurance — as well as buyer's guides on annuities, long-term care insurance and Medicare supplement plans.

Financial Regulation
Useful handbooks, compliance guides and reports on financial analysis, company licensing, state audit requirements and receiverships.

Legal
Comprehensive collection of NAIC model laws, regulations and guidelines; state laws on insurance topics; and other regulatory guidance on anti-fraud and consumer privacy.

Market Regulation
Regulatory and industry guidance on market-related issues, including anti-fraud, product filing requirements, producer licensing and market analysis.

White Papers
Relevant studies, guidance and NAIC policy positions on a variety of insurance topics.

Special Studies
Studies, reports, handbooks and regulatory research conducted by NAIC members on a variety of insurance-related topics.

Statistical Reports
Valuable and in-demand insurance industry-wide statistical data for various lines of business, including auto, home, health and life insurance.

Supplementary Products
Guidance manuals, handbooks, surveys and research on a wide variety of issues.

Capital Markets & Investment Analysis
Information regarding portfolio values and procedures for complying with NAIC reporting requirements.

NAIC Activities
NAIC member directories, in-depth reporting of state regulatory activities and official historical records of NAIC national meetings and other activities.

For information about NAIC publications, visit us at: https://content.naic.org/publications

ISBN: 978-1-64179-530-2

NAIC Executive Office
1101 K Street, N.W.
Suite 650
Washington, DC 20005
202.471.3990

NAIC Central Office
1100 Walnut Street
Suite 1000
Kansas City, MO 64106
816.842.3600

NAIC Capital Markets & Investment Analysis Office
One New York Plaza
Suite 4210
New York, NY 10004
212.398.9000

Are Consumers Aware of State Insurance Guaranties?

David Blanchett, PGIM
Michael Finke, The American College of Financial Services
Michael Guillemette, Texas Tech University

ABSTRACT
State insurance guaranty associations provide additional protection that reduces the risk of annuity insolvency when premiums fall below a fixed threshold. Multi-year guaranteed annuities (MYGAs), also known as fixed-deferred annuities, offer investors a guaranteed return comparable to corporate bond yields, with the added benefit of insolvency risk protection. Informed investors should select lower-quality, higher-return MYGAs at or near the state guaranty threshold using nonqualified assets to maximize after-tax return and take advantage of downside protections. Using sales data from an online annuity provider, we find no evidence of strategic annuity selection. Sophisticated investors do not appear to take advantage of opportunities to earn higher returns below protection thresholds during periods of market turbulence when spreads between higher- and lower-quality insurers widen. Rules that shroud state guaranty protection appear to limit strategic purchases by sophisticated investors, potentially misallocating capital toward lower-rated insurers, while also protecting vulnerable consumers who appear to ignore insurer solvency ratings.

DOI: https://doi.org/10.52227/27290.2026

EXECUTIVE SUMMARY

IMPORTANCE

State insurance guaranties protect consumers against the risk of insurer insolvency. Sophisticated consumers can take advantage of these protections by selecting higher-risk, higher-return insurance products, such as fixed deferred annuities. Prior research on income annuities suggests that consumers do not make strategic choices by selecting products that provide a higher lifetime income from lower-rated providers that receive guarantee protection. Multi-year guaranteed annuities (MYGAs), which accounted for 35% of all annuities sold in 2024, are shorter-term savings products that are more likely to be purchased by sophisticated investors who recognize the benefits of third-party downside protection. Certificate of deposit (CD) investors appear to ignore bank quality when selecting savings products protected by the Federal Deposit Insurance Corporation (FDIC) up to the limit. However, unlike FDIC deposit insurance that protects bank depositors, state insurance guaranty protection appears to be intentionally shrouded from policyholders. The prohibition on providing consumers with salient information about state guaranty protections exists because regulators fear that awareness of these protections could cause consumers to demand less yield premium when buying products from lower-rated insurers, resulting in a misallocation of capital that favors lower-quality insurers.

OBJECTIVES

We use a unique database of 5,577 MYGA purchases made directly by consumers through an online annuity sales platform between June 2020 and April 2024 to explore pricing variation and credit quality. We focus on the credit quality of MYGAs purchased at or near the common $250,000 state guaranty threshold using non-qualified funds since this maximizes the expected after-tax return. If they are aware of the protections provided by state insurance guaranty protections, the most sophisticated investors should select the highest-yielding MYGAs, which are commonly offered by lower-rated insurers at the state guaranty limit using non-qualified funds.

CONCLUSIONS

We see little evidence that sophisticated investors who buy MYGAs at or near the protection limits buy higher-return products from lower-rated insurers. There is some evidence that MYGA purchases from non-qualified assets, which may reflect greater investor sophistication, favor annuities from lower-rated insurers. Our findings suggest that state guaranty protections do not influence product choice in a way that distorts capital flows toward lower-risk insurers while still providing protections to vulnerable consumers who select lower-quality, lower-premium annuities. This apparent regulatory benefit may result from rules that limit an insurer's ability to communicate state guaranty protections to consumers.

INTRODUCTION

Multi-year guaranteed annuities (MYGAs), also known as fixed deferred annuities, provide guaranteed returns over specified terms similar to bank certificates of deposits (CDs) or zero-coupon bonds.[1] Unlike CDs and bonds, gains on an MYGA can be deferred through the life of the contract and beyond. MYGAs held in a taxable investment account dominate comparable annually taxable investments, such as corporate bonds, since they offer comparable yields, less volatility, tax deferral, and significant protection against default risk through state guaranty associations that provide consumer reimbursement in the event of insurer insolvency (Blanchett & Finke, 2023). Fixed deferred annuities represented $153.2 billion of the $434.1 billion in total annuity sales in 2024, or 35% of all annuities purchased (LIMRA, 2025).

Consumers seem to be unaware of the protections offered by state guaranty associations when selecting annuities. This lack of awareness can lead to substantial forgone welfare from the selection of less generous annuity contracts from higher-rated providers (Searle, Ayton, & Clacher, 2024) or, in the case of income annuities, avoidance of annuity products that provide unique value through the reduction of idiosyncratic longevity risk (Li, Neumuller, & Rothschild, 2021). Investors unaware of state guaranty protections when selecting MYGAs may prefer products that offer a suboptimal risk/return tradeoff since lower-rated, higher-return MYGAs may be protected against loss from insurer insolvency.

MYGAs offer a unique opportunity to examine whether consumers strategically leverage state guaranty protections when selecting insurance products. State guaranty associations limit the amount of downside protection in the event of insurer insolvency to $250,000 in most states. Guaranteed returns reflect a credit rating discount that does not account for these downside protections. Higher observed return spreads between lower- and higher-rated insurers during periods of market turbulence can present particularly attractive opportunities for sophisticated investors. The ability to substitute MYGAs for tax-inefficient comparable investments, such as bonds or CDs, in taxable accounts provides a potentially significant tax-deferral benefit that can be exploited by consumers who strategically realize gains in years when their marginal tax rate is comparatively lower.

We use a unique database of 5,577 MYGA purchases made directly by consumers through an online annuity sales platform between June 2020 and April 2024 to explore pricing variation and credit quality. We show that guaranteed return spreads between lower- and higher-rated MYGAs are significant and widen during periods of high market volatility. The ability to select lower-rated MYGAs with downside protection from state guaranty associations presents an opportunity for sophisticated investors that appears unexploited. We see little evidence

[1] MYGAs are sold to consumers by agents or directly to consumers through online insurance sales platforms that are compensated through a sales commission (often 3% of the premium amount). These "spread" products provide guaranteed returns that are net of any fees or expenses.

that sophisticated investors who buy MYGAs at or near the protection limits buy higher-return products from lower-rated insurers. There is some evidence that MYGA purchases from nonqualified assets, which may reflect greater investor sophistication, favor annuities from lower-rated insurers. We add to the literature on consumer awareness of state guaranty protections by studying an annuity product that is less biased by fears of long-term insolvency from annuity products that provide lifetime income. Our findings suggest that state guaranty protections do not influence product choice in a manner that distorts capital flows toward lower-risk insurers while still providing protections to vulnerable consumers who select lower-quality, lower-premium annuities. This apparent regulatory benefit may result from rules that limit an insurer's ability to communicate state guaranty protections to consumers.

LITERATURE REVIEW

Insurer default risk is fundamental to understanding consumer behavior in annuity markets. Insurer liabilities can be conceptualized through a contingent-claims framework, wherein default risk logically influences insurance pricing (Doherty & Garven, 1986). Specifically, policyholders implicitly bear some of the insurer's default risk and, thus, rationally demand higher yields from insurers with greater default probabilities. Annuity purchasers make explicit trade-offs between longevity and default risks against potential yields, as demonstrated empirically (Yang & Zhang, 2021). Consumers consistently weigh higher promised returns against the increased possibility of insurer insolvency, reflecting a nuanced understanding of default risk. However, many consumers do not adequately consider government guaranty protections and insurer default risk when selecting annuities (Searle, Ayton, & Clacher, 2024). Consumers frequently select lower yields from higher-rated insurers, even when government guaranty coverage exist, indicating incomplete integration of default risk considerations.

Credit ratings provide value to consumers as a simplified yet powerful signal of insurer default risk. Market discipline in life insurance is evident from increases in policy lapses and reductions in new business following a ratings downgrade (Baranoff & Sager, 2007). Similar patterns are observed in property/casualty insurance markets, where rating downgrades lead to measurable reductions in premium growth (Epermanis & Harrington, 2006). These findings underscore the role of financial credit ratings as critical decision-making tools for annuity purchasers.

State guaranty associations are funded by insurance companies operating in the state, with assessments levied when losses occur. According to the National Conference of Insurance Guaranty Funds (NCIGF), the typical timeframe for reimbursement of claims filed with a state guaranty association is 60–90 days following insurer liquidation (NCIGF, 2025). In the event of insolvency, MYGA investors may experience a period of illiquidity that is somewhat longer than the next-day liquidity offered to Federal Deposit Insurance Corporation (FDIC)-protected bank depositors. There may also be time and utility costs associated with applying for

reimbursement through the state guaranty fund that affect the tradeoff between guaranteed returns and insolvency risk, particularly among sophisticated investors.[2] However, Li, Neumuller, and Rothschild (2021) find no evidence of loss from insurer insolvency between 1983 and 2016 among annuity buyers whose annuity value did not exceed the state guaranty association limit.

Banks whose depositors receive FDIC protection are required to "prominently" display a sign on the bank itself, on the new accounts desk within the bank, and on a bank's website homepage, login page, and pages on which deposit transactions are made (FDIC, 2024). In contrast, insurance companies and agents who sell MYGAs to investors are prohibited from mentioning the existence of state guaranty association protections either through advertising or orally during the sales process,

according to model regulations commonly adopted by state insurance regulators issued by the National Association of Insurance Commissioners (NAIC, 2018).[3] Among consumers, this lack of information about insolvency risk protection leads to lower awareness of the true risk of investing in an MYGA, specifically, that it may lead consumers to perceive a greater insolvency risk than actually exists because of the protections offered by state guaranty associations.

The prohibition on providing consumers with salient information about state guaranty protections exists because regulators fear that awareness of these protections could cause consumers to avoid requiring a yield premium from lower-quality insurers, resulting in an increasing burden on state guaranty associations from placing more assets in less financially stable insurers (Hartley, 2024). In other words, investors will have little reason to seek out a more stable financial institution or require a higher interest rate since there is little downside risk when deposits are insured.

One justification for advertising FDIC protection is that small savers, many of whom are unable to accurately and efficiently evaluate a bank's insolvency risk, can delegate supervision of the bank to the government (Merton, 1977). FDIC advertisements are mandated to inform consumers about this protection so they don't need to waste time investigating a bank's creditworthiness and can simply select the highest rate for the investment term. For example, a consumer comparing CD rates on bankrate.com is only given information on the minimum deposit amount, term, and interest rate (APY). In contrast, MYGA rate comparison sites all provide information about the credit quality of the insurer (the AM Best rating) in addition

[2] Higher-rated insurers may also provide improved consumer policy services. These differences would be most important for insurance products that may involve claims or a greater degree of product complexity. MYGAs are simple insurance products that do not necessarily require a great degree of communication between purchase and maturity.

[3] Michigan and Alabama do not follow this model regulation.

to minimum investment amount, term, and guaranteed yield.[4] There is often little guidance on how consumers should use the AM Best rating to evaluate whether to select a slightly higher guaranteed return from a lower-rated provider.

In the absence of high-quality information to evaluate whether it is worth investing in a higher-rate MYGA from a lower-rated insurer, consumers need to rely on intuition, the knowledge of their insurance agent or financial advisor, or information from an online quote provider. A popular online provider states that "an insurer's financial credit rating measures their financial strength and ability to meet future obligations. The rating indicates the credibility and ability an insurance company has to repay any claims to customers."[5] This will likely lead some consumers to conclude that investing in an MYGA offered by a lower-rated insurer presents a greater investment risk and should be discounted by an amount reflecting the probability of nonpayment or principal loss due to insolvency. Since investors have little information to base risk-related investment tradeoff decisions, there is a substantial amount of ambiguity regarding the distribution of possible returns. Dimmock, Kouwenberg, Mitchell, and Peijnenburg (2016) find that perceived return ambiguity reduces demand for risky assets and requires a greater expected return premium. If some consumers are aware that MYGA risk from insurer insolvency is greatly reduced by the existence of state guaranty funds, they will likely be more willing to invest in lower-rated MYGAs because their loss estimates are more realistic.

The justification for limiting the dissemination of consumer information about state insurance guaranty protections assumes heterogeneous risk awareness. In other words, some informed consumers will understand that insolvency risk is small and mainly a risk to their short-run liquidity, and other consumers will perceive a significantly higher risk and be more likely to select a lower return from an insurer with a higher AM Best rating. By limiting an insurer's ability to mention state guaranty protection, insurance regulators are intentionally shrouding a relevant product attribute that could result in a separating equilibrium among investors in which more informed investors choose lower-rated, higher-return MYGAs, and less informed investors choose MYGAs from higher-rated firms (Gabaix & Laibson, 2006). This reduces the inefficient allocation of capital that may result when investors overinvest in lower-rated insurers, knowing that higher-rated insurers will provide downside protection.

MYGA investors are only protected up to the state guaranty association limit, which is most commonly $250,000[6] per insurance company. An individual can

[4] For example, immediateannuities.com, annuityadvantage.com, stantheannuityman.com, annuity.org, and blueprintincome.com all provide AM Best ratings in their MYGA rate comparison page.

[5] https://www.blueprintincome.com/fixed-annuities

[6] State guaranty association limits for annuities currently range from a low of $200,000 in Utah to a high of $500,000 in Connecticut, New York, and Washington. The limit in 41 states is $250,000, and the remaining five states have a limit of $300,000. California only offers 80% reimbursement of losses. https://nolhga.com/the-guaranty-system/guaranty-association-laws/

spread MYGA investments across multiple insurers and is covered by the state guaranty in which they reside, not the state where the policy is purchased (American Council of Life Insurers [ACLI], 2010). MYGA investments under the state guaranty association limit face the risk of delayed principal repayment. MYGAs above the state guaranty association limit face the risk of a capital loss in the event of insurer insolvency. The risk of capital loss for large-denomination MYGAs is similar to that of bank CD investments above the FDIC limit, although bank insolvencies are more common (Hartley, 2024).

How does an MYGA investor assess the risk of insurer insolvency? An investor must select an MYGA from an insurer using an initial AM Best insurer rating. To accurately estimate the annualized probability of impairment, we use data from the AM Best Impairment Rate and Rating Transition Study (1977–2022) to track impairment by rating annually, incorporating subsequent rating changes in Table 1. For example, among A rated insurers, only 73.9% retain an A rating three years later, with 11.5% improving to A++ or A+ and 14.6% downgraded (0.3% were downgraded to D). In other words, the initial risk of impairment at purchase will not

necessarily equal the ratings during MYGA ownership. Most MYGAs are sold by either A or A- rated insurers, with aggregate five-year annualized insolvency risk of 0.23% and 0.42%.

Table 1: Annualized Probability of Impairment

Initial Rating	1-Year	3-Year	5-Year	7-Year	10-Year
A++	0.00%	0.00%	0.00%	0.00%	0.00%
A+	0.17%	0.11%	0.13%	0.15%	0.19%
A	0.27%	0.17%	0.23%	0.28%	0.35%
A-	0.63%	0.35%	0.42%	0.48%	0.53%
B++	1.30%	0.69%	0.77%	0.79%	0.82%
B+	1.51%	0.89%	1.19%	1.29%	1.28%
B	3.65%	2.11%	2.22%	2.38%	2.35%
B-	7.73%	3.29%	2.87%	2.58%	2.53%
C++/C+	6.34%	3.26%	3.28%	3.26%	3.17%
C/C-	9.02%	4.07%	3.79%	3.83%	3.69%
D	13.48%	6.39%	5.80%	5.44%	4.72%

Should an MYGA investor require a guaranteed return at least 23 basis points higher from an A rated insurer than from an A++ rated insurer? If the amount invested is below the state guaranty threshold, the only premium required should be sufficient to account for the liquidity and psychic costs of waiting for a claim to be repaid or (more likely) having the annuity purchased by a solvent insurer. MYGA investors above the limit can still submit a claim up to the limit amount but should pay more attention to risk/return tradeoffs.

If consumers are aware of the availability of insurance against loss, they should optimally select a lower-rated insurer when buying an MYGA below the protection limit since they can transfer downside risk to the guaranty association. Consumers who buy an MYGA above the state guaranty limit will need to weigh the risk/return tradeoff.

Prior research suggests that consumers do not respond rationally to loss protection when deciding whether to accept more generous guarantees from riskier providers. In Chile, a comparison of annuity purchases made before and after a change in the amount of annuity income insured by the government showed that consumers did not adjust their risk/return tradeoff as would be predicted by rational expectation models (Searle, Ayton, & Clacher, 2022). Consumers appear to be highly sensitive to the idiosyncratic risk of insurer insolvency when considering lifetime income from an annuity (Boon, Brier, & Werker, 2019). This sensitivity suggests that consumers may be prone to placing a high discount on perceived credit quality risk when selecting an irrevocable lifetime income. MYGAs, however, are short-term investments whose modest idiosyncratic risk can be reduced by integrating them into an investor's portfolio.

Behavioral shifts in risk perception can magnify suboptimal MYGA choice if consumers below the state guaranty threshold are more likely to buy higher-rated annuities during periods of market turbulence. Campbell and Cochrane's (1999) habit-formation model demonstrates that risk aversion increases significantly during economic downturns, causing investors to prefer safer financial products. Empirical support for time-varying risk aversion emerges from broader financial market studies such as Longstaff's (2004) examination of the "flight-to-quality" phenomenon. During turbulent market periods, investors consistently prefer safer, higher-rated assets, implicitly increasing the required yield premiums for riskier alternatives. Research on uncertainty shocks supports this theory, showing that heightened economic uncertainty prompts investors to delay risky financial commitments and prioritize safety (Bloom, 2009).

Existing studies typically utilize survey-based methods to explore consumer decision-making regarding annuity products. While surveys provide valuable insights, they often fail to capture actual consumer behavior accurately due to their hypothetical nature. In contrast, this study employs a transaction-based approach using real MYGA purchase data from an online annuity marketplace, allowing us to observe revealed consumer preferences.

We hypothesize that sophisticated MYGA investors are likely to buy products at or near the state guaranty threshold and are more likely to use nonqualified assets to take advantage of the product's tax-deferral benefit. These sophisticated investors should be more aware of the protections offered by state guaranty associations and should therefore select products from lower-rated insurers that offer the highest possible return. We also investigate whether there is a flight to

quality during periods of market turbulence, suggesting that consumer preference for insurer quality is driven by time-varying risk aversion rather than strategic risk/return tradeoffs.

METHODS AND RESULTS

This study uses a unique set of sales data consisting of all MYGA sales on a popular online annuity sales platform between June 2020 and April 2024. Consumers can select an MYGA online based on term (the most popular terms are five years and three years), guaranteed rate of return, and the credit quality of the insurer. The website from the data provider prominently features information on the insurer name, financial strength rating, and fixed-rate annuity yield. We do not know the name of the respective insurer selected, nor do we have a complete list of annuities that were available, only those that were sold. In order to be included, the MYGA must be categorized as an issued/completed contract with available information on insurer financial strength, annuitant age, whether the annuity is purchased from a qualified or nonqualified account, date of purchase, payout rate, and premium. A total of 5,577 sales meet the required filters from the initial dataset.

Credit quality can be compared using AM Best financial credit rating to assess the insolvency risk and overall financial stability of insurers. Lower-rated insurers typically offer higher yields to attract annuitants, reflecting consumer sensitivity to increased credit risk (Baranoff & Sager, 2007; Harrington, 2009; Blanchett & Finke, 2023). This phenomenon is known as the "quality premium." The lowest credit rating offered on the platform is B+. The distribution of sales by credit rating is shown in Table 2. Most MYGAs sold are from A rated, A- rated, and B++ rated insurers.

Table 2: MYGA Sales by AM Best Rating

AM Best Rating	Sales	Percent
A++	273	4.9%
A+	464	8.3%
A	1,689	30.3%
A-	1,468	26.3%
B++	1,268	22.7%
B+	415	7.4%

The total premiums are approximately $600 million, which means the average annuity sold is approximately $100,000. The maximum contract is $1.6 million, and the minimum contract is just over $1,000. Most annuities are purchased by individuals between the ages of 65 and 69, and the most common MYGA premium is between $100,000 and $200,000.

Table 3: Distribution of Contracts by Age and Premium Size

		Premium					
		<$25k	**$25k-$50k**	**$50k-$100k**	**$100k-$200k**	**$200k+**	***Total***
Age	**<60**	239	148	184	302	161	***1,034***
	60-64	126	174	254	436	266	***1,256***
	65-69	204	184	303	415	294	***1,400***
	70-74	131	166	207	281	225	***1,010***
	75+	98	138	196	272	173	***877***
	Total	***798***	***810***	***1,144***	***1,706***	***1,119***	***5,577***

Among the contracts, 79% were nonqualified, and 21% were qualified. Among the qualified contracts, 88% were for traditional assets, and 12% were roth. 39% of all contracts had a five-year term, followed by three-year (22%) and seven-year (15%). These three terms represent 76% of all contracts sold. The average terms increase gradually over the analysis period.

Figure 1 shows the distribution of average yields among MYGA contracts per month. MYGAs consistently yield more than five-year Treasury bonds each month, though the gap is widest in 2020, when government bond yields were below 1%. The spread of over A rated five-year MYGAs compared to five-year constant Treasuries has been 169 basis points, on average, ranging from almost 300 basis points in August 2020 to less than 100 basis points in May 2022. Insurers with A++ ratings offered yields well below those of lower-rated insurers, and B++ rated insurers (the third-largest credit rating category) remained consistently above A and A- rated insurers. In other words, the credit premium is consistent in this sample.

Figure 1: Average Yields Among Contracts Sold with a Five-Year Term

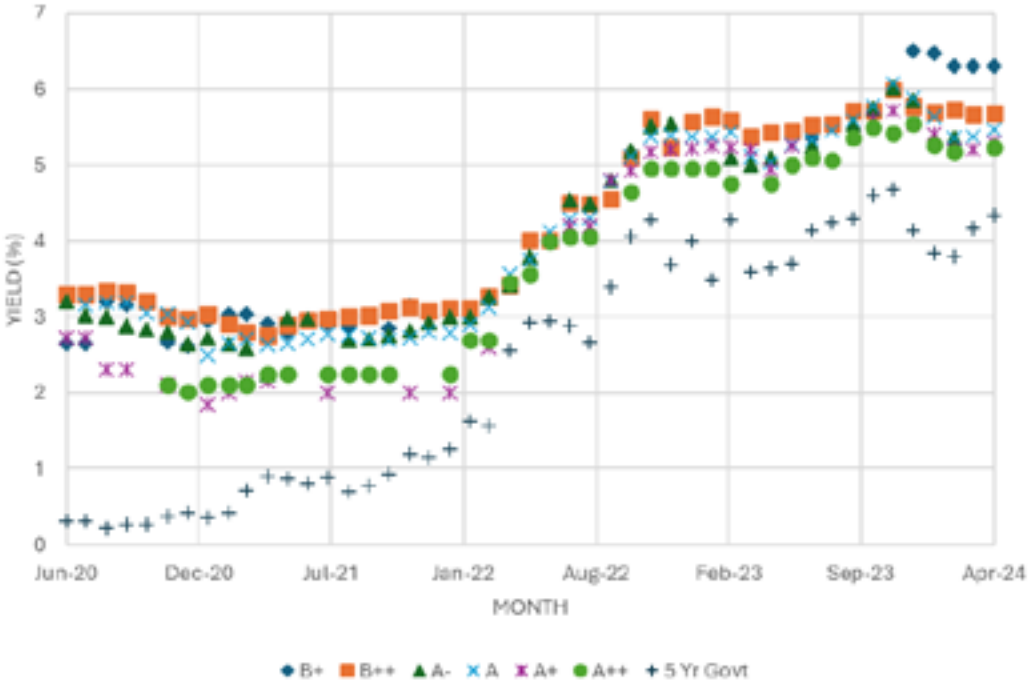


Figure 2 provides a clearer comparison of MYGA returns offered from higher- and lower-rated providers by comparing the average monthly rate difference relative to A rated insurance companies. The monthly spread difference between B++ and B+ rated insurers ranged consistently around 25 basis points higher than A rated insurers, with B+ insurers offering as much as a 93 basis point advantage in March of 2024.

Figure 2: Difference in Average Yields Among Contracts Sold with a Five-Year Term Compared to Contracts Sold with an A Rating

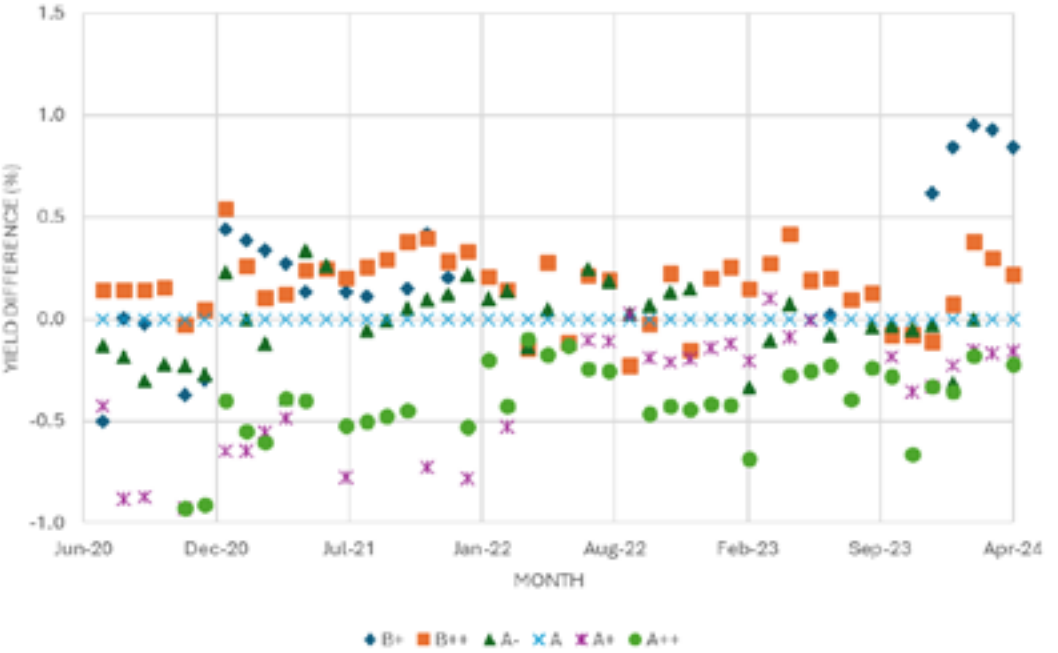
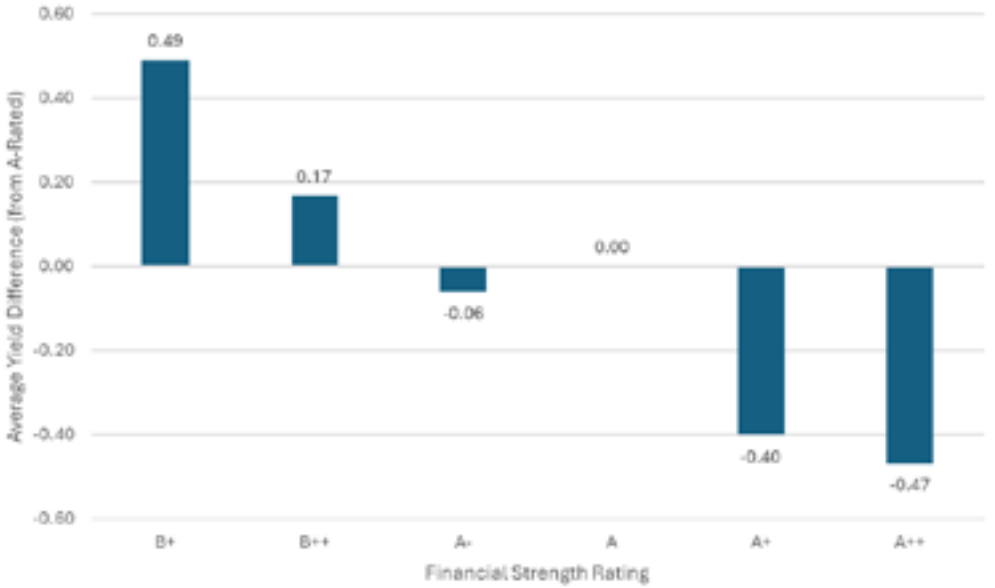


Figure 3 shows the average spread among five-year MYGAs offered by insurers with higher and lower credit ratings than A rated insurers (the most common insurer rating category). Consumers who bought an MYGA from a B+ rated insurer earned, on average, an additional 49 basis points of return per year compared to buyers of A rated MYGAs, and the spread between the highest (A++) and the lowest (B+) rated insurers in the sample averaged nearly 1% per year (96 basis points).

Figure 3: Average Overall Annual Yield Differential Among Contracts Sold Versus A Rated Contracts with a Five-Year Term



There is a clear association between insurer credit quality and the guaranteed rate of return on MYGAs. Insurers with greater insolvency risk offer higher returns, and the average return spread between the lowest- and highest-rated MYGAs in this sample is nearly 1% per year. Given that the average annuity sold is roughly $100,000 and the average yield is 5%, this translates to an additional $5,920 that could have been earned on a five-year MYGA.

We now consider whether more sophisticated MYGA buyers strategically select lower-rated MYGAs at or near the state guaranty protection limit. We compare the average credit rating by annuity size and whether the annuity is purchased from qualified or nonqualified assets. We expect that more-informed MYGA investors will use nonqualified assets since MYGAs offer a greater relative tax benefit over assets with comparable risk among those who are aware of the benefit of asset location (Dammon, Spatt, & Zhang, 2004). In addition, wealthier households that may have exhausted opportunities to invest in tax-sheltered accounts have significantly higher financial literacy than less wealthy households (Van Rooij, Lusardi, & Alessi, 2012). Average premium amounts and ages are similar between purchases from qualified and nonqualified. The average qualified MYGA premium is $116,163, and the average nonqualified premium is $110,524. The average age of a qualified annuity buyer is 65.9 years, and the average age of a nonqualified buyer is 66.2 years. Quantitative credit rating is measured by assigning a value of 1 to 6, from lowest (B+) to highest (A++). A higher average number can be translated as a higher average AM Best rating.

Table 4 shows the average credit quality by premium size. We focus specifically on investors who buy MYGAs that are likely at the state guaranty association limit of either $250,000 or $300,000. (We do not have information about the state in which the MYGA was purchased, nor do we have information about whether the individual owns another policy from the same insurer, reducing the available protection amount.) The average credit rating is lowest for investors in the lowest-premium MYGAs, in both qualified and nonqualified accounts. There is no evidence that investors using nonqualified assets are taking advantage of the downside protection of state guaranties by increasing MYGA risk (and realizing higher returns) when they invest at or near the state guaranty threshold limit of exactly $250,000 or $250,000 to $300,000. In fact, the average credit rating is nearly identical among unprotected MYGAs above the limit and below the protection threshold. Among qualified account investors, there is clearly a preference for safer insurers. This may reflect either the reduced financial sophistication of consumers buying MYGAs from accounts that are already tax-advantaged or a behavioral preference for safety when buying lower-risk assets from accounts framed as funding a retirement goal. Unlike consumers using nonqualified funds, investments above the state guaranty threshold are higher rated, although this appears to simply reflect a greater demand for safety when consumers buy larger MYGAs from retirement savings.

Table 4: Average Credit Quality by MYGA Premium Amount and Source of Funds

Premium Amount	Nonqualified	Qualified	Nonqualified (N)	Qualified (N)
<$50,000	2.71	2.69	1284	250
$50k - $99,999	2.91	3.21	878	229
$100k - $249,999	3.28	3.42	1730	411
$250,000	3.35	3.71	283	52
>$250k - $300k	3.34	3.89	103	44
>$300,000	3.31	4.30	123	50

Table 5 shows the results from two ordered logit regressions in which an incremental increase in quantitative insurer credit quality is modeled as a function of MYGA premium size interacted with qualified or nonqualified funding source, age, and MYGA contract length or term. Model 1 adds a measure of the prior-quarter S&P return (percentage) and the S&P return squared to capture a possible nonlinear relationship between return and MYGA credit quality. We include a category with a premium value of $250,000 to capture possible strategic purchase at the largest state guaranty amount protected in 41 states. We do not have the state of residence or demographic characteristics of the MYGA buyer other than age in the data set. The largest category of premium values below $200,000 from nonqualified savings is omitted. We include time (monthly) fixed effects to control for possible changes in interest rates and the macroeconomic environment.

Regression results show that, in both qualified and nonqualified accounts, consumers select higher quality insurance companies for more expensive MYGAs. There is no evidence that sophisticated nonqualified MYGA investors are paying premium values at or near the state guaranty threshold select lower-rated MYGAs to capture the return premium with downside protection guarantees. Credit rating coefficients are higher among investors using qualified assets, indicating a greater preference for insurer safety and a lack of awareness of state protections.

Model 1 shows the large significance impact of prior-quarter S&P returns on insurer credit quality in the opposite direction expected if sophisticated investors were taking advantage of a larger yield spread between lower- and higher-rated insurers. Investors who purchase MYGAs immediately after a decline in the S&P 500 select insurers that are significantly higher rated. All else equal, when the previous quarter return is -10%, the predicted quantitative credit quality increases by 0.2, or one-fifth of an AM Best category. Investors appear to have a behavioral preference for safer MYGAs following a down market, suggesting a flight to quality that disappears the quarter after an increase in the S&P 500.

Table 5: Ordered Logit Regression Results Predicting Quantitative Credit Quality

Variable	Model 1	Model 2
Premium < $250,000, qualified assets	0.04 (0.59)	0.04 (0.56)
Premium $250,000 qualified assets	0.61 (2.52)**	0.60 (2.47)**
Premium over $2500,000, qualified assets	1.18 (6.33)***	1.18 (6.35***)
Premium $250,000 nonqualified assets	0.33 (3.06)***	0.33 (3.02)***
Premium over $250,000, nonqualified assets	0.25 (2.02)**	0.25 (2.04)**
Last Quarter S&P 500 Return	-0.02 (-2.72)***	
Last Quarter S&P 500 Return Squared	0.00 (1.47)	
MYGA term	0.02 (1.28)	0.02 (1.28)
Age	0.00 (0.50)	0.00 (0.52)
Pseudo R2	0.096	0.038

*,**,*** indicate statistical significance at p>.05, .01, and .001, respectively.

CONCLUSION

Using sales data from an online annuity provider, we find no evidence of strategic selection of lower-quality annuities at or near the state guaranty protection limit. This result is consistent with those of Li, Neumuller, and Rothschild (2021) and Searle, Ayton, and Clacher (2024), who both find that annuity buyers ignore state or federal government protections that favor annuities from lower-quality providers that offer a more generous payout. We also find strong evidence that demand for higher-quality MYGAs increases following periods when the S&P 500 declines. These flights to quality can result in even less efficient MYGA selection if consumers are less likely to take advantage of credit quality spreads protected by state guaranty associations.

Our results are consistent with prior studies of annuity selection, which find no evidence that consumers are aware of institutional protections against loss. The consequence of this lack of awareness is that consumers believe they must assess insurer insolvency risk when selecting insurance products. Consumers who buy smaller MYGAs well below the state guaranty limit appear to pay less attention to insolvency risk and select annuities with the lowest credit ratings. Relatively low limits per insurer, coupled with the time costs of applying for reimbursement, may limit the market participation by sophisticated investors. State guaranty protections

may be particularly valuable to these presumably lower-wealth, less financially sophisticated investors for whom a loss might have significant welfare consequences. We also find no evidence of a separating equilibrium in which sophisticated consumers take advantage of downside protections to select MYGAs from higher-return, lower-quality insurers. Shrouding state guaranty protection appears to have the dual benefit of reducing inefficient capital allocation while also protecting the most vulnerable consumers.

REFERENCES

American Council of Life Insurers. (2010). *Insurance guaranty associations: Frequently asked questions*. https://www.acli.com/-/media/ACLI/Public/Files/PDFs-PUBLIC-SITE/Public-Public-Policy/guarantee-associations-FAQ.ashx

Baranoff, E., & Sager, T. (2007). Market discipline in life insurance: Insureds' reaction to ratings downgrades in the United States. *Journal of Risk and Insurance, 74*(3), 765–794.

Blanchett, D., & Finke, M. (2023). Fixed rate annuities: Are high returns an anomaly? *Journal of Investment Consulting, 22*(1), 63–69.

Bloom, N. (2009). The impact of uncertainty shocks. *Econometrica, 77*(3), 623–685.

California Life & Health Insurance Guarantee Association. (2025). *Frequently asked questions*. https://www.califega.org/FAQ

Campbell, J. Y., & Cochrane, J. H. (1999). By force of habit: A consumption-based explanation of aggregate stock market behavior. *Journal of Political Economy, 107*(2), 205–251.

Dammon, R. M., Spatt, C. S., & Zhang, H. H. (2004). Optimal asset location and allocation with taxable and tax-deferred investing. *The Journal of Finance, 59*(3), 999–1037.

Deng, Y., Leverty, J. T., Wunder, K., & Zanjani, G. (2024). Market discipline and government guarantees: Evidence from the insurance industry. *Journal of Risk and Insurance*, 1–40.

Dimmock, S. G., Kouwenberg, R., Mitchell, O. S., & Peijnenburg, K. (2016). Ambiguity aversion and household portfolio choice puzzles: Empirical evidence. *Journal of Financial Economics, 119*(3), 559–577.

Doherty, N. A., & Garven, J. R. (1986). Price regulation in property-liability insurance: A contingent-claims approach. *Journal of Finance, 41*(5), 1031–1050.

Elton, E. J., Gruber, M. J., Agrawal, D., & Mann, C. (2004). Factors affecting the valuation of corporate bonds. *Journal of Banking & Finance, 28*(11), 2747–2767.

Epermanis, K., & Harrington, S. E. (2006). Market discipline in property/casualty insurance: Evidence from premium growth surrounding rating downgrades. *Journal of Money, Credit and Banking, 38*(6), 1515–1544.

Federal Deposit Insurance Corporation. (2024). *Questions and answers related to the FDIC's Part 328 final rule*. https://www.fdic.gov/deposit-insurance/questions-and-answers-related-fdics-part-328-final-rule

Flannery, M. J. (1982). Deposit insurance creates a need for bank regulation. *Business Review*, 17–27.

Gabaix, X., & Laibson, D. (2006). Shrouded attributes, consumer myopia, and information suppression in competitive markets. *Quarterly Journal of Economics, 121*(2), 505–540.

Harrington, S. E. (2009). The financial crisis, systemic risk, and the future of insurance regulation. *Journal of Risk and Insurance, 76*(4), 785–819.

Hartley, D. (2024). Insurance on insurers: How state insurance guaranty funds protect policyholders. *Economic Perspectives, 3*, 1–13.

Li, H., Neumuller, S., & Rothschild, C. (2021). Optimal annuitization with imperfect information about insolvency risk. *Journal of Risk and Insurance, 88*(1), 101–130.

LIMRA (2025). *2024 retail annuity sales grow 13% to a record $434.1 billion*. *https://www.limra.com/en/newsroom/news-releases/2025/limra-2024-retail-annuity-sales-grow-12-to-a-record-$434.1-billion/*

Longstaff, F. A. (2004). The flight-to-liquidity premium in U.S. Treasury bond prices. *Journal of Business, 77*(3), 511–526.

Merton, R. C. (1977). An analytical derivation of the cost of deposit insurance and loan guarantees. *Journal of Banking & Finance, 1*, 3–11.

National Association for Fixed Annuities. (2020). *State guaranty fund: State association directory and guaranteed cash values for annuities*.

National Conference of Insurance Guaranty Funds. (2025). *Insolvencies: An overview*. *https://www.ncigf.org/insolvencies-an-overview*

Searle, P., Ayton, P., & Clacher, I. (2024). Annuity selection in the presence of insurer default risk and government guarantees. *Journal of Risk and Insurance, 91*(1), 161–192.

Van Rooij, M. C., Lusardi, A., & Alessie, R. J. (2012). Financial literacy, retirement planning, and household wealth. *Economic Journal, 122*(560), 449–478.

Yang, T., & Zhang, J. (2021). Longevity risk, insurer default risk, and annuity demand: How important is valuation risk? *Journal of Risk and Insurance, 88*(3), 555–592.