

Modern Portfolio Theory for the 21st Century

Life insurance:
The forgotten component

Integrating advanced insurance products into portfolio allocation, retirement planning, and estate planning to reduce risk, boost returns, reduce volatility and tax obligations



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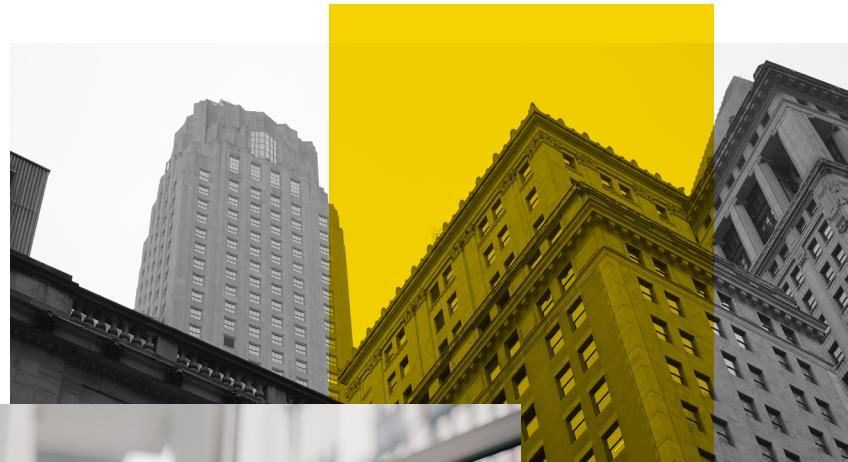
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Introduction

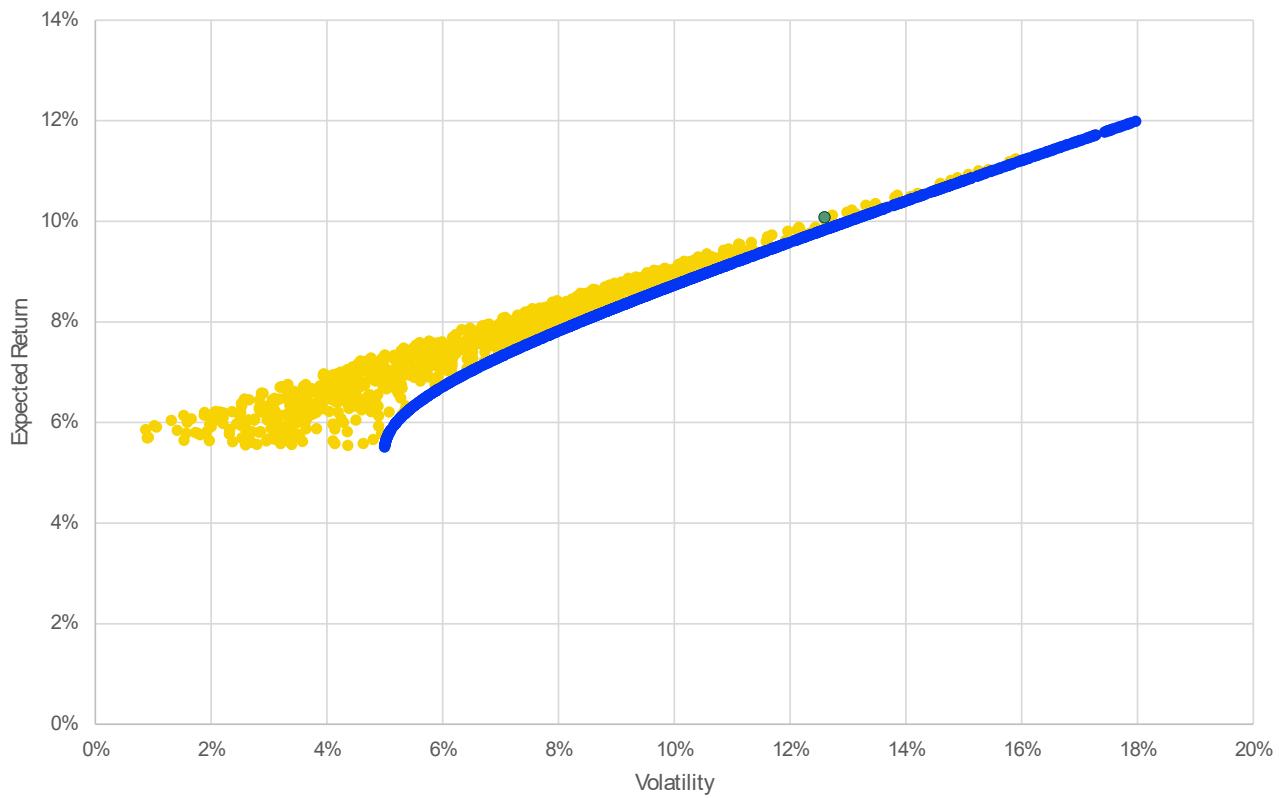
For the past 75 years, financial advisors have turned to Modern Portfolio Theory (MPT) to construct client portfolios and manage their assets. MPT was first introduced by Nobel Prize-winning economist Harry Markowitz in 1952. The goal of MPT is to show how diversification through different asset classes can reduce risk and improve overall return. Markowitz called this the “efficient frontier” – the point at which a client can achieve the highest expected return given their appetite for risk.

Portfolios that lie below the efficient frontier are suboptimal because they do not provide enough return for the level of risk. Portfolios that cluster to the right of the efficient frontier are suboptimal because they have a higher level of risk for the defined rate of return.



Efficient Frontier of Simulated Portfolios

● Portfolios With Life Insurance ● Portfolios Without Life Insurance ● Current Portfolio



Source: The Ridgeback Group

What is an optimal portfolio?

An optimal portfolio is one designed with a perfect balance of risk and return – that's the sweet spot. The optimal portfolio looks to balance securities that offer the greatest possible returns with acceptable risk or the securities with the lowest risk given a certain return.

The goal for advisors has always been to get clients to the efficient frontier by reducing risk and increasing returns.

However, many advisors try to create optimal portfolios without considering all available assets. Here's why that could be problematic:

Markets have changed.

The rise of exchange-traded funds (ETFs) and index funds has made trading the entire market rather than individual stocks easier and more accessible than ever. The securitization of fixed-income strategies in ETFs and other vehicles has made them more volatile than they have been historically. Also, there has been a shift in market dynamics, with huge institutional investors – not individual investors – now the largest holders of market index funds. Further, the number of public companies in the U.S. has declined as private equity gobbles up more organizations and as companies increasingly tire of quarterly filing requirements and regulatory scrutiny. Finally, there is also greater access to international markets, and international markets now have greater influence on each other than they used to.

Technology has changed the markets.

We used to trade shares in units of one-eighth of a dollar. Now shares trade in pennies and people have figured out ways to make money on the pricing spread between eighths and pennies. That led to algorithmic “black box” trading systems that can create huge swings in the market. A 100-point swing in the Dow Jones Industrial Average used to be big news. Unfortunately, in this new landscape, individual investors are increasingly taken advantage of.

Correlations between asset classes are not the same.

Conventional wisdom is that bonds and stocks are inversely correlated, but that's not the case anymore. That is due to securitization of the bond market and so many more people investing in bond funds and bond ETFs rather than holding bonds directly.

New asset classes.

Such as cryptocurrency, alternatives, and alt funds have changed the way assets are owned, because now illiquid assets are increasingly being owned by average retail investors, not just by accredited high-net-worth investors.

Duration risk.

Holding an asset for a long period of time is risky because so many institutions have disappeared. The longer you hold something, the greater the risk it won't come to fruition.

U.S. sovereign risk.

The U.S. government is taking on so much debt that eventually there will be a day of reckoning. We haven't seen this level of sovereign risk since World War II. Also, the exploding U.S. deficit and foreign countries moving trade away from the United States could result in the loss of dominance of the U.S. in the global economy and the loss of the U.S. dollar as the global reserve currency.

Volatility is higher.

Each of the factors outlined above has contributed to making markets more volatile and uncertain than they used to be. As shown in the chart below, we haven't seen volatility like today's since the COVID-19 recession of 2020 and the global financial crisis of 2008-2009.

According to the Federal Reserve Bank of Kansas City's board, market volatility is increasing and swings are bigger.



Source: Federal Reserve Bank of Kansas City

In light of these factors, should we be rethinking how we construct portfolios, since the world is very different from how it was when MPT emerged 70 years ago? The answer is YES.

In many traditional wealth management practices, however, advisors allocate the conservative portion of a client's portfolio to individual bonds, bond funds and ETFs, high-yield savings accounts, certificates of deposit, or money market accounts. Relying on these types of assets exclusively may be suboptimal for the long term for two important reasons.



1. Taxes. Some of these types of assets generate taxable income, thus reducing their effective yields significantly. This is especially true for individuals who are in high income tax brackets. For individuals with high marginal tax rates, traditional conservative assets are even less effective. For example, someone with a 40% marginal tax rate getting a 5.0% yield only has an effective yield of 3.0%. Frequently this is not accounted for when comparing assets through the MPT lens.



2. Volatility. With some of these conservative assets such as individual bonds and bond funds, there is tremendous price volatility. In 2022, for instance, we saw a 20% decline in the value of these assets, significantly impacting clients' net worth and ability to access liquidity.

Clients can protect against this happening with the "safe" portion of their assets.



Suppose there were a better way to reduce risk, lower volatility, and improve returns. Enter Cash Value Life Insurance Allocation (CVLIA)

Life Insurance Through the Lens of Modern Portfolio Theory

In financial planning, life insurance is often relegated to the domain of estate protection or income replacement. But what if it could play a more strategic role in portfolio construction itself? While traditional MPT textbooks rarely mention cash value life insurance, products such as Indexed Universal Life (IUL) or Whole Life (WL) fit surprisingly well within an MPT framework – especially when viewed through the lens of contemporary portfolio construction.

At its core, MPT encourages diversification and seeks to optimize the risk-return profile of a portfolio. In this context, the cash value component of life insurance can be modeled as a low-volatility, low-correlation asset with modest return potential and strong capital preservation

features. For clients with significant allocations to cash or low-yield high-credit-quality bonds, repositioning a portion of these assets into life insurance can improve the portfolio's risk-adjusted returns while reducing overall volatility and lowering taxes. The trade-off? Minor reductions in liquidity in early years – something that is ignored by typical MPT models.

The client will lose some liquidity, but MPT doesn't take that into account, so we need to assuage client concerns about access to their funds. They will still have access to close to 95% of their funds in the first five to seven years. After that, the CVLIA will begin to outperform traditional strategies, giving clients greater liquidity.



Indexed Universal Life (IUL, for example, provides downside protection via a 0% floor while still participating in market upside (often subject to caps). When integrated into a portfolio, it behaves more like a hybrid of bonds and alternatives – one that does not directly correlate with equity or fixed-income markets and grows on a tax-advantaged basis. From an MPT standpoint, IUL introduces a new and not-perfectly correlated asset that can add diversification to a portfolio and may improve portfolio risk-adjusted returns.

Still, two barriers stand out: **perceived complexity** and **concerns about compensation/fiduciary standards**, which we'll discuss shortly. Let's start with perceived complexity. Many financial professionals hesitate to recommend life insurance within an asset allocation framework due to perceived product opacity and their own lack of technical expertise about how products work. ***That's why a repeatable, rules-based framework for policy selection and funding is essential.***

It's important to have a consistent structure for the CVLIA to be optimally effective. The goals should be to limit compensation, to maximize policy performance, and to be independent from carriers in the marketplace to maintain objectivity for the client. There is no defined fiduciary standard in the life insurance space. However, doing these minimal things will provide the best outcomes for clients. That is what a fiduciary should do every time.

Cash Value Life Insurance Allocation

CVLIA is a systematized method for integrating life insurance into a portfolio using predefined design principles focused on liquidity, flexibility, duration, and tax performance. CVLIA gives advisors a structured way to include IUL as part of a diversified, goal-oriented plan.

Only two types of cash value life insurance qualify for a CVLIA. The first is whole life, in which policy values grow at a guaranteed rate and qualify for additional dividends. The other is IUL, which provides credit based on the performance of a market index, subject to a cap and a guaranteed floor.



Advantages of Replacing Conservative Assets with a Cash Value Life Insurance Allocation

		Traditional Conservative Assets	Cash Value Life Insurance Allocation (CVLIA)
Yield		<ul style="list-style-type: none"> • 4.64% 30-year U.S. gov't. bond • 3.63% Florida municipal bond 	<ul style="list-style-type: none"> • 6.67% historical performance IUL* • 4.5% projected long-term whole life
Taxes		<ul style="list-style-type: none"> • Ordinary income for taxable bonds • Municipal bond: tax-free 	Tax-deferred and potentially tax-free
Volatility		Bonds and bond funds have a great deal of volatility	Very low to none, as gains are realized in a policy annually, and some policies have guaranteed performance
Death Benefit		None unless a separate death benefit policy is purchased	Yes
Long-Term Care		None unless a separate policy is purchased or assets are allocated	Yes

**Analysis is from a MassMutual study analyzing historical returns from 1980 through 2024.*

Source: FBO Strategies 2025

The chart summarizes the distinct advantages that a CVLIA provides to clients over traditional conservative assets – an additional hedge against volatility, the cost of term life insurance to replace the death benefit, and the cost of long-term care through access to the policy's death benefit.

Traditional Allocation Model Performance Calculation

Yield on Investments

- Cost of Volatility Hedge

- Term Life Insurance Premium

- Long-Term Care
Insurance Premium

= Net Total Performance

A properly executed CVLIA adds returns to a portfolio while reducing volatility and overall risk. The advantages are even greater when you take into account the tax efficiency of the strategy.

On the surface, life insurance can sound too good to be true. When it is properly structured, it provides benefits that go above and beyond any other asset with a similar risk profile. With our proprietary Carbyne Allocation®, we will deliver over the long term better returns with less volatility and lower taxes compared to other assets and strategies with a similar risk profile. And of course, there's the added value of life insurance and long-term care protections.

Let's look more closely at how the Carbyne Allocation® works.



Results of Implementing the Carbyne CVLIA

We have built a proprietary CVLIA allocation that we call the Carbyne Allocation®. This allocation and strategy is executed by reallocating our clients' conservative assets, such as bonds and cash, into a meticulously structured cash value life insurance policy that transfers risk and maximizes cash value accumulation. The Carbyne Allocation® approach leverages the stability and benefits of life insurance to enhance financial security and optimize asset growth.

Financial Comparison of Different Conservative Assets

	Bond Index	CVLIA	Description
Historical Average	6.84%	6.67%	
Tax Efficient	4.79%	6.67%	
Alpha	0.00%	1.88%	Additional returns above benchmark index
Beta	0.68	NA	Measures correlation and volatility compared to the markets
Standard Deviation	7.27%	4.44%	Measures the spread of outcomes
Sharpe Ratio	0.34	2.55	Risk adjusted return

Source: FBO Strategies 2025

NOTES:

- Historical average is based on a 45-year lookback on the strategies.
- Bond index – The Bloomberg U.S. Aggregate Bond Index, which is often used to measure total performance of investment-grade bonds being traded in the U.S.
- CVLIA – The Standard & Poor's 500 Index, excluding dividends and assuming a cap rate of 10%, a minimum crediting rate of 0%, and a 100% participation rate.
- Tax-efficient calculation: Taxes on the bond index are treated as ordinary income and taxed at a rate of 30%.
- According to some, the beta for a CVLIA is impossible to calculate because there is no direct investment in an index.

There are six important reasons why a CVLIA is superior:

- | | | | | | |
|----|--|----|--|----|--|
| 01 | Consistency.
CVLIA has a return similar to that of bond indexes without having any years in which it achieved a zero-percent return. | 02 | Tax Efficiency.
The annual returns or yields that clients receive are not reduced by their marginal income tax rate. | 03 | Superior Returns to Bonds.
Returns on bonds have compressed over the past years and are now consistently in the 4.0% to 5.0% range – but a CVLIA historically achieves a return over 6.0%. Better returns combined with tax efficiency result in a significantly better asset given the similar risk profiles. |
| 04 | Market Independence.
Since there is no volatility in the allocation, the asset is not negatively impacted by the performance of the markets. | 05 | Lower Volatility.
Its standard deviation, which measures how far something deviates from its projected performance, is narrower than the standard deviation of traditional bonds. That's because there is less volatility and no negative returns. | 06 | Risk-Adjusted Returns.
A CVLIA's Sharpe Ratio is higher, meaning that it will deliver significantly higher returns than assets that have a similar risk profile. |

By utilizing the Carbyne Allocation®, we produce better outcomes for our clients by:



Being independent and finding the best solutions for our clients.



Providing criteria for carrier choice. We pay attention not just to financial strength but to ownership structure as well. When you have a relationship with a financial institution for decades, you want to make sure they are going to be there for you.



Being transparent so our clients know exactly how we are compensated.



Systematizing the structure to maximize cash value accumulation to clients as well as providing flexibility.

At a time when the traditional inverse relationship between stocks and bonds is no longer playing out, the Carbyne Allocation® offers clients robust protection and strength in all market climates and economic cycles. By taking a unique approach to permanent life insurance and annuities, clients enjoy enhanced returns, lower volatility, minimized tax burden, safeguards against rising long-term care costs, and strategic hedging for premature mortality. Numerous empirical studies support the benefits of integrating insurance products into retirement plans.

For instance, an [EY research paper](#) estimates that by 2030, there will be a \$240 trillion retirement savings gap and a \$160 trillion protection gap. “Insurers are uniquely positioned to address these gaps with products that offer legacy protection, tax-deferred savings growth, and guaranteed income for life,” researchers concluded. Meanwhile, a [Financial Planning Review report](#) identified **four key benefits of integrating life insurance into retirement planning:**



Enhanced Retirement Income and Stability. Financial modeling showed that an integrated approach combining investments, life insurance, and annuity use created greater retirement income, stability, and longevity protection than did investments alone.



Improved Financial Outcomes. Portfolios with life insurance policies can improve financial outcomes in retirement by decreasing income risk while increasing legacy potential.



Protection for Premature Retirement. There are many retirees who would benefit from life insurance protection, particularly in cases of premature retirement before the household has built up sufficient financial assets or where retirement income is attached to one member of the household without survivor benefits.

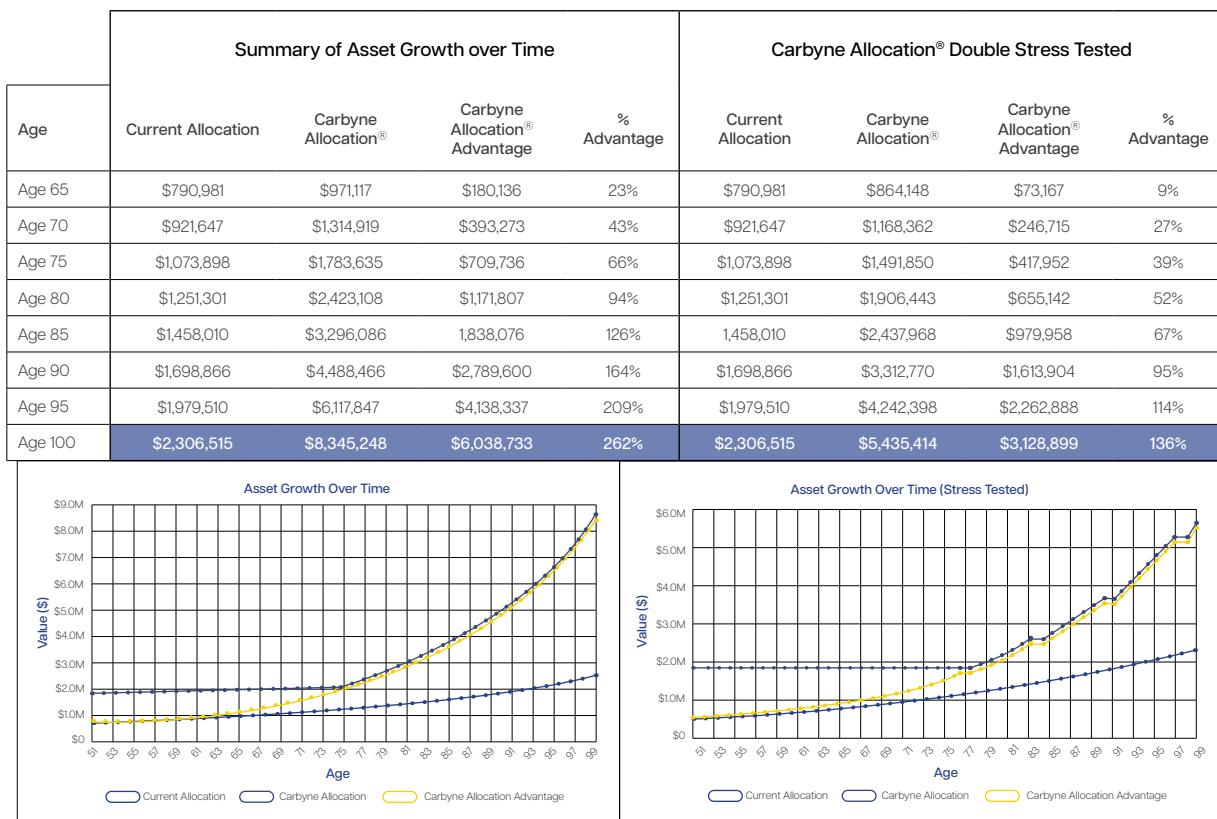


Long-term Asset-Holding Strategy. Cash value policies are structured to hold for the remainder of the insured's life, with policies purchased during working years often held well into retirement.

Meanwhile, a paper by professors David Babbel (The Wharton School of the University of Pennsylvania) and Oliver Hahl (Tepper School of Business, Carnegie Mellon University), "[Buy Term and Invest the Difference Revisited](#)," points out that cash values in whole life always grow by positive amounts in relatively stable ways, providing stability that exceeds popular stable value funds in 401(k) plans. The paper notes that optimization algorithms almost universally favor stable value funds across a wide range of risk-tolerance levels.

At its core, the Carbyne Allocation® takes conservative assets – bonds/cash/money market – in the portfolio and replaces them with a properly constructed cash value life insurance policy. The strategy works especially well with IUL and whole life insurance. As a result, clients get better results, thanks to tax efficiency, reduced volatility, mortality credits, and better crediting.

The Carbyne Allocation® generates better returns compared to traditional conservative assets. Cash value accumulation, death benefit, and liquidity to fund long-term care needs all outperform their risk peers.



Source: FBO Strategies 2025



Conclusion

Modern Portfolio Theory requires updating for today's volatile markets. The Carbyne Allocation® strategy demonstrates that strategically replacing traditional conservative portfolio assets with a properly structured CVLIA enhances risk-adjusted returns, reduces volatility, improves tax efficiency, and provides clients with comprehensive protection and peace of mind – proving that life insurance deserves serious consideration in contemporary portfolio construction.

To learn more about the Carbyne Allocation®, contact **Keith Friedman** at

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or visit our website for [more information](#) or to schedule a demo.

About the Authors



KEITH FRIEDMAN is the Founder & CEO of Stamford, Connecticut-based FBO Strategies, LLC. He is a 21-year veteran of the insurance and financial services industries, including 14 years at the helm of FBO Strategies. Friedman is a pioneer in the use of permanent life insurance to transfer risk and maximize cash value accumulation. He is the originator of the Carbyne Allocation® strategy for reallocating clients' conservative assets, such as bonds and cash, into a cash value insurance policy with higher returns and similar risk. Friedman has been featured on CNBC, Fox Business, and the AFO Wealth Management Forward Podcast and quoted by U.S. News & World Report, Nasdaq, CPA Trendlines, and Insure.com.



BRENDAN COSTELLO is Executive Vice President and Chief Financial Officer of The Ridgeback Group. He has more than a decade of experience in life insurance distribution, product development, actuarial services, and risk management. Brendan's career spans roles at national distribution firms, insurtech companies, and actuarial consulting firms. Prior to joining Ridgeback, he co-founded and developed Illumine On Track, a life insurance analytics toolset. He is a fellow of the Society of Actuaries, a member of the American Academy of Actuaries, and a Chartered Enterprise Risk Analyst.



About FBO Strategies, LLC

FBO Strategies, LLC, is an independent insurance and estate planning firm based in Stamford, Connecticut. Architect of the trademarked **Carbyne Allocation®** strategy, FBO helps clients reallocate conservative assets (bonds, cash, money markets) into carefully structured permanent life insurance policies. This proprietary approach improves returns, lowers volatility, and enhances tax and estate planning outcomes, giving families greater financial security and resilience across market cycles.



About The Ridgeback Group, Inc.

The Ridgeback Group, Inc., is a **cooperative, invitation-only community** of premier life insurance and wealth advisory firms serving high-net-worth clients. Unlike traditional distributors, Ridgeback is **firm-owned**, ensuring member firms retain independence while benefiting from shared scale, aligned incentives, and strategic collaboration. Its mission is to unite 100 of the industry's best firms to grow stronger, supported by innovation, technical excellence, and a peer-driven network.

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