

Insurance Companies Alternatives Analytic

Spring 2016



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Executive Summary

Insurers have begun increasing alternatives exposures:

- A. In response to decreasing yields on their core investment portfolios, insurers have added significant allocations to higher-returning assets, such as alternatives, although such allocations remain relatively small

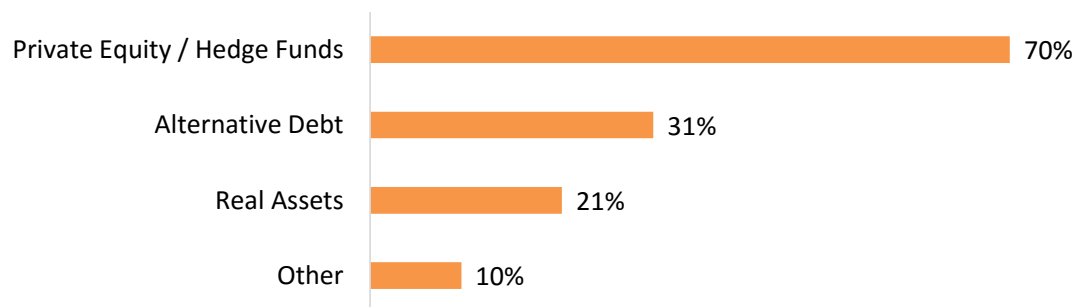
Alternatives constituted 5.8% of insurance investments in 2014, up from 3.6% in 2006 - a 61% increase

- B. Insurers feel these asset classes introduce a variety of benefits, including diversified strategy exposures and strong returns with non-correlation to fixed income

- C. Their investment tactics, including choice of different alternative asset classes, vary by business line and size segmentation

Tactics are driven by diverse tolerances for capital utilization, earnings volatility, liquidity to meet liability demands, and other factors

Allocation Increases – Planned or Under Evaluation



- D. Insurers expect to continue to build out their alternatives positions, including the strategic additions of new asset classes to further diversify risk exposures, particularly in the face of ongoing interest rate uncertainty

Executive Summary

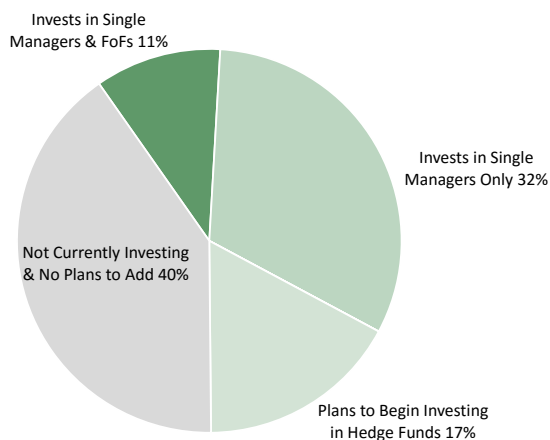
Within this movement towards diversified alternatives exposures, hedge funds have proven an important tool:

A. Allocations to hedge funds have grown at an 11.4% CAGR from 2008, surpassing private equity allocation growth in the same time period (8.9%)

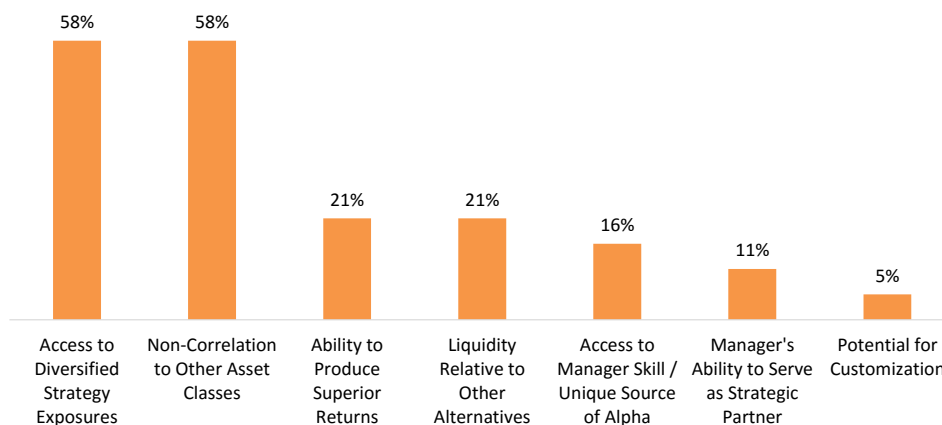
This growth trend is projected to continue, as 17% of the research participants that do not yet invest in hedge funds now plan to create allocations in coming years

B. Insurers cite a variety of reasons for adding hedge funds, highlighting the asset class' many roles within their portfolios (*e.g. diversification, return generation*)

Participants' Hedge Fund Investments



Reasons for Investing in Hedge Funds

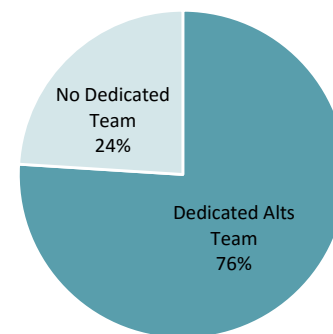


Executive Summary

This increased demand for hedge funds is driving organizational change, as well as exploration of new investment vehicles:

- A. Insurers are expanding upon their internal investment capabilities, including adding dedicated alternatives staff
- B. Firms are also investing through portfolio solutions, in addition to single manager funds:
 - 1) Funds of Hedge of Funds (FoFs) – Commingled vehicle promising diversification and expert manager oversight
 - 2) Hedge Fund Managed Accounts – Emerging structures offering direct ownership of underlying securities for transparency and safety
 - 3) Internally-Directed/Custom Portfolio Strategies – Creative structuring & strategy replication programs leveraging in-house resources or consulting services
- C. Some insurers also expressed that relationships with third-party consultants were important in guiding their hedge fund selection and oversight processes
- D. Yet, with 22% of interviewed insurers expressing little understanding of hedge fund investment options, there is strong need of further education to maximize the appropriate usage of hedge funds and other alternatives in insurers' portfolios

Alternatives Programs: Diverse Structures



Source: Patpatia & Associates Proprietary Research;
Data as of 12/2015

Research Approach and Participant Profile



Research Approach

Patpatia & Associates, in conjunction with Permal Group, has undertaken a research study to better understand the role that alternative investments play in insurance companies' investment portfolios:

- To this end, wide-ranging interviews on investment policy and alternatives usage were conducted with senior investment decision-makers at 47 insurance companies
- Although all participants were asked to respond to a limited number of standard questions, interviews were not designed to resemble a flat “survey”
- Rather, each discussion was individualized, with the objective of bringing to the surface each firm’s unique take on alternative investments and their applicability to the insurer’s general account portfolios
- To contextualize these conversations, supplemental data on aggregate U.S. insurance industry investment practices was also gathered from the National Association of Insurance Commissioners (NAIC) and other sources

Research Approach

Research interviews touched upon a number of topics, including:

- Participants' current alternatives portfolio makeup and context within their wider general account investment activities
- Desired alternatives portfolio characteristics (*e.g. liquidity, volatility, diversification, return*)
- Strategic rationale for current portfolio composition, including usage of unique or differentiating alternative asset classes and implementation tactics
- Due diligence and oversight practices
- Anticipated changes to alternatives portfolio strategy, including the addition or reduction of individual asset classes
- Regulatory requirements influencing investment decisions, with a particular focus on NAIC restrictions that impact U.S. firms (*vs. Bermuda, Canada, EU etc. regulatory regimes*)
- Factors influencing utilization or avoidance of particular alternative asset classes, particularly hedge funds

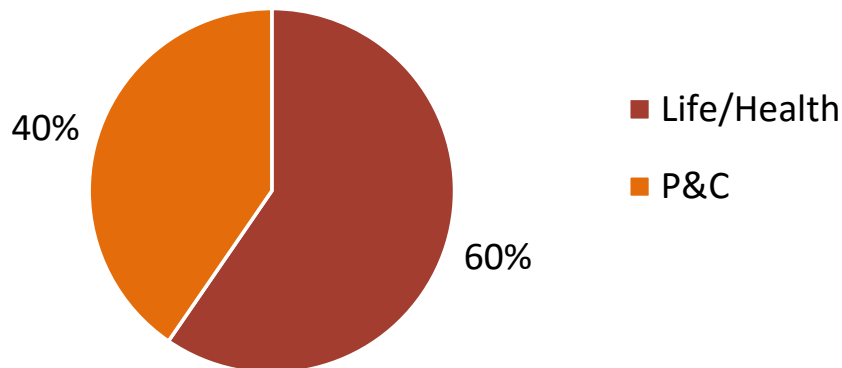
Key findings from these conversations are highlighted throughout this report, as are selected case studies – however, all such data has been anonymized to protect the privacy of research participants

Participant Profile

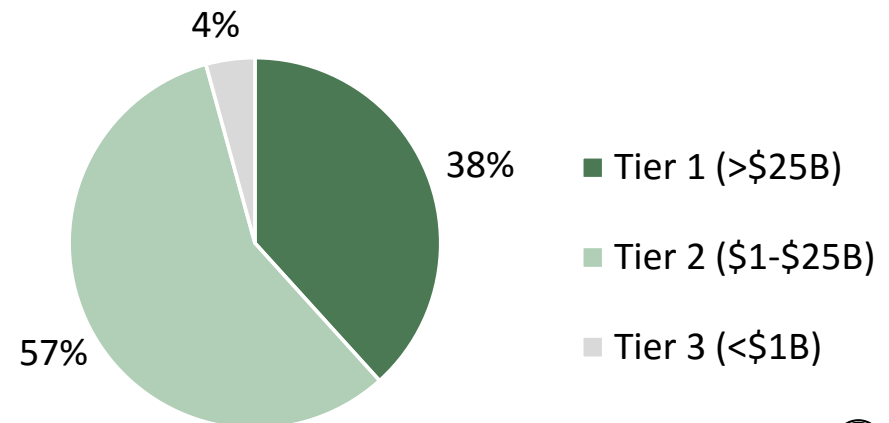
Research participants were selected to ensure comparable representation across business lines and size segments over \$1B:

- Of 47 insurers interviewed, 28 were primarily Life/Health companies, while 19 had an exclusive or primary Property and Casualty (P&C) focus
- 44% of all Tier 1 (>\$25B) and 13% of all Tier 2 (\$1-\$25B) U.S. insurers were included in the analysis
- A small number of Tier 3 (<\$1B) insurers were also interviewed to provide preliminary insights on emerging alternatives practices in this size segment
- Participant makeup is displayed in the charts below:

Participants by Business Line



Participants by Size Segment



Chapter 1: Trends in Alternatives Usage

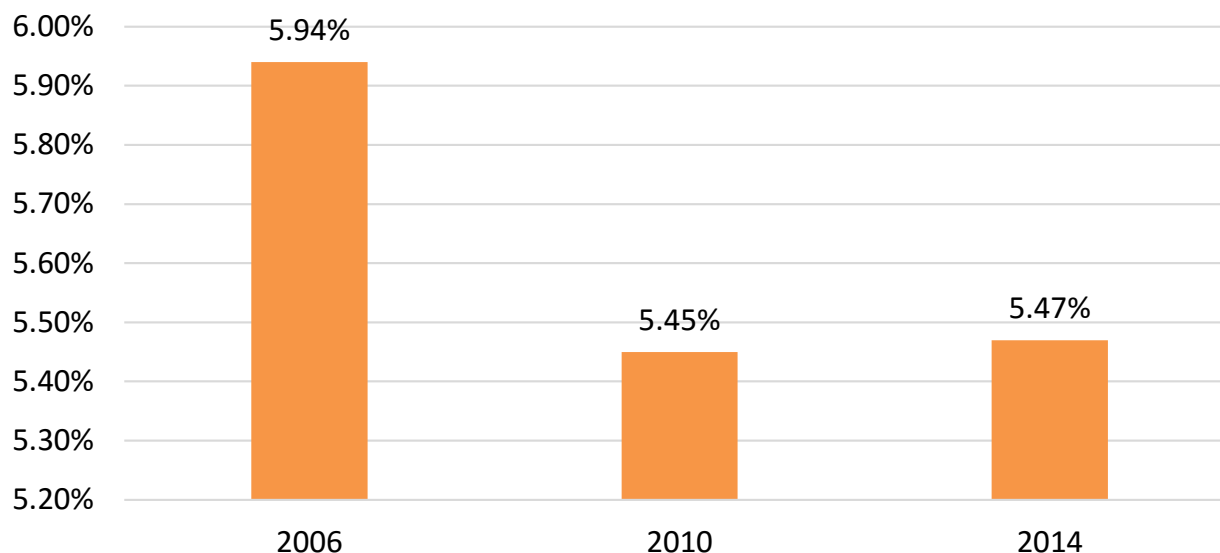


Chapter 1: Trends in Alternatives Usage

Insurers' traditional investment approach was shaken post-2008, when they experienced substantially reduced fixed income yields:

- Prior to 2008, core fixed income assets comprised approximately 75% of insurance investment portfolios, serving as insurers' primary source of investment income
- After 2008, however, low interest rates dramatically drove down bond yields, reducing this income and threatening overall profitability at many insurers

Life Insurers' Net Investment Yield – Yet to Recover from 2008

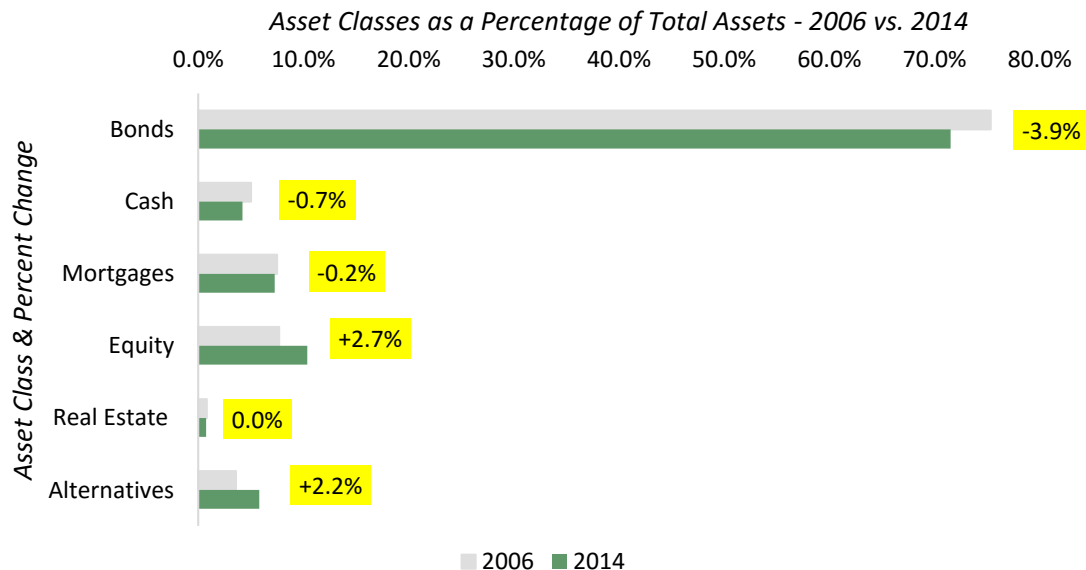


Chapter 1: Trends in Alternatives Usage

To compensate, insurers have increasingly turned to a variety of higher-returning investments, which had previously constituted a negligible portion of many portfolios:

- These investments include non-traditional fixed income (e.g. high yield bonds, emerging markets debt), equities, and alternatives (e.g. hedge funds, private equity)

Allocation Evolution – 2006 vs. 2014



- This change has been evolutionary, rather than revolutionary – *core fixed income remains largest portfolio component*

Even so, the deployment of higher-returning assets post-2008 has changed portfolio makeup in a lasting way

Chapter 1: Trends in Alternatives Usage

Since 2008, significant alternative assets have been added to insurers' investment portfolios:

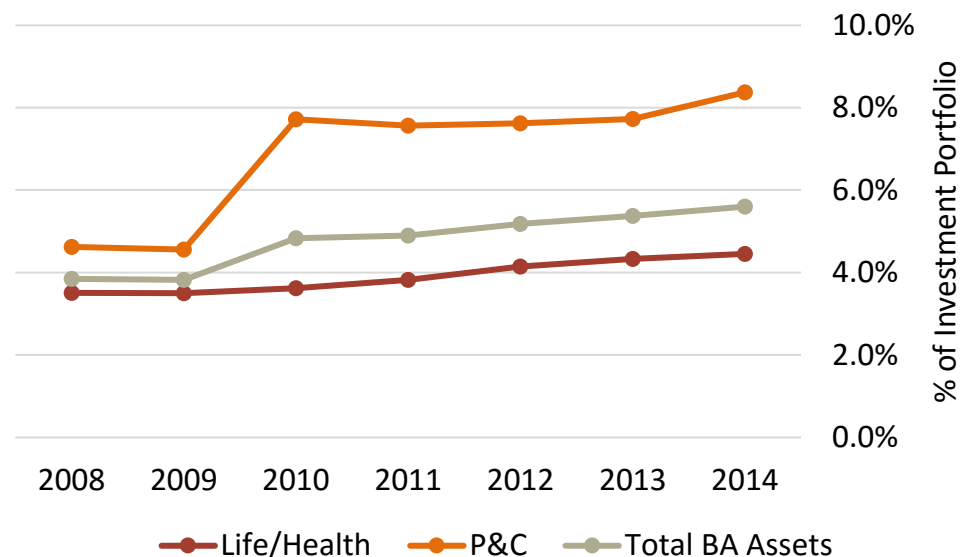
Indicative of this, \$150B in "Schedule BA" assets (i.e. limited partnerships and further assets classified as "Other" by the NAIC) have been added in the U.S. alone

- "Schedule BA" includes a wide variety of assets:

- Hedge funds
- Private equity
- Debt and real estate LPs
- Infrastructure
- Mineral rights
- Housing tax credits

- Other non-traditional assets (e.g. EMD, high yield bonds) may also be considered "alternative" by some insurers

Growth in Alternative Investments (Total Schedule BA Assets)



Source: NAIC; Data as of 12/2014

Distinct investment approaches influence alternatives usage by business line...

Chapter 1: Trends in Alternatives Usage

Investment objectives that vary by business line account for different rates of alternatives adoption among Life/Health and P&C insurers:

Life/Health insurers have made modest additions to their alternatives allocations in the years since 2008 – from 3.5% of their investment portfolios in 2008 to 4.4% in 2014

- In general, Life/Health insurers' alternatives strategies are constrained by a “buy-and-hold” book income investment approach, which emphasizes stable yields
 - Leaves limited space for return-oriented investments, such as public equities
- Because their allocations to return-oriented assets are relatively small, they are strategically constructed to maximize their return potential
 - Results in significant investment in equity-oriented alternatives (*e.g. private equity, hedge funds*) that provide returns not achievable in the book income portion of the portfolio – *such alternatives constitute 54% of Life/Health BA investments in the U.S., vs. only 35% of P&C BA investments*
 - Life/Health insurers also invest in income-oriented alternatives (*e.g. mezzanine finance, infrastructure*)

Book Income Investment Approach

- In keeping with the long-duration, actuarially predictable nature of many Life/Health liabilities, the book income investment approach focuses on maximizing stable investment yields rather than near-term capital appreciation
- Intended to produce predictable income from interest and maturing securities to complement anticipated liability payments
- Book income approach is less liquidity focused, emphasizing low turnover (“buy-and-hold”), resulting in accounting practices that are sensitive to investment price volatility

Chapter 1: Trends in Alternatives Usage

By contrast, P&C insurers have substantially increased their allocations to alternatives in recent years – *from 4.6% of their investment portfolios in 2008 to 8.4% in 2014*:

- To a large degree, this increase reflects the relative flexibility of P&C insurers' constrained total return investment programs, which balances both investment yields and portfolio appreciation
 - Total return approach allows for significant allocations to public equities and direct real estate investing
- Increase in alternatives is consistent with these insurers' general return orientation
 - Portfolios tend to include relatively diverse alternative investments
 - Includes larger allocations than Life/Health insurers to real estate and fixed income funds, tax credits, and miscellaneous "Other" alternatives

Constrained Total Return Investment Approach

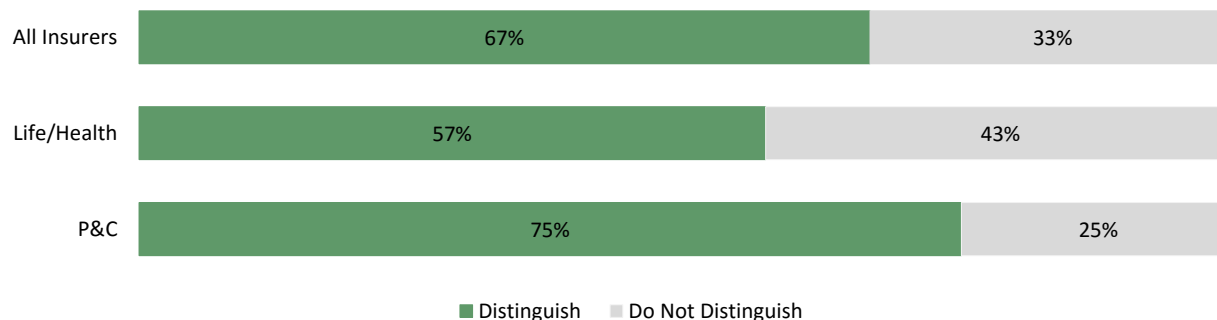
- Those following a constrained total return investment approach invest a larger portion of their portfolios in growth-oriented assets such as equities and alternatives
- Designed to provide adequate flexibility to meet unexpected spikes in claims (*e.g. resulting from natural disasters*) that must be backed by asset sales – *leads to a focus on shorter-duration, relatively liquid assets*
- Emphasizes a modest amount of active trading to capitalize on valuation changes, with capital gains a significant driver of overall investment returns – *constrained by various regulatory, tax, and capital considerations*

Chapter 1: Trends in Alternatives Usage

Business line differences also play a role in determining whether or not insurers distinguish between core and surplus portfolios when placing alternative assets:

- 67% of all interviewed insurers distinguish between assets backed by liabilities (“core portfolio”) and those backed by capital reserves (“surplus”)
 - Typically, more volatile assets are held in the surplus portfolio to mitigate the potential for liability mismatch
- The tendency to distinguish between core and surplus is most pronounced among P&C insurers – *potentially due to the greater representation of public P&C insurers in the survey (public insurers have greater concerns regarding earnings volatility)*
- However, the majority of Life/Health insurers also make a distinction between the two, generally holding traditional fixed income in the core portfolio and alternatives in the surplus account

Insurers that Distinguish Between Core and Surplus Portfolios



■ Distinguish ■ Do Not Distinguish

Chapter 1: Trends in Alternatives Usage

The decision to maintain a distinct surplus portfolio impacts an insurer's approach to alternatives investing:

- Across insurance business lines, nearly all who distinguish between liability and surplus hold alternatives in the surplus portfolio, rather than to back liabilities
- This is to ensure that the value of the liability portfolio will not be impacted by potential price changes, allowing surplus portfolios to be viewed as a “testing ground” for new asset classes and investment approaches
- However, the presence of a discrete “surplus” account does not appear to facilitate more liberal use of alternative asset classes
 - Insurers that do not distinguish between core and surplus are more likely to invest in non-traditional assets like hedge funds (60% vs. 40%) and private equity (80% vs. 60%) than those that do make a distinction
 - Additionally, those without a surplus portfolio maintain a larger average allocation to equity (5.5% of total assets vs. 2.4%)

This may be due to the fact that these firms include mutual insurers, which are comparatively insensitive to earnings volatility

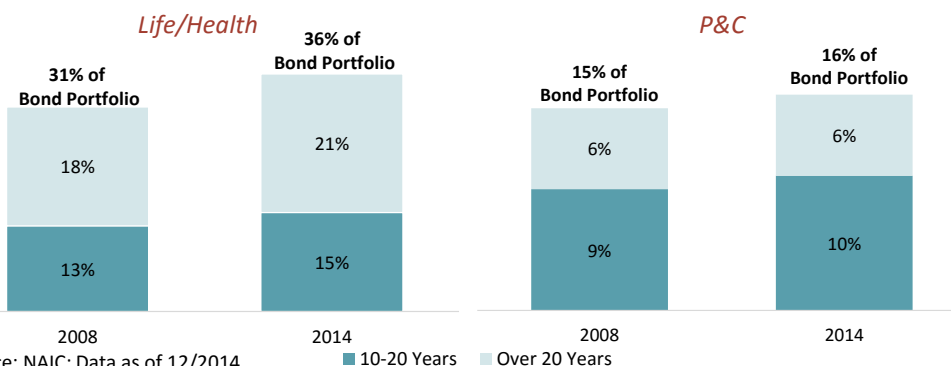
Chapter 1: Trends in Alternatives Usage

Recently, insurers have a new impetus for investing in alternatives, as bond strategies designed to suit a low-yield environment may falter in the face of rising interest rates:

- Insurers continue to maintain substantial fixed rate bond portfolios, which may decline in value as interest rates rise
 - This poses particular asset-liability matching (ALM) risk for Life/Health insurers that follow a “buy-and-hold” approach: rising rates will increase the size of certain liabilities while bond values drop, potentially resulting in significant mismatches
- Critically, bond investment strategies since 2008 have made many insurers more susceptible to interest rate risk, if they were not properly designed:
 - After briefly shortening bond portfolio duration in the immediate aftermath of the financial crisis, insurers began to invest in longer-duration fixed income assets in order to generate needed investment income

Movement to Longer-Duration Bonds Since 2008

Adds to Interest Rate Risk



- As rates rise, these insurers' long-duration fixed income assets are likely to lose some value compared to new, higher-yielding issues

Some insurers are looking to reduce fixed income investments as a result...

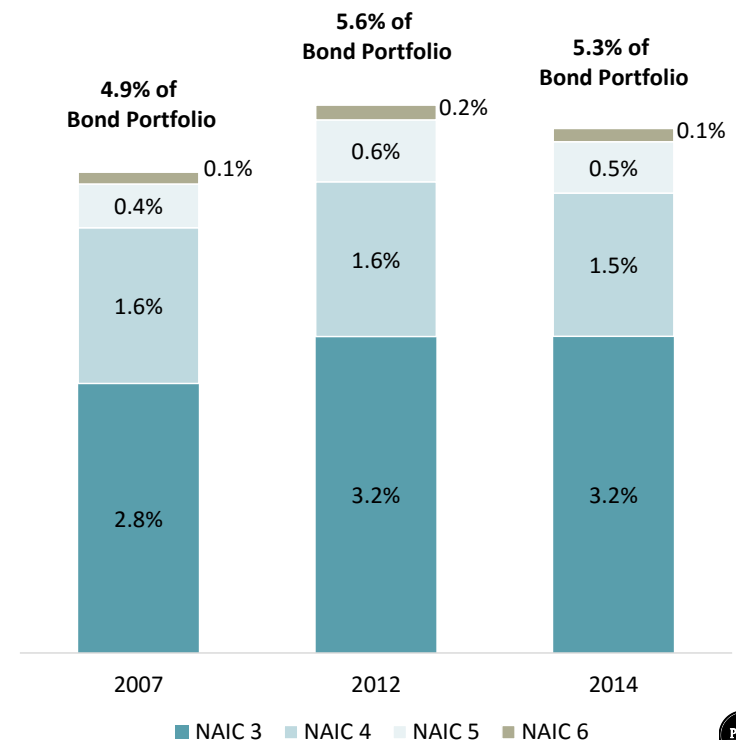
Chapter 1: Trends in Alternatives Usage

Faced with interest rate uncertainty, some insurers are beginning to taper the extremes of their fixed rate investments as a preventive measure:

- This can be clearly seen in the recent shift away from high yield bonds
- These grew after 2008 (peaking in 2012) as insurers sought to compensate for low yields on investment-grade fixed income
- With high yield bonds particularly exposed to interest rate risk, insurers are beginning to reduce these investments

However, insurers still require high-returning investments; alternatives offer one potential solution...

High Yield Bonds as Percentage of Insurers' Bond Portfolios



Chapter 1: Trends in Alternatives Usage

Some insurers are contemplating strategic additions to their alternatives portfolios to modestly diversify their risk exposures:

- Many alternatives are negatively correlated to traditional fixed income, making them an attractive complement to insurers' bond portfolios in the event of a rate increase
- Offer greater diversification than certain non-traditional fixed income assets (*e.g. high yield bonds*), which gained in popularity during period of low yields
- Some insurers have indicated that their allocations to alternative assets, such as hedge funds and private equity, will continue to rise as they seek to maintain adequate returns while constructing a portfolio that is less exposed to interest rate risk

Low Correlation for Portfolio Diversification: Fixed Income, HY Bonds, and Hedge Funds

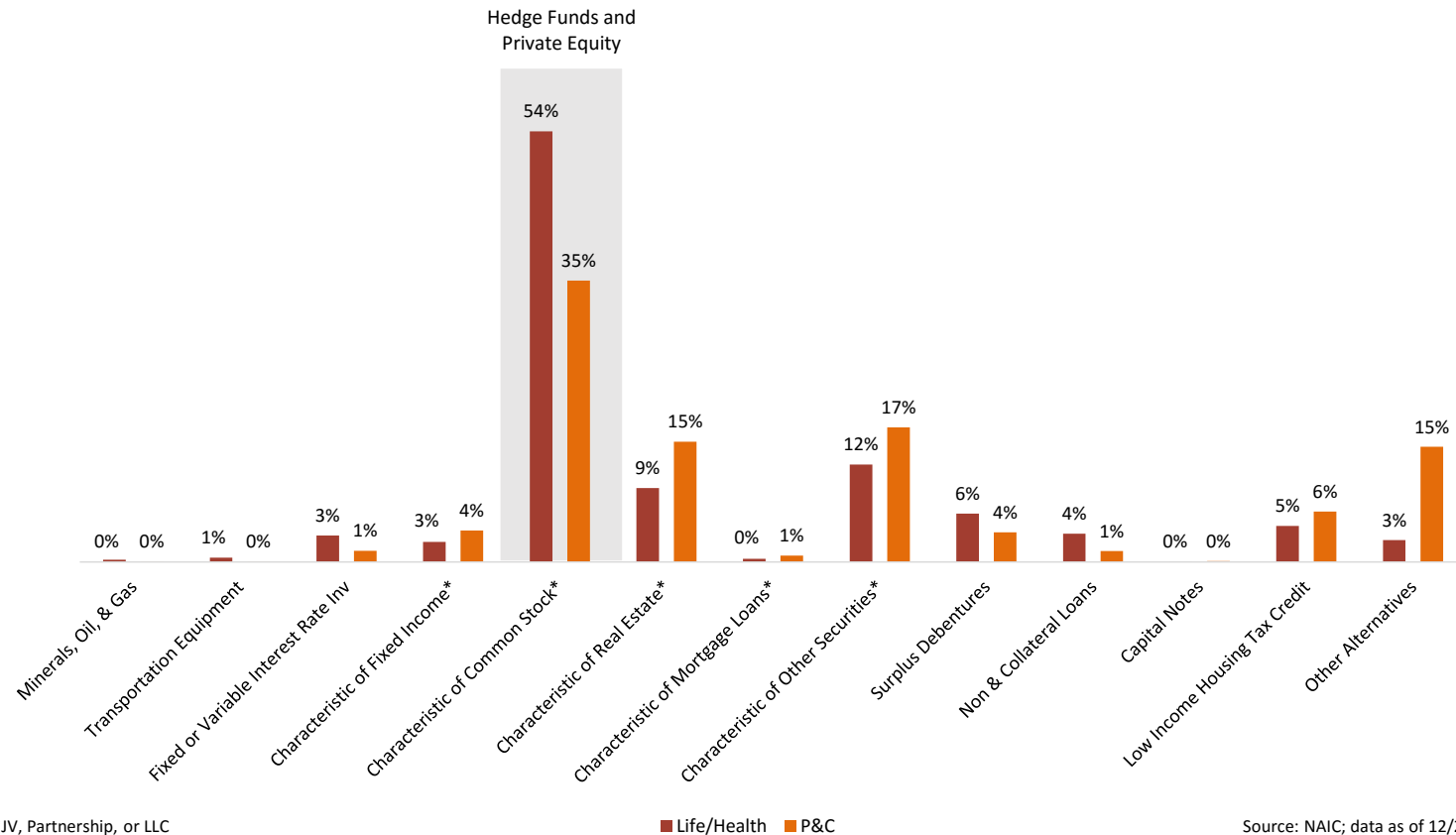
	Fixed Income	High Yield Bonds	Hedge Funds
Fixed Income	1.000		
High Yield Bonds	0.187	1.000	
Hedge Funds	-0.007	0.582	1.000

Chapter 2: Alternatives Strategies – *Variations by Business Line and Individual Investment Objectives*



Chapter 2: Alternatives Strategies

Alternatives portfolio composition varies by business line, with U.S. Life/Health insurers significantly more likely to invest in equity-oriented hedge fund and private equity vehicles:



These divergent approaches can be explained by regulatory treatment that varies by business line and their particular investment objectives...

Chapter 2: Alternatives Strategies

In the U.S., business line investment differences are heavily influenced by NAIC regulations, which treat Life/Health and P&C insurers differently:

Life insurers face risk-based capital (RBC) charges on non-fixed income that are often nearly double those imposed on their P&C counterparts

- Equity and alternative (“Schedule BA”) assets both incur a 30% RBC charge for Life insurers, compared to only 15% for P&C
- Although these charges may be reduced under the NAIC’s covariance formula, which reflects the diversification benefit of small allocations to non-traditional assets, they remain a significant consideration
- As a result, these insurers actively seek to maximize the value of the high-RBC portion of their portfolios
 - This often results in Life/Health alternatives strategies that are comparatively more focused on various fund structures (*e.g. hedge funds, private equity*), which offer diversification benefits and non-correlation to fixed income in addition to moderate- to high performance

Example: One Tier 2 Life/Health insurer forgoes common stock in favor of private equity investments, particularly venture capital funds

- They feel that as both incur the same capital charge, investing in private equity over common stock is an efficient deployment of capital, allowing the insurer to focus on higher-returning, lower-volatility investments

Chapter 2: Alternatives Strategies

Though they face smaller RBC charges than Life/Health insurers, P&C insurers' alternatives are also subject to regulatory constraints:

- In certain, more restrictive states, insurers are subject to state regulatory limits on aggregate exposure to non-traditional investments (*often 5% of total assets*)
- In absence of high RBC charges, these so-called “leeway buckets” become the most relevant limiting factor on some P&C insurers’ alternative investments
 - At many P&C insurers, the “leeway bucket” contains emerging markets debt, below investment grade bonds, and international common stock, in addition to “true” alternatives like hedge funds and private equity
- Within this type of framework, performance tends to be the greatest factor determining investment in any particular non-traditional asset classes
 - Some firms believe that this limits their opportunity for investment in certain fund structures, which may offer different risk-return profiles than public equity investments
- In spite of this, many P&C insurers have found ways to gain significant alternatives exposures, as demonstrated by their relatively large alternatives holdings

Regulations are not the only factor, as investment objectives that vary by business line also play a role in influencing insurers’ alternatives strategies....

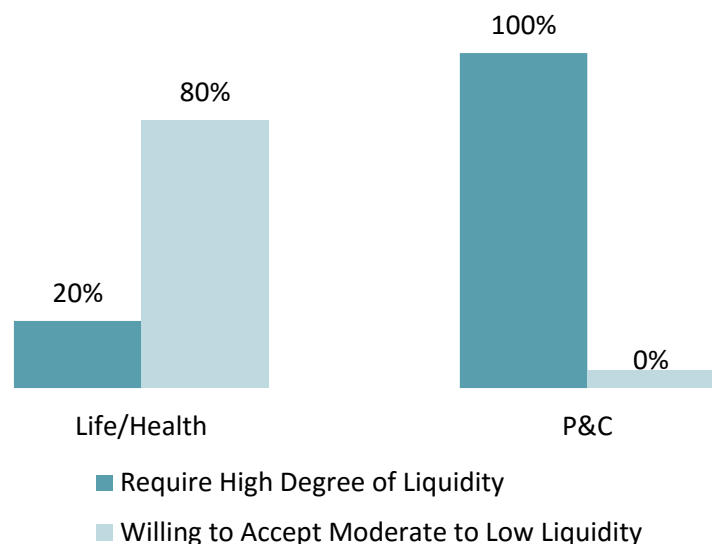
Chapter 2: Alternatives Strategies

Different liquidity and volatility preferences, influenced by the business lines' divergent liability structures, are perhaps the most relevant factor in accounting for different alternatives approaches:

Given book income focus, many Life/Health insurers have low institutional tolerance for accounting volatility; as a result, they are more willing to invest in illiquid structures that are not subject to significant mark-to-market risk

- These insurers' book income investment approach emphasizes stable and predictable investment income, meant to match their liabilities
- Results in choice of alternatives that offer longer lock-up periods, such as private equity
- Yet, many still use hedge funds in a focused fashion, as they see them adding value overall

Liquidity Preferences for Alternatives Portfolio



Chapter 2: Alternatives Strategies

In contrast, all P&C insurers surveyed require liquidity in their alternatives portfolios, as in their broader investment accounts:

- With liabilities that are far less actuarially predictable than Life/Health insurers', P&C insurers must maintain relatively liquid investment portfolios in the event that unexpected spikes in claims must be backed by asset sales
- With this in mind, P&C insurers prefer to invest in highly liquid structures with reduced or no lock-up periods
 - Shown in a bias towards public equities, particularly at smaller organizations with less surplus
- Liquidity preferences also reduce the attractiveness of many private equity and hedge fund structures, as many require an extended lock-up period
- One outcome of need for liquidity is an alternatives portfolio that is more diversified than Life/Health insurers'
 - Invest to a greater degree in diverse real estate and fixed income funds, tax credits, and miscellaneous "Other" investments
 - Unlike Life/Health insurers, many do not perceive the need to heavily weight their alternatives portfolios towards a small number of longer-duration asset classes

Chapter 2: Alternatives Strategies

The definition of alternative investments, also, varies significantly from insurer to insurer:

Alternatives at insurers frequently include investments beyond private equity, hedge funds, and infrastructure

- At a number of insurers, “alternatives” portfolios include any investment that is not traditional core fixed income
- For instance, 20% of insurers consider non-traditional fixed income (e.g. high yield, emerging markets debt) to constitute a component of their “alternatives” portfolio

***Example:** One Tier 1 Life/Health insurer’s “alternatives” portfolio includes sovereign debt and bank loans, as well as assets such as direct investments in infrastructure that suit its long-duration liabilities*

- Similarly, 13% of insurers invest in public equities under the rubric of their “alternatives” program

***Example:** One Tier 2 P&C Reinsurer allocates approximately 1/3 of its “alternatives” portfolio to public equities in order to achieve its desired liquidity profile*

- Direct real estate investments and liquid alternatives (i.e. 40 Act funds reported separately from “true” alternatives) are also occasionally included in these strategies

Chapter 2: Alternatives Strategies

Some insurers invest in specific, differentiating asset classes in their alternatives allocations:

Example: Real Assets

- One Tier 1 P&C insurer's alternatives portfolio is primarily comprised of real assets, including private infrastructure, global timber, and direct real estate
 - Insurer seeking low correlation with traditional equities and fixed income
 - Real assets believed to be higher returning and less volatile than private equity and hedge funds
 - Aligns with investment committee's more conservative approach post-Dodd Frank

Example: Real Estate Lending

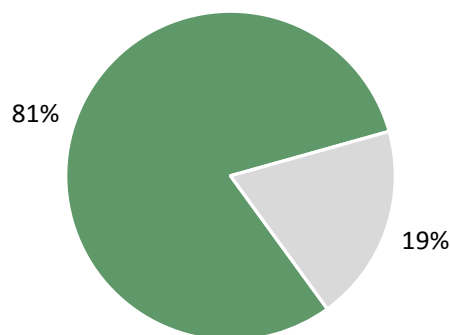
- One Tier 2 Life insurer devotes approximately 40% of total general account portfolio to commercial real estate lending – *considered “alternative” by many insurers*
 - Focus on real estate lending rather than equity real estate results in relatively low RBC charges
 - Historically low default rate on carefully-selected loans has meant high returns with manageable risk
 - Has delayed move into “true” alternatives due to commercial lending portfolio's healthy returns, but is currently evaluating certain assets (*e.g. infrastructure and mezzanine LPs*) as a means to diversify their portfolio

Chapter 2: Alternatives Strategies

Private equity is widely popular regardless of ultimate investment objective – 81% of interviewed insurance companies currently invest:

- Attracted to private equity's low accounting volatility – *a result of periodicity and the manager appraisal effect*
- High returns and low fees are also a perceived benefit of the asset class – *value proposition easily communicable to Board investment committees*
- Access to co-investment opportunities with private equity managers are also valued by many insurers

Private Equity Investments



■ Invest in Private Equity ■ Do Not Invest in Private Equity

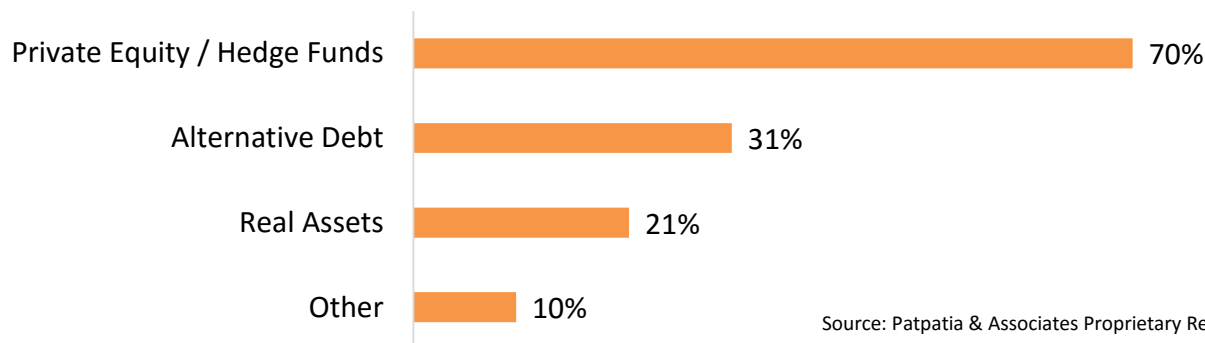
- Leveraged buyouts and venture capital most popular with interviewed insurers
 - Both were cited for their high returns and unique investment opportunities
- However, “current income”-oriented insurers may opt for mezzanine finance and other income-producing strategies

Chapter 2: Alternatives Strategies

Looking to the future, insurers are fine-tuning their alternatives portfolios, often through increased strategic allocations to certain asset classes:

- Increases to private equity and/or hedge fund investments are being planned or actively evaluated by 70% of interviewed insurers – *most seeking strong returns and portfolio diversification*
- Alternative debt investments are under consideration by 31% of insurers – *many seeking investments with a current income focus*
- Real assets being evaluated by 21% of insurers – *the majority of which are Life/Health*
- 10% of firms are also making new allocations to “other” assets internally classified as “alternatives” (e.g. emerging markets debt, high yield) – *reflects reach for yield even by alternatives-averse companies*

Allocation Increases – Planned or Under Evaluation



Chapter 3: Managing Insurance Alternatives Programs



Chapter 3: Managing Alternatives

Insurers take a variety of approaches to alternatives program management, with some maintaining dedicated investment teams and others pursuing a less institutionalized approach:

- Certain well-resourced firms maintain large internal alternatives teams, often with dedicated personnel for each asset class employed

Example: A Tier 2 P&C insurer, which holds sizeable alternatives positions in its global portfolio, maintains dedicated teams for each non-traditional asset class, including three full-time analysts devoted exclusively to the firm's hedge fund portfolio

- However, other large firms with significant alternative investments choose not to construct a dedicated alternatives team, though they may have the resources to do so
 - These firms typically do not view alternatives as constituting a distinct “asset class,” and therefore do not feel a need to segregate or separately evaluate these investments within the broader investment portfolio

Example: A Tier 1 Life/Health insurer, whose alternative investments include infrastructure, deploys these investments opportunistically rather than viewing them as set “allocations” that must be filled; as a result, it maintains no dedicated alternatives team

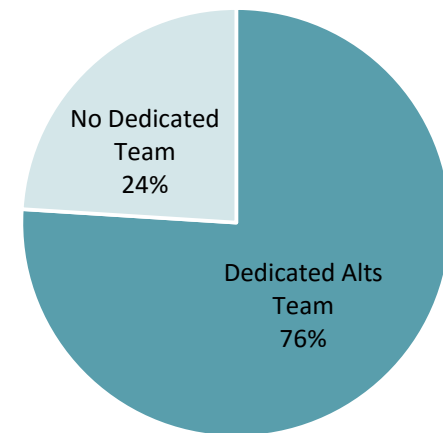
- Others forego an internal alternatives team in favor of an outsourcing model, with third-party managers working under the oversight of the insurance company CIO or other senior investment manager

Chapter 3: Managing Alternatives

Internal alternatives programs may also vary in other regards:

- Teams responsible for alternatives may also oversee a variety of non-traditional investments not technically regarded as “alternative” by the NAIC
 - For instance, some insurers include alternatives in an “opportunity portfolio” containing all return-oriented investments, including public equity
 - Others manage alternatives within the context of a “private portfolio” containing all non-publicly traded investments, including privately placed bonds
- Investment team members’ backgrounds also vary:
 - Some internal alternatives personnel have built their careers managing insurance investments, and have a strong understanding of insurance companies’ investment preferences
 - Others have been recruited directly from alternatives managers to build out alternatives programs or further refine alternatives strategies

Alternatives Programs: Diverse Structures



Example: A Tier 2 Life/Health insurer, which does not invest in hedge funds, recently hired a new Head of Alternatives whose career has been spent in the hedge fund industry – *expected to bring broad alternatives expertise beyond any particular asset class*

Chapter 3: Managing Alternatives

Some insurers – particularly those in the Tier 1 (>\$25B) size segment – prefer to perform not only manager selection and alternatives portfolio oversight in-house, but also manage underlying portfolio investments internally:

- They may attempt to replicate certain alternatives strategies in-house rather than investing externally through a limited partnership structure
 - However, occasionally willing to invest with limited partnerships offering truly unique, difficult-to-reproduce investment strategies
- Among these insurers, access to co-investment opportunities is seen as the primary benefit of engaging external managers
- These insurers rely exclusively on internal resources to conduct manager sourcing, due diligence, and selection

Example: One Tier 1 P&C insurer with an established alternatives program seeks to minimize third-party influence on the portfolio, even managing hedge fund replication strategies internally rather than investing through an LP structure

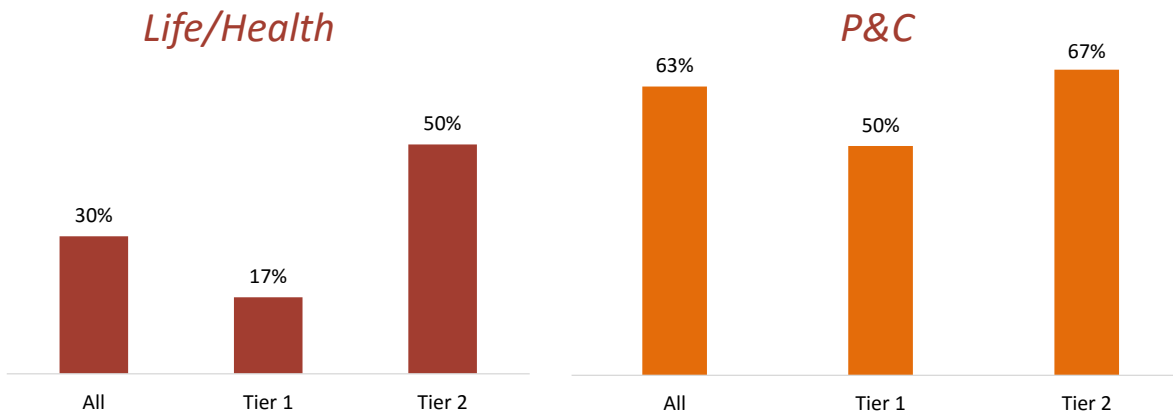
- Will only employ managers offering targeted expertise in strategies that cannot be run at a smaller scale (e.g. activism)

Chapter 3: Managing Alternatives

Other insurers utilize third parties for investments and manager due diligence, though they do not cede discretionary control:

- 44% of insurers rely on third parties to source managers and to perform investment and operational due diligence
- P&C insurers are more likely to use these services (63% vs. 30%), as they typically maintain smaller internal investment departments than their Life/Health peers
- For the same reason, Tier 2 (\$1-25B) insurers of both business lines are more likely to use third parties than their Tier 1 (>\$25B) counterparts

Use of Third Parties for Due Diligence



- In general, insurers that only employ third parties for manager due diligence continue to make manager selection and portfolio strategy decisions in-house

Chapter 3: Managing Alternatives

Finally, some insurers give third parties discretionary control over all or a portion of their alternatives portfolios – *this can take a variety of forms:*

- Certain insurers rely on third-party investment consultants to effectively make recommendations/decisions regarding manager selection and portfolio strategy
 - In some cases, consultants may outsource the entire alternatives portfolio to third parties who are able to exercise investment discretion, including selecting underlying managers
 - Outsourced portfolios typically monitored directly by insurer's CIO or other senior executive – *companies following this model generally maintain limited or no alternatives staff in-house*
 - Though it entails a lack of control, firms utilizing the approach see benefits in receiving expert manager selection and periodic asset allocation review
- Funds of funds offer similar benefits for hedge fund and private equity investing
 - However, certain insurers feel they allow access to a third party's targeted expertise in manager selection and portfolio construction *without* ceding control over broader alternatives strategy

Funds of Funds, and other vehicles facilitating alternatives investment, are discussed more thoroughly in Chapter 7

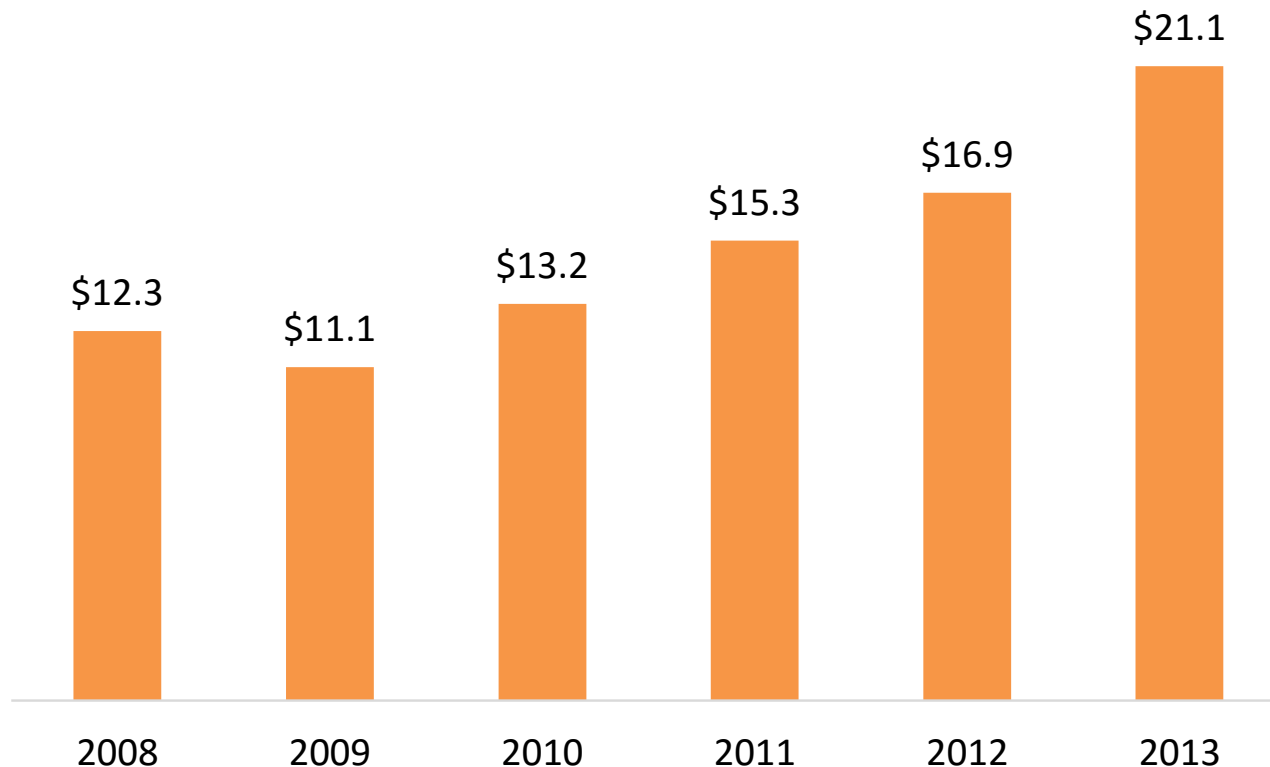
Chapter 4: Asset Class Spotlight – Hedge Funds



Chapter 4: Spotlight on Hedge Funds

After declining in the immediate aftermath of the 2008 financial crisis, insurers' hedge fund investments have steadily rebounded:

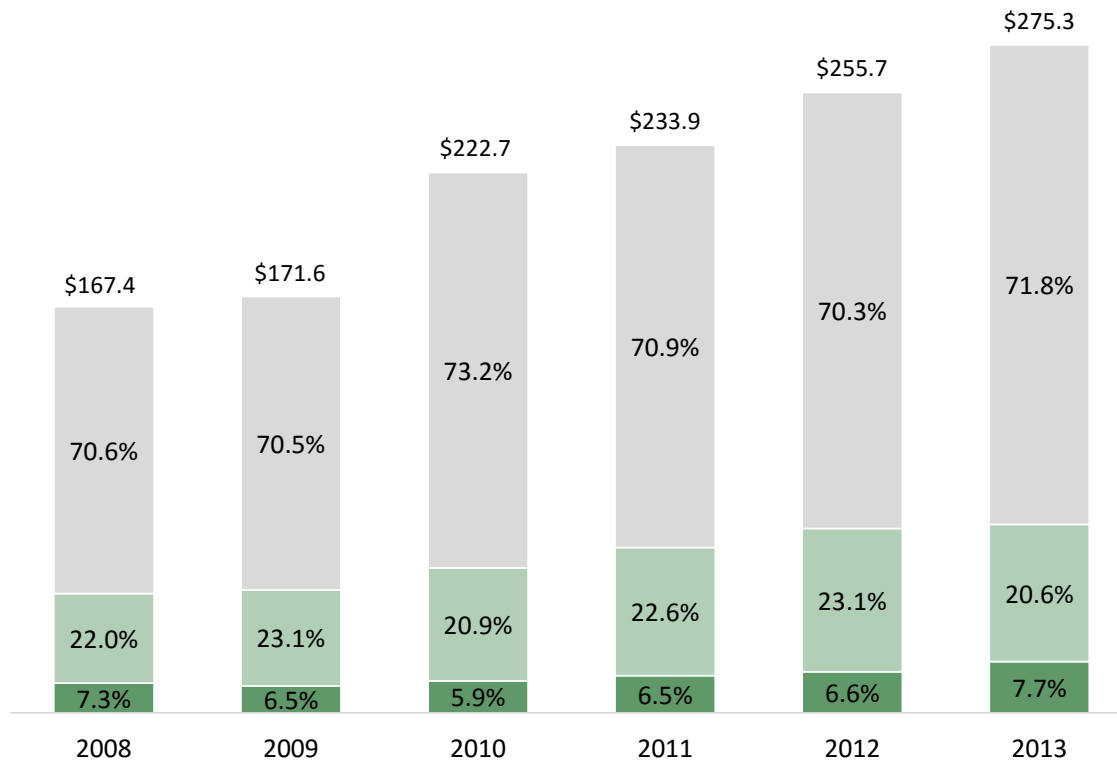
Insurance Industry Hedge Fund Investments – \$ in B



Chapter 4: Spotlight on Hedge Funds

Hedge funds are used as strategic diversifier within a broader alternative investments portfolio, rather than a primary return driver in general accounts:

Insurance Industry Alternatives Portfolio Allocation – \$ in B

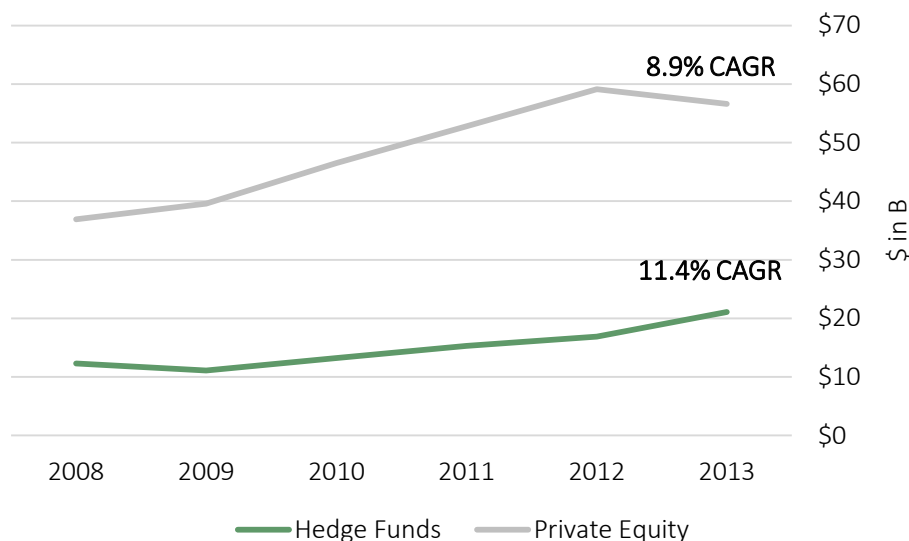


Chapter 4: Spotlight on Hedge Funds

Though still modest, insurers' hedge fund investments have grown at a faster rate than their investments in private equity:

- Prized for their diversification benefits, investment in hedge funds has accelerated as insurers have refocused on the need for uncorrelated returns

Investment Growth: Hedge Funds vs. Private Equity



- Insurers are increasingly deploying both hedge funds and private equity in their alternatives portfolios
 - Each offers different risk/return and volatility profiles
 - Insurers express complementary roles, including downside protection in rising rate environments

Example: One Tier 1 Life/Health insurer invests in hedge funds with a moderate risk/return profile to diversify their established private equity portfolio

Chapter 4: Spotlight on Hedge Funds

60% of interviewed insurers perceive significant value in incorporating hedge funds into their alternatives portfolios:

- 43% of these insurers currently maintain hedge fund allocations in their general accounts

Additional 17% plan to begin investing

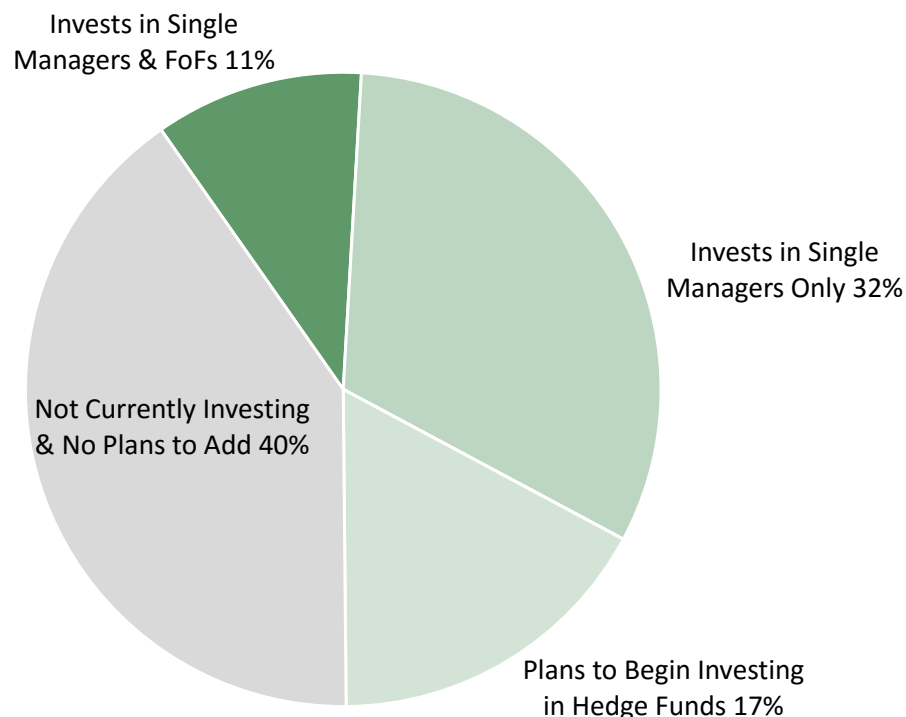
- Of those that invest in hedge funds, approximately 25% invest via both single managers and fund of funds

See value in fund of funds managers' ability to perform due diligence and identify new approaches

- Approximately 75% of those that invest in hedge funds invest in single managers only

Reflects concerns over double layers of fees and confidence in internal capabilities

Participants' Hedge Fund Investments

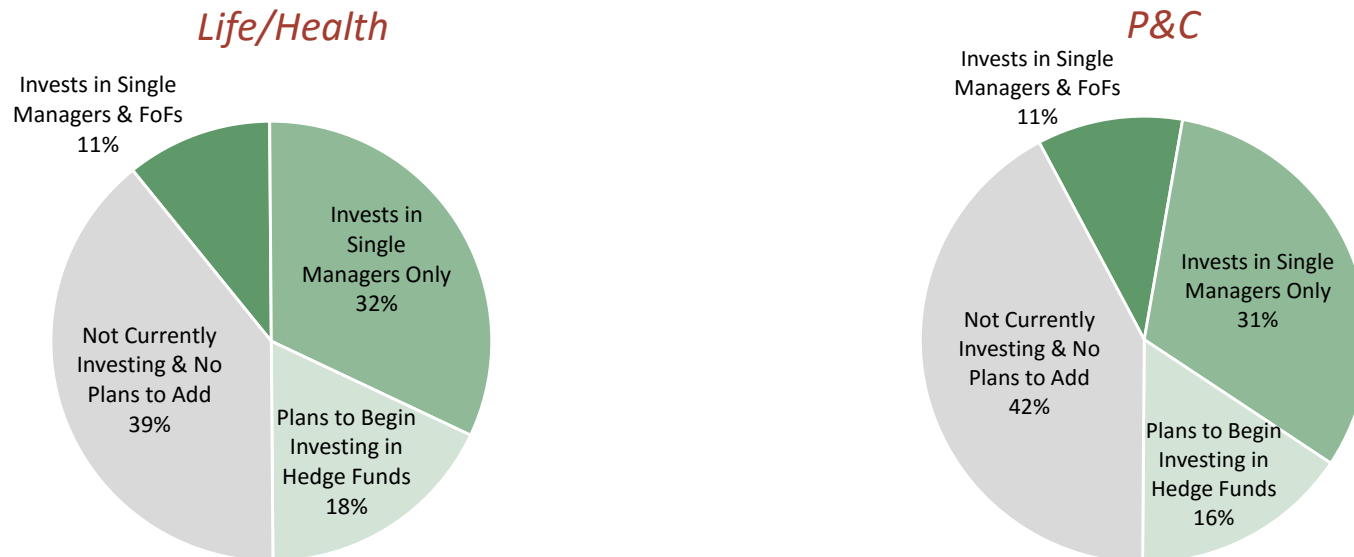


Chapter 4: Spotlight on Hedge Funds

Although investment objectives vary by business line, hedge fund preferences across business lines are remarkably similar:

- Life/Health companies are only slightly more likely than P&C firms to plan to begin investing in hedge fund vehicles
 - Largely due to fact that several interviewed P&C companies (*e.g. mortgage insurers*) are subject to particularly restrictive regulatory investment constraints that effectively prevent use of hedge funds

Hedge Fund Investment – Similar Across Business Lines



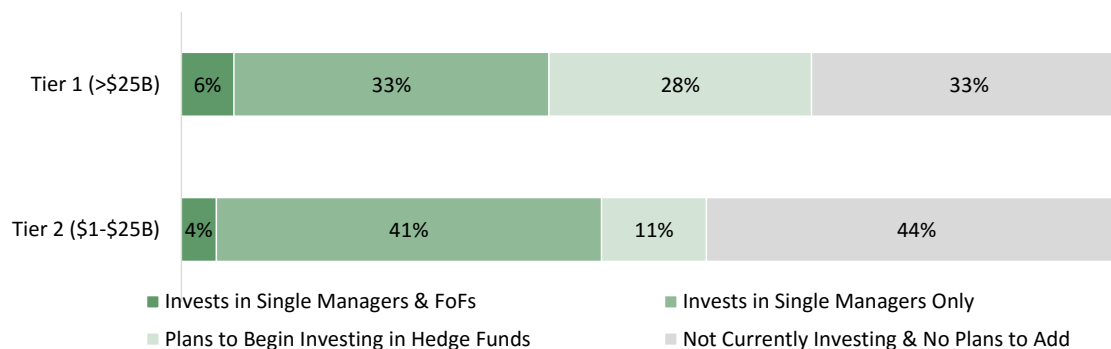
Size segmentation is a better predictor of hedge fund usage...

Chapter 4: Spotlight on Hedge Funds

Among surveyed insurers, the propensity to invest in hedge funds varies significantly by size segment:

- Contrary to expectations, large insurers (Tier 1) are actually modestly less likely to invest in hedge funds than mid-sized insurers (Tier 2) – *39% of interviewed Tier 1 insurers invest, vs. 45% of interviewed Tier 2*
 - In part, this is because surveyed Tier 2 insurers included a number of smaller mutual companies (vs. larger public firms), who are more at liberty to invest in assets like hedge funds that introduce earnings volatility
- However, Tier 1 insurers that do not currently invest in hedge funds are significantly more likely than Tier 2 insurers to have plans to do so
 - As hedge funds have become more common in insurance investing, 2/3 of Tier 1 insurers now feel that they should participate in the asset class – *soon, they are likely to overtake Tier 2 insurers as most likely to invest*

Hedge Fund Investment – Size Segment Differences



Chapter 4: Spotlight on Hedge Funds

In determining which hedge fund strategies and managers to add to their portfolios, interviewed insurers employ a wide variety of metrics – *not solely seeking index out-performance*:

- Hedge fund indices are not widely used among interviewed insurers, either to evaluate the desirability of the asset class in aggregate or to benchmark the performance of individual managers
 - This is especially the case among larger insurers with established alternatives programs – *only one interviewed Tier 1 insurer uses hedge fund indices in its investment decision-making process*
- Most insurers expressed that they recognize the variety of limitations to which indices (*both hedge fund and public equity index comparables*) are subject
 - For instance, *hedge fund* indices fail to capture the extreme variability of performance (both positive and negative) that exists across the hedge fund space – *in particular, averages are misleading when less tenured, smaller funds are taken into account*
 - Many also view hedge funds as a legal structure, not an asset class – that is, they turn to hedge funds to access a diversity of both equity- and non-equity exposures within an LP structure, many of which are not directly comparable to *broad public equity indices*

Finally, many seek to invest in hedge funds that meet particular risk/return or non-correlation criteria, often rendering raw “performance” a secondary consideration...

Chapter 4: Spotlight on Hedge Funds

Rather than benchmarking performance vs. an index, insurers typically evaluate hedge fund strategies and managers on a case-by-case basis within the context of their own, individual investment objectives:

- For instance, some interviewed insurers evaluate hedge fund managers in aggregate within the context of their alternatives portfolios, without requiring any single manager to generate a particular beta
- Others evaluate managers individually with emphasis on Sharpe ratio, volatility, or other metric
- Many seek difficult-to-replicate sources of alpha, employing both qualitative and quantitative (*e.g. factor replication*) methods to evaluate

The diversity of approaches employed points to the increasingly targeted roles that hedge funds are beginning play within insurance portfolios, despite some common challenges...

Chapter 5: Common Considerations in Hedge Fund Investing



Chapter 5: Common Considerations

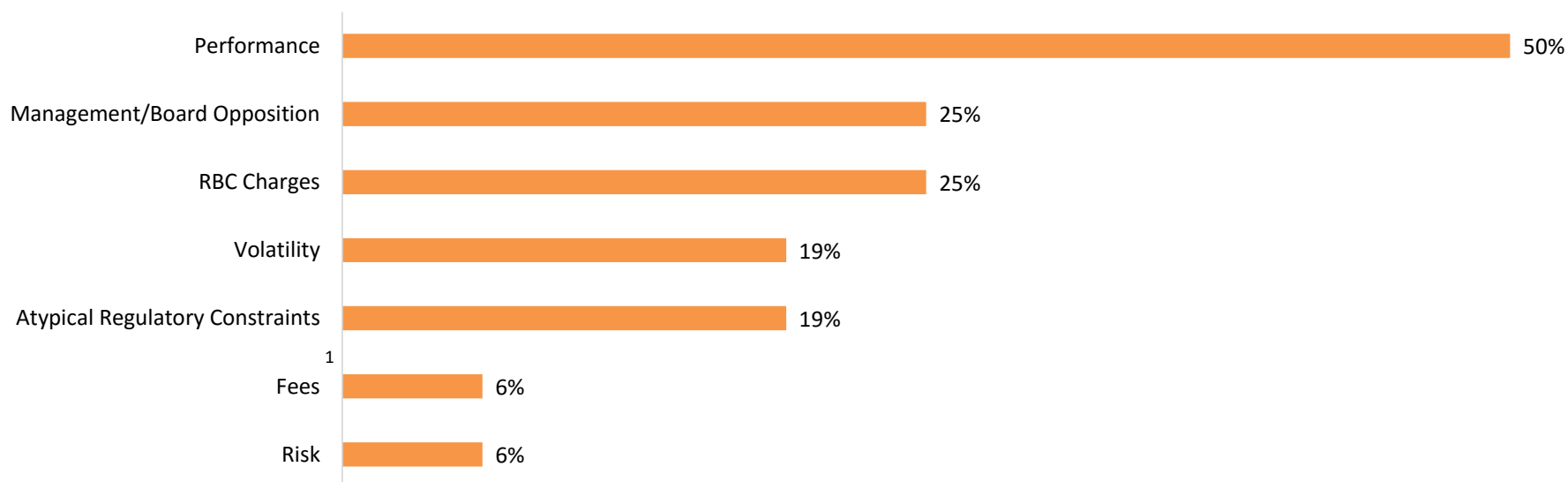
Despite increased, industry-wide interest, many interviewed insurers still do not feel they have sufficient understanding of the hedge fund space:

- 22% of insurers interviewed admitted to limited or no understanding of hedge fund investment options – *includes single managers and more complex structures*
 - Due in part to the fact that most insurance hedge fund investment programs are relatively new (developed within the past 10 years) – *still a limited pool of expertise in the industry*
 - Inhibits hedge fund investment, as many insurers will not invest in asset classes they do not understand, even when guided by a third-party investment consultant
- Another 68% of interviewed insurers reported only low to moderate understanding of complex hedge fund structures, such as managed accounts and custom consulting services
 - This may exacerbate insurers' frustrations with hedge funds if they do decide to invest, as these structures can mitigate common concerns like fees and transparency
- In total, only 10% of interviewed insurers could be described as “very sophisticated” hedge fund investors
 - These insurers have either utilized or actively evaluated a range of hedge fund structures

Chapter 5: Common Considerations

Among insurers not currently investing in hedge funds, performance is the key reason for not investing:

Reasons for Not Investing in Hedge Funds



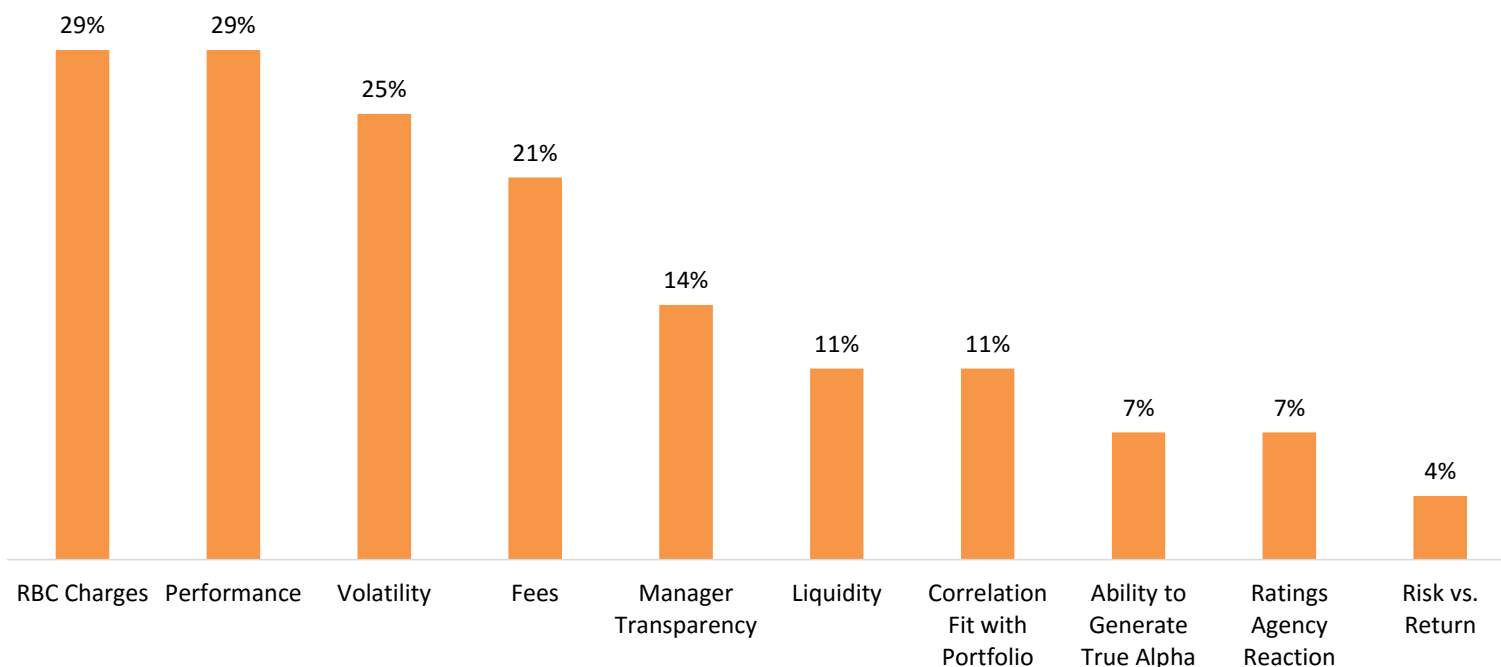
¹Represents certain insurers (e.g. mortgage, bond) that are subject to additional regulatory constraints beyond most U.S. insurers

Chapter 5: Common Considerations

Of those insurers that currently invest or plan to invest in hedge funds, considerations guiding investment decisions are broader:

- RBC charges, performance, and volatility are of particular importance

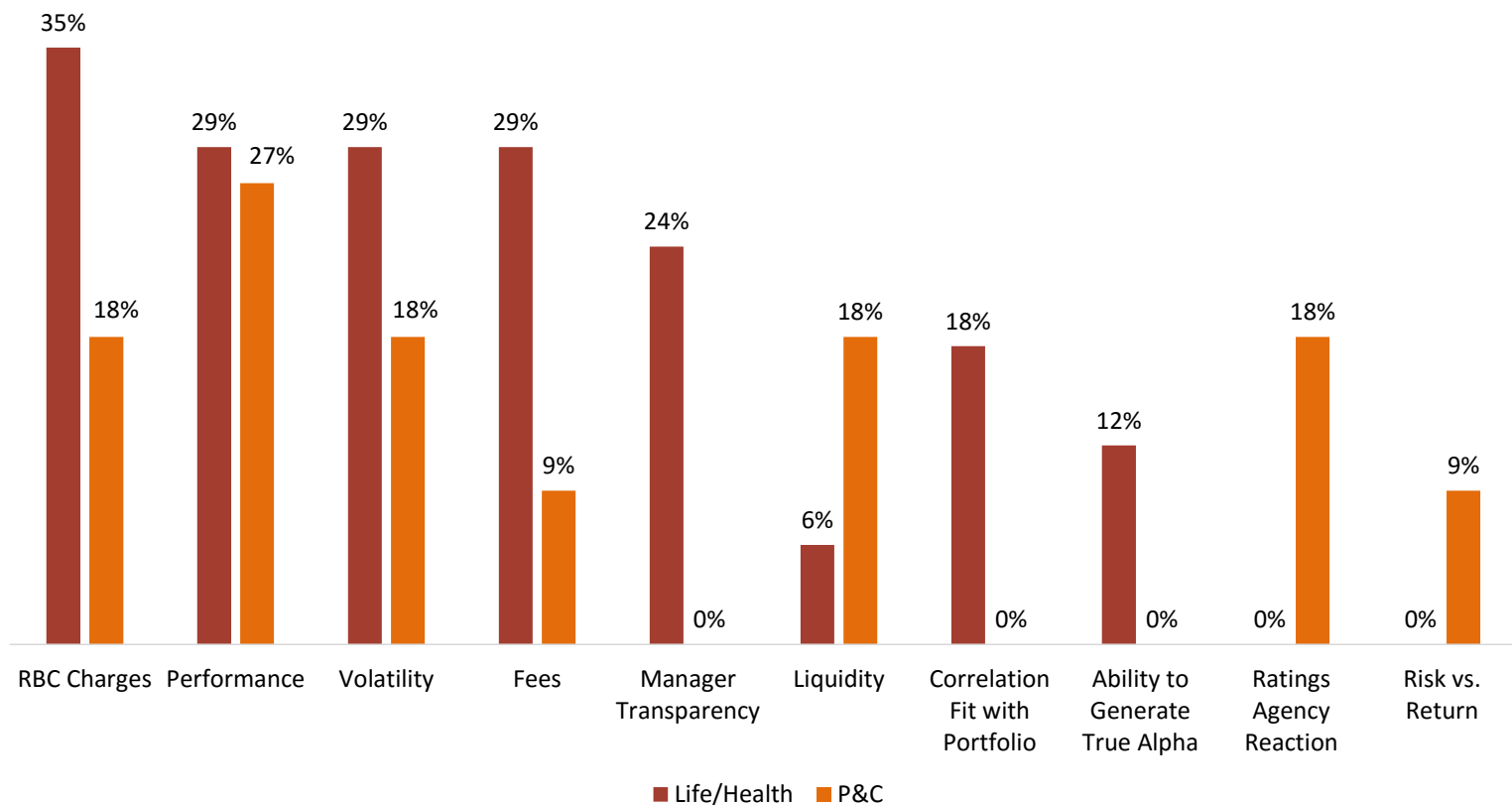
Common Considerations Influencing Hedge Fund Investment¹



Chapter 5: Common Considerations

Different business lines weight these considerations differently:

Common Considerations Influencing Hedge Fund Investment By Business Line¹



Reflects their distinct business characteristics and investment needs....

¹Includes only those insurers that currently invest in hedge funds or that have plans to invest

Chapter 5: Common Considerations

Interviewed Life/Health insurers' top considerations in hedge fund investing reflect an emphasis on long-term cost and stable returns:

- Faced with 30% NAIC risk based capital (RBC) charges on hedge funds (*vs. 15% for P&C*), interviewed Life/Health insurers were consistently more concerned with hedge funds' capital efficiency than their P&C peers
- Longer-term investment orientation is another factor contributing to Life/Health insurers' heightened awareness of hedge fund costs, both in terms of RBC and manager fees – *must weigh long-term costs of an investment before committing*
- Hedge funds' potential for high volatility is another commonly-cited consideration, particularly for public insurers

Example: One publicly-traded Tier 2 Life/Health insurer that does not invest in hedge funds describes itself as “laser focused” on mitigating volatility of net investment income figures in quarterly reporting; as such, it admits it is “loath to rock the boat” by adding potentially volatile investments, such as hedge funds

- Taken together, these factors have contributed to internal resistance to hedge funds at some interviewed insurers
 - Many expressed that in order to overcome this resistance, a particular hedge fund's value proposition must be obvious
 - As one insurance investment executive remarked, there must be a good reason for him to “*pound the table*” and insist that a hedge fund be added to the portfolio despite internal opposition

Chapter 5: Common Considerations

In contrast with Life/Health peers, interviewed P&C insurers cited performance as their #1 criteria in considering hedge fund investment:

- In keeping with their general total return orientation, interviewed P&C insurers are more focused on hedge fund performance and risk/return characteristics than on portfolio construction and non-correlation issues

Example: One Tier 1 P&C insurer explained that its alternatives portfolio had been designed with the primary goal of achieving the highest possible absolute return for a given amount of risk – *diversification a secondary consideration*

- Performance orientation also impacts views on manager fees, with many P&C insurers indicating they are willing to pay high fees if net performance is adequate
- Of course, performance is hardly the only consideration that impacts P&C insurers' hedge fund investment decisions
 - Hedge funds' fit with desired liquidity and volatility profiles are also factors, given limited tolerance for illiquidity at P&C insurers due to their short-term liabilities, as well as volatility concerns at public companies
 - When planning to increase hedge fund allocations, must also consider potential reactions from ratings agencies – described by some P&C insurers as their “*de facto regulator*” in absence of RBC charges as severe as those imposed on Life/Health firms

Chapter 6: New Roles for Hedge Funds in the Alternatives Portfolio



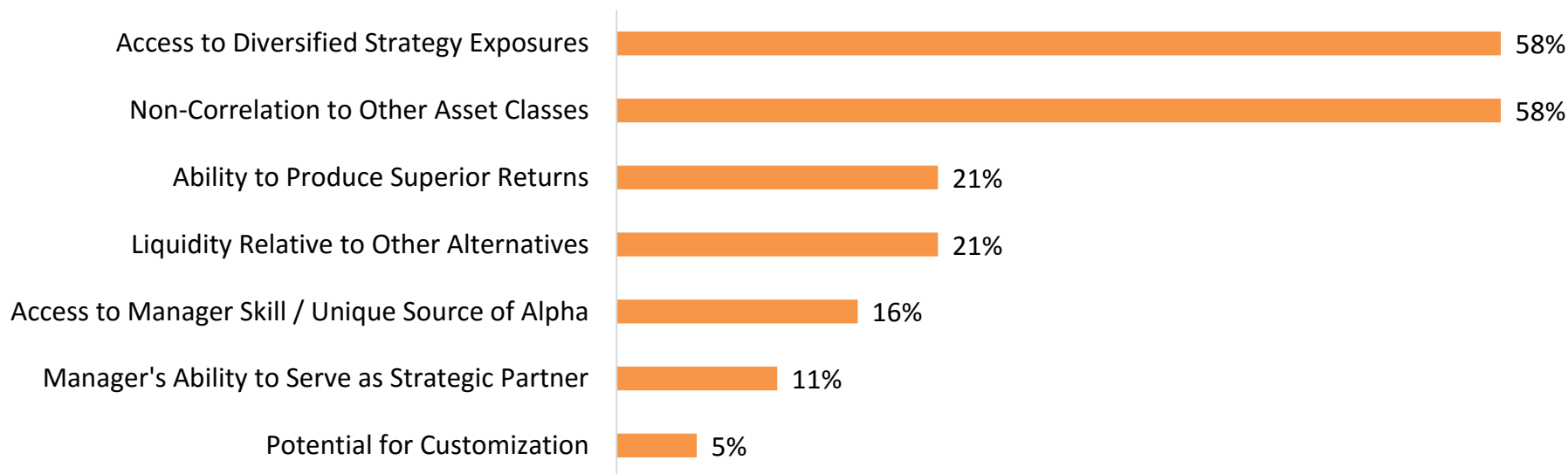
Chapter 6: New Roles for Hedge Funds

As insurers add hedge funds to their alternatives portfolios, they cite a number of reasons across business lines and size segments:

- Access to varied strategy exposures and non-correlation to other asset classes are perceived as hedge funds' top benefits

Consistent with hedge funds' status as a portfolio diversifier

Reasons for Investing in Hedge Funds



Chapter 6: New Roles for Hedge Funds

Hedge funds are used in a wide variety of deployments, highlighting the versatility of the asset class:

Example: Hedge Funds for Liquidity

A Tier 1 Life/Health insurer maintains a modest allocation to hedge funds in order to add needed liquidity to its alternatives portfolio

- Takes on significant illiquidity in the wider alternatives book (*e.g. private equity, infrastructure*) to meet long-term capital appreciation objectives
- Hedge funds serve as another higher-returning, yet comparatively liquid, component of the portfolio
- Viewed internally as a “bridge” to get around the J-curve impact of the broader alternatives portfolio

Example: Hedge Funds for Flexibility and Control

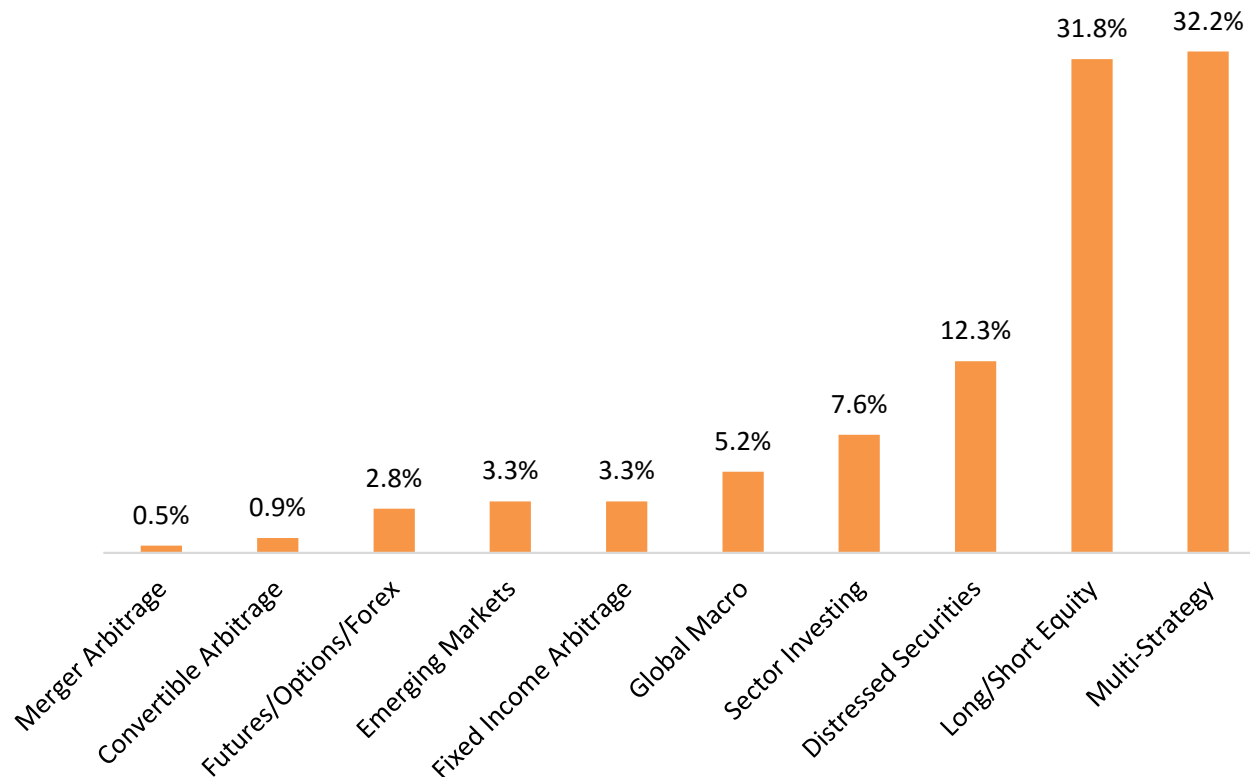
One Tier 2 P&C insurer actively invests in hedge funds over private equity to maintain maximum control over the investment process

- Believes hedge fund managers are much more willing than private equity peers to be flexible on aggressiveness of strategy and “degree of investedness”
- Allows them to quickly react to market cycles and implement any changes that the insurer makes to its allocation strategy
- Liquidity relative to private equity also perceived as a benefit, given unpredictable liabilities

Chapter 6: New Roles for Hedge Funds

In addition, U.S. insurers invest in a wide variety of hedge fund strategies to meet their unique objectives:

Hedge Fund Strategies Employed *(% of Insurers' Hedge Fund Portfolios)*



Chapter 6: New Roles for Hedge Funds

Interviewed insurers indicated a gradual shift in the strategies they employed:

- Multi-strategy remains the most popular choice, at 32% of insurers' hedge fund portfolios – *however, has steadily decreased from 43% in 2008*
 - Insurers value multi-strategy funds' ability to reduce volatility by allowing managers to opportunistically shift between investment strategies
 - However, some interviewed insurers expressed that the need to monitor managers' strategy changes to ensure consistent fit with investment objectives presents an onerous oversight burden
 - For some, insurers felt a solution may be found in structures such as funds of hedge funds, which also seek to reduce volatility and provide a steady return stream while offering expert management to prevent strategy drift
- Long/short equity – the 2nd-most widely used hedge fund strategy – remains a critical component of insurers' hedge fund portfolios, though some expressed that it will not be their preferred focus moving forward
 - Several interviewed insurers have resources to manage long/short equity strategies in-house, and are not willing to pay a third party for what is seen by some as essentially “stock picking”
- Across the board, insurers are seeking access to truly unique investment opportunities:
 - Credit strategies (*e.g. distressed debt*) are employed by many as a partial fixed income replacement, and several expressed plans to increase investment – *especially Life/Health, who can accept relative illiquidity*
 - Activist and event-driven strategies (*e.g. merger arbitrage, convertible arbitrage*) are also widely popular with interviewed insurers, who believe managers with proven expertise in these areas offer a clear “value add”

Chapter 7: Structures Facilitating Hedge Fund Investment



Chapter 7: Structures Facilitating Investment

In addition to traditional single manager funds, insurers may also invest in hedge funds through a variety of other portfolio solutions:

- Funds of Hedge of Funds (FoFs) – Commingled vehicle promising diversification and expert manager oversight
 - Utilized by 25% of interviewed hedge fund investors
- Hedge Fund Managed Accounts – Emerging structures offering direct ownership of underlying securities for transparency and safety
 - Although only 10% of research participants indicated significant knowledge of managed accounts, several expressed interest in the structure
- Internally-Directed/Custom Portfolio Strategies – Creative structuring and strategy replication programs leveraging in-house resources or consulting-based services
 - 15% of interviewed hedge fund investors pursue such strategies

In some cases, insurers may find that these are better suited than ad hoc single manager funds to fulfill desired hedge fund portfolio characteristics

Chapter 7: Structures Facilitating Investment

For many insurers, funds of hedge funds are an important tool providing portfolio diversification and steady return streams:

25% of interviewed hedge fund investors currently invest via funds of funds, while another 15% would consider this approach

- Funds of hedge funds (FoFs) invest in an expertly selected portfolio of single manager hedge funds, offering diversified strategy or manager exposures for a significantly lower minimum investment than would be required to invest separately
- Interviewed insurers reported that many FoFs effectively provided relatively low volatility and steady returns, thanks to managers' ability to rebalance the portfolio in response to market conditions
- Though dismissed by some insurers due to additional layer of fees charged by FoF manager, many feel that FoFs offer a compelling value proposition despite the additional cost

Example: Funds of Funds for Stable Returns

Over the past year, one Tier 2 P&C insurer has reduced its investments in single manager hedge funds – while simultaneously increasing its investments in funds of funds

- Although it has historically maintained substantial allocations to both single manager funds and FoFs, feels that with its track record in selecting single manager funds, low performance and high fees have reduced the attractiveness of that approach
- However, the insurer continues to see value in funds of hedge funds, as it feels these provide a stable return stream with relatively low volatility – *willing to pay additional FoF manager fees to access these benefits*

Chapter 7: Structures Facilitating Investment

Hedge fund managed accounts are also beginning to attract interest as a means to access some of the benefits of both single manager funds and FoFs without relinquishing control of underlying assets:

As a relatively new investment vehicle, still limited awareness among insurers – only 10% of research participants had a significant understanding of managed accounts

- Similar to traditional separately managed accounts, hedge fund managed accounts allow investors to directly own the underlying assets in the account
 - Additionally, facilitate investments in an expertly selected portfolio of hedge fund managers – *offers manager selection and due diligence benefits of a FoF, while giving insurers greater control over investments*
- Many insurers expressed interest in managed accounts’ “look-through” into underlying assets
 - Appeals to insurers averse to “black box” investing by facilitating nearly real-time monitoring of investment decisions – *may also generate superior RBC treatment in certain instances*
- Some insurers also attracted by the liquidity afforded by direct ownership of underlying assets, as well as reduced fees frequently negotiated with underlying hedge fund managers

Example: Managed Accounts for Flexibility

Though not yet actively investing in such structures, one Tier 1 Life/Health insurer is interested in managed accounts as a vehicle to make its hedge fund portfolio more responsive to changes in the market

- Currently maintains significant allocations to both single manager hedge funds and funds of hedge funds
- Believes a managed account with monthly liquidity could offer the ability to make rapid, tactical shifts between managers as market conditions require – *hedge fund portfolio currently lacks this degree of flexibility*

Chapter 7: Structures Facilitating Investment

Finally, custom-designed portfolios or internally-directed strategies may be attractive to insurers that are concerned with RBC and oversight:

- Several use fund of funds managers on a consulting basis to create hedge fund portfolios with tailored risk-return characteristics
 - Frequently accessible to Tier 1 and Tier 2 insurers allocating at least \$100MM-\$250MM to hedge funds
 - Several interviewed insurers indicated that they valued not just fund selection and due diligence, but also the investment strategy and alternatives allocation assistance provided by their consultants
- Additionally, a few insurance investment departments with significant hedge fund expertise pursue hedge fund strategy replication in-house or maintain internal funds of funds
 - Frequently managed by individuals hired from the hedge fund industry
 - Facilitates direct control over strategy, as managers may be removed at the insurers' discretion

Appendix: Selected Case Studies



Appendix: Selected Case Studies

Case Study #1: Building a De Novo Alternatives Program

- One Tier 1 Life/Health insurer that has not historically invested in alternatives has found it increasingly difficult to generate needed investment returns from its fixed income-heavy portfolio alone
- As a result, has begun reducing fixed income investments while simultaneously building out a de novo alternatives program
- Have added staff to facilitate this shift, including a Head of External Mandates responsible for evaluating alternatives managers
- Currently assessing a number of alternative asset classes in various modeling scenarios, but have yet to determine which will be included in portfolio
- Seeking to construct a portfolio that produces high, yet stable returns – *as a Life/Health insurer, has limited tolerance for volatility*
- Attracted to private equity and real estate funds due to low accounting volatility, but also evaluating hedge funds for diversified returns

Appendix: Selected Case Studies

Case Study #2: Strategically Refining Alternatives Approach

- A Tier 2 P&C insurer has pursued one-off relationships with alternatives managers for nearly ten years, but has never implemented a rationalized alternatives program
 - Current alternatives portfolio a “mixed bag” of buyouts, mezzanine debt, energy, and growth strategies
- As a result, alternatives portfolio has not been optimized to serve the insurer’s broader investment objectives
 - In fact, certain private equity managers selected specifically due to their personal relationships with insurer staff have shown poor performance – *feel need for more disciplined selection process*
- With the recent hiring of a new CIO, this insurer has begun to construct a more coherent alternatives strategy in order to address these issues
 - Internal asset allocation exercise conducted to guide the process
 - Have begun to utilize investment manager databases, rather than relying on personal relationships to source managers
 - Also uses a variety of context-dependent metrics to evaluate managers or particular investments: include Sharpe ratio, risk vs. total return, volatility, and drawdown
- Though new allocation has yet to be determined, has definite plans to add hedge funds in 2016 to complement existing private equity orientation – *may use third-party consultants to source and oversee, as still have limited internal resources*

Appendix: Selected Case Studies

Case Study #3: Utilizing Consultant to Guide Investment

- One Tier 2 P&C insurer wanted to begin investing in alternatives to diversify its investment portfolio
 - However, firm resources could not support adding full-time staff to supplement its existing two-person, fixed income-oriented investment team
- To solve this problem, the firm contracted with a third-party investment consultant to advise on asset allocation and manager selection
 - A non-discretionary mandate – consultant’s suggestions are reviewed by insurer’s CIO
- Today, insurer has a diversified, low volatility alternatives portfolio that complements core fixed income investments
 - Comprised of hedge funds (both fund of funds and single managers), as well as certain high-yielding investments that the insurer also classifies as “alternatives” (*e.g. EMD, high yield*)
- With consultant’s help, perform periodic diversification studies to determine which asset classes might add value given performance expectations
- Do not anticipate terminating consultant or bringing any outsourced investment functions in-house, given overall success of approach

Appendix: Selected Case Studies

Case Study #4: Maturing Alternatives Program

- A leading Tier 1 Life/Health insurer continues to refine its investment strategy in response to market shifts, even though its alternatives program is relatively well established
- In particular, it is currently refining its hedge fund strategy, including implementing a plan to grow hedge funds to over \$3B in three years
 - Believes it is currently under-invested in hedge funds, particularly diversifying strategies such as macros and CTAs
- Plans to reduce fund of fund investments over time as part of a broader move away from multi-strategy funds
- Will simultaneously increase targeted allocations to single managers providing desired strategy exposures
- However, as it does not utilize any investment consultants, will continue to invest with certain fund of funds that it believes provide exceptional manager sourcing and due diligence

Appendix: Selected Case Studies

Case Study #5: A Hedge Fund Replication Approach

- One Tier 1 P&C insurer appreciates many hedge funds' risk/return characteristics and diversification benefits, but has persistent concerns regarding hedge funds' fees and capital efficiency
- To reduce the overall expense of its sizeable hedge fund program, the insurer leverages its significant in-house resources to replicate selected hedge fund strategies internally
 - In particular, utilizes its deep in-house credit team to manage fixed income-oriented hedge fund strategies
- Restrictions on leverage and derivatives usage curtail insurer's ability to replicate certain strategies, but it believes the program has nevertheless achieved satisfactory returns
- At the same time, the insurer selectively invests with hedge fund managers offering unique capabilities that cannot be executed internally
 - For instance, invests in activist hedge funds, which it believes offer a clear "value-add" by complementing internal investment expertise

Appendix: Selected Case Studies

Case Study #6: Proprietary Structures for RBC Reduction

- A Tier 2 Life/Health insurer does not believe that the NAIC's 30% capital charge is appropriate for many of its alternative investments, approximately half of which are income-oriented
 - Commits approximately \$250MM each year to private equity-type partnerships and co-investments
- In consultation with its state Department of Insurance, the insurer created a securitized vehicle for its fund investments that has been effective in reducing RBC charges
 - Gathered alternative fund investments into three internal fund of funds corresponding to three stages of investment cycle (1. New Commitments; 2. Buildup/Drawdown; 3. Harvest)
 - Securitized Harvest fund as it approached maturity – after selling 50% of senior debt tranches to achieve an “arms’ length” sale, was able to have this security rated
 - Now pays reduced RBC charges on the retained debt tranches consistent with the security's rating
 - Also retains full ownership of the equity tranche at full RBC charge
 - Likely to repeat the process when the current Buildup/Drawdown fund reaches maturity
- Though it requires a high degree of sophistication, the entire alternatives portfolio is able to be overseen by only 2 dedicated investment personnel

Report Author



Patpatia & Associates

Patpatia & Associates provides strategy development and execution management consulting to insurance companies and asset managers:

Services for Insurance Companies

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- Build out of **outsourcing programs**, including oversight processes and incentives
- **Diversification** into new asset classes to improve risk-adjusted portfolio yields
- Assistance in the creation of **new investment capabilities** – liftouts acquisitions
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- Guide the assembly of the requisite infrastructure and **technology platforms**