



Patpatia & Associates, Inc.

Insurance Practice

Insurance Asset Management Investment Approach & Manager Dynamics





Insurance Asset Management: A Market Survey

Over the past several years, we have worked with a number of insurers to strategically improve their general account investments, including strategic business organization, investment strategy development processes, and third party asset manager programs. As we have analyzed the insurance marketplace, we have noticed a significant lack of focus on insurance asset management as a discrete discipline. With the continuing growth of insurance asset management outsourcing, we felt that it was timely to undertake a comprehensive assessment of the scope and unique characteristics of this marketplace.

We are pleased to release the findings of our Insurance Asset Manager Survey, which we conducted in partnership with Insurance Finance & Investment (IFI). Participants spanned the money management marketplace, from boutique insurance managers to diversified global institutions. Over 50 investment firms, each of which actively markets asset management services to insurance companies, kindly collaborated with us. They enabled the quantification & segmentation of insurers outsourcing preferences and the analysis of managers' disparate business models at an unprecedented level of detail.

We have sought to provide a multi-focused analysis that is of value to both insurers and the money managers that serve them. How does the unique investment philosophy of different segments of the insurance marketplace drive outsourcing decisions? How are the investment mandates given to third parties evolving? Which managers focus on specific markets and products and why?

As the global insurance marketplace evolves and the on-going search for increased yields and returns continues, insurers and asset managers are increasingly developing synergistic relationships to maximize firm value, while managing investment-related risk. Successful relationships are being built on mutual collaboration, developing liability-driven investment strategies tailored to the specific needs of insurers. They utilize the breadth of resources available to third party managers. This domestic and international growth is expected to continue under dual drivers – the potential of increased portfolio returns for insurers and the opening of profitable asset gathering opportunities for managers.

We hope that you find this survey to be valuable in your business, whether you are an insurer seeking new managers or a money manager seeking perspective and access to one of the largest growth segments of the marketplace. We would like to extend our particular thanks to all the participants of the 2006 survey, through whom this work has been possible.

Sunny Patpatia

Sunny Patpatia
President & CEO
Patpatia & Associates, Inc.



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Scope of the Survey & Manager Profiles

This analysis is founded principally on information collected through a comprehensive survey of asset managers serving the insurance marketplace, complemented by proprietary market data and extensive research of select insurance companies' practices.

The asset manager survey was conducted through the combination of a written survey and one-on-one communications. The survey instrument included both quantitative business measures (e.g. insurance client type breakdown) and qualitative components (e.g. investment strategy development). Except where otherwise noted, all asset and client data has been reported as of September 30, 2006.

Following the initial data collection, executive management, portfolio managers, marketing, and customer relations professionals at each manager participated in strategic conversations regarding their unique approaches to the insurance marketplace. These discussions were undertaken throughout the fourth quarter of 2006 and first quarter of 2007.

Research focused on the managers' quantitative business fundamentals and their perceptions of the insurance marketplace, with topics including:

- Buying preferences of different insurers
- Distribution of insurance client size
- Managers' insurance business strategy
- Managers' investment approach
- Degree of customization of mandates
- Leading investment strategies
- Types of insurers engaging the managers
- Size of insurance mandates
- Insurance general account asset allocation
- Required service offerings to target insurers

The analysis focused on general accounts, an insurer's own corporate assets garnered from insurance product proceeds and used to back future insurance payments on products such as traditional life, fixed annuities, auto insurance, and health care programs. These were selected to emphasize their true institutional nature and insurance investment particularities, including the asset-liability management-driven investment strategies and an income orientation.

Sub-advisory (i.e. separate account) assets, generally encompassing the management of sub-accounts for variable annuity & variable life products, were identified separately in the survey. The sub-advisory assets of managers have been excluded from most of the analysis due to their distinct retail nature. The study focuses, rather, on institutional general accounts.



Survey Participants

With 52 participants, the 2006 incarnation of the survey encompasses a broad selection of global money managers. More firms than ever before are focusing on insurers as a separate & discrete opportunity to gather institutional assets. Our 52 respondents reflect a nearly 50% increase over previous surveys conducted by Insurance Finance & Investment (IFI). The survey is highly representative of the insurance outsourcing marketplace, with participants in this survey managing over \$748 B, which accounts for over 90% of the total insurance assets outsourced today.

The survey respondents are asset managers that focus explicitly on insurers as a market. They are predominantly core fixed income or equity money managers. Alternative investment specialists (i.e. funds of funds managers, private equity firms) that service insurers as an ancillary business focus, therefore, remain largely outside the scope of this analysis. This results in an anticipated underreporting of insurers' use of third parties to manage non-traditional investments.

The majority of participating managers have diversified businesses, gathering assets from a variety of pension, foundation/endowment, corporate, retail, and sub-advisory clientele. Insurance companies, however, have become material to their business success. Survey respondents today can trace 9% of their total assets under management to non-affiliated general account insurance clients. A full range of firms now compete for insurers' assets. The increasingly diverse nature of the insurance asset management marketplace is reflected in the breadth of the 2006 survey participants, including:

1. Insurance asset management specialists
2. The 3rd party investment operations of insurance companies
3. Investment banks leveraging broader capital raising relationships with insurers
4. Leaders in fixed income investments for pensions & other institutional clients
5. Recent entrants who have extended their focus from sub-advising to more dedicated insurance practices
6. Firms managing specialty asset classes - e.g. CDOs, bank loans, fixed income hedge funds

Insurance General Account Assets of Participants

Market: \$ 804 B

Survey Representation
\$ 748 B

Survey participants can trace 9% of their total assets under management to general account insurance clients who are not affiliated with themselves.



2007 Insurance Asset Manager Survey Participants

(\$ in Billions)

<u>Rank</u>	<u>Company</u>	<u>Third-Party GA</u>	<u>Affiliated</u>	<u>Sub-Advised</u>	<u>Total Ins.</u>
1	Deutsche Asset Mgmt.	141.5	0	1.6	143.1
2	BlackRock	109.0	0	N/A	109.0
3	Conning Asset Management	63.4	2.0	0	65.4
4	GE Asset Management	60.4	31.2	0	91.6
5	Wellington Mgmt. Company	55.4	0	102.1	157.5
6	General Re-New England AM	49.5	21.2	1.0	71.7
7	Western Asset Management	39.4	0	0	39.4
8	State Street Global Advisors	23.6	0	23.3	46.9
9	Evergreen Investment Mgmt.	21.3	0	0.8	22.1
10	Standish Mellon Asset Mgmt.	17.6	0	0	17.6
11	JPMorgan Asset Management	17.1	0	0	17.1
12	AAM	14.9	0	0	14.9
13	PIMCO	13.3	149.2	33.0	195.5
14	Goldman, Sachs Asset Mgmt.	12.7	0	23.9	36.6
15	Hyperion Brookfield AM	12.5	1.4	0	13.9
16	AllianceBernstein	10.1	69.2	59.3	138.6
17	Morgan Stanley Inv. Mgmt.	8.8	0	11.9	20.7
18	Wells Capital Management	8.4	0	3.1	11.5
19	Loomis, Sayles & Company	7.7	2.1	7.4	17.2
20	Principal Global Investors	5.8	57.8	0	63.6
21	Brown Brothers Harriman	5.7	0	0	5.7
22	Prudential Investment Mgmt.	5.4	128.6	0	134.0
23	Columbia Mgmt. Advisors	5.2	1.6	0.6	7.4
24	ING Investment Management	4.6	202.9	0	207.5
25	Delaware Investments	4.1	66.7	0	70.8
26	Trust Company of the West	2.9	0	1.8	4.7
27	Advantus Capital	2.7	9.2	0	11.9
28	Victory Capital Management	2.7	0.1	<0.1	2.8
29	Munder Capital Management	2.6	0	0.8	3.4
30	Voyageur Asset Management	2.4	0	0	2.4
31	Robeco Weiss, Peck and Greer	2.2	0	0	2.2
32	Citigroup Alternative Investments	1.8	0	2.1	3.9
33	Madison Investment Advisors	1.8	0	0	1.8
34	Capital Group International	1.6	0	4.7	6.3
35	Hartford Investment Mgmt. Co.	1.4	74.7	9.7	85.8
36	WB Capital Management	1.4	0	0	1.4
37	New York Life Inv. Mgmt.	1.1	108.1	0	109.2
38	Dwight Asset Management	1.1	18.8	1.3	21.2
39	Lord, Abbett & Co. LLC	1.1	0	9.3	10.4
40	MBIA Asset Management	0.9	11.5	0	12.4
41	MFC Global Inv. Mgmt.	0.8	139.7	0.1	140.6
42	Babson Capital Management	0.8	61.8	0	62.6
43	Denver Investments Advisors	0.8	0	0	0.8
44	Hillswick Asset Management	0.4	0	0	0.4
45	Advent Capital Management	0.2	0	0	0.2
46	Cohen & Steers Capital Mgmt.	0.2	0	0	0.2
47	Allegiance Capital	0.1	0	0	0.1
48	Fort Washington Inv. Advisors	0.1	22.7	0	22.8
49	Froley, Revy Investment Co.	<0.1	0	0	<0.1
50	Putnam Investments	N/A	0	20.1	20.1
51	Entrust Capital	N/A	0	<0.1	<0.1
52	Highland Capital Mgmt.	N/A	N/A	N/A	N/A
	Total	748.5	1,180.5	317.9	2,246.9



Please note that the following rankings are based upon an analysis of asset managers' third-party general account assets; firms that did not supply detailed business line or regional data during the survey have been excluded from the rankings below.

2007 Life & Annuity Manager Rankings

Top L&A Managers – By Total L&A AUM

Asset Manager	\$ in B
1. Deutsche Asset Mgmt.	\$77.1
2. GE Asset Mgmt.	39.6
3. Conning Asset Management	13.9
4. BlackRock	12.8
5. Evergreen Investment Mgmt.	12.0
6. Wellington Mgmt. Company	7.9
7. Hyperion Brookfield AM	5.1
8. Prudential Investment Mgmt.	4.3
9. Standish Mellon Asset Mgmt.	4.2
10. PIMCO	4.1
11. AAM	3.7
12. Principal Global Investors	3.4
13. Wells Capital Management	2.9
14. ING Investment Management	2.6
15. General Re-New England AM	2.5
16. JPMorgan Asset Management	1.9
17. AllianceBernstein	1.9
18. Victory Capital Management	1.8
19. Advantus Capital	1.6
20. Goldman, Sachs & Co	1.2

Top L&A Managers – By % of Insurance AUM

Asset Manager	%
1. MFC Global Inv. Mgmt.	100%
2. New York Life Inv. Mgmt.	91%
3. WB Capital Management	86%
4. Prudential Investment Mgmt.	80%
5. Dwight Asset Management	68%
6. Victory Capital Management	67%
7. GE Asset Management	66%
8. Principal Global Investors	59%
9. Advantus Capital	59%
10. Evergreen Investment Mgmt.	56%
11. ING Investment Management	56%
12. Deutsche Asset Mgmt.	54%
13. Hyperion Brookfield AM	41%
14. Wells Capital Management	35%
15. PIMCO	31%
16. Fort Washington Inv. Advisors	29%
17. AAM	25%
18. Standish Mellon Asset Mgmt.	24%
19. Conning Asset Management	22%
20. Hartford Investment Mgmt. Co.	21%

2007 P&C Manager Rankings

Top P&C Managers – By Total P&C AUM

Asset Manager	\$ in B
1. Deutsche Asset Mgmt.	45.7
2. Conning Asset Management	44.7
3. Wellington Mgmt. Company	33.8
4. BlackRock	29.7
5. General Re-New England AM	23.6
6. GE Asset Management	20.8
7. Standish Mellon Asset Mgmt.	7.9
8. AAM	6.7
9. AllianceBernstein	6.1
10. JPMorgan Asset Management	5.2
11. Brown Brothers Harriman	5.2
12. Hyperion Brookfield AM	3.9
13. Columbia Mgmt. Advisors	3.2
14. Evergreen Investment Mgmt.	3.0
15. PIMCO	2.5
16. Morgan Stanley Inv. Mgmt.	2.0
17. Robeco Weiss, Peck and Greer	1.9
18. Western Asset Management	1.6
19. Voyageur Asset Management	1.6
20. Capital Group International	1.6

Top P&C Managers – By % of Insurance AUM

Asset Manager	%
1. Capital Group International	100%
2. Frolely, Revy Investment Co.	100%
3. Lord, Abbett & Co. LLC	97%
4. Hillswick Asset Management	95%
5. Brown Brothers Harriman	91%
6. Robeco Weiss, Peck and Greer	86%
7. Madison Investment Advisors	83%
8. Conning Asset Management	71%
9. Hartford Investment Mgmt. Co.	71%
10. Fort Washington Inv. Advisors	71%
11. Voyageur Asset Management	67%
12. General Re-New England AM	66%
13. Columbia Mgmt. Advisors	62%
14. Wellington Mgmt. Company	61%
15. AllianceBernstein	60%
16. Munder Capital Management	46%
17. Advent Capital Management	46%
18. Standish Mellon Asset Mgmt.	45%
19. AAM	45%
20. MBIA Asset Management	44%



2007 Health Manager Rankings

Top Health Managers – By Total Health AUM

<u>Asset Manager</u>	<u>\$ in B</u>
1. BlackRock	\$15.9
2. Wellington Mgmt. Company	6.7
3. JPMorgan Asset Management	6.5
4. Standish Mellon Asset Mgmt.	3.6
5. Wells Capital Management	3.5
6. Evergreen Investment Mgmt.	2.3
7. Columbia Mgmt. Advisors	1.4
8. Conning Asset Management	1.4
9. PIMCO	1.3
10. Advantus Capital	1.0
11. General Re-New England AM	0.9
12. Hyperion Brookfield AM	0.9
13. AAM	0.8
14. ING Investment Management	0.7
15. Goldman, Sachs Asset Mgmt.	0.5
16. Denver Investments Advisors	0.5
17. Brown Brothers Harriman	0.2
18. Voyageur Asset Management	0.2
19. Hartford Investment Mgmt. Co.	0.1
20. Dwight Asset Management	<0.1

Top Health Managers – By % of Insurance AUM

<u>Asset Manager</u>	<u>%</u>
1. Allegiance Capital	94%
2. Denver Investments Advisors	63%
3. Wells Capital Management	42%
4. JPMorgan Asset Management	38%
5. Advantus Capital	37%
6. Advent Capital Management	36%
7. Columbia Mgmt. Advisors	27%
8. Standish Mellon Asset Mgmt.	20%
9. BlackRock	15%
10. ING Investment Management	15%
11. Wellington Mgmt. Company	12%
12. Evergreen Investment Mgmt.	11%
13. PIMCO	10%
14. Voyageur Asset Management	8%
15. Dwight Asset Management	8%
16. Hyperion Brookfield AM	7%
17. Hartford Investment Mgmt. Co.	7%
18. AAM	5%
19. Goldman, Sachs Asset Mgmt.	4%
20. General Re-New England AM	3%

2007 Reinsurance Manager Rankings

Top Reinsurance Managers – By Total Re AUM

<u>Asset Manager</u>	<u>\$ in B</u>
1. BlackRock	\$40.0
2. Deutsche Asset Mgmt.	20.3
3. Goldman, Sachs Asset Mgmt.	9.8
4. General Re-New England AM	8.7
5. Wellington Mgmt. Company	7.0
6. Western Asset Management	6.2
7. PIMCO	5.4
8. Evergreen Investment Mgmt.	4.0
9. AAM	3.7
10. JPMorgan Asset Management	3.5
11. Conning Asset Management	3.4
12. Delaware Investments	3.3
13. Hyperion Brookfield AM	2.6
14. Principal Global Investors	2.4
15. AllianceBernstein	2.1
16. Standish Mellon Asset Mgmt.	1.9
17. Wells Capital Management	1.2
18. Prudential Investment Mgmt.	0.5
19. MBIA Asset Management	0.5
20. Morgan Stanley Inv. Mgmt.	0.3

Top Re Managers – By % of Insurance AUM

<u>Asset Manager</u>	<u>%</u>
1. Cohen & Steers Capital Mgmt.	86%
2. Delaware Investments	80%
3. Goldman, Sachs Asset Mgmt.	77%
4. MBIA Asset Management	56%
5. PIMCO	41%
6. Principal Global Investors	41%
7. BlackRock	37%
8. AAM	25%
9. General Re-New England AM	24%
10. Hyperion Brookfield AM	21%
11. AllianceBernstein	21%
12. JPMorgan Asset Management	20%
13. Evergreen Investment Mgmt.	19%
14. Western Asset Management	16%
15. Deutsche Asset Mgmt.	14%
16. Wells Capital Management	14%
17. Wellington Mgmt. Company	13%
18. Voyageur Asset Management	13%
19. Standish Mellon Asset Mgmt.	11%
20. Robeco Weuss, Peck and Greer	10%



2007 US Insurance Manager Rankings

Top US Managers – By Total US AUM

Asset Manager	\$ in B
1. GE Asset Management	\$58.2
2. Deutsche Asset Mgmt.	57.7
3. Conning Asset Management	57.5
4. Wellington Mgmt. Company	36.0
5. General Re-New England AM	25.3
6. Western Asset Management	21.7
7. Evergreen Investment Mgmt.	17.4
8. Standish Mellon Asset Mgmt.	13.4
9. AAM	13.3
10. JPMorgan Asset Management	12.0

Top US Managers – By % of Insurance AUM

Asset Manager	%
1. Advantus Capital	100%
2. Victory Capital Management	100%
3. Madison Investment Advisors	100%
4. Hartford Investment Mgmt. Co.	100%
5. WB Capital Management	100%
6. Advent Capital Management	100%
7. Cohen & Steers Capital Mgmt.	100%
8. Allegiance Capital	100%
9. Frolely, Revy Investment Co.	100%
10. Fort Washington Inv. Advisors	99%

2007 Europe Insurance Manager Rankings

Top Euro Managers – By Total Euro AUM

Asset Manager	\$ in B
1. Deutsche Asset Mgmt.	\$62.2
2. Wellington Mgmt. Company	8.2
3. General Re-New England AM	5.7
4. AllianceBernstein	4.5
5. Conning Asset Management	4.4
6. ING Investment Management	3.3
7. Western Asset Management	3.0
8. Delaware Investments	2.3
9. GE Asset Management	2.1
10. Robeco Weiss, Peck and Greer	1.7

Top Euro Managers – By % of Insurance AUM

Asset Manager	%
1. Robeco Weiss, Peck and Greer	77%
2. ING Investment Management	72%
3. Delaware Investments	56%
4. AllianceBernstein	45%
5. Deutsche Asset Management	43%
6. Hillswick Asset Management	22%
7. General Re-New England AM	16%
8. Wellington Mgmt. Company	15%
9. Capital Group International	13%
10. Citigroup Alternative Investments	11%

2007 Asia Insurance Manager Rankings

Top Asia Managers – By Total Asia AUM

Asset Manager	\$ in B
1. Deutsche Asset Mgmt.	\$7.5
2. Western Asset Management	1.2
3. PIMCO	0.9
4. Prudential Investment Mgmt.	0.6
5. ING Investment Management	0.6
6. New York Life Inv. Mgmt.	0.6
7. Wellington Mgmt. Company	0.5
8. JPMorgan Asset Management	0.4
9. AllianceBernstein	0.4
10. GE Asset Management	0.1

Top Asia Managers – By % of Insurance AUM

Asset Manager	%
1. New York Life Inv. Mgmt.	55%
2. ING Investment Management	13%
3. Prudential Investment Mgmt.	11%
4. PIMCO	7%
5. Deutsche Asset Mgmt.	5%
6. AllianceBernstein	5%
7. Western Asset Management	3%
8. JPMorgan Asset Management	2%
9. Columbia Mgmt. Advisors	2%
10. Wellington Mgmt. Company	1%

2007 Offshore Domicile (e.g. Bermuda) Manager Rankings

Top Offshore Managers – By Total Offshore AUM

Asset Manager	\$ in B
1. Deutsche Asset Mgmt.	\$15.0
2. Western Asset Management	13.5
3. Wellington Mgmt. Company	9.1
4. PIMCO	7.2
5. General Re-New England AM	4.7
6. Standish Mellon Asset Mgmt.	4.2
7. Evergreen Investment Mgmt.	3.9
8. Hyperion Brookfield AM	2.6
9. AllianceBernstein	1.8
10. JPMorgan Asset Management	1.7

Top Offshore Managers – By % of Insurance AUM

Asset Manager	%
1. Hillswick Asset Management	65%
2. MBIA Asset Management	56%
3. PIMCO	53%
4. Western Asset Management	34%
5. Lord, Abbett & Co. LLC	27%
6. MFC Global Inv. Mgmt.	25%
7. Standish Mellon Asset Mgmt.	24%
8. Delaware Investments	24%
9. Hyperion Brookfield AM	21%
10. Evergreen Investment Mgmt.	18%



Key Findings

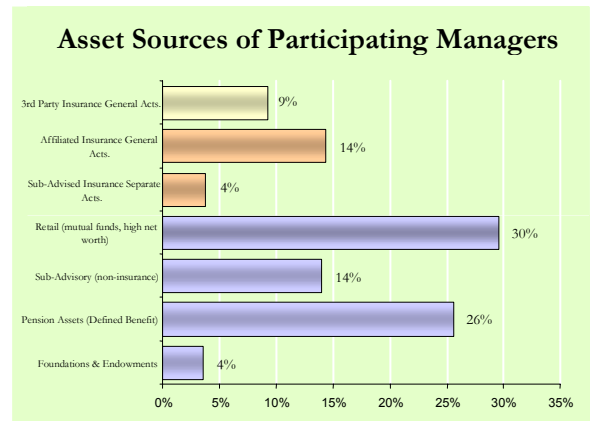
1. Outsourcing of insurance asset management is anticipated to grow remarkably over the next five years to reach \$1.9 Trillion.

Insurers Increasing Outsourcing of Insurance General Account Management				
	North America	Europe	Asia & Other	Total
2006	\$590 B	\$165 B	\$50 B	\$805 B
2011 (projected)	\$975 B	\$815 B	\$65 B	\$1,855 B
<i>New Money</i>	<i>\$385 B</i>	<i>\$650 B</i>	<i>\$15 B</i>	<i>\$1,050 B</i>

With more than \$1 Trillion expected to be outsourced over five years, many insurers will encounter challenges when selecting the right asset classes, investment strategies, and managers to best balance the risk-return dynamic for their investment needs.

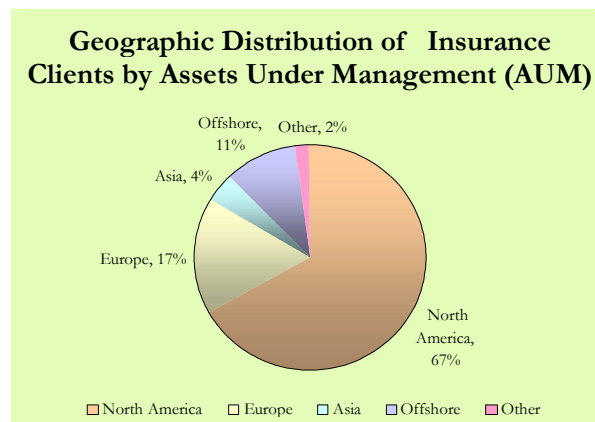
2. Insurers have become a vibrant institutional market for investment advisors. 9% of the assets of participating managers are derived from general accounts today.

When including sub-advised separate accounts (i.e. VA/ VL), outsourced insurance assets have reached 13% of the institutional asset management marketplace.



3. Two thirds of outsourced assets come from North America. However, insurance asset management is a global business and non-US insurers are driving the most rapid growth.

All markets, including the United States, are experiencing positive growth. North America has a large base of outsourced assets and continues to expand at 30% annually. Europe and Asia are also accelerating at 40% and 38% CAGR respectively. Offshore domiciles like Bermuda have experienced dramatic expansion, with outsourced assets increasing at a 53% CAGR over two years.



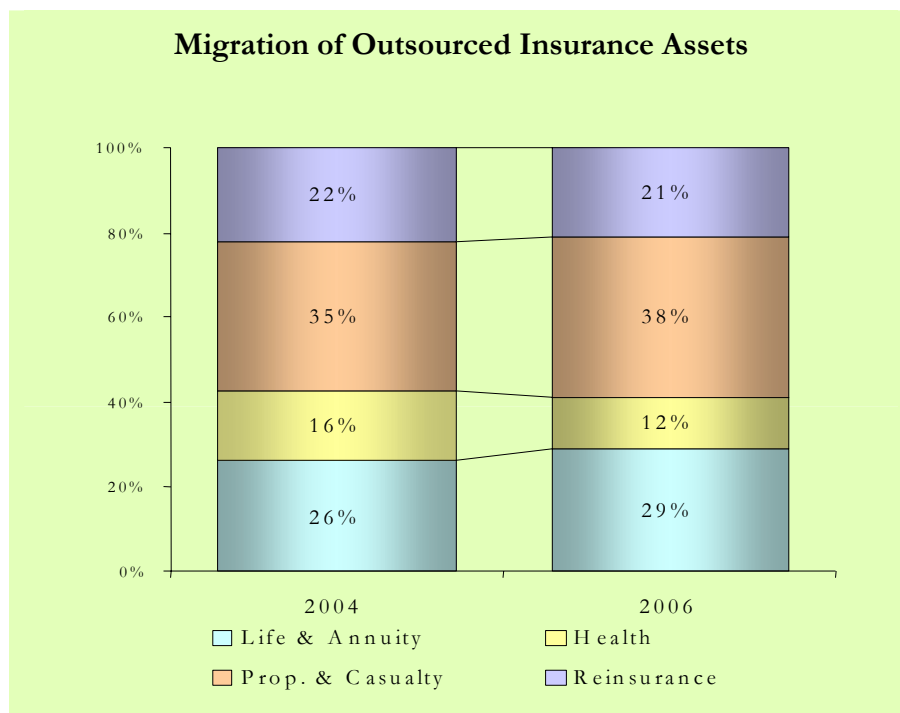
Key Findings (continued)

4. Property & Casualty insurers have dominated insurance outsourcing.

P&C firms have been serviced more easily by managers' institutional offerings due to their total return investment orientation, driving greater adoption of third party management in this channel.

5. Life & Annuity purveyors, however, increasingly engage third parties for their general account investments.

More money managers today have developed specialized book income investments to attract life companies, and these targeted efforts are gathering life company assets at increasing rates.



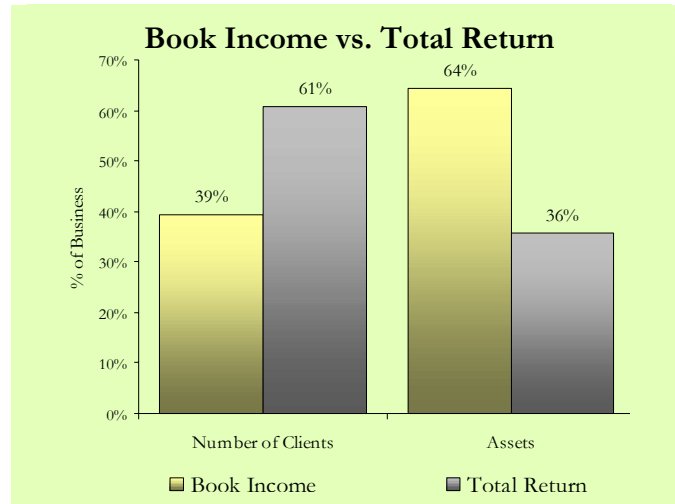
6. All insurers, including health insurers and reinsurers, have turned increasingly to third parties.

An aggregate compound annual growth rate of 35% was seen across all insurers over the past 2 years, with health growing the slowest at 15% and life & annuity expanding the most rapidly at 42%. Even health insurers and reinsurers have increasing engagements with third parties, despite declines in their total share of outsourced assets.

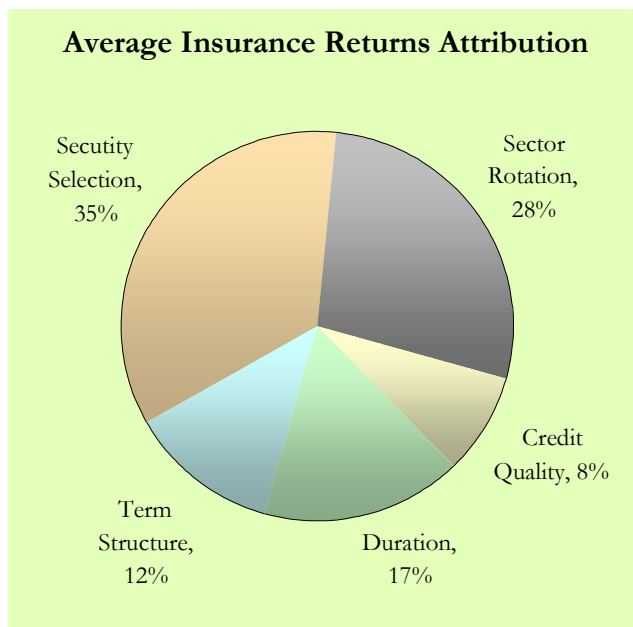
Key Findings (continued)

7. Most insurance mandates are managed differently than for other institutional clients (e.g. pensions).

These specialized strategies are of particular interest to life & annuity companies. Their liability features and accounting requirements are often oriented toward generating risk-adjusted book income (39% of clients, 64% of outsourced assets), rather than total return. Managers also support significant customized investment restrictions (e.g. duration & term structure, and portfolio turnover).



8. Accordingly, fixed income insurance mandates frequently follow explicit ALM and credit guidelines that encourage investment strategies to de-emphasize active interest rate and credit quality management.



Within this customized, book income environment, insurance asset managers primarily focus on security selection & sector allocations to drive returns (63% of returns). They reorient the portfolio primarily through new cash flows rather than active trading to limit taxable gains and losses.

Managers generally also limit duration, yield curve, and credit quality management due to their inconsistency with insurers' ALM and credit constraints (37% of returns).

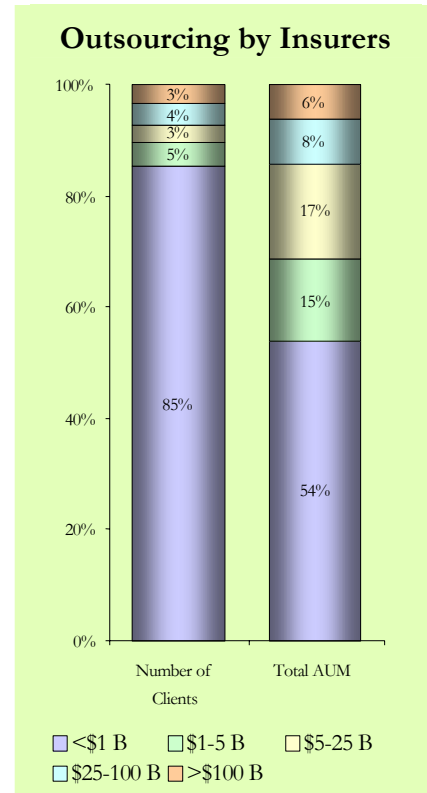
Key Findings (continued)

9. Long considered the provenance of small insurers, insurance companies of all sizes now outsource general account assets.

Smaller insurers have had the strongest propensity to employ third parties, with many firms outsourcing their entire investment portfolios. Managers with <\$1 B in general account assets continue to dominate this sector; however mandates are comparatively small (frequently <\$50 MM) and conservative.

Within the mid-market (\$1-5 B) many firms continue to outsource, exclusively focusing on diversifying their managers and broadening beyond core mandates. Other firms of this size have begun to reclaim select assets in-house, while continuing to employ third parties for resource intensive specialties. These specialties frequently include select fixed income classes, such as high yield and emerging markets.

Historically, large insurers have been less likely to outsource portfolio management functions. In recent years, however, they have demonstrated a trend toward employing third parties to complement their internal investment activities on core investments as well as engaging specialists for alternative investments (e.g. hedge funds, private equity). These mandates generally represent sizable investments (\$500 MM to >\$1 B) and support higher fees than those of traditional core bonds.



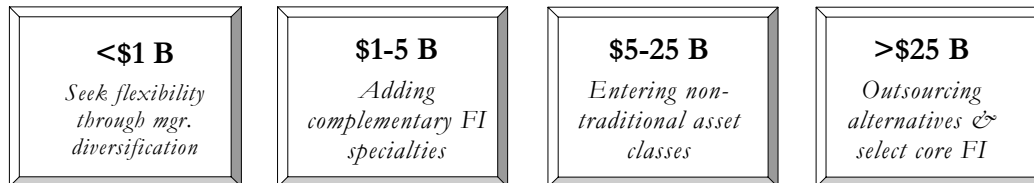
10. Many insurance clients require that managers provide specialized servicing capabilities.

A select number of managers have developed turnkey insurance investment programs, including insurance investment accounting, investment strategy development, risk modeling, and performance analysis. These specialties have allowed managers to develop a strong niche presence particularly among smaller insurers, providing essential services to insurers with limited internal resources.

Key Findings (continued)

11. Economies of scale influence how insurers will participate in outsourcing.

Insurance Market Segmentation



Insurers of various sizes have differing resources, risk tolerances and capacity constraints. These factors affect an insurer's propensity to participate in the outsourcing market.

The study shows that small insurers have engaged third party managers the most. Economies of scale have presented challenges that inhibit in-house investment management. Smaller insurers have relied on managers for support with related business functions such as ALM and portfolio accounting. As their companies grow, however, insurers tend to diversify outsourcing strategies across multiple managers while selectively internalizing core investments.

Larger insurers, those with assets >\$5 B, utilize managers in another fashion. They often decide to complement their internal programs selectively in order to diversify assets, add capacity, enhance access to third party research, and benchmark internal investment activities. Although large insurers represent only 10% of third party relationships, they now comprise of more than 30% of outsourced assets in the market.

12. Insurance investments, while predominated by traditional fixed income (FI), increasingly include specialty allocations.

Insurers are engaging third party managers for a breadth of focused investments, including high yield & emerging markets debt, income-oriented specialties (e.g. privates, commercial mortgages, mezzanine finance), real estate and public & private equity strategies.

13. Insurers are now engaging managers for derivatives oriented mandates.

Insurance asset managers are employing derivatives more frequently and selectively to hedge currency & interest rate risks within liability-driven mandates. A few insurers have also begun to collaborate with asset managers to create risk-managed, absolute return strategies to be included in either capital surplus or liability portfolios.



1. A Market in Evolution

Insurance investments have been treated historically as a separate silo from the core insurance functions. Senior insurance executives, largely drawn from other areas of the firms, have emphasized distribution and product improvements as primary profit drivers. Executives have depended on general account investments to produce a minimum baseline of returns and to reduce risks to the company that may otherwise affect ratings.

Until recently, insurers have been conservative participants in the investment marketplace. Operating under different objectives & regulatory constraints, insurers participate in the investment markets by employing methods varying from those of other institutional investors. Accounting regulations and ratings considerations have penalized insurers more for losses than they have favored consistent yields, directing insurers' investment strategies away from active total return management. This has led insurers to build core fixed income portfolios dominated by book income, buy & hold strategies.

Smaller insurers, lacking a depth of resources, frequently have banded investments to outside management. Insurers with assets <\$1 B have a tendency to engage with a small set of money managers specializing in the insurance marketplace that provide a full range of ancillary services, including actuarial/ asset-liability management, portfolio strategy, insurance accounting and performance reporting, alongside portfolio implementation.

Large & mid-sized insurers, in turn, have leveraged their critical mass to maintain internal staff. Firms frequently developed one or two specialties (e.g. private placements & commercial mortgages) into which they channeled most assets. Asset classes were underutilized generally in areas where firms lacked specific domain expertise.

A new competitive dynamic has emerged, however, compressing insurers underwriting margins and leading them to revisit their investment approaches.



1. A Market in Evolution (continued)

New competitive dynamics are increasing the challenges faced by insurers and placing renewed emphasis on the returns generated by their general accounts.

Life insurance companies have witnessed an unprecedented lengthening of life expectancy coupled with declining faith in the reliability of governments' and employers' retirement benefits. This is driving the market's increasing preference for savings-oriented insurance products, affecting core actuarial assumptions underlying business profitability, as well as the integrity of their investment approaches.

In the property & casualty market, new direct & reinsurance entrants have combined with globalized competition to reduce pricing inefficiencies. In addition, high exposures to long-tailed liabilities, like asbestos, and the recent spate of catastrophic claims have challenged underwriting profits, thus leading P&C firms to seek alternative income drivers.

The dramatic rise in captives and offshore reinsurers funded by venture capital is also leading more organizations to review insurance business practices with a start-up mentality. The new focus on returning value to owners is driving an evolution in firms' investment behavior as well as influencing their more traditional peers.

New business pressures are causing insurance company management to become more involved with their general accounts and investment practices. Whether firms are small and outsourcing their assets or large and primarily investing on their own, asset management is no longer a peripheral activity. Today, focus is being placed on implementing strategies that will best align insurance investments with the demands of specific products and corporate surplus opportunities. All efforts aim to ensure that investments are maximizing true risk-adjusted economic value for insurers.

Insurers are exploring new investment and asset management practices internally and through third parties in search of improved returns.



2. Insurers' Challenges

Within this new environment, insurance company executives are refocusing upon several core investment concerns:

A. How can insurers know if they receive the most value for the risks in their portfolios?

Many insurers, from small to large, are seeking new avenues to enhance returns. Smaller firms, while generally maintaining a conservative position, further diversify their managers, with allocations directed to best tap manager strengths. As firms move up the size spectrum, core fixed income investments become complemented by specialty strategies – bank loans, high yield, emerging markets debt. P&C firms, in particular, are penetrating alternative investment sectors – public equities, real estate, hedge funds, derivatives. Of paramount concern is which methods will best add value to the enterprise.

B. What is the most effective means of managing these assets?

In this environment, purveyors are looking at how they undertake their investments. Small insurers are seeking the flexibility offered by unbundling investments from strategy & servicing. Larger insurers are evaluating the value of managing assets internally versus outsourcing. Concurrently, multinationals have become more centralized, thus reducing home country asset biases and broadening the coordination of local investment programs.

C. Which investments should be made?

What is the best approach to diversification?

To better evaluate success, insurers are implementing liability-driven investment strategies, economic capital models, and benchmarking to direct portfolio manager activities, gauge relative performance, and identify enterprise risk exposures.

A movement toward greater outsourcing has occurred to address these investment concerns. Primary challenges are which strategies to externalize and how to select the appropriate managers.



3. A Growing Market

Many insurers are turning to third party managers in their quest to maximize returns from their general accounts, and looking to their peers to assess where and how to outsource investments. This outsourced insurance market is experiencing sustained growth, in both assets and institutions, and hence presenting high value opportunities for managers. In most markets, insurance general account assets have grown rapidly, reaching \$16 Trillion globally by the end of 2006:

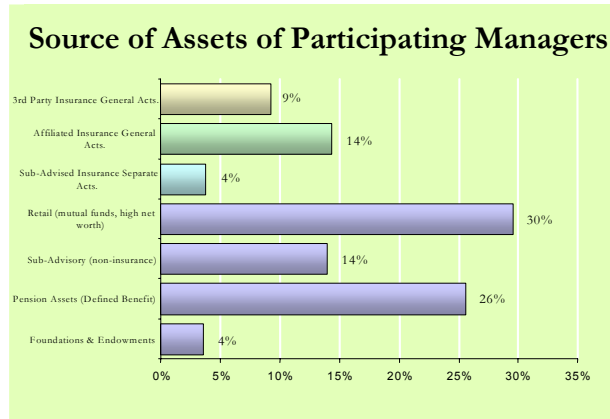
Global Insurance General Account Assets				
	<u>North America</u>	<u>Europe</u>	<u>Asia & Other</u>	<u>Total</u>
Total Assets	\$6.3 T	\$7.7 T	\$2.0 T	\$16.0 T
CAGR	7.1%	12.5%	2.0%	8.4%

*Figures above distribute offshore general account assets between North America and Europe

Only 5% of the approximately \$16 Trillion in total insurance general account assets have yet been outsourced to third party managers. This amount should increase rapidly over the next five years. Insurers, large and small, are expected to allocate more than an additional \$1 Trillion to the global market through third party managers.

Insurers Increasing Outsourcing of Ins. General Account Management				
	<u>North America</u>	<u>Europe</u>	<u>Asia & Other</u>	<u>Total</u>
2006	\$590 B	\$165 B	\$50 B	\$805 B
2011 (projected)	\$975 B	\$815 B	\$65 B	\$1,855 B
New Money	<i>\$385 B</i>	<i>\$650 B</i>	<i>\$15 B</i>	<i>\$1,050 B</i>

This presents challenges for many insurers in selecting the right asset classes, investment strategies, and managers to best balance the risk-return dynamic for their needs. Managers have recognized the growing market opportunities and have responded accordingly. Today, survey participants can trace 9% of their total assets under management to non-affiliated general account insurance clients. In total, these 52 firms manage nearly \$740 B of the current \$805 B in insurance general accounts outsourced to unaffiliated investment managers today.



4. The Global Dynamic

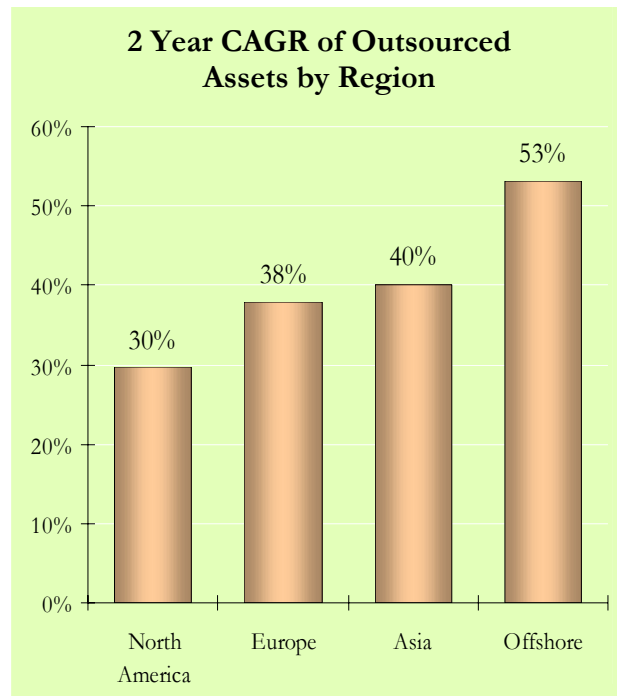
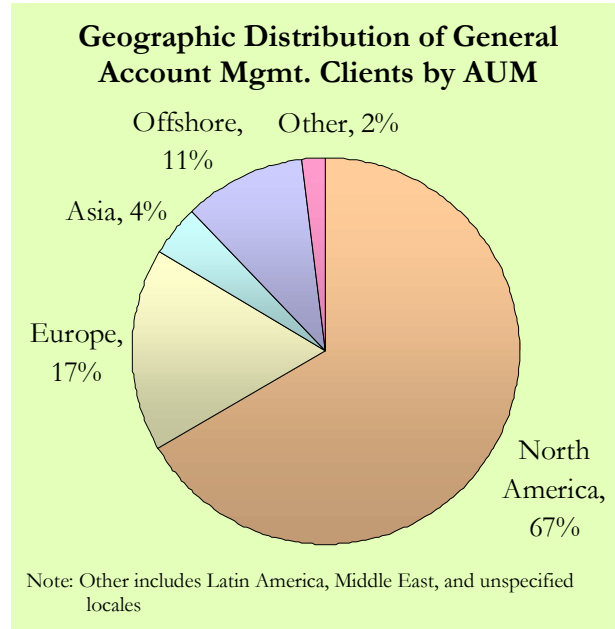
The outsourcing of insurance asset management has been largely a North American phenomenon, although it is becoming increasingly global in nature. Not surprisingly, survey participants are drawing their insurance clientele from similarly diverse locales.

In the highly competitive North American market, firms have had strong incentives to turn to external managers for new asset classes or to better harvest the scale efficiencies of investment specialists. Furthermore, several managers based in the US have expanded their global focus aggressively.

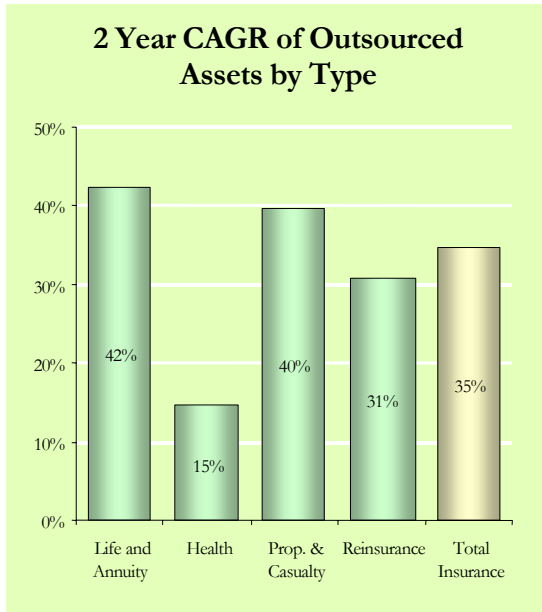
Recently, however, growth has been strong across all markets (with an average 35% CAGR) and accelerating the most outside of the US. As insurers become increasingly global, the ability to support general accounts outside of their home markets is leading firms to explore 3rd party options.

In particular, offshore domiciles, such as Bermuda, have become attractive for asset managers. Offshore entities have experienced a high concentration of recent entrants (captives & reinsurers), rapid growth rates, and the relative sophistication of management opens them to a broad array of 3rd party investments.

Insurance companies are turning to managers with deep specialty capabilities to complement core fixed income investments. Other insurers need to select firms with extensive cross-border and multi-currency capabilities. This plays to two types of managers: insurance specialists and firms with broad global affiliations.

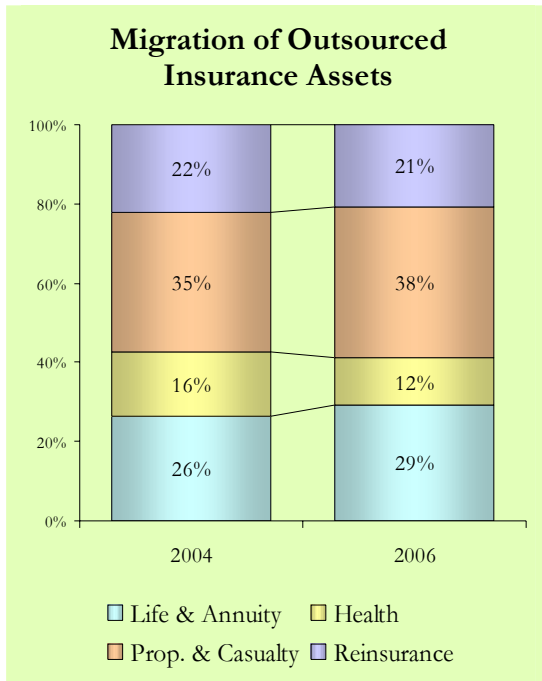


5. Differentiated Needs Across the Insurance Spectrum



Different types of insurance companies have been aggressively increasing their outsourcing of general account investments. Survey respondents experienced an aggregate compound annual growth rate of 35% across all types of insurers over the past 2 years.

The insurance industry is still far from monolithic. Different insurance businesses have disparate demands and requirements from 3rd party managers. Although property & casualty assets represent only one fifth of the US general account marketplace, P&C firms have been aggressive adopters of outsourcing. Today, direct P&C insurers and reinsurers account for nearly 60% of survey participants' insurance business.



P&C companies have greater freedom to manage investments on a total return basis than life companies due to the nature of their regulatory environment and lack of interest rate sensitivity to their liabilities. Having less predictable payouts and a comparatively higher need for liquidity, P&C insurers frequently find that active management on a market value vs. book income approach is suitable. Additionally, P&C firms have been more open to capital-appreciation oriented asset classes (e.g. equities, hedge funds). For this reason, managers' standard institutional offerings, founded on active management and total return, have been attractive to property & casualty insurers. However, even with P&C firms, these strategies require a degree of customization & constraints, due to the taxable nature of all insurance investors.

Life insurers have been comparatively slower adopters of third party management. Although life, annuity, & health insurers share a five to one (5:1) dominance in total US general account assets (cresting \$5 T vs. \$1 T for P&C insurers), a much smaller share of their portfolios have yet to be outsourced. As the outsourcing market continues to open, it should generate a greater share of outsourced assets.



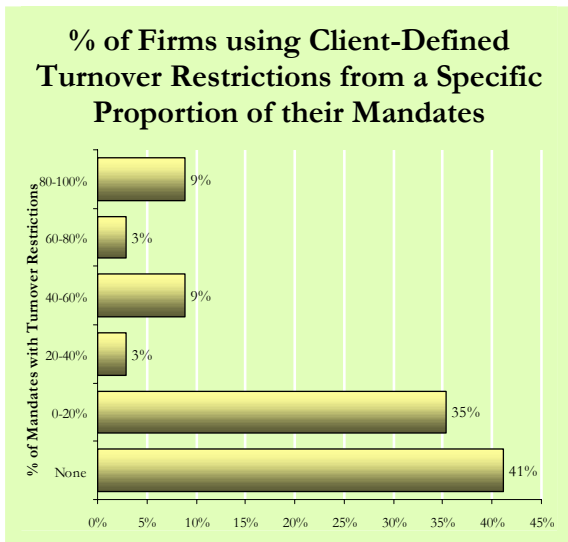
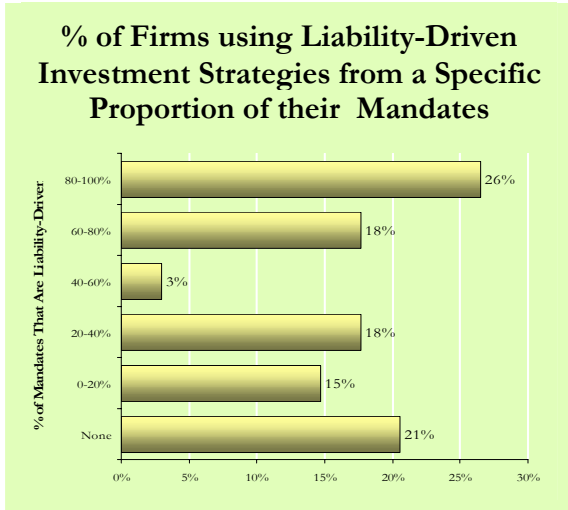
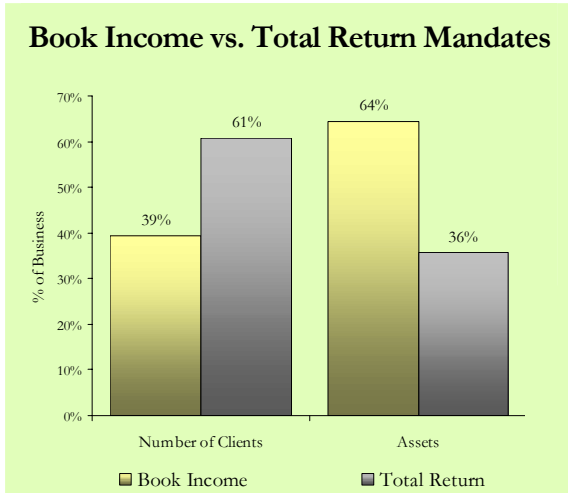
5. Differentiated Needs Across the Insurance Spectrum (cont'd)

Life companies have developed an industry-specific book income, buy-and-hold management style. The nature of their actuarially-dependent liabilities, regulations, & accounting requirements treat investment income more favorably than capital gains, thus encouraging book income strategies.

Historically, insurers have shown difficulty finding managers with the required expertise. However, more managers have assembled book income investment programs to tap this underserved market, and the majority of managers today support book income mandates. This practice allows them access to a more attractive segment of the market. The overall market is greater and individual mandates also tend to be larger.

Similarly, finding managers who are willing to accept more stringent restrictions than other institutional investors is critical, especially due to the demands of insurance liabilities. Many insurers seek custom liability-based managed accounts in outsourced strategies so they may dictate key criteria, like term structure, rather than invest in "off the shelf" products. Formal investment strategy & risk assessment services, with integrated ALM, are also incorporated frequently into insurance investment offers. Smaller insurers who lack internal portfolio strategists have found such services to be of significant value.

Portfolio turnover is often a focus due to the taxability of insurers' investments. Insurers may place specific targets for maximum turnover or require managers to achieve specific levels of realized capital gains & losses. Many insurers seek managers willing to collaborate with their insurance company clients on new asset inflows and anticipate liquidity events to tailor investments to their anticipated cash flows.





6. Insurer Size Segmentation

Size is another critical driver of insurer behavior. Even across business types, firms with the same size general account frequently make similar outsourcing decisions. Insurers may be divided into four general size categories:

Segmentation of the \$6 T US Insurance Market (1,200+ insurers)	
<p><\$ 1 B</p> <p>1,000+ insurers</p> <p>\$450 B in assets</p>	<ul style="list-style-type: none"> ▪ Lack dedicated resources – finance professionals oversee general account investments ▪ Extensively outsource investments – primarily conservative core fixed income mandates ▪ Frequently employ managers or third party consultants for ALM, investment strategy, accounting, & related services
<p>\$1-5 B</p> <p>100 insurers</p> <p>\$400 B in assets</p>	<ul style="list-style-type: none"> ▪ 1-2 professionals dedicated to overseeing investments ▪ Frequently employ third party managers ▪ Moderately broader restrictions (greater allowance for lower quality credits, increased allocations to structured finance) ▪ Core plus mandates with select specialty allocations (e.g. bank loans, global fixed income)
<p>\$5-25 B</p> <p>60 insurers</p> <p>\$850 B in assets</p>	<ul style="list-style-type: none"> ▪ Possess established investment functions ▪ Frequently manage core bond portfolios internally – leverage scale through low-cost, beta-tracking approach ▪ Require 3rd party managers for alpha-producing specialty investments – expertise & market-access intensive assets (e.g. commercial mortgages, real estate)
<p>>\$25 B</p> <p>40 insurers</p> <p>\$4,300 B in assets</p>	<ul style="list-style-type: none"> ▪ Extensive investment organizations with multiple specialties ▪ Selectively outsource alternative investments (e.g. mezzanine finance, hedge funds, distressed debt) ▪ Increasingly employing 3rd party mandates to complement internal management – seek additional capacity; performance benchmark; 3rd party opinions on holdings

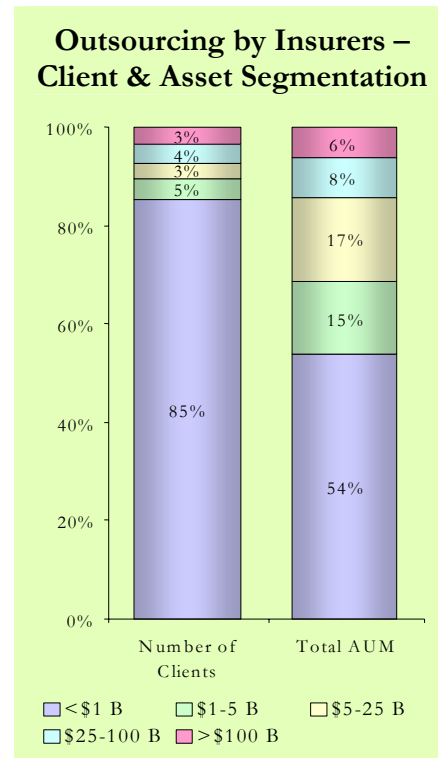
With differing access to resources, risk tolerances, and relative capacity constraints, insurers will contrast significantly criteria when adopting outsourcing mechanisms and selecting managers.

7. The Segmentation Dynamic

Outsourcing Propensity:

Historically, smaller insurers have been most likely to employ third party managers, with many firms entirely outsourcing their investment function. Firms with <\$1 B in general account assets continue to dominate, both in terms of the numbers of clients and volume of outsourced assets. Mandates in this market, not surprisingly, tend to be small comparatively, frequently holding less than \$50 MM and investing in conservative core strategies.

The mid-market insurers, with \$1-5 B, are inherently in transition. As their general accounts and accompanying 3rd party mandates grow, refinement of their overall manager strategies (i.e. number of managers, allocation of assets across mandates to maximize leverage of manager specialties) becomes a prominent focus. These managers also begin to bring select assets in house.



Larger insurers, with more than \$5 B in their general accounts, utilize third party managers in a more strategic fashion. Asset diversification efforts have driven the establishment of many of these manager relationships, where insurers have lacked specific domain expertise. Although they make up only 10% of 3rd party manager relationships, they now comprise over 30% of all outsourced insurance assets.

Servicing Requirements:

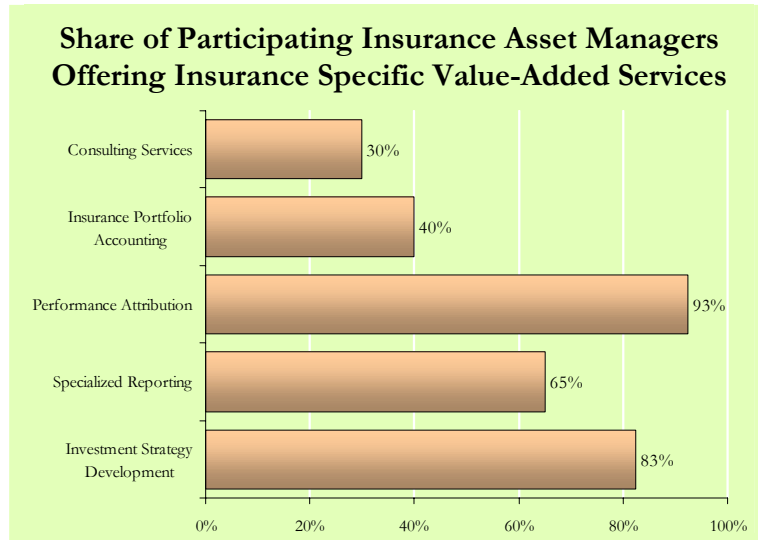
Managers require different platforms to target varying segments of the insurance marketplace. Managers are using a variety of approaches, from offering turnkey strategy & investment servicing programs to income-oriented alternative investment platforms, to differentiate themselves and capture a share of the growing opportunity.

Small insurers, lacking the resources to develop a large ALM and asset management organization, demand a broad breadth of investment related assistance from their managers, such as insurance investment accounting, investment strategy development, and risk modeling.

A select number of managers have specifically built-out these ancillary services, to deliver a comprehensive insurance investment consulting service. Several of these managers have also developed proprietary technologies for cash flow modeling & DFA, insurance capital forecasting, asset allocation/ portfolio optimization, risk management, and reporting. Although highly resource intensive, these capabilities have differentiated them in the small insurer marketplace and assisted them in gathering new client relationships.

7. The Segmentation Dynamic (continued)

Small insurers, alternatively, frequently retain boutique insurance investment consultants focused on serving as an outsourced CIO function. These consultants set investment policy, as well as select and monitor one or more third party managers to invest the general account. Managers cultivating relationships such as these have an advantage in reaching the smallest insurers.



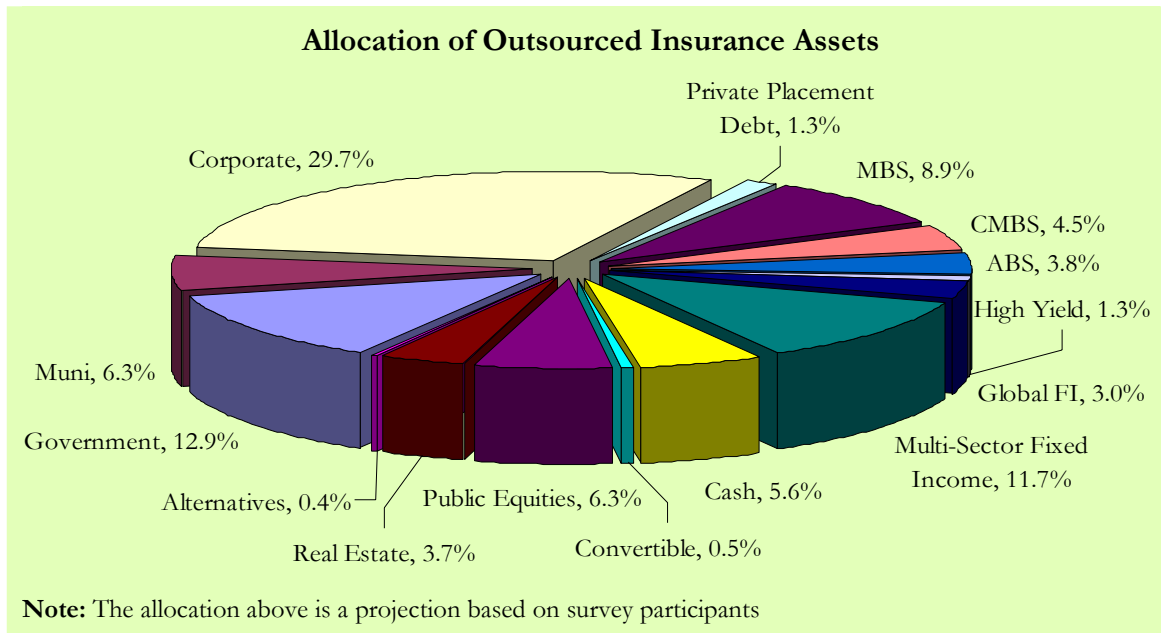
Success in the smaller market is a matter of scale and efficiency. With modest mandate sizes, the most profitable managers have developed differentiated service offerings and strong market recognition to gather and maintain large client bases. The challenge for new entrants in this segment is to support the cost of building insurance-focused capabilities and brand awareness without the benefit of cash flow from an established base of insurers.

Insurers with greater critical mass seek different characteristics when evaluating managers. In many instances, rather than using broad core mandates, they seek offerings to fill gaps in their internal investment capabilities. Investment strategy sought from managers is focused generally on optimizing the specific portfolio management mandate to liability-driven investment constraints, as opposed to comprehensive ALM analysis. Less insurance-specific technology is sought from managers, primarily encompassing portfolio reports & performance analytics.

Currently, many managers have identified the mid tier and larger segments of the market as the most attractive. Core mandates are significantly larger, frequently \$300 MM to well over \$1 B. Specialty mandates, in particular, also typically require less customization. This enables managers to achieve scale and profitability from a focused client base, without the need for extensive marketing organizations or ancillary activities (e.g. actuarial services).

Several managers currently in the insurance marketplace, including some of the largest participants, are also refocusing their efforts on larger mandates. These firms are not abandoning their existing client base of firms below \$1 B. However, they are not as aggressively marketing or pricing mandates for new relationships with small insurers, unless significant near-term growth potential is perceived, such as with many Bermuda reinsurers, is perceived. Managers affiliated with large multinationals are leveraging their broader client relationships (e.g. investment banking, commercial credit, VA/ VL separate account sub-advisory) to extend their reach up market and enhance their overall business margins.

8. Asset Class Utilization



Fixed Income Allocations:

Across all insurance companies, outsourced general account assets have been allocated primarily to fixed income investments, consistent with overall industry practice.

- Investment grade publics & 144a issues predominate
- A strong bias toward domestic market, local currency investments remains; although select insurers are incorporating them through core plus & specialty investments
 - Global, international, regional, country specific, and emerging markets account for only 3%
- High yield investments remain modest, due to economic capital & ratings concerns, as well as the corporate earnings impact of potential losses
- Most insurers maintain significant cash allocations, either through dedicated cash management mandates or as cash flow reserves within broader multi-asset portfolios
 - Liquidity for claims volatility
 - Reserves for acquisitions/ sales proceeds
 - Scheduled liability payments (e.g. GICs)
 - Capital from insurance securitizations

Equity Investments:

Insurers have made significantly more modest equity allocations to 3rd party managers:

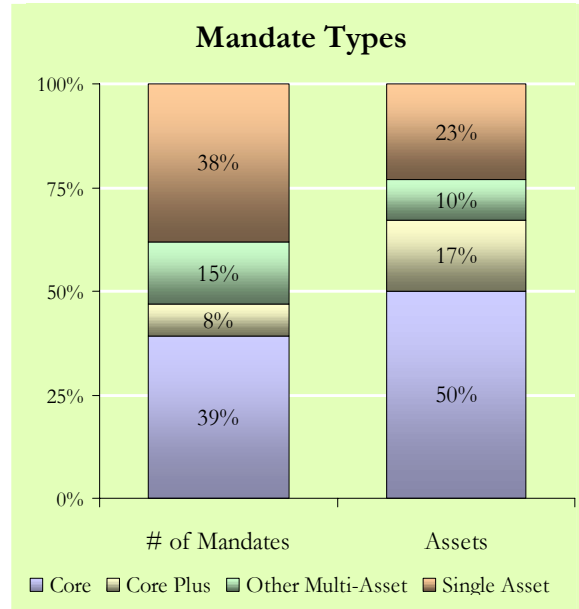
- Public equities have been sourced almost exclusively by the P&C direct insurers and reinsurers
- Alternatives to date have had a very limited (<1%) role, concentrated among the largest insurance firms

8. Asset Class Utilization (continued)

Structure of General Account Mandates:

Insurers access this breadth of strategies through several means:

1. **Core-** investment grade fixed income, typically in domestic market assets only
2. **Core Plus-** core bond portfolios supplemented by opportunistic allocations to high yield, international, CDOs, etc.
3. **Other Multi-Asset-** completion portfolios, often rounding out separate core mandates with multiple specialties (i.e. private placement debt, EMD, & CMBS)
4. **Single Asset-** focused allocations to a single investment to tap focused manager expertise or market access (e.g. loan origination & deal flow for commercial mortgages)



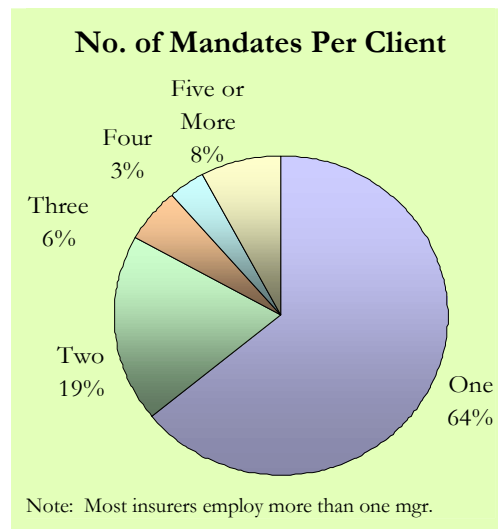
Single asset specialty mandates are making up an increasing proportion of new business for managers. This coincides with the gradually increasing diversification of insurers' portfolios and the increasing use of third party managers at larger insurers.

Although these allocations tend to be smaller than core mandates from a similarly sized insurer, they generate typically higher revenues (i.e. management fees) & profit margins (due to a reduced dependence on special insurance services). For this reason, a number of managers have begun to market these mandates aggressively.

The Breadth of Insurer-Manager Relationships:

Single mandates are common due to the preponderance of multi-asset mandates (62% of manager relationships). Most smaller insurers have focused on adding managers to accommodate growth and diversify via core plus strategies, rather than add explicit allocations to asset class specific mandates.

However, diversified managers, particularly those with broad fixed income offerings, have found success in cross-selling multiple products to insurers (36% of insurance clients).





8. Asset Class Utilization (continued)

Further distinctions arise across the different types of insurers, in the types of securities included in their third party mandates. While there are exceptions to the rule, certain asset classes are primarily the province of either life & health or property & casualty firms:

Typical Asset Class Usage – by Insurer Type

	Life & Health	Property & Casualty		Life & Health	Property & Casualty
Government	✓	✓	Commercial Mortgages	✓	
Muni		✓	Direct Real Estate	✓	✓
Corporate	✓	✓	REITs	✓	✓
Private Placements	✓		Preferreds/ Hybrid	✓	✓
MBS	✓	✓	Convertible		✓
CMBS	✓	✓	Mezzanine Finance	✓	✓
ABS	✓	✓	Distressed Debt	✓	
CDOs	✓	✓	Public Equities		✓
High Yield	✓	✓	Hedge Funds	✓	✓
Bank Loans	✓	✓	Private Equity	✓	
Global & EMD	✓	✓	Commodities		

- Life insurers continue to actively seek out managers offering private placement & commercial mortgage investment programs consistent with their longer duration liabilities
- Property & casualty insurers have engaged equity managers to add highly liquid common stock investments to their capital surplus portfolios for alpha enhancement
- Many insurers are participating in real estate, particularly life & annuity purveyors attracted to its income orientation coupled with capital appreciation potential
- Participation in alternative investments are increasing gradually as familiarity grows among insurers, regulators, & ratings agencies:
 - Usage varies by type of insurer with life companies emphasizing yield generating mezzanine finance & distressed debt
 - P&C firms generally have been more attracted to the greater liquidity of hedge fund mandates than that provided by private equity or real estate investments
 - Speculative vehicles, such as commodities, continue to receive limited acceptance

8. Asset Class Utilization (continued)

Core investment grade assets predominate at the small end of the market. As insurers grow in scale, they begin to incorporate assets with greater volatilities & lower liquidities that offer more aggressive return profiles, first for capital surplus and later in modest amounts against liabilities.

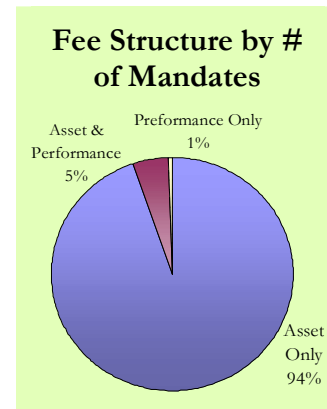
Typical Asset Class Usage – by Insurer Size

	<\$1 B	\$1-5 B	\$5-25 B	>\$25 B		<\$1 B	\$1-5 B	\$5-25 B	>\$25 B
Government	✓	✓	✓	✓	Commercial Mortgages			✓	✓
Muni	✓	✓	✓	✓	Direct Real Estate				✓
Corporate	✓	✓	✓	✓	REITs		✓	✓	✓
Private Placements		✓	✓	✓	Preferreds/ Hybrid		✓	✓	✓
MBS	✓	✓	✓	✓	Convertible		✓	✓	✓
CMBS	✓	✓	✓	✓	Mezzanine Finance			✓	✓
ABS	✓	✓	✓	✓	Distressed Debt				✓
CDOs			✓	✓	Public Equities		✓	✓	✓
High Yield		✓	✓	✓	Hedge Funds			✓	✓
Bank Loans			✓	✓	Private Equity				✓
Global & EMD			✓	✓	Commodities				

Fee Formats:

The challenges to widely adopting performance incentives are inappropriate market indices:

- Managers are typically not free to pursue unconstrained active management (e.g. total return; high turnover/tax strategies)
- Index weights typically do not reflect insurers' guidelines – *credit quality, duration/ cash flow profile, maturity, sector, issuer weights, etc.*



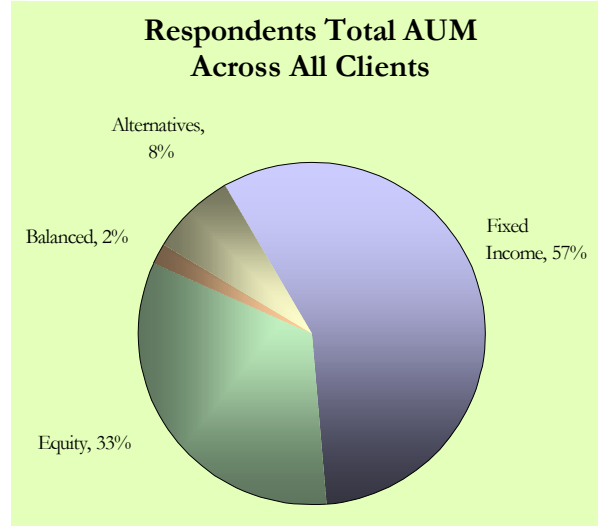
Without proper benchmarks, performance fees may incent managers to take excessive risks. Two factors, however, are driving a gradual increase in the use of performance based fees:

1. The expansion of alternative mandates, where performance fees are more standard
2. The implementation by insurers of liability-based benchmarks in place of standard market indices, presenting a risk-aware framework for structuring incentives

9. The Character of Insurance Asset Managers

Manager Types:

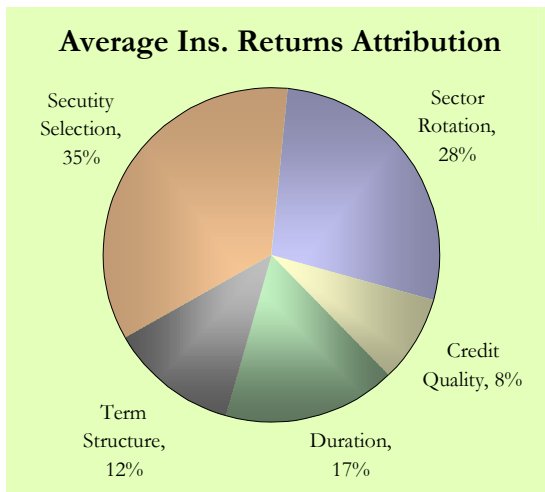
Despite the fact that insurers are largely fixed income investors, insurance asset management is not solely the domain of bond specialists. Diversified managers with only a secondary fixed income emphasis have been successful in gaining penetration, particularly with property & casualty insurers who seek coordinated investment of broad bond portfolios with a focused allocation to public equities. Several equity managers have also made focused inroads into the life marketplace, generally in alternative strategies, by leveraging the VA/ VL separate account sub-advisory relationships that they have developed with insurers. Alternative capabilities are still a small portion of the market. Insurers are viewing them increasingly as a key differentiator when selecting core managers, thus moving this bias away from exclusively fixed income specialists.



Investment Methodologies:

The majority of insurance asset managers pursue “active”, although constrained strategies.

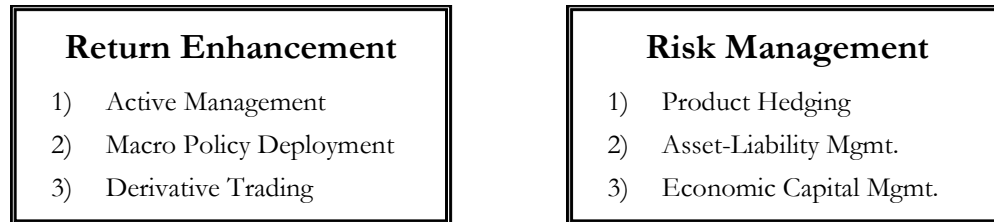
- With high core bond allocations, insurers require these assets to serve as return generators
- Requiring income, insurers desire managers that proactively select higher yielding instruments
- Many insurers’ strategies are not based on total return benchmarks, the foundation of many bond index products



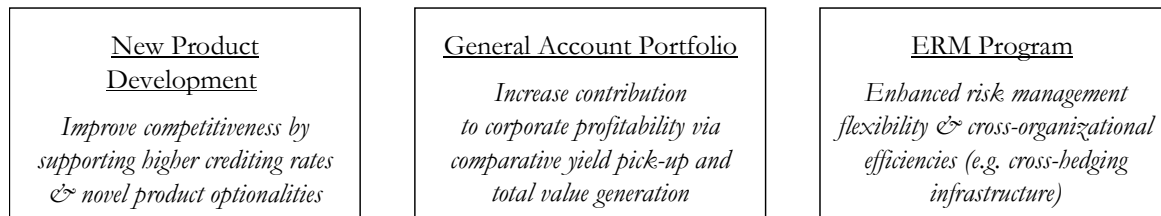
In instances where insurers do elect to pursue a core-satellite strategy based on an indexed base portfolio, these insurers typically undertake the indexing component internally, once they have the scale & resources to support it. Third party managers are then utilized for the alpha generating satellites. Returns are generated predominantly from security selection and sector rotation, consistent with insurers’ buy & hold, book income orientation. Yield curve positioning and credit quality manipulation is limited due to tight ALM & ERM constraints.

10. Role of Derivatives

Recently insurers have been revisiting their derivatives and hedging programs as another lever to improve their portfolios' risk-return profiles:



**Multiple business enhancements
through the integration of Derivatives
into Insurance Portfolios**



Return Enhancement:

With the sustained low yield environment, insurers are facing significant challenges in achieving sufficient returns. They are turning increasingly to non-traditional strategies, including derivatives, to generate enhanced yields. More insurers are seeking fixed income absolute return strategies to incorporate them into their new product development programs and overall portfolios for improved corporate profitability.

Managers that have developed offerings tailored to the regulatory, accounting, & risk concerns of insurers, as well as demonstrated the ability to harvest significant additional alpha for their clients, have begun to attract insurers to their new offerings.

Return Enhancement Usages:

- Active management
- Absolute ret./ portable alpha strategies
- Opportunistic risk concentrations
- Leverage – margin & short positions

Representative Transactions:

- Synthetic assets (i.e. CLNs, CDOs)
- Mortgage TBAs & dollar rolls
- Duration & yield curve management
- Currency arbitrage
- Custom structured notes

10. Role of Derivatives (continued)

Risk Management:

Insurers continue to struggle with the implementation of appropriate risk management strategies and infrastructure for systematic and event-driven risks. With increasingly complex products and investments, firms are active in formalizing their ERM programs to deploy hedging approaches optimally.

Managers delivering integrated risk immunization strategies in their offerings can present a value-add, differentiated position to their clientele.

Hedged Exposures:

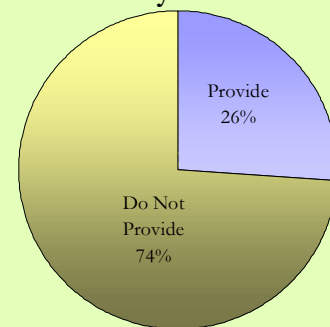
- ☑ Liability product features
- ☑ Asset-liability mismatch
- ☑ Currency exposures
- ☑ Credit deterioration
- ☑ Offshore tax liability mitigation via structured notes
- ☑ Multi-national enterprise business & portfolio concentrations

Derivatives in Third Party Manager Mandates:

Currency overlay services are one of the most broadly offered hedging strategies by managers to their insurance clientele. Frequently tied to global, regional or emerging markets mandates, insurers also seek managers to hedge currency risks present in internally managed portfolios.

Although the majority of these mandates are pure hedging strategies, a small number of mid & large size insurers have begun to engage currency overlay managers to deploy hybrid hedging / active strategies. These approaches are typically conservative, low leverage mandates, designed to primarily eliminate currency volatility, while taking small tactical positions seeking to generate modest alpha to offset the management & transaction costs of the overlay approach.

Mgrs. Offering Currency Overlay Services



Other uses of derivatives within insurance portfolios, include:

- A. *Interest Rate Risk Immunization* – interest rate swaps, options, & swaptions; treasury forwards & futures
- B. *Synthetic Security Replication* – credit default swaps; interest rate swaps, total return swaps
- C. *Product Feature Hedges* – interest rate caps & floors; equity derivatives
- D. *Term Structure, Duration, & Convexity Management for Income Generation* – interest rate swaps, options, swaptions, caps, & floors; treasury forwards & futures



11. Conclusions

Both insurance companies and money managers are struggling with how to best approach the outsourced insurance asset management marketplace; the challenges include:

Insurers

- ✓ Identification of prudent asset diversification approaches & new asset class entry strategies
- ✓ Setting an appropriate third party manager strategy – number of managers, allocation of mandates
- ✓ Selection of the optimal managers for their unique situation – management style, specialist expertise, fees
- ✓ Ongoing oversight of outsourced activities to ensure appropriate liability-driven, risk-adjusted performance

Money Managers

- ✓ Selection of insurance segments – type, size – to facilitate rapid & profitable market entry & business expansion
- ✓ Packaging of investment offers to attract different insurance clientele
- ✓ Execution of distribution methodologies to efficiently reach target insurers
- ✓ Establishment of the optimal infrastructure to service insurance clientele in a cost effective manner



Patpatia & Associates’ Insurance Asset Management Consulting Practice:

Strategic Evaluation

- *Organizational assessment*
- *Competitive benchmarking*
- *Profitability & transfer pricing*
- *Investment, actuarial, and product integration*

Investment Strategy

- *Liability-driven investment implementation*
- *Asset allocation optimization*
- *Asset diversification*
- *Derivatives Strategy*

Portfolio Implementation

- *PM assembly & 3rd party manager review*
- *Performance*
- *Compensation strategy*
- *Synthetic portfolio structuring*

Risk Management

- *Risk budgeting & economic capital modeling*
- *Risk modeling & hedging*
- *Reinsurance strategies*
- *Compliance*

Representative Clients

- | | | |
|------------------------|------------------------|--------------------------|
| ▪ Allianz Life | ▪ Lehman Brothers | ▪ Scottish Re |
| ▪ Ameriprise Financial | ▪ Mackay Shields | ▪ The Dreyfus Corp. |
| ▪ American Int’l Group | ▪ Manulife Financial | ▪ UBS Financial Services |
| ▪ Fidelity Investments | ▪ Payden & Rygel | ▪ Wells Fargo |
| ▪ ING Investment Mgmt | ▪ Prudential Financial | ▪ Zurich Financial |

Our Recent Publications:

- *Portfolio Management Strategies for Insurers* – outsourced & internal approaches to liability-driven general account investments
- *Asset Diversification for Insurers* – incorporation of specialty fixed income allocations & alternative investments for return enhancement, risk diversification, & additional capacity
- *Derivative Strategies for Insurers* – maximization & protection of value through derivatives & structured notes
- *Investment Benchmarking Survey* – a comprehensive analysis of over 50 insurers’ general account investment best practices, spanning investment policy development, asset-liability strategies, asset allocation, performance benchmarking, reporting, the role of third parties, and required technologies



The preceding was prepared by Patpatia & Associates, Inc., a strategic and execution management consulting firm specializing in servicing the insurance industry. We assist in the development and repositioning of investment services businesses in both the domestic and international markets. Our clients include insurance companies, brokerage firms, banks and investment management companies, and represent some of the largest players in the industry.



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Insurance Practice

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