BERMUDA CAPTIVE CONFERENCE

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JUNE 3RD - JUNE 6TH, 2012

Risk Management for Captives: An Overview

Speakers:

- *Craig Cairns, President, Howe & Rusling*
- *David T. Kilborn, Chief Investment Officer, P.R.P. Performa LTD*

Moderator:

- *Carl E. Terzer, Principal, CapVisor Associates*

Terminology

Strategic Asset Allocation

- Intermediate to long-term horizon
  - Typically 3-5 Years measured in “business cycles”
- Utilizes underwriting, claims, expected return projections
- Incorporates customized risk and return measures
- Governed by broad tax, statutory, and company-specific guidelines
- Defines range of allocations

Tactical Asset Allocation

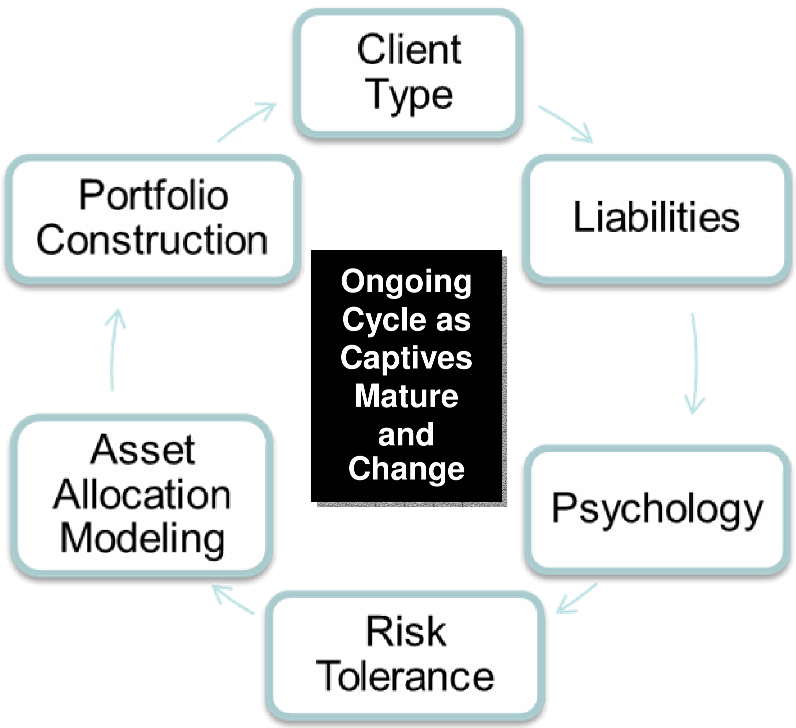
- Short to intermediate-term horizon
  - Typically 3-18 months measured in weeks, months & quarters
- Utilizes actual underwriting results
- Incorporates current capital market pricing and relative valuations
- Governed by “temporary” modifications to portfolio based on market conditions
- Defines specific allocation

Asset Allocation: What is an Asset Class?

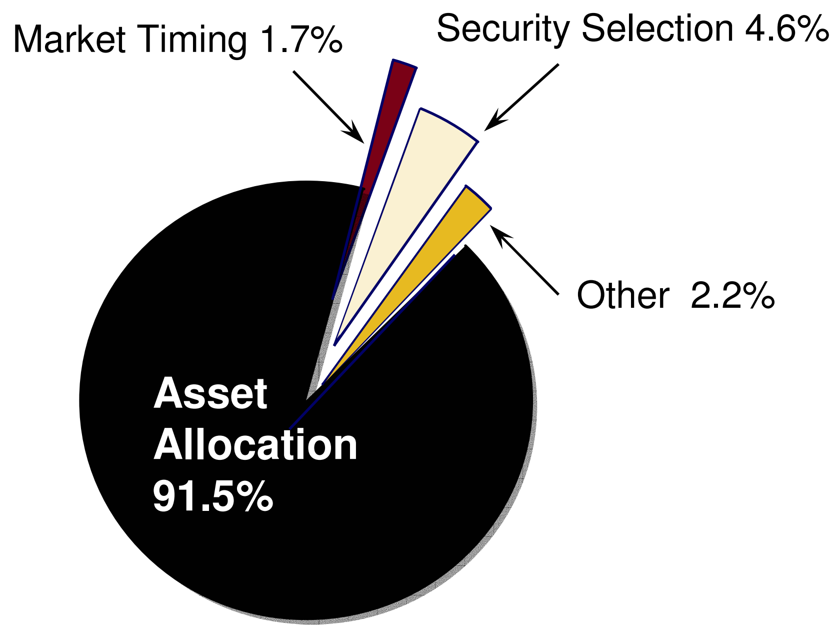
Strategic	Tactical
Cash	**Treasuries**
US Bonds	**Corporates**
TIPs	**AAA**
High Yield	**AA**
Hedge Funds	**A**
US Equities	**BBB**
Global Equities	**MBO**
	CMBS
Emerging Mkt. Equities	**ABS**
Commodities	**High Yield**
Real Estate	**TIPs**
Natural Resources	
Etc.	

Asset Allocation – From Beginning to Never Ending

- Initial Asset Allocation is the **MOST** important decision the Client and Advisor make
- Clients must be honest with themselves:
    - Eliminate noise and understand what your Captive needs vs. unnecessary influences and conventional wisdom



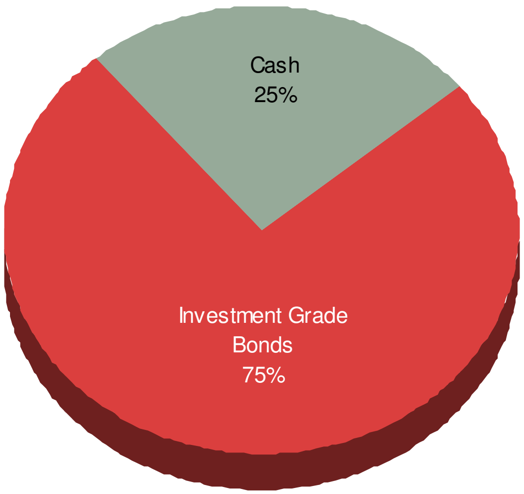
The Biggest Attribution of Return… *



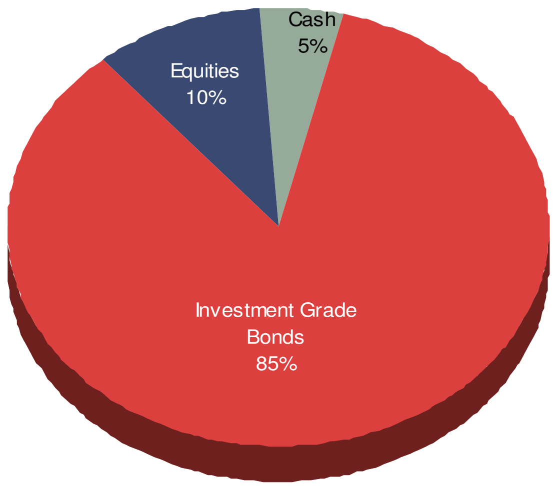
****** Source: Financial Analysts Journal, May/June 1991. Returns are based on historical performance; however, historical performance is no guarantee of future performance.***

Strategic Asset Allocation

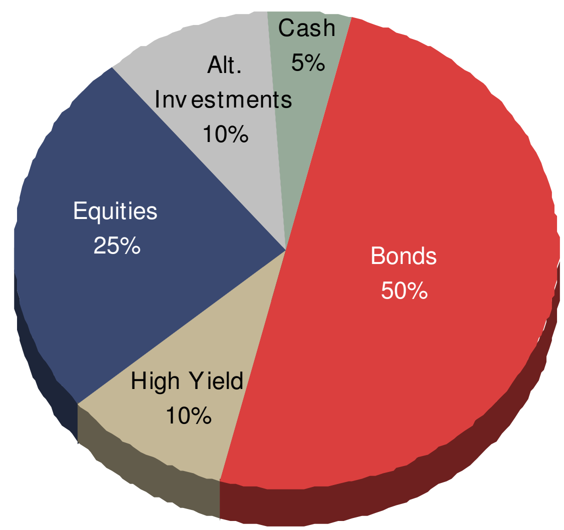
New/Small Captive



Advanced Captive



Mature Captive



Establishing Lines of Defence

- Captives are not like other main line insurance companies
- Capital preservation and building surplus is the most important defense to maintaining a healthy captive
- Unrealized underperformance due to style or market conditions are not the main determinants of a bad manager – Impairments are

It is imperative within the asset allocation process to have:

- Investment Managers with historically superior downside protection
  - Independent, fundamentally driven investment process
  - Unwillingness to be sucked into "new paradigms"
  - Focused on eliminating impairments – the total loss of a particular investment as opposed to unrealized losses or underperformance
- The ongoing ability to analyze sectors, strategies, and styles to help ensure best-in-class management

Asset Allocation Process

Client Inputs (Bottom Up) + **Portfolio Construction (Top Down)** = **Dynamic Asset Allocation**

Client Inputs (Bottom Up)

- Dialogue is continual and most important
- Clients and Advisor must be mutually honest about expectations and capabilities

Portfolio Construction (Top Down)

- Can the portfolio be managed as you would like?
- Compromises abound when there are multiple risk participants

Dynamic Asset Allocation

- Deliberate change
- Value orientation

Client and Advisor communication is the key towards successful asset allocation performance. Changes to the Captive must immediately trigger a total asset allocation review

Asset Allocation Process Overview

Bottom Up: Client Inputs and Characteristics

- **ALM**
  - Policy liability
  - Shareholder turnover / duration – **more focus needed from sponsors as shareholder risk tolerance fall**
- **Risk Tolerance**
  - Psychological
  - Structural
- **Liquidity Needs**
  - Expenses - Known
  - Claims - Actuarial
  - Shareholder redemptions – Wildcard
- **Surplus**
  - Current vs. Target
- **Restrictions**
  - Regulatory
    - Domicile
    - International
      - Basel II-III/Dodd Frank
  - Letter Of Credit
  - 114 Trust
- **Life Cycle**

Bottom Up and the Captive Business Model

Formation

Short-term Spending Needs

Specific Cash Flow Support

Reserve Strategy

Goal: Supports short-term cash flow and liabilities

Orientation: Zero Risk

Initial Sectors: Cash & Equivalents

Development

Intermediate Term Objectives

Growth Asset Strategies

Liquid Growth Strategy

Goal: Optimization of returns on funds, within the constraints/ risk tolerance of collateral providers and regulators

Orientation: Moderate Risk

Additional Sectors:

Investment Grade Bonds, Global Bonds, High Yield, Market Neutral Hedged and Long-only Equities

Maturity

Long-Term Goals

Durable Growth Strategy

Goal: Optimization of returns on surplus funds, within the constraints/ risk tolerance of the client

Orientation: Total Return, Higher Risk Tolerance

Additional Sectors:

Emerging Markets Bonds and Equities, Commodities, REITS, Other Alternative Strategies

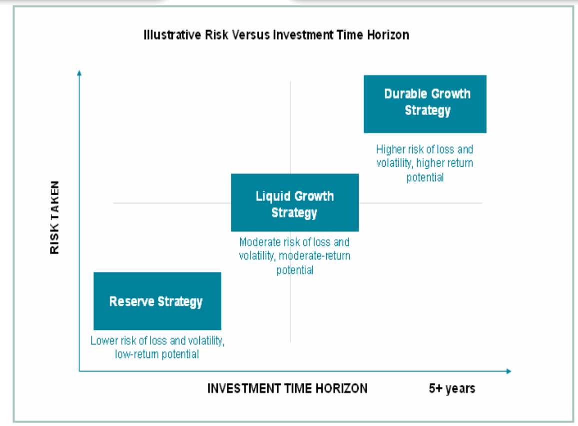
RISK TAKEN

INVESTMENT TIME HORIZON

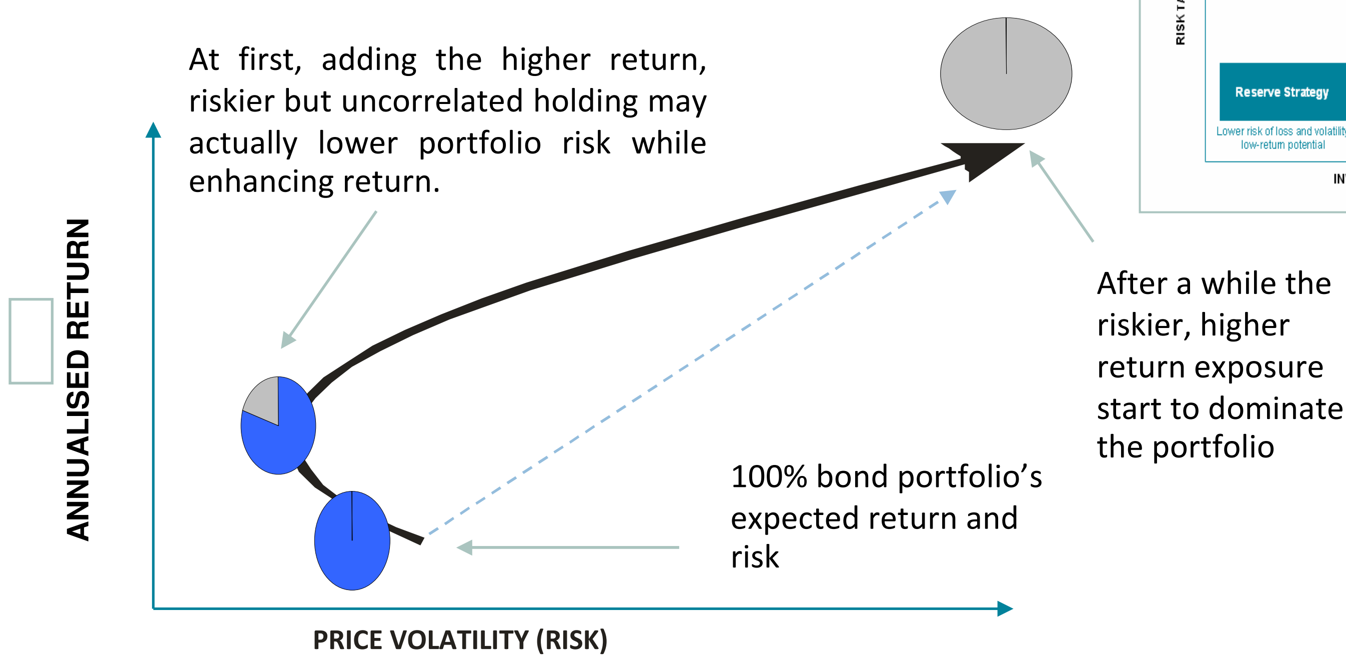
5+ years

Portfolio Construction (Top Down)

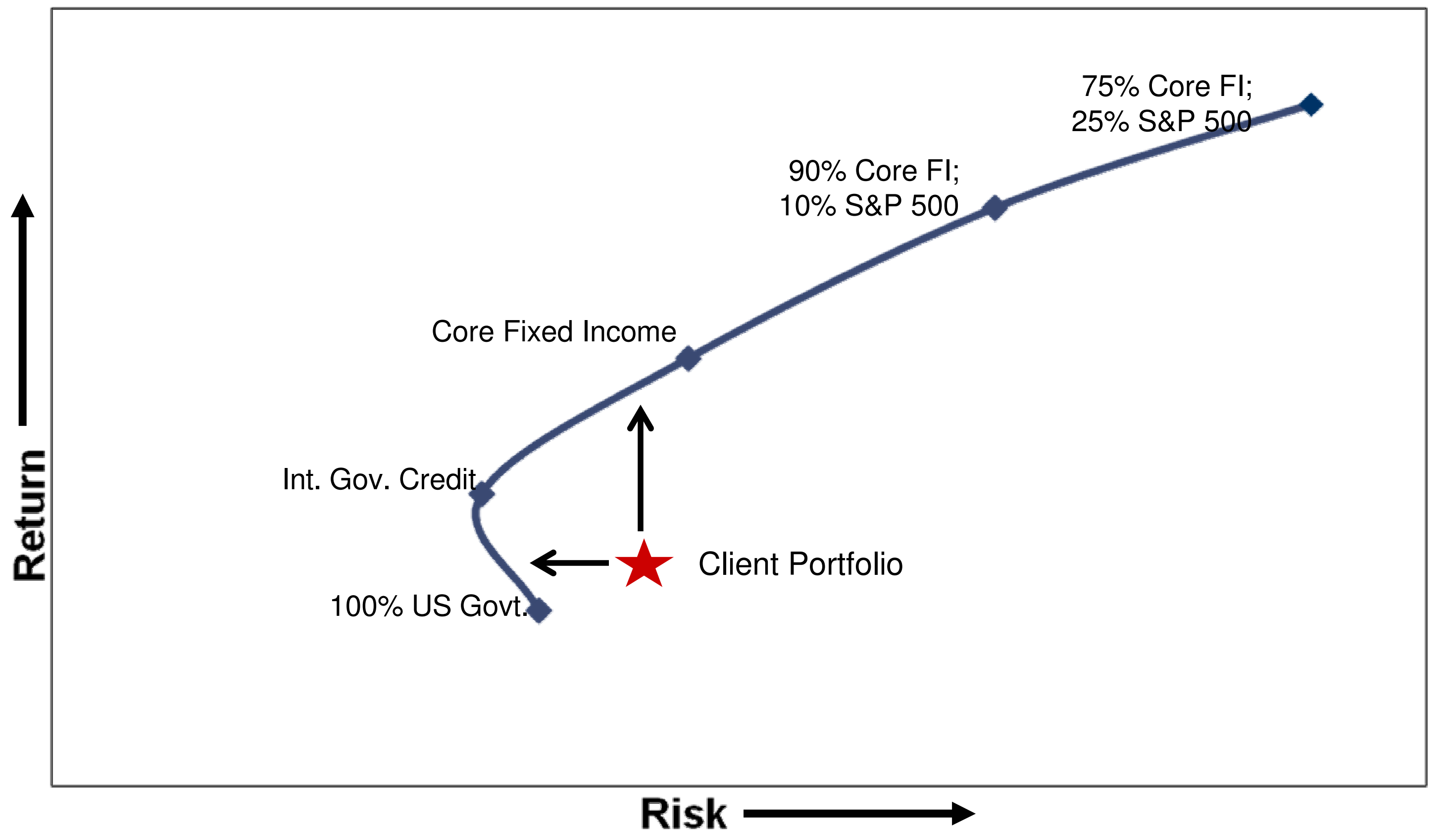
Inputs → Guidelines → Optimize → Implement



Adding a riskier, but uncorrelated, asset to a portfolio initially decreases risk…



Efficient Frontier Analysis



Determining the Risk Profile (Fixed Income)

More Risk → Less Risk

•Junk Bonds •Emerging Debt	•Sovereigns •Preferreds •Convertibles •Commercial Mortgage-backed securities •Asset-backed securities	•Mortgage-Backed Securities •Investment Grade Corp. Bonds •Municipal Bonds	•U.S. Treasuries •U.S. Agencies

Fixed Income Sector Returns

2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	4Q11	10-yrs '02 - '11
Corp. 10.3%	TIPS 16.7%	High Yield 29.0%	EMD 11.9%	EMD 12.3%	High Yield 11.8%	TIPS 11.6%	Treas. 13.7%	High Yield 58.2%	High Yield 15.1%	TIPS 13.6%	High Yield 6.5%	EMD 185.6%
Barclays Agg 8.4%	EMD 12.2%	EMD 26.9%	High Yield 11.1%	Asset Alloc. 3.6%	EMD 10.0%	Treas. 9.0%	MBS 8.3%	EMD 34.2%	EMD 12.8%	Muni 10.7%	EMD 4.9%	High Yield 133.6%
MBS 8.2%	Treas. 11.8%	TIPS 10.6%	TIPS 6.3%	Muni 3.5%	MBS 5.2%	Barclays Agg 7.0%	Barclays Agg 5.2%	Corp. 18.7%	Corp. 9.0%	Treas. 9.8%	TIPS 2.7%	TIPS 107.5%
TIPS 7.9%	Barclays Agg 10.3%	Asset Alloc. 10.0%	Asset Alloc. 6.0%	TIPS 2.8%	Asset Alloc. 5.1%	MBS 6.9%	Asset Alloc. -1.4%	Asset Alloc. 15.8%	Asset Alloc. 7.6%	Asset Alloc. 8.9%	Asset Alloc. 2.4%	Asset Alloc. 96.0%
Asset Alloc. 6.8%	Corp. 10.1%	Corp. 8.2%	Corp. 5.4%	Treas. 2.8%	Muni 4.8%	Asset Alloc. 6.2%	TIPS -2.4%	Muni 12.9%	Barclays Agg 6.5%	Corp. 8.2%	Muni 2.1%	Corp. 85.2%
Treas. 6.7%	Asset Alloc. 10.0%	Muni 5.3%	MBS 4.7%	High Yield 2.7%	Barclays Agg 4.3%	EMD 5.2%	Muni -2.5%	TIPS 11.4%	TIPS 6.3%	Barclays Agg 7.8%	Corp. 1.9%	Barclays Agg 75.4%
High Yield 5.3%	Muni 9.6%	Barclays Agg 4.1%	Muni 4.5%	MBS 2.6%	Corp. 4.3%	Corp. 4.6%	Corp. -4.9%	Barclays Agg 5.9%	Treas. 5.9%	EMD 7.0%	Barclays Agg 1.1%	Treas. 74.3%
Muni 5.1%	MBS 8.7%	MBS 3.1%	Barclays Agg 4.3%	Barclays Agg 2.4%	Treas. 3.1%	Muni 3.4%	EMD -14.7%	MBS 5.9%	MBS 5.4%	MBS 6.2%	Treas. 0.9%	MBS 73.9%
EMD 1.5%	High Yield -1.4%	Treas. 2.2%	Treas. 3.5%	Corp. 1.7%	TIPS 0.4%	High Yield 1.9%	High Yield -26.2%	Treas. -3.6%	Muni 2.4%	High Yield 5.0%	MBS 0.9%	Muni 68.8%

Source: Barclays Capital, FactSet, J.P. Morgan Asset Management.

Equity Returns

2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	4Q11	10-yrs '02 - '11
REITs 13.9%	DJ UBS Cmdty 23.9%	MSCI EME 56.3%	REITs 31.6%	MSCI EME 34.5%	REITs 35.1%	MSCI EME 39.8%	Barclays Agg 5.2%	MSCI EME 79.0%	REITs 28.0%	REITs 8.3%	Russell 2000 15.5%	MSCI EME 277.2%
Market Neutral 9.3%	Barclays Agg 10.3%	Russell 2000 47.3%	MSCI EME 26.0%	DJ UBS Cmdty 17.6%	MSCI EME 32.6%	MSCI EAFE 11.6%	Market Neutral 1.1%*	MSCI EAFE 32.5%	Russell 2000 26.9%	Barclays Agg 7.8%	REITs 15.3%	REITs 164.2%
Barclays Agg 8.4%	Market Neutral 7.4%	MSCI EAFE 39.2%	MSCI EAFE 20.7%	MSCI EAFE 14.0%	MSCI EAFE 26.9%	DJ UBS Cmdty 11.1%	Asset Alloc. -23.8%	REITs 28.0%	MSCI EME 19.2%	Market Neutral 5.0%	S&P 500 11.8%	Barclays Agg 75.4%
Russell 2000 2.5%	REITs 3.8%	REITs 37.1%	Russell 2000 18.3%	REITs 12.2%	Russell 2000 18.4%	Market Neutral 9.3%	Russell 2000 -33.8%	Russell 2000 27.2%	DJ UBS Cmdty 16.7%	S&P 500 2.1%	Asset Alloc. 6.5%	Asset Alloc. 73.5%
MSCI EME -2.4%	Asset Alloc. -5.4%	S&P 500 28.7%	Asset Alloc. 12.5%	Asset Alloc. 8.0%	S&P 500 15.8%	Asset Alloc. 7.3%	DJ UBS Cmdty -36.6%	S&P 500 26.5%	S&P 500 15.1%	Asset Alloc. -0.2%	MSCI EME 4.5%	Russell 2000 72.8%
Asset Alloc. -3.4%	MSCI EME -6.0%	Asset Alloc. 25.2%	S&P 500 10.9%	Market Neutral 6.1%	Asset Alloc. 14.9%	Barclays Agg 7.0%	S&P 500 -37.0%	Asset Alloc. 22.5%	Asset Alloc. 12.7%	Russell 2000 -4.2%	MSCI EAFE 3.4%	Market Neutral 72.7%
S&P 500 -11.9%	MSCI EAFE -15.7%	DJ UBS Cmdty 22.7%	DJ UBS Cmdty 7.6%	S&P 500 4.9%	Market Neutral 11.2%	S&P 500 5.5%	REITs -37.7%	DJ UBS Cmdty 18.7%	MSCI EAFE 8.2%	MSCI EAFE -11.7%	Market Neutral 2.9%	MSCI EAFE 64.8%
MSCI EAFE -21.2%	Russell 2000 -20.5%	Market Neutral 7.1%	Market Neutral 6.5%	Russell 2000 4.6%	Barclays Agg 4.3%	Russell 2000 -1.6%	MSCI EAFE -43.1%	Barclays Agg 5.9%	Barclays Agg 6.5%	DJ UBS Cmdty -13.4%	Barclays Agg 1.1%	DJ UBS Cmdty 58.0%
DJ UBS Cmdty -22.3%	S&P 500 -22.1%	Barclays Agg 4.1%	Barclays Agg 4.3%	Barclays Agg 2.4%	DJ UBS Cmdty -2.7%	REITs -15.7%	MSCI EME -53.2%	Market Neutral 4.1%	Market Neutral -2.5%	MSCI EME -18.2%	DJ UBS Cmdty 0.3%	S&P 500 33.4%

Source: Russell, MSCI, Dow Jones, Standard and Poor's, Credit Suisse, Barclays Capital, NAREIT, FactSet, J.P. Morgan Asset Management.

10 Year Asset Class Correlations

	Large Cap	Small Cap	EAFE	EME	Core Bonds	Corp. HY	EMD	Cmdty.	REITs	Hedge Funds	Eq Market Neutral*
Large Cap	1.00	0.94	0.92	0.87	-0.32	0.79	0.65	0.43	0.74	0.79	0.49
Small Cap		1.00	0.88	0.83	-0.37	0.73	0.56	0.36	0.79	0.74	0.46
EAFE			1.00	0.91	-0.22	0.75	0.63	0.51	0.73	0.85	0.66
EME				1.00	-0.20	0.80	0.70	0.54	0.64	0.86	0.53
Core Bonds					1.00	-0.11	0.16	-0.23	-0.04	-0.22	-0.02
Corp. HY						1.00	0.85	0.51	0.68	0.78	0.40
EMD							1.00	0.42	0.59	0.64	0.34
Commodities								1.00	0.39	0.69	0.49
REITs									1.00	0.60	0.50
Hedge Funds										1.00	0.58
Eq Market Neutral*											1.00

Source: Standard & Poor's, Russell, Barclays Capital Inc., MSCI Inc., Credit Suisse/Tremont, NCREIF, DJ UBS, J.P. Morgan Asset Management.

Model Inputs

Constraints

Risk tolerance/guidelines
Regulatory, tax, and accounting issues

Objective Functions

Preservation of principal
Maximization of surplus
Preserve AM Best ratings
Limit 1 yr. negative return

Data

Balance sheet
Income statement
Projected premiums, claims, etc.
Reinsurance

Scenarios & Portfolios

Interest rate movements
Market up/down
Adding assets classes

Bad claims year
Premium up/down

Model Building and Data Requirements

Dynamic Financial Analysis Study	
Current and Pro-Forma Financials	☐ Statutory or GAAP Financial Statements o Balance Sheet o Income Statement o Cash Flow ☐ Pro-Forma Business Plan o Periodicity and Horizon to match analysis (e.g. 5 forward years in annual increments)
Underwriting & Actuarial Data	☐ Forward-Looking Underwriting Assumptions o Premium written / earned by line of business o Fixed and variable expense ratios or levels o Expected loss ratios ☐ Loss detail o Opening reserve runoff expectations o Expected payment pattern by line of business o Loss volatility model (simple or frequency/severity) or sufficient historical data to estimate parameters ☐ Reinsurance detail (if applicable) o Treaty type (XOL, Quota-Share, Stop-Loss) o Treaty terms
Investment Data	☐ Current investment policy / guidelines o Investment goals & objectives o Acceptable investments o Asset allocation guidelines and limits ☐ Current investment portfolio o CUSIP level or asset-class level

Dynamic Financial Analysis (DFA)

Features

- Casualty Actuarial Society
- Sophisticated capabilities
- Expensive and rigorous process
- Best for large insurers

Characteristics

- Enterprise– wide risk modeling
- Stochastic analysis
- Monte Carlo simulations
- Data optimization
- Visualization

Simplified Actuarial Based

Features

- Casualty Actuarial Society
- Sophisticated match to most Captives' requirements
- Inexpensive and less rigorous process
- Best for small – medium sized insurers

Characteristics

- Scenario testing or Monte Carlo analysis
- Asset class testing
- Manual data optimization
- Balance sheet/Income statement projections

Asset Only

Features

- Ease of use and generally available
- Same sophistication but without application of liability structure
- Inexpensive and less rigorous process
- Best for new captives or surplus portfolios

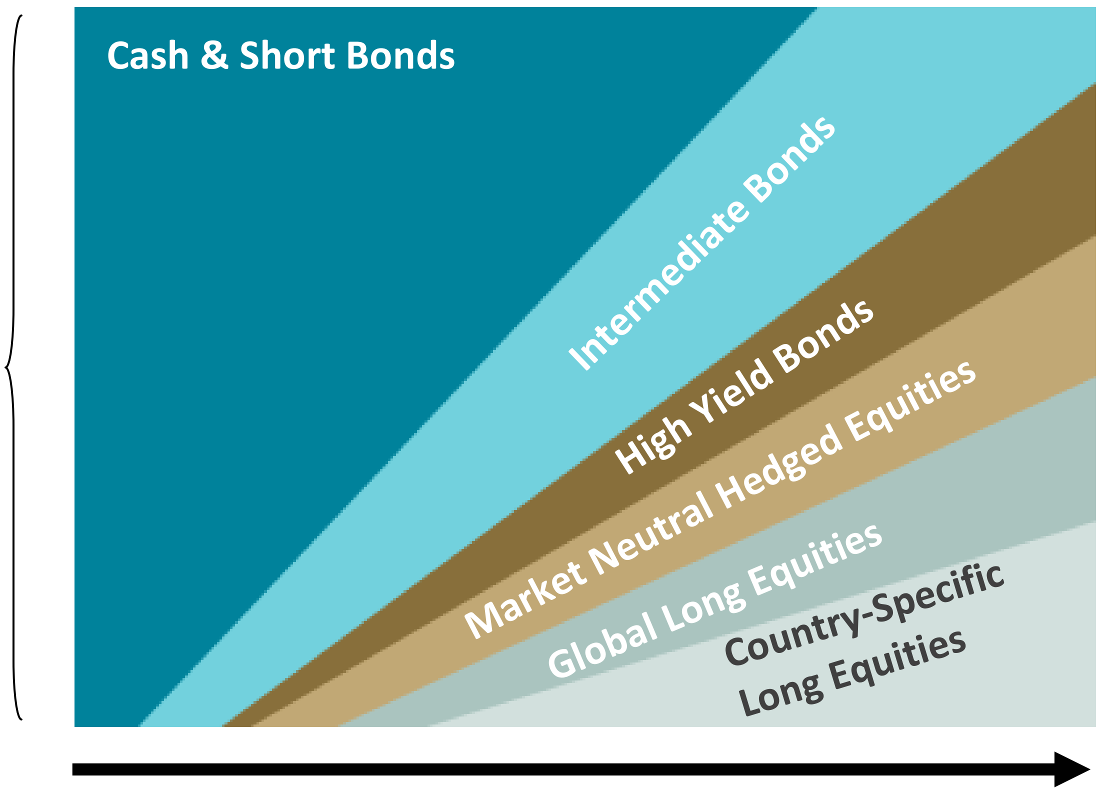
Characteristics

- Scenario testing or Monte Carlo analysis
- Asset class testing
- Manual data optimization
- Liabilities and income projections assigned assumptions

Asset Allocation Process Overview

Illustrative Shift in Asset Allocation as Captive Matures

100% Fixed Income



30% Fixed Income

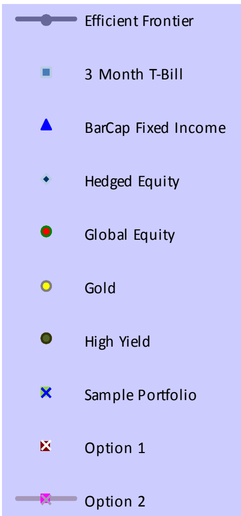
70% Equities

INVESTMENT TIME HORIZON

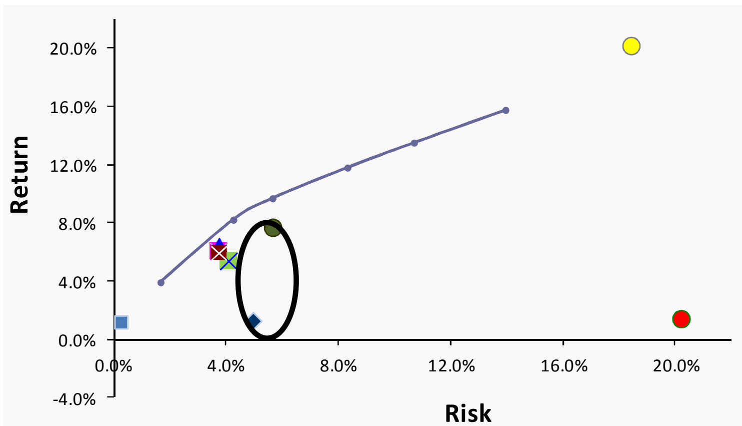
The Case For High Yield

- High Yield Investors Can Benefit from both **Relatively Attractive Yields** and the **Possibility of Price Appreciation** if the Credit Quality of the Company Improves
- Despite First Quarter Rally, Spreads in High Yield Remain **Above the Historic Tight Levels** (2006-07)
- Moody's Is Forecasting **Continued Low Default Rates**
- High Yield Delivers **Highly Competitive Returns vs. Equities** on a Risk Adjusted Basis
- High Yield Correlations are in **the Middle of the Risk Spectrum** between Long and Hedge Equities
- **As Interest Rates Begin to Rise, High Yield Typically Outperforms** Investment Grade Bonds
- The Addition of an Allocation to High Yield **Increases Diversification and Can Improve a Portfolio's Total Risk and Return Profile**

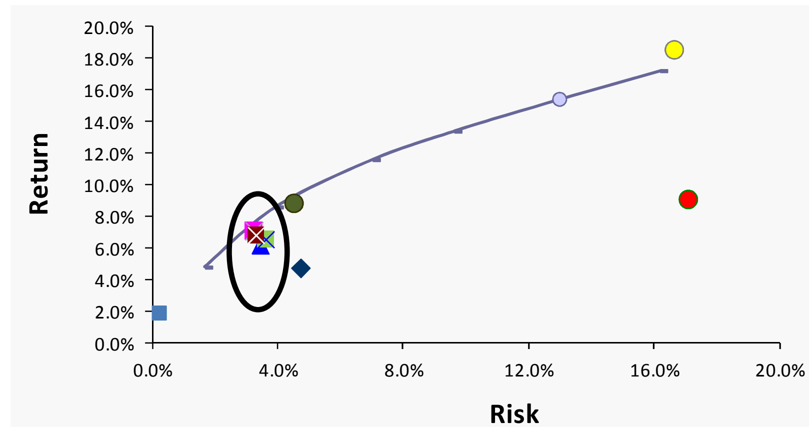
Asset Allocation Optimization



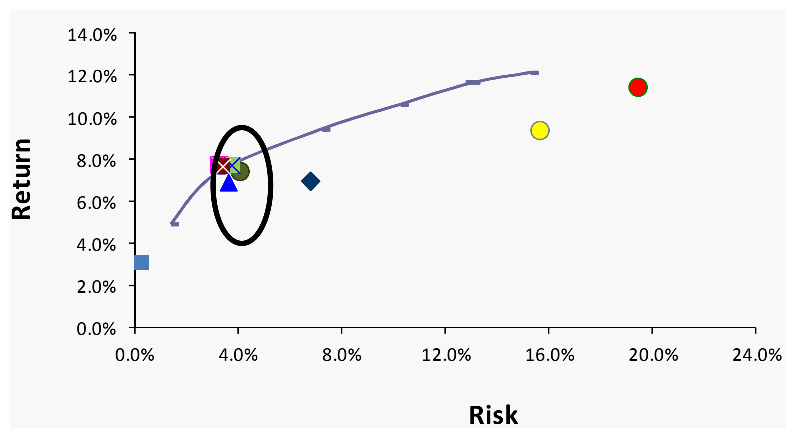
5 years – 3/07-3/12



10 years – 3/02-3/12



15+ years – 1/96-3/12



	3 Month T-Bill	BarCap Fixed Income	Hedged Equity	Global Equity	High Yield
Sample Portfolio	0.00%	72.00%	16.00%	12.00%	0.00%
Option 1	0.00%	70.00%	10.00%	10.00%	10.00%
Option 2	0.00%	60.00%	10.00%	10.00%	20.00%

Risk/Return Attributes

		Risk	Historical Return	Expected Return	Sharp Ratio
5 - YEAR	Sample Portfolio	4.1%	5.4%	1.52% - 3.72%	1.03
	Option 1	3.7%	6.0%	1.95% - 3.67%	1.27
	Option 2	3.7%	6.1%	2.50% - 4.21%	1.31
10 - YEAR	Sample Portfolio	3.6%	6.6%	n/a	1.29
	Option 1	3.3%	6.8%	n/a	1.49
	Option 2	3.2%	7.1%	n/a	1.61
15+ - YEAR	Sample Portfolio	3.7%	7.7%	n/a	1.23
	Option 1	3.4%	7.7%	n/a	1.34
	Option 2	3.3%	7.7%	n/a	1.40

5-Year Expected Returns	Cash	0.50% - 1.00%
	Bonds	1.50% - 2.50%
	Hedged Eq.	2.50% - 5.00%
	Long Equity	6.00% - 10.00%
	High Yield	6.50% - 9.00%

High Yield Benefits for Captives

- **Reduce volatility**
- **Act as a hedge against higher interest rates**
- **Increase portfolio diversification**
  - With an additional asset class
  - Reduce manager concentration
- **Increase LTV % from several LOC providers**
  - 85% LTV can release collateral and increase free cash
- **Reduce fees**
- **Potential to increase portfolio yield and expected return**

When to Revise Allocations

Strategic Allocation

- Anomalously high claims
- Evolution of the Captive
- Major business changes (M&A, major tax change)
- Change in premium, reinsurance
- Very good/bad investment performance

Tactical Allocation

- Changing market conditions
- Rebalancing
- New opportunities
- Fine-tuning asset liability structure