



Institute
and Faculty
of Actuaries

Strategic Investment Risk

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Contents

- Introduction.
- How important is investment strategy in general insurance?
- What are the key elements of investment strategy?
- How should we measure investment risk when considering strategy?
- Strategic interest rates positioning.
- What about the practical considerations?

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How Important is Investment Strategy?

Perhaps less than for other institutional investors

But...

- Pressure on renewal rates
- Competition from alternative capital providers – hedge fund model
- Economic conditions – low interest rate environment

Have increased the focus on investment strategy.

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Question 1

“My company’s investment strategy directly affects my area of the business.”

- Yes
- No

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Question 2

“Input from my area of the business should be taken into consideration when determining investment strategy.”

- Yes
- No

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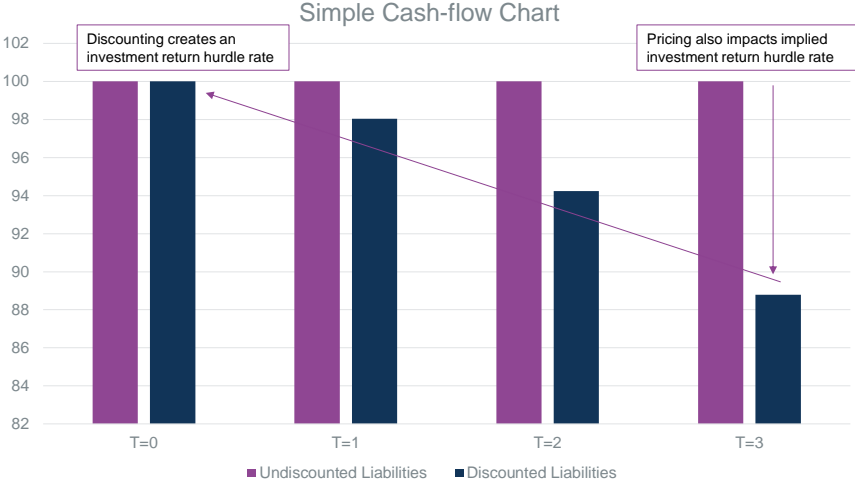
Investment Strategy is Integral to a General Insurance Business

- Shareholder Capital : Total Assets Invested
 - investment return has geared impact on RoE
- Solvency II reserves are discounted
 - creates an implied net investment return hurdle
- Pricing of business should consider return expectations
- Capital efficiency
 - Balance between 1:200 and more central expectations
- Dynamic capital allocation
 - requires knowledge of marginal risk/return characteristics

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Reserving and Pricing effect Investments



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Basic Investment Management Model



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Why set an Investment Strategy?

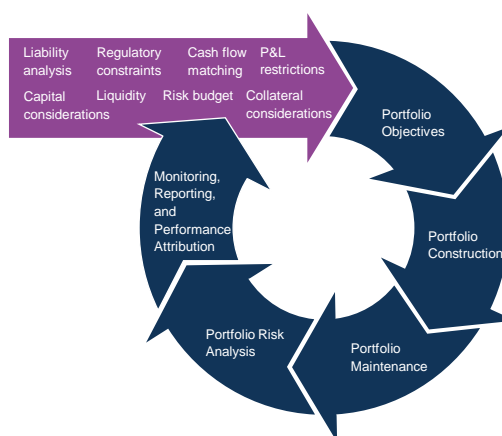
Good investment outcomes	Poor investment outcomes
<p>Investments are well managed and understood:</p> <ul style="list-style-type: none"> • Unrewarded risks are avoided • Poor investment outcomes can be explained, impacts may be managed 	<p>Investments are poorly managed:</p> <ul style="list-style-type: none"> • Business changes or market movements have unexpected impacts • Liquidity is poorly managed or understood
<ul style="list-style-type: none"> • Portfolio managers have clear and appropriate guidelines • Portfolio managers have scope to take advantage of appropriate opportunities 	<ul style="list-style-type: none"> • Portfolio managers are over-constrained and cannot take advantage of market opportunities • Portfolio managers pursue inappropriate opportunities

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What is Investment Strategy?

- An **action plan**...
- ...that aims to achieve the strategic investment **objectives**...
- ...while being consistent with the investment **policy**.



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What is Strategic Asset Allocation?

Strategic	Dynamic	Tactical
<ul style="list-style-type: none"> • multi-year • risk premia • committee governance 	<ul style="list-style-type: none"> • medium term • relative to SAA • fundamentally driven... • ...but cognisant of current pricing. 	<ul style="list-style-type: none"> • short term • cash benchmark • driven by current pricing • requires dedicated PM

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Question 3

Regarding your businesses investment objectives, which of the following statements do you most agree with:

- A. Investment objectives should be return driven, for example based on the overall targets of the business and the implied investment return required to achieve those targets.
- B. Investment objectives should be risk driven, for example aiming to maximise the investment return for a chosen level of risk.
- C. Investment objectives should consider both risk and return and seek to target the best trade off between the two.

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Strategic Investment Risk

- What is investment risk?
- How do our liabilities effect that risk?

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Choice of Risk Basis

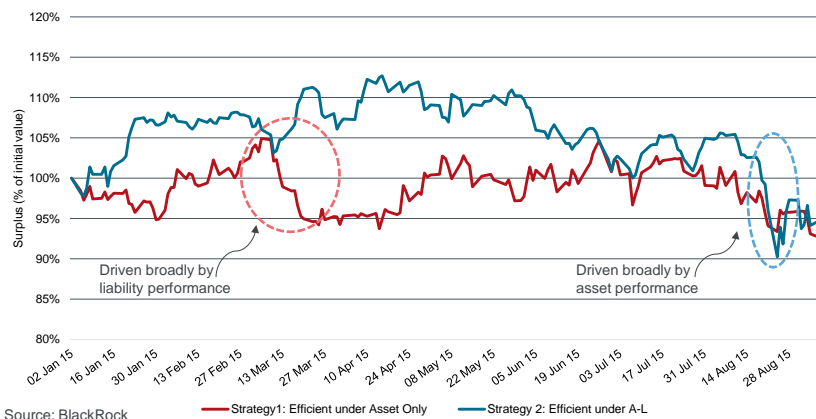
- Choosing the basis to measure risk is key to investment strategy:

Asset only	Assets / Liabilities (A/L)	Assets – Liabilities (A-L)
<ul style="list-style-type: none"> • Volatility of Assets • No consideration of liabilities • Rates Neutral Strategy: zero-duration assets 	<ul style="list-style-type: none"> • Volatility of (A/L) • Volatility of the 'funding ratio' • Rates Neutral Strategy: <i>All</i> assets duration matched to liabilities 	<ul style="list-style-type: none"> • Volatility of (A-L) • Volatility of the surplus • Rates Neutral Strategy: <i>Liability Backing</i> assets duration matched to liabilities; <i>surplus</i> invested in zero duration assets

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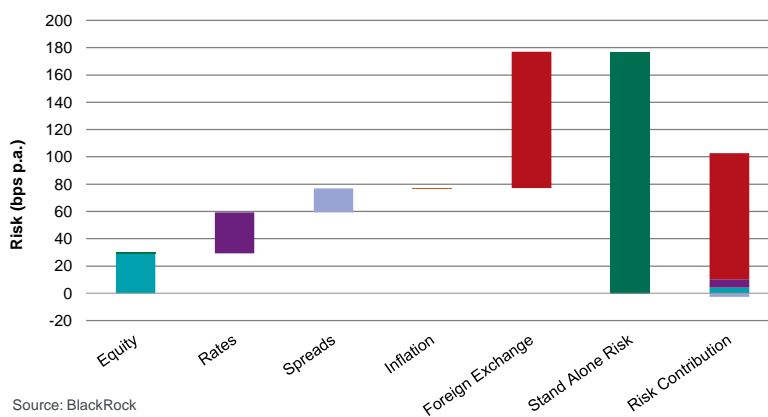
Does Asset Risk Tell the Full Story?



- **Strategy 1:** Efficient in Asset only basis. Money market funds and short credit (FX matched)
- **Strategy 2:** Efficient in A-L basis. Fixed income PV01 matched + 10% equity allocation

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Asset Only Risk Decomposition

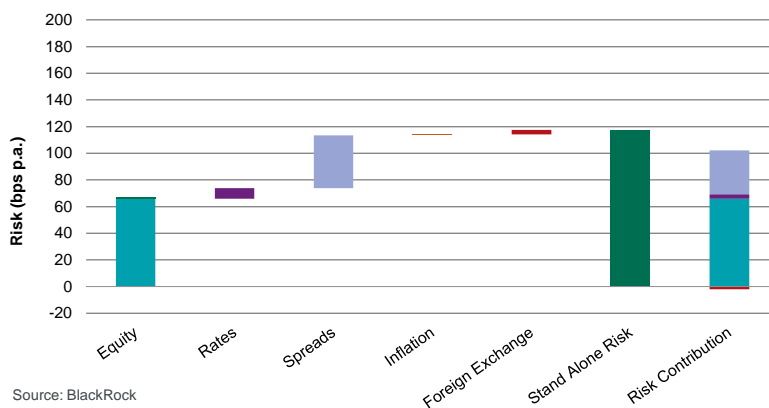


- Dominated by FX
- Equity and Rates risk broadly equivalent.

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Asset and Liability Risk Decomposition



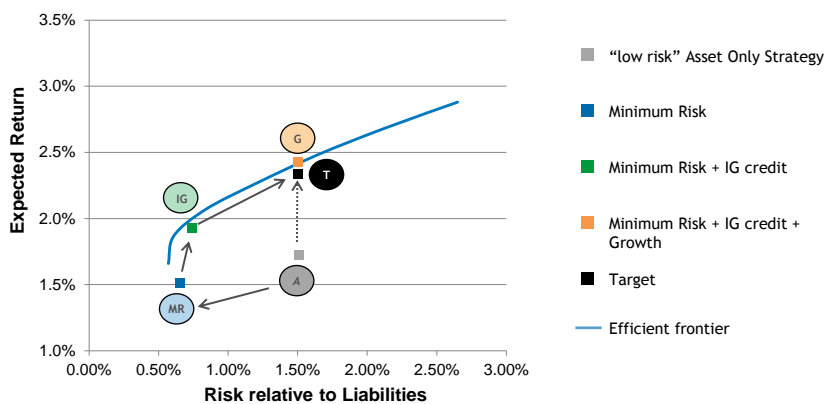
- Shows risks relative to liabilities
- Now equity and spreads are the key risks.

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Efficient allocation of risk

Replacing poorly rewarded risks with an efficient mix



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How to Incorporate Liabilities

Characteristics of Minimum Risk Portfolio	A - L (Surplus focused)	A / L (Funding ratio focused)
FX exposure	Quantity of foreign currency matches liabilities	Proportion of foreign currency matches liabilities
Interest rates exposure	PV01 matched to liabilities (lower duration)	Duration matched to liabilities (higher PV01)
Effect of market movements on surplus	Market value of surplus should be stable	Market value of surplus should change in line with liabilities
Effect of market movements on funding ratio	Funding ratio will change in opposite direction to liabilities	Funding ratio should be stable
Accounting basis	Less volatile	More volatile

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Question 4

Which risk framework do you believe is most appropriate for the key risk measure in a General Insurance business:

- A. Asset only
- B. Asset minus liabilities (A-L) (i.e. the nominal difference between the two.)
- C. Assets over liabilities (A/L) (i.e. the relative difference between the two.)

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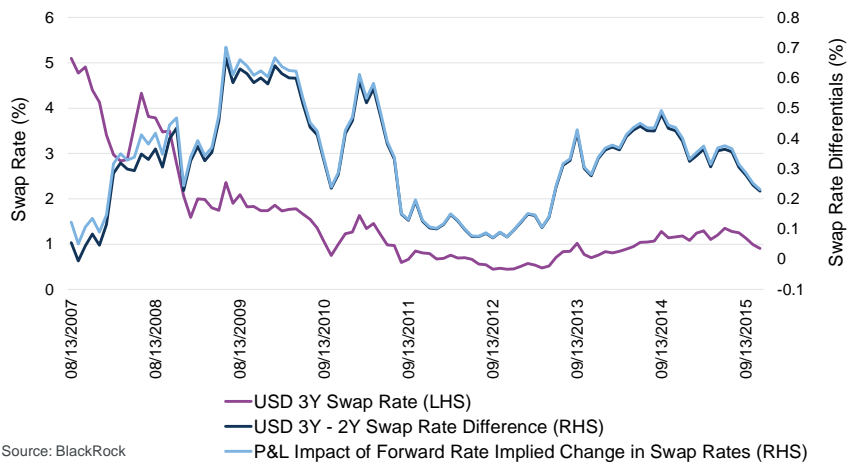
Strategic Interest Rate Risk

- Should you be strategically short?
- How should interest rate risk be managed?

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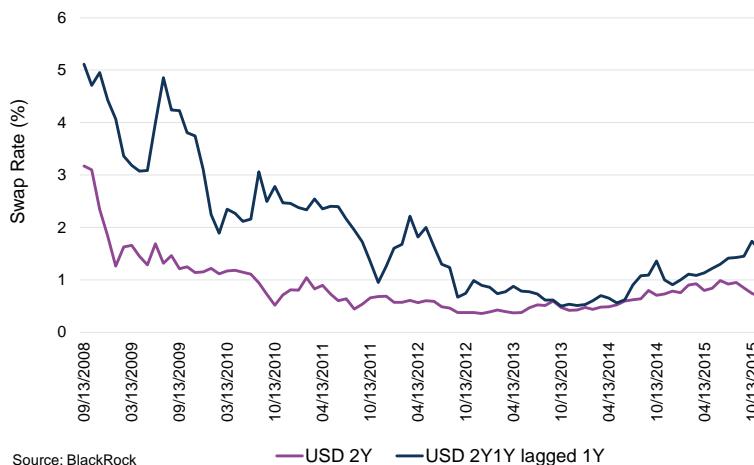
Is now a good time to be short rates?



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How well do Markets Predict Rates?



Source: BlackRock

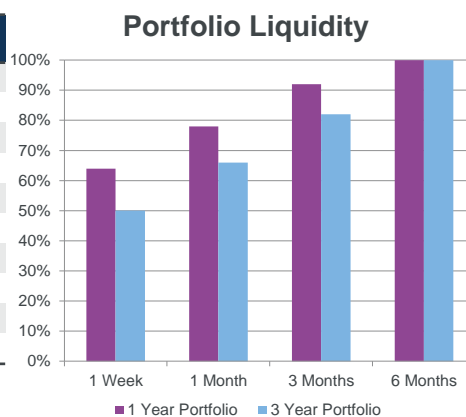
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What about liquidity?

Asset Class	1 Week	1 Month	3 Months	6 Months
Cash	100%	100%	100%	100%
Govs	100%	100%	100%	100%
Corp AAA	50%	50%	100%	100%
Corp AA	0%	50%	100%	100%
Corp A	0%	33%	66%	100%
Corp BBB	0%	33%	66%	100%
Covered	0%	33%	66%	100%
Securitized	0%	33%	66%	100%
EMD	0%	25%	50%	100%
Equity	0%	33%	66%	100%

Source: BlackRock



Does high liquidity requirement justify being short rates?

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Question 5

With interest rates set to start going up in the US and UK, what would you choose as your strategic interest rates position:

- A. Short
- B. Neutral
- C. Long

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Investment Policy Statement

- Our **liabilities** are key to our business, therefore their economic characteristics should be the starting point for our investment strategy.
- **Diversification** is central to insurance and investments, therefore we seek a multi asset portfolio including fixed income and growth assets.
- FX exposures are strategically unrewarded.
- The volatility of the surplus (standard deviation of **A-L**) in nominal terms is the key risk to our business that investment strategy generates.
- We wish to be as holistic and efficient as possible, taking into account as much of the business as we can and seeking to maximise expected return / minimise risk for a given level of risk / expected return.

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Ongoing Management of Investments

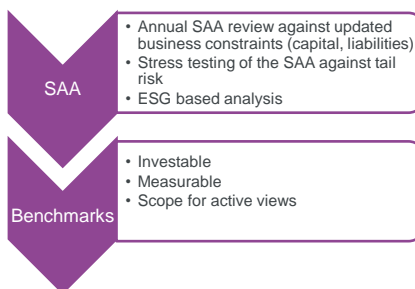
How do you implement the investment strategy?

Direct Management against key risk measures?

- Asset manager continuously seeks to add value against objectives and constraints set out through the investment strategy;
- **This tends to be complex**, it may be difficult for the asset manager to truly align to the business
- Typically, the asset manager **may not have full control over all aspects of the investments**

Benchmark Based Investment Management

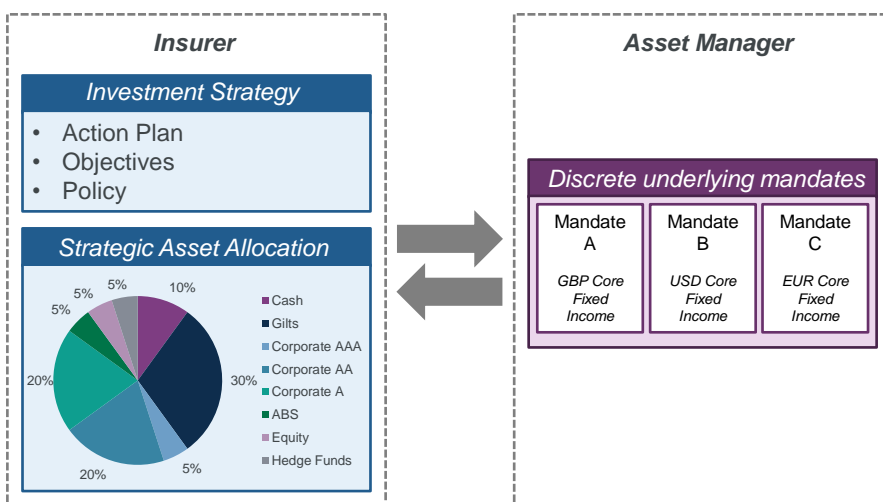
- The key elements of the investment strategy are captured in mandate guidelines, including the definition of risk measures
- The annual SAA is used to explore asset allocations and strategies against a range of objectives and constraints



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Translating the Investment Strategy



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How can Benchmarks remain relevant?

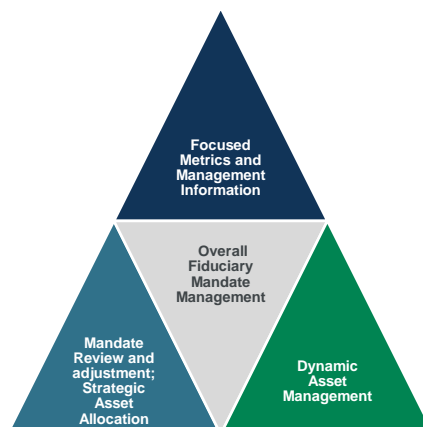
- The Strategic Asset Allocation is static, reviewed every 1-3 years
 - How do you ensure the investments remain relevant?
 - How do you build in scope to take active positions relevant to benchmarks?



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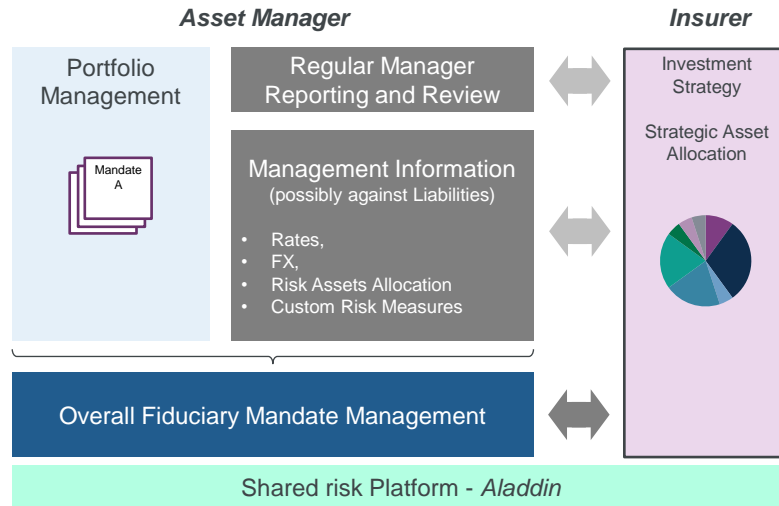
Fiduciary Management (“OCIO”)



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Overall Structure



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Implementation Timelines

		Months:	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Strategy	Design and Agree Investment Strategy		█									
	Source Asset and Liability Data		█									
	Design Risk Measures			█								
	Design SAA				█							
	ESG and Stress Testing				█							
	Design TAA / DAA				█							
	Finalise SAA					█	█					
Design	Design Portfolio Structure		█				█					
	Design Benchmarks						█					
	Design Overarching Fiduciary Mandate								█			
	Design Underlying Mandates									█		
	Design Reporting								█	█		
Build	Set out transitioning plan										█	
	Transition Assets											█
	Ongoing Portfolio Management											

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Conclusions

- Investment strategy is an important part of a general insurance business.
- Investment risk should be defined and measured relative to the economic characteristics of the liabilities.
- Strategic allocations should aim to be efficient, avoiding poorly rewarded risks and delegating opportunistic positioning.

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Questions



Comments

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