Balancing investment risk and return in a low yield environment

Sarah MacDonnell, John Clements and Carolyn Schuster-Woldan
Lane Clark & Peacock LLP

Real rates continually defy expectations
But they can’t fall forever

Source: LCP RITA

Yield date: 31 December 2008
Yield date: 31 December 2010
Yield date: 31 December 2012
Yield date: 31 December 2014

Historical Real spot yield with duration 15
Projected Real spot yield based on market data at 31 August 2015
How investment actuaries help insurers

Set a sensible investment strategy

Implementation

Ongoing monitoring

The GI actuary’s investment thesaurus

“Credit”

Growth assets

Absolute return

LDI
The GI actuary’s investment thesaurus

<table>
<thead>
<tr>
<th>“Credit”</th>
<th>Growth assets</th>
<th>Absolute return</th>
<th>LDI - Liability driven investment strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Lending to corporates</td>
<td>• Higher risk - used for 'spare' assets</td>
<td>• Any type of investment aiming to beat a cash</td>
<td>• Any investment strategy based on</td>
</tr>
<tr>
<td>• Bonds – investment grade to high</td>
<td>with a view to targeting a high yield</td>
<td>benchmark.</td>
<td>liability cash flows</td>
</tr>
<tr>
<td>• Loans</td>
<td>• Examples such as: equity, property,</td>
<td>• Hedge funds</td>
<td></td>
</tr>
<tr>
<td>• Direct lending</td>
<td>private equity, hedge funds.</td>
<td>• Diversified growth funds</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Absolute return bond funds</td>
<td></td>
</tr>
</tbody>
</table>

Agenda

How insurers’ investment strategies have developed under the low yield environment

Positioning your bond portfolio for the future

• investing sensibly into a rising interest rate environment

Diversifying the growth assets

Managing PPO risks effectively

Next steps
Responding to the low yield environment

How insurers are adapting investment strategies to the low interest rate environment

Source: The Economist Intelligence Unit, May 2013, BlackRock

On the face of it, insurers’ investment strategies remain defensively positioned

Based on BofA’s coverage universe of £3.2tn of invested assets (£2.5tn based on exchange rate as at 31 December 2014)

Source: BofA Merrill Lynch Global Research, Insurance Pan Euro Investment Handbook
But average credit quality has been worsening

Breakdown of corporate bond credit ratings

Understanding the drivers of the shift to lower-rated bonds

Taking on more risk just to maintain investment returns
Playing a dangerous game?
Leaving yourself most vulnerable at the worst time

If there is a market correction, lower quality bonds may well be hit hardest

Source: Datastream

23 November 2015

What can insurers do instead?
Maintain corporate bond exposure, but in a more resilient way

• “Absolute return bonds” are products specifically designed to be resilient in down markets (ie when yields are rising)
  – targeting a return of cash +2 to 4% pa with low volatility
  – not “relative to” a bond benchmark index

• Typically invest in bond markets on a global basis
  – no single approach – different investment managers use different philosophies

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoother returns and more diversification</td>
<td>Approach may be unfamiliar</td>
</tr>
<tr>
<td>Specifically designed to be resilient, so may be attractive in a rising</td>
<td>Choice of manager will be important</td>
</tr>
<tr>
<td>interest rate environment</td>
<td></td>
</tr>
<tr>
<td>Flexibility to capture opportunities quickly and avoid over-heated areas</td>
<td></td>
</tr>
<tr>
<td>of the market</td>
<td></td>
</tr>
<tr>
<td>Enable you to bank profits made recently</td>
<td></td>
</tr>
<tr>
<td>Capital implications</td>
<td></td>
</tr>
</tbody>
</table>

23 November 2015
Absolute return bond track record
Achieving smooth “all-weather” returns

23 November 2015

Risk vs Return on Absolute Return Bond Funds
Over 3 years to 30 June 2015

Capturing upside and limiting losses
Achieving smooth “all-weather” returns

23 November 2015
Making efficient use of your risk capital
Solvency II may be a catalyst for making absolute return products more attractive

The “look-through” principle underlying Solvency II may allow you to take credit for the diversification and careful risk management that absolute return bond approaches offer

23 November 2015
The chart above is for illustrative purposes only, to show the extent to which a manager’s approach may affect the SCR on a “look-through” basis. We have used LCP’s best estimate assumptions of the expected returns over the 10 year period from 30 June 2015.

What could you do instead?
New opportunities to get extra yield

Supply
Demand
Outcome
The opportunity is multi-faceted

Descriptions and indicative target returns from researched managers

<table>
<thead>
<tr>
<th>Direct lending funds</th>
<th>Commercial real estate (&quot;CRE&quot;)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 – 10% (UK and / or Europe)</td>
<td>7 – 9% (UK and / or Europe)</td>
</tr>
</tbody>
</table>

Multi-asset funds

<table>
<thead>
<tr>
<th>Infrastructure debt</th>
<th>Regulatory capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 – 6%</td>
<td>8 – 12% (Europe)</td>
</tr>
</tbody>
</table>

“Opportunistic credit” 12 – 15% (Global)

An alternative approach to credit

Look for opportunities to increase yields

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diversification away from traditional credit with much higher return potential</td>
<td>New asset class so limited track records</td>
</tr>
<tr>
<td>Lending is secured, so higher recoveries in event of default</td>
<td>Illiquid, so need to hold for life of the fund</td>
</tr>
<tr>
<td>Wide range of approaches means that tailored approach possible</td>
<td>Fees</td>
</tr>
</tbody>
</table>

Capital requirements?
Diversifying the growth assets

Often a significant driver of market risk capital

- “Diversified growth” products typically target a return of cash +4-6% pa with particular focus on downside protection
  - not “relative to” an index
  - “equity-like” returns with lower volatility
- Typically invest dynamically across a wide range of asset classes

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoother returns and more diversification</td>
<td>Approach may be unfamiliar</td>
</tr>
<tr>
<td>Specifically designed to be resilient</td>
<td>Choice of manager will be important</td>
</tr>
<tr>
<td>Improves your governance, capturing opportunities quickly and avoiding over-heated areas of the market</td>
<td></td>
</tr>
<tr>
<td>Enable you to bank equity profits made recently</td>
<td></td>
</tr>
<tr>
<td>Reasonable terms and good track records</td>
<td></td>
</tr>
<tr>
<td>Capital implications</td>
<td></td>
</tr>
</tbody>
</table>

Diversified growth track record

Achieving equity-like returns with significantly less volatility

Risk vs return
8 years from June 2007 to June 2015

Return (after fees, GBP, annualised)

-10%  -5%   0%   5%   10%   15%   20%

Risk (annualised standard deviation)

0%   4%   8%   12%   16%   20%

Diversified growth managers

Global equities

The red squares above represent the diversified growth products researched by LCP.
Capturing upside and limiting losses
Achieving smooth “all-weather” returns

The managers look to limit downside in negative months and capture upside in positive months

23 November 2015

Source: Investment managers, Bloomberg, LCP. Green bar represents the FTSE All World Equity Index, red and blue bars represent diversified growth managers.

Making efficient use of your risk capital
Solvency II may be a catalyst for making absolute return products more attractive

The “look-through” principle underlying Solvency II may allow you to take credit for the diversification and careful risk management that diversified growth approaches offer

23 November 2015
Managing PPO risks effectively

PPO reserves and risks are expected to grow rapidly
As the number of cases being settled increases

Because PPOs have such a long term, they could quickly dominate market risk

Across the motor industry, PPO reserves may end up representing around 30% of total reserves

Source: Institute and Faculty of Actuaries – October 2013 – showing PPO reserves (settled PPOs only) as a proportion of UK motor market reserves. LCP analysis to estimate interest rate and inflation risk.
Matching assets should go up when your liabilities go up
Asset class returns during 2008

Gilts are priced in a similar way as PPOs. Therefore, in a distressed environment such as 2008 where falling bond yields pushed up the value of PPO reserves, only gilts offered protection.

Achieving precise cashflow matching
Using liability driven investment (LDI) approaches

Matching achieved through holding index-linked gilts
Matching achieved through holding the same amount in Liability Driven Investment

Liability Driven Investment strategies are widely used to manage interest rate and inflation risk, by matching the cashflows in a precise way.
What is Dynamic LDI?
Selecting the best value instrument to manage risk

- Gilts and swaps do not always yield the same
- Given free choice we would invest in highest yielding instrument
- “Dynamic LDI” managers adjust the allocation between gilts and swaps over time
- This process can add value over the long term

Potential investment strategies to back PPOs
“Pure” Dynamic LDI vs introducing a corporate bond element

<table>
<thead>
<tr>
<th>Option</th>
<th>Using pure Dynamic LDI</th>
<th>Using 50% Dynamic LDI and 50% corporate bonds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected excess return (pa)</td>
<td>-0.5%</td>
<td>-1.0%</td>
</tr>
<tr>
<td>Impact of corporate bonds falling in value by 10%</td>
<td>0%</td>
<td>-5%</td>
</tr>
</tbody>
</table>

Note: Figures for illustrative purposes
Call to action
Balancing investment risk and return

Position your bond portfolio for the future
- Simply worsening the credit quality to maintain yield can be a dangerous approach
- Absolute return bonds may help you achieve smoother and more resilient returns
- Credit opportunities may enable you to take risk where it is properly rewarded

Diversify the growth assets
- Diversified growth products offer a low-governance way to achieve equity-like returns with much lower volatility

Managing PPO risks effectively
- PPO risks are already large and growing
- A Dynamic LDI approach can manage these risks very effectively, in a cost-efficient way

The “look-through” principle underlying Solvency II may allow you to take more credit for products that offer diversification and careful risk management

Presenters

Sarah MacDonnell
sarah.macdonnell@lcp.uk.com
+44 (0)20 7432 6728

John Clements
john.clements@lcp.uk.com
+44 (0)20 7432 0600

Carolyn Schuster-Woldan
carolyn.schuster-woldan@lcp.uk.com
+44 (0)20 7432 0617
The views expressed in this presentation are those of invited contributors and not necessarily those of the IFoA. The IFoA do not endorse any of the views stated, nor any claims or representations made in this presentation and accept no responsibility or liability to any person for loss or damage suffered as a consequence of their placing reliance upon any view, claim or representation made in this presentation.

The information and expressions of opinion contained in this publication are not intended to be a comprehensive study, nor to provide actuarial advice or advice of any nature and should not be treated as a substitute for specific advice concerning individual situations. On no account may any part of this presentation be reproduced without the written permission of Lane Clark & Peacock LLP.
Real rates continually defy expectations
But they can't fall forever

Source: LCP RITA