Financial Engineering
Is the long term cost too high?

Johnny Vo & Ed Gunby, Insurance Research, Goldman Sachs
A Case Study
UK Annuities & Dutch Group Pensions
New entrants in UK…departures from NL

UK Annuities: A number of new entrants

Dutch Group Pensions: Foreign players have largely exited

Source: Company data, Goldman Sachs Global Investment Research.
UK Annuities
Intermediated, competitive & commoditised

UK Annuities are competitive

- Legal & General: 33%
- PIC: 28%
- Rothesay Life: 22%
- Aviva: 6%
- Prudential: 6%
- Just Group: 5%

Asset-based valuation - degree of transparency

Pension Scheme

Deals are intermediated and brand power is limited

- Trustees
- EBCs
- Insurer
- Sponsors

New business creates a capital strain

- Buffer 2-4%
- SCR 6-12%
- Risk Margin 7-10%
- Best Estimate Liabilities
- Equity 2-8%
- Net Premium Received

Source: ABI, Company data, Datastream, Goldman Sachs Global Investment Research, IFoA

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Dutch Group Pensions
Intermediated, competitive & commoditised

The Dutch insurance market is highly concentrated

Market-based valuation creates price transparency

Distribution is largely intermediated

Delta Lloyd had written business at negative NBM

Source: DNB, Company data, Datastream, Goldman Sachs Global Investment Research.
Operational performance drivers
“Five forces” dictate performance

Capital is at the epicenter of any insurance company

1. **Distribution**: Ability to attract policyholders vis-a-vis competitors
2. **Assets**: Current asset mix and ability to optimize further
3. **Liabilities**: Constitution and composition of liability profile
4. **Expenses**: Cost base and efficiency by reserves
5. **Capital**: The aggregation of assets/liabilities and ability to grow reserves

Source: Goldman Sachs Global Investment Research.
What influences company behaviour?
A multitude of factors
Insurers need to manage many metrics
It’s a balancing act

Insurance is a multi-dimensional balancing act

<table>
<thead>
<tr>
<th>IFRS</th>
<th>Leverage</th>
<th>Solvency</th>
<th>Local Statutory</th>
<th>Liquidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>What investors believe drives business decisions and capital distributions</td>
<td>IFRS is a key input for rating agencies. Regulatory restrictions also apply</td>
<td>A headline binding constraint for dividends and M&amp;A</td>
<td>Local GAAP needs to be managed in order to create dividend “flow”</td>
<td>Holding company liquidity supports shareholder dividends</td>
</tr>
</tbody>
</table>

**Significant planning required**

**Managing Solvency II such that it is not a constraint**

**Hidden element needs significant management**

- **IFRS**: What investors believe drives business decisions and capital distributions
- **Leverage**: IFRS is a key input but, regulatory restrictions also apply
- **Solvency**: A headline binding constraint
- **Local Statutory**: Needs to be managed from a remittance perspective
- **Liquidity**: Supports shareholder distributions

Source: Goldman Sachs Global Investment Research.
Balancing Solvency II and IFRS

Capital generation and IFRS profits differ

- **UK Annuities:**
  - **Capital generation:** Excess spread recognised upfront under (MA); capital release key
  - **IFRS:** Profit recognised upfront (MSSB)

- **Dutch Group Pensions:**
  - **Capital generation:** Excess spread partly earned through (VA); capital release key
  - **IFRS:** Accrued and earned through

Source: Goldman Sachs Global Investment Research. *includes release of default provision.*
Many factors determine growth
Pricing, profit and capital dynamics key considerations

APE has been rising for UK insurers (L&G UK)

APE has been falling for Dutch insurers (NN NL Life)

• **UK annuities:**
  - **Pricing:** MA facilitates aggressive pricing for new business based on target asset mix
  - **Capital/profit:** New business incurs a capital strain, but profit is recognised upfront

• **Dutch Group Pensions:**
  - **Pricing:** VA pricing is more “market-based” and usually less attractive
  - **Capital/profit:** Capital and profit largely earned through

Source: Company data, Goldman Sachs Global Investment Research.
Is growth good?
Asset risk is an important consideration

**MA asset gearing is relatively high (L&G UK)**

- Corporate bonds (rated): 3.4x
- Corporate bonds (unrated): 2.1x
- Equity: 0.8x
- Government bonds: 1.4x
- Property & other: 0.2x 0.3x

**VA asset gearing is more conservative (NN NL Life)**

- Corporate bonds: 4.4x 4.5x
- Mortgage bonds: 1.9x 2.0x
- Corporate bonds: 1.8x 1.8x
- Property: 0.8x 0.8x
- Equity: 0.4x 0.4x

**UK Annuities:**
- **Asset Mix:** Skewed to riskier asset classes
- **Aggregation of credit risk:** Aggregates credit risk & greater asset leverage

**Dutch Group Pensions:**
- **Asset Mix:** More conservative driven by liability profile & liquidity (duration)
- **Aggregation of credit risk:** Spread is earned through

Source: Company data, Goldman Sachs Global Investment Research.
What drives investor returns?

“Economic value” creation and capital returns
IFRS profit growth has been strong and stable
Share price movements have been more nuanced

European insurers have seen strong earnings growth

However, valuation (multiples) have shown little trend

• **Reported metrics:**
  − Current IFRS and Traditional Embedded Value metrics provide a view of stability
  − Historic book value approach ("locked-in") creates smooth profit and "cash"

• **Share price movements:**
  − Continue to be influenced by underlying economic factors

Source: Datastream, Goldman Sachs Global Investment Research.
Two components to investor returns
Growth in “economic equity” and capital returns

Schematic of insurance company investor returns

Investor Returns

Economic Value Creation
- Market Value of Assets
- Market Value of Liabilities

Incorporating ROEE

Capital Returns
- Economic Equity
- Holding Company Flexibility
  - (i) Unencumbered Liquidity
  - (ii) Leverage Capacity
  - (iii) Solvency II Capital

- Remittance Profile
  - (i) Local GAAP & IFRS earnings
  - (ii) Solvency II Capital Generation
  - (iii) Available Liquid Assets

Driving returns on economic capital

Driving cashflows to shareholders

- “Market-consistent” roll-forward:
  - Provides a holistic view of capital creation

- Cash dynamics:
  - Ability to fund cash flows to shareholders

Source: Goldman Sachs Global Investment Research. ROEE = Return on Economic Equity.
Should dividend policies be linked to IFRS?

IFRS focus creates unusual incentives

Dividend policies are predominantly linked to IFRS

<table>
<thead>
<tr>
<th>Policy</th>
<th>Target</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ageas</td>
<td>Pay-out</td>
<td>40-50% IFRS net profit on insurance activities</td>
</tr>
<tr>
<td>ASR</td>
<td>Pay-out</td>
<td>45-55% IFRS net operating profit</td>
</tr>
<tr>
<td>Aviva</td>
<td>Pay-out</td>
<td>55-60% (by 2020) IFRS net continuing operating profit</td>
</tr>
<tr>
<td>L&amp;G</td>
<td>Progressive</td>
<td>7% CAGR Annual growth in dividend</td>
</tr>
<tr>
<td>NN Group</td>
<td>Pay-out</td>
<td>40-50% IFRS net ongoing operating result</td>
</tr>
</tbody>
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With remittances expressed as an IFRS ratio

- **Dividend policies:**
  - **IFRS based:** Most insurers continue to tie capital returns to IFRS
  - **Growing:** Steadily rising IFRS profit has translated to robust dividend growth

- **Cash dynamics:**
  - **Remittance ratio:** Insurers tend to describe remittances in terms of an IFRS ratio
  - **Cash upstream:** True cash emergence is less linear

Source: Company data, Goldman Sachs Global Investment Research.
Insurance Capital Structure

Engineering Returns & Dividends
Internal capital structures maximise returns
Insurers manage multiple balance sheets

<table>
<thead>
<tr>
<th>Subsidiary Capitalisation</th>
<th>Linking Items</th>
<th>Group Capitalisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub. EOF</td>
<td>(1) Transferability &amp; Fungibility</td>
<td>Group EOF</td>
</tr>
<tr>
<td>Sub. SCR</td>
<td>&quot;Trapped&quot; capital</td>
<td></td>
</tr>
<tr>
<td>Sub. EOF</td>
<td>(2) Group Diversification</td>
<td>Group SCR</td>
</tr>
<tr>
<td>Sub. SCR</td>
<td>Diversification between subsidiaries</td>
<td></td>
</tr>
<tr>
<td>Sub. EOF</td>
<td>(3) Double Leverage</td>
<td></td>
</tr>
<tr>
<td>Sub. SCR</td>
<td>Used to materialise Group Diversification benefits</td>
<td></td>
</tr>
<tr>
<td>Sub. EOF</td>
<td>(4) Intra-group Transactions</td>
<td></td>
</tr>
<tr>
<td>Sub. SCR</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Solvency II is not a one balance sheet approach**
  - Differential capital treatment still exists at both a subsidiary and group level

- **Converting subsidiary capital to central cash**
  - Four factors to consider

Source: Goldman Sachs Global Investment Research.
Solvency only one part of financial flexibility
Central liquidity is a hidden constraint

Are insurers “long liquidity” from a shareholder perspective?

- **Group Solvency:**
  - Solvency II produces a capital amount, which is not a cash metric

- **Unencumbered Liquidity:**
  - Long-term central (unencumbered) liquidity is needed to materialise “capital surplus”

- **Leverage Capacity:**
  - Leverage is the easiest way to create central liquidity

Source: Goldman Sachs Global Investment Research.

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Holding company flexibility is critical
Cash “flow” and cash “stock”

- **Cash “flow”**: 
  - **Subsidiary capital**: Local capital generation key determinant of remittance potential 
  - **Other gating items**: Local GAAP remains important for ensuring dividend flow

- **Cash “stock”**
  - **Materialising solvency**: Unencumbered Liquidity needed to materialise group solvency 
  - **Subsidiary shocks**: Managing many local balance sheets

Source: Goldman Sachs Global Investment Research.
Is the long term cost too high?

Taking stock of change
UK insurers are at a cross road
The market is bifurcating

Insurers are choosing their business model

<table>
<thead>
<tr>
<th>UK WEALTH</th>
<th>UK COMPOSITE</th>
<th>UK ANNUITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aegon (Cofunds)</td>
<td>Just Group</td>
<td>Legal &amp; General</td>
</tr>
<tr>
<td>IntegraFin (Transact)</td>
<td>Aviva</td>
<td>Lloyds Bank (Scottish Widows)</td>
</tr>
<tr>
<td>Old Mutual (Quilter)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prudential (M&amp;G Prudential)</td>
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<tr>
<td>St. James’s Place</td>
<td>PIC</td>
<td></td>
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<tr>
<td>Standard Life Aberdeen</td>
<td>Phoenix Grop</td>
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A tale of two markets:

- **UK Wealth**: Greater scope for product differentiation and pricing power
- **UK Annuities**: Heavily intermediated and largely commoditized product

Considerations:

- **Conduct risk**: Regulation is driving unbundling in UK Wealth
- **Prudential risk**: Capital intensity/asset risk in UK Annuities

Investors appear to value simplicity

Source: Company data, Datastream, Goldman Sachs Global Investment Research.
Evolving reporting standards
IFRS17 has potential to provide a better view of “economic value” creation

How have reporting standards evolved?
- The never ending question of “costs of goods sold”
- Market-based approaches provide a more realistic view

Are reporting standards converging?
- IFRS17 provides an opportunity to more closely align profit, capital and economics
- But, insurers still have flexibility (e.g. top-down approach)

Source: Goldman Sachs Global Investment Research.
An agency problem?
Balancing policyholder and shareholder interests

- Simply an insurer can be considered an asset manager with guarantees
  - Long-term nature of business makes it easy to conceal long-term difficulties
  - Link between returns for policyholders and returns for shareholders provides incentive to maximise returns
  - However market consistency & risk based capital incentivises management to reduce risk
  - Linking capital requirements to asset portfolio risk helps align policyholder and shareholder interests
  - A move further away from market consistent principles may provide incentive for excessive risk taking and financial engineering
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