Discovery Investor Relations Communication

LIFE BUSINESS FUNDING STRUCTURES

1. Introduction

This note describes the funding and reinsurance structures used by Life insurance businesses within the Discovery Group (namely Discovery Life and VitalityLife). Section 2 describes the sources of funding for Discovery Life whilst Section 3 describes the sources of funding for VitalityLife.

This note is targeted at knowledgeable investors and investment analysts and assumes previous knowledge of Discovery's Annual Financial Statements. It is further intended to provide supplementary information on a principles basis rather than intended to provide any specific reconciliations to the accounts. It has not been externally reviewed or audited. Any further reference to Discovery Life in this document includes Discovery Invest.

2. Discovery Life

Discovery Life funds its new business strain using three different sources of funding, namely:

1. **Cash flow** emerging on in-force business;
2. **Cashless Financing Structure** which refers to the combination of a lapse protection reinsurance policy and a matching strategy for new portfolios of guaranteed endowments; and
3. **Cash Financing Reinsurance** (Cash FinRe) on an ad-hoc basis.

In the 2016/2017 financial year, Discovery Life entered into R1 649m worth of new Cashless Financing Structures and repaid R1 407m towards existing Cashless Financing Structures and Cash FinRe, implying a net FinRe surplus of R 242m.

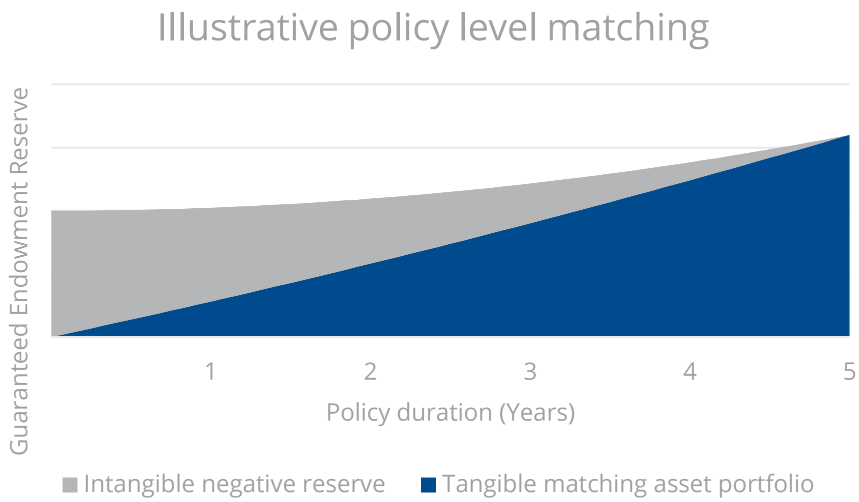
Discovery Life has not used debt or subordinated debt as a source of funding.

2.1 CASHLESS FINANCING REINSURANCE STRUCTURES

Discovery Life, through Discovery Invest, offers single premium guaranteed endowments with five year terms (which have corresponding positive reserves at inception). Discovery Life has significant negative reserves on its in-force portfolio of risk policies. This negative reserve is a good match by nature, currency and term to a fixed interest Rand liability.

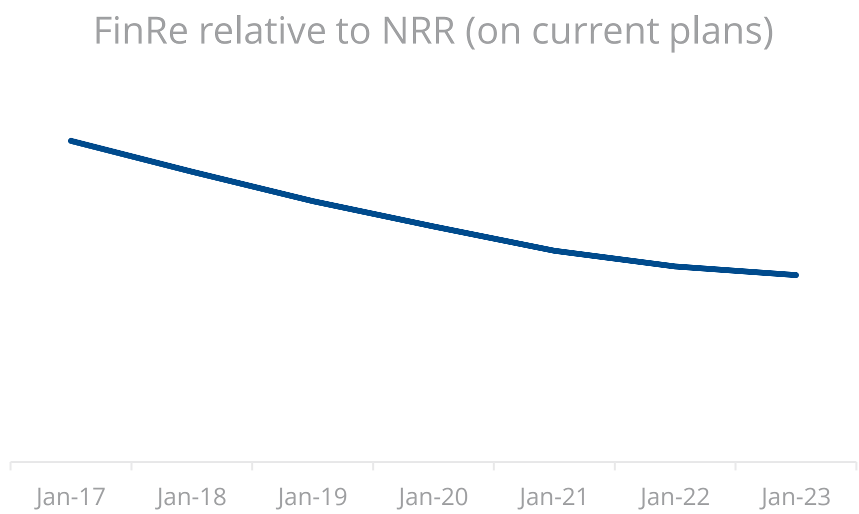
Discovery Life therefore matches a portion of the positive reserve on a tranche of new guaranteed endowment business with a portion of this negative reserve. *Guaranteed endowment single premiums are thus now available to fund new business strain*. With the passage of time, predictable, net positive cash flows generated by the risk book are applied to purchase tangible assets which back a progressively larger portion of the guaranteed endowments' reserve as they approach maturity. This relationship is shown for an illustrative guaranteed endowment policy in Graph 1 below.

Graph 1: Illustrative matching for an individual guaranteed endowment policy



The quantum of financing available is restricted to the quantum of negative reserve unwinding over the liability duration, since expected cash flows on the risk book must be sufficient to cover the required investment into the matching, tangible asset portfolio. Discovery Life further considers theoretical risks inherent in the projected cash flows and limits the quantum of negative reserve available to match positives by considering a severe stress scenario. The remaining cash flow, after having considered the stress scenario, is then available for matching and the residual lapse risk is further reinsured. Graph 2 shows the ratio of FinRe (including Cashless Financing Structures and Cash FinRe treaties) to negative rand reserve on Discovery Life's current capital plan. The reduction in the ratio (from approximately 26%) implies additional capacity is available if the ratio is to be maintained at the current level.

Graph 2: Ratio of FinRe to negative rand reserve using Discovery Life's current capital plan



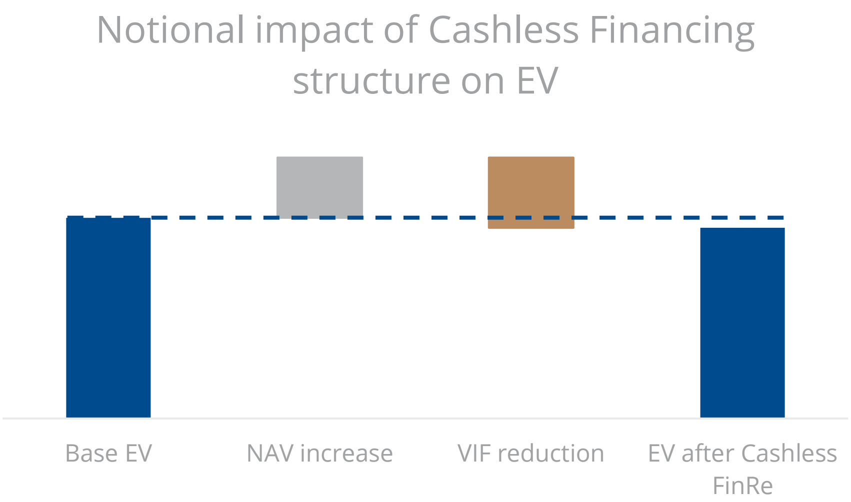
A portion of future, expected cash flow is earmarked to cover the investment into the matching, tangible asset portfolio. Remaining, expected cash flow not earmarked for use elsewhere in the business acts as a "buffer" against future adverse experience variances.

In spite of this cash flow buffer, there is still some exposure to higher than expected lapses on the risk book which is mitigated using **lapse protection reinsurance**. Should the reserve unwind be insufficient to meet the guaranteed endowment liability, the reinsurer will pay the shortfall. This reinsurance does provide a benefit under other stress scenarios, for example an increase in mortality rates, but the stress would need to be extremely severe for this benefit to be realised. Internal buffers provide protection below the reinsurance protection level.

Impact on Embedded Value[1]

Cashless Financing structures have a net cost above the risk-free rate approximately equal to the cost of lapse protection reinsurance premiums. The net cost is not dissimilar to the margin inherent in the risk discount rate over the risk free rate. Graph 3 shows how the cost incurred reduces Discovery Life's EV.

Graph 3: Notional impact on Discovery Life's EV at inception of a Cashless Financing structure



At inception, tangible assets that originally matched guaranteed endowment reserves are transferred to NAV. VIF reduces to reflect the portion of future cash flows used to purchase tangible matching assets on the portfolio of guaranteed endowments and pay the lapse protection reinsurance premium. The absolute reduction in VIF is typically marginally greater than the absolute increase in NAV, reflecting the marginal cost of this Cashless Financing structure over the risk discount rate.

During the June 2017 financial year[2] Cashless Financing structures increased NAV by R1 649m and reduced VIF by R1 722m.

Impact on Cash Flow

The Cashless Financing structure uses risk negative reserves to match the liability on a tranche of new guaranteed endowments. Single premiums that would usually be used to purchase matching tangible assets are made available for other initiatives. This has a net positive impact on Discovery Life's cash flow at inception equal to the total single premiums for a tranche of guaranteed endowments.

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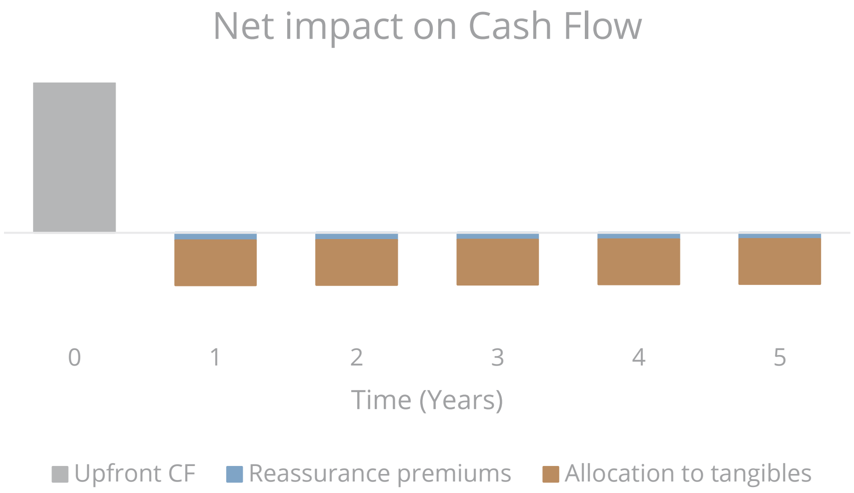
[1] The graphs illustrating the impact on embedded value do not allow for the Cost of Capital.

[2] Extracted from the June 2017 EV report in respect of Life & Invest business.

Thereafter, a portion of Discovery Life's cash flow is used to purchase the matching tangibles for a tranche of guaranteed endowments and pay the premium in respect of lapse protection reinsurance. The net impact of a given Cashless Financing structure on Discovery Life's cash flow is illustrated in Graph 4.

Graph 4: Notional, net impact of a single Cashless Financing structure on Discovery Life's cash flow



Impact on Income Statement

The IFRS income statement allows for the full liability of the guaranteed endowment as well as the full negative reserve transfer. Thus on taking out new FinRe, there is no immediate significant net impact on the income statement.

From Discovery Life's perspective, the interest earned on the negative reserve backing the guaranteed endowment liability (at the risk free rate) is notionally transferred to Discovery Invest. Discovery Life's IFRS earnings are therefore **reduced** over time by the interest payable on the negative reserve unwind (at risk free) and the lapse protection reinsurance premium payable.

Liquidity Consideration

Guaranteed Endowments typically have a low surrender rate before the end of their five year terms. As at 30 June 2017, approximately 45% of the outstanding liability on Guaranteed Endowments was matched by a tangible bond portfolio. This provides a very large liquidity buffer should a large number of Guaranteed Endowments surrender before maturity.

2.2 CASH FINRE

A Cash Financing reinsurance treaty includes the following features:

1. An upfront payment from the reinsurer;
2. The repayment of this receipt, on an expected basis, using the cash flows arising on a specific tranche of in-force risk policies; and
3. Risk transfer.

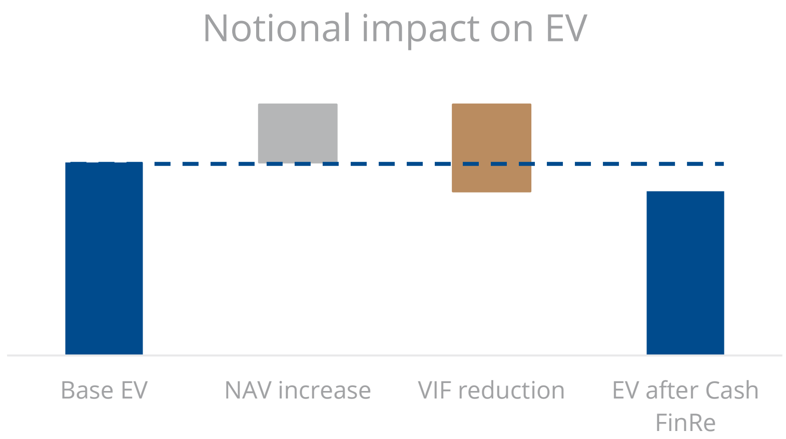
A notional account is established with a starting balance equal to the upfront reinsurance payment received by Discovery Life. In principle, the balance outstanding accrues at an agreed financing rate and is reduced by actual reinsurance premiums paid less the reinsurer's share of claims.

These policies are usually structured so that the notional account balance is expected to run down to zero before the termination date of the contract. If the balance reduces to zero before the termination date, Discovery Life can recapture the underlying risk business. If this balance is positive at the end of the contract term due to adverse underlying experience, Discovery Life is not obligated to repay it. So, the reinsurer accepts the risk of cash flows being different to expected. This **risk transfer mechanism** differentiates Cash FinRe from a debt arrangement and transfers some degree of claims risk, lapse risk and interest rate risk to the reinsurer.

Impact on Embedded Value

Graph 5 shows that a Cash FinRe treaty has a negative impact on Discovery Life's EV. The reduction in EV reflects the cost of the Cash FinRe treaty which is effectively the financing rate paid on the notional account balance.

Graph 5: Notional impact on Discovery Life EV at inception of Cash FinRe

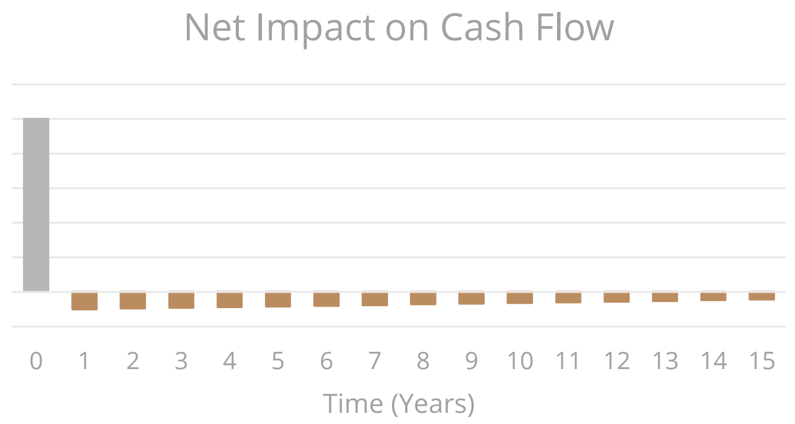


At inception, the reinsurance payment increases NAV. Thereafter, Discovery Life expects to repay this receipt on a best estimate basis which reduces future expected cash flows and the VIF. The absolute reduction in VIF is greater than the absolute increase in NAV reflecting the cost of the FinRe relative to the risk discount rate.

Impact on Cash Flow

The upfront reinsurance payment is a net cash inflow for Discovery Life. Thereafter, on a best estimate basis, cash outflows amortise the notional account balance. The notional impact of a Cash FinRe treaty on Discovery Life's cash flow is illustrated in Graph 6 below.

Graph 6: Notional, net impact of a single, typical Cash FinRe treaty on Discovery Life's cash flow



Impact on Income Statement

Overall, the combination of an upfront reinsurance receipt and the establishment of a reinsurance liability marginally depresses earnings. The reinsurance liability is required since Discovery Life expects Cash FinRe premiums to exceed Cash FinRe recoveries. The absolute size of this liability is typically greater than the absolute size of the upfront reinsurance payment, reflecting the cost of the Cash FinRe treaty relative to the risk free interest rate assumption in the IFRS reserve.

The upfront reinsurance payment is used to fund new business strain, allowing Discovery Life to write more new business. This will generate additional earnings in future periods. If this new business impact is ignored, IFRS earnings are reduced by the full interest element of the reinsurance liability each year.

2.3 CASH FINRE VS CASHLESS FINANCING STRUCTURES

	Cashless Financing structure		**Cash FinRe**
Costs	Approximately equal to lapse protection premium.	<	Financing rate
Flexibility	New tranche taken out annually. Notional account balance on lapse protection varies in line with expected sales volumes of guaranteed endowments.	>	Subject to reinsurance capacity due to relatively large upfront reinsurance payment.
Term	Fixed @ 5 years	<	Longer term (> 10 years)
Risk Transfer	Catastrophic lapse risk transferred.	<	Portion of all lapse, claims & interest rate risk transferred to reinsurer above an implied attachment point.
Impact on EV at inception	Replacing tangible assets with negative reserves increases NAV. Bigger reduction in VIF reflecting portion of expected cash flow used to purchase tangibles and lapse protection.	<	Upfront reinsurance payment increases NAV, but bigger, negative impact on VIF due to expected reinsurance outgo.
Impact on Cash Flow	Large proportion of emerging cash flows used to purchase tangible assets. Creates a "steep" trend at early durations (5 years) when considering a graph of net cash flows.	>	Longer term contract, so smaller impact on cash flows for individual years.
Impact on IFRS earnings	Lapse protection premiums and interest costs reduce IFRS earnings.	<	Interest element of reinsurance liability reduces IFRS earnings.

2.4 RISK REINSURANCE

The following table gives a broad overview of other reinsurance treaties used within Discovery Life that **do not include a financing element**.

Reinsurance in place	Key features
Surplus treaty	• Include risk transfer. • Risk premium structures. • Profit sharing arrangements.
Facultative surplus treaty	
Catastrophe cover	

3. VitalityLife

The following section describes the sources of funding used in respect of VitalityLife in the UK. Funding is in the form of:

1. **Debt** arrangements within the group (but outside of VitalityLife) to support VitalityLife – there are a number of different arrangements which are described below; and
2. **Cash FinRe** on tranches of new business.
3. **Other Group capital resources**

VitalityLife started writing new business on its own licence from 1 January 2016. Prior to this date, business was written as part of a joint venture with the Prudential Assurance Company (PAC). These different subsets of business used differently structured sources of funding.

Sections 3.1 and 3.2 describe these sources of funding as historically employed by VitalityLife in more detail and how they differ between different subsets of business.

3.1 PAC JOINT VENTURE

Under the joint venture, new business was written on PAC's insurance licence. Three different sources of funding were used, namely:

1. Tangible policyholder assets on PAC's balance sheet up to April 2015. The mechanics of this arrangement is similar to a **loan structure**. The remainder of this note will refer to this loan as "Pre-cap funding".
2. **Debt** raised by the Discovery Group and injected as equity capital into the joint venture after April 2015. The remainder of this note will refer to this arrangement as "Post-cap funding".
3. Group **excess capital**

These sources of funding are described in more detail below.

Pre-cap funding

The joint venture used a portion of PAC's tangible, policyholder assets to fund new business strain. This portion was capped at an agreed limit. These tangible assets will be recouped by PAC as the negative reserve unwinds.

This was achieved by offsetting a portion of PAC's positive reserve (that would otherwise be matched with tangible assets) with a portion of the negative reserve on the portfolio of new VitalityLife business. The unwind on these negative reserves effectively belongs to PAC. VitalityLife pays a floating financing rate.

Once VitalityLife business had used the available limit of pre-cap funding, a new source of funding was required. This is later described under the heading of post-cap funding.

Impact on EV

Pre-cap funding arrangements were entered into at the point of sale, so there was no VIF/NAV transfer on in-force business in the EV statement.

Impact on Cash Flow

This Pre-cap funding arrangement has an immediate positive impact on new business cash flows thereby eliminating the new business strain. Thereafter, cash flows are reduced as VitalityLife pays PAC the finance charge and capital on negative reserve funding.

Impact on Income Statement

At inception, there is no material impact on IFRS earnings. Thereafter, the financing cost of the arrangement reduces IFRS earnings over time by the full cost of the interest rate.

Post-cap funding

The pre-cap funding limit was reached by April 2015. Thereafter, VitalityLife used an alternative source of funding, described here as post-cap funding, to finance new business strain written under the joint venture. This post-cap funding included debt raised within the Discovery Group. A floating financing rate is payable on this debt which is approximately equal to half the cost of pre-cap funding at the time of writing.

The impact on Group EV, cash flow and IFRS earnings is consistent with other debt financing raised by the Discovery Group.

3.2 VitalityLife

VitalityLife has written new business on its own licence since 1 January 2016. This was capitalised using part of the Discovery Ltd rights issue to meet regulatory capital requirements. For new business a combination of debt capital raised by the group (and injected as equity and tier 2 sub debt within the VitalityLife Ltd entity), Cash FinRe and excess group capital is used to finance new business strain.

The Discovery Group raises **debt** financing which is injected as capital into VitalityLife. The structure and cost of this debt financing arrangement is similar to the post-cap funding described above.

Cash FinRe on VitalityLife risk business operates in a similar manner to Cash FinRe on Discovery Life risk business. An important difference is that VitalityLife Cash FinRe treaties are taken out on tranches of **new business at the point of sale** and are therefore already allowed for in the calculation of VNB. This will not have an impact on the EV of in-force business. In particular, no VIF to NAV transfer will be observed on the in-force EV on the new business financing. The cost of FinRe reduces future expected cash flows emerging on a given tranche of new business. That is, for a given reporting period, Cash FinRe will **reduce VNB**. It will also result in a **lower negative reserve in absolute terms** since a portion of acquisition costs is now funded by the FinRe and FinRe premiums are allowed for when calculating the reserves.

The following table summarises further differences between Cash FinRe treaties used by Discovery Life and VitalityLife respectively.

	Discovery Life	VitalityLife
Frequency	Ad-hoc	(Currently) automatic tranches of **new business** cover every quarter.
Business covered	In-force	Tranches of new business
Frequency of upfront receipts from reinsurers	Once-off at inception of reinsurance contract	Quarterly intervals – based on volume of new business during quarter
Term to contract expiry	Typically > 10 years	Typically < 10 years
Effective financing rate fixed/variable	Typically fixed at inception	Typically variable: Defined spread over benchmark floating rate

3.3 RISK REINSURANCE

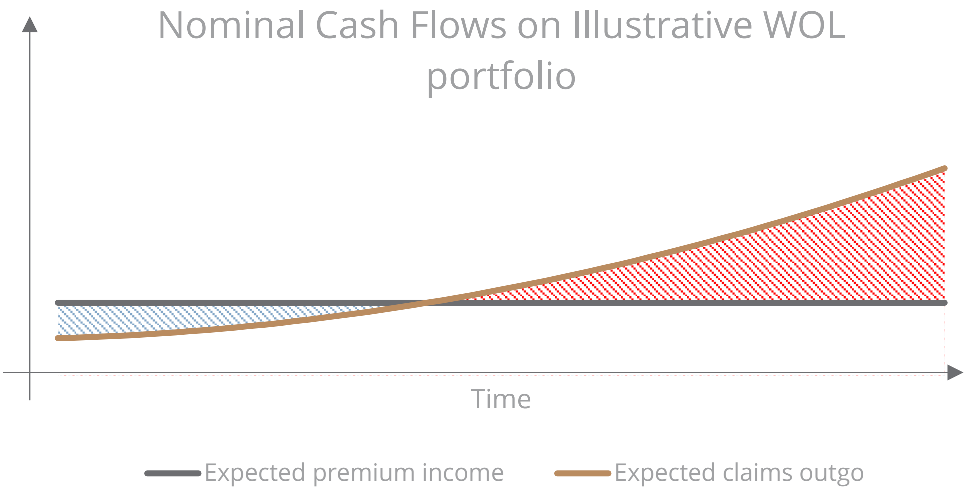
Like Discovery Life, VitalityLife uses reinsurance treaties that transfer risk, but do not include a financing element. Quota Share and Surplus treaties transfer a significant portion of VitalityLife's claims risk as at 30 June 2017.

Level risk premium reinsurance was taken out on a portion of Whole-of-Life policies written up to mid-2015. This transfers claims risk to the reinsurer as well as the risk that interest rates and/or lapse rates are lower than expected. This is explained in more detail below.

Level Risk Premium Reinsurance

In general, an increasing insurance risk on a portfolio of whole-of-life policies is funded by level premium income. At later durations the expected claims outgo exceeds the premium received given that policyholders have aged and are more likely to claim. This relationship is illustrated in Graph 7 below.

Graph 7: Nominal premiums vs nominal outgo for an illustrative portfolio of whole-of-life policies



The area shaded blue in Graph 7 funds the red shaded area at later durations. This “pre-funding” may not be sufficient to cover the red shaded area if interest rates or lapse rates are lower than expected.

Under a level risk premium reinsurance treaty, the reinsurer receives a level premium for each reinsured policy and in return pays a portion of increasing claims outgo. This transfers a portion of interest rate risk and lapse risk to the reinsurer, where these are lower than expected. Given the current, low interest rate environment in the UK, this treaty currently reflects as an asset on the VitalityLife balance sheet. A normalisation of interest rates may unwind this asset (with a corresponding reduction in policyholder liabilities).