Automated Box Management using Invest | Pro™

Maximise capital efficiency under Solvency II, by automating a new unit matching approach by using box management functionality on Invest | Pro™.

Solvency II regulation

Recent Sol II discussions on matching have highlighted the importance of box management as an approach to releasing cash, minimising volatility of own funds and reducing market risk Solvency Capital Requirements (SCR) for unit-linked life companies.

Invest | Pro™ is a portfolio accounting system from Financial Risk Solutions (FRS) which was developed specifically for unit linked life companies. The platform delivers the entire range of critical investment management functions in one single integrated application – including Implicit and explicit box management functionality.

Why do Life companies have a Box position?

Every Life Company has an implicit box position, because unit-linked funds allocated to policy holders will always differ from the number of units in issue. This may be because:

- Policy administration systems can't report small policyholder transactions on daily basis
- Seeding of a fund
- Some policy administrations systems can't report forecast transactions

Life Companies need to quantify the Gain/Loss on box or 'holding' positions but cannot do this unless the implicit box position is converted to an explicit box position.

Invest | Pro™ manages explicit box positions in the following way:

- Shareholder 'Box Fund' holds Units in All Policyholder Funds
- Box Units = Policyholder Units – Fund Units
- The long term and short term box funds on Invest | Pro™ have the same rigorous controls as other funds (showing the daily profit and loss on the box management fund, highlighting the gain or loss to the shareholder)

Invest | Pro™ supports both a long term and short term box fund and full financial accounting and fund performance is available for the box funds.

Contact : **Matthew.Baldwin@frsltd.com** or **Frank.Carr@frsltd.com**

FRS Invest | Pro™

Unit-matching approaches that can be automated on Invest | Pro™

The four most commonly used market methods of appropriations i.e. matching units with policyholder money flows by cancelling units for surrenders and creating units in the case of new money flows, are summarised in the table below.

	A Forecast Matching	B Forecast Matching	C Forecast Matching	D Forecast Matching
Equity Test	Pass	Pass	Fail	Pass
Shareholder Market Exposure	Small	A < B < D	None	Large
Suitable for Mirror Funds	Yes	Yes	No	Yes
Forecast Cashflow Required	Yes	No	No	No
VP's for Trade / Liability Units / Asset Units	T/T/T	T+K/T/T+K	T+K/T/T	T+K/T/T+K

Method A – Forecast Matching

- Ensures strict equity
- Small profit/loss to shareholder
- Administratively complex – requires policy admin forecasts
- Asset/liability units based on same valuation point
- Suitable for mirror funds

Method B – Deferring Appropriations

- Ensures strict equity
- Asset units based on later valuation point than liability units
- More significant profit/loss to shareholder
- Suitable for mirror funds
- Administratively simpler than method A – no forecast

Method C – Backdating Appropriations

- Does not ensure strict equity
- Profit/Loss borne by policyholders
- More suitable for managed funds holding direct assets
- Administratively simple

Method D – seeding of fund

- Ensures strict equity
- Significant capital commitment from shareholder
- Significant profit/loss borne by shareholder
- Runoff of box managed by Invest | Pro™

Invest | Pro™ supports all of these methods as either standalone approaches or as a mix of these approaches, depending on the functionality of the policy processing system and on its ability to provide forecasts to **Invest** | Pro™ .

Criteria for unit matching approaches in a Solvency II world

Under the new Solvency II regime, to maximise capital efficiencies, a new unit-matching approach would typically be required, and although the new approach is normally complex, Invest | Pro™ now has functionality to cater for this.

Invest | Pro™ automatically records the two components of the unit- matching by firstly matching the face value of units and then recording the underfunding in respect of the present value in force of future management charges. The system then calculates the profit/loss on the underfunding for IFRS reporting purposes. In this scenario the life company's Investment administration systems (Invest | Pro™ in this case) is running a special type of negative box position to accurately meet their fund accounting obligations under the Solvency II directive.

The excellent analytical functionality available on Invest | Pro™ provides the ability to access the size of the underfunding positions and the gains or losses on those positions at any given time. Such reporting and analytical capabilities are a critical requirement for CFOs and fund managers, for validation purposes and cross-reporting to the actuarial function.

In determining the investment policy for the excess value amount, Life Companies need to take a number of criteria into account, including:

- Capital efficiency e.g. avoiding unnecessary forced investment into the unit funds
- Is the unit-matching process driven by Solvency II reporting or IFRS reporting considerations?
- Is there an objective to minimise volatility in Solvency II net assets arising from variations in unit-linked values?
- Is there an objective to minimise market risk SCR?
- Is there an objective to minimise volatility in the SCR coverage ratio?
- Is there an objective to match the SCR for lapse risk?

Software expertise backed by actuarial excellence.

Contact : **Matthew.Baldwin@frsltd.com** or **Frank.Carr@frsltd.com**

www.frsltd.com