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What is the future of financial reinsurance under Solvency II?

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Financial reinsurance under Solvency I

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What do we mean by financial reinsurance ("FinRe")?

- No "official" definition, but we can live with something like: "Reinsurance that is motivated by financial as well as other risk transfer objectives"
- However, FinRe contracts may not be treated as reinsurance under certain accounting conventions (e.g. IFRS) because they do not transfer significant insurance risk:
  - Not because reinsurers don't like accepting risk, rather because there is little or no insurance risk in the underlying business to transfer to the reinsurer
  - "Significant" is open to interpretation and not necessarily quantifiable
- In practice there can be considerable blurring between "reinsurance" and "FinRe":
  - Some reinsurance transactions both transfer material insurance risk and achieve a significant financing benefit for the insurer
  - Accounting conventions may require separation of financing and risk transfer (if possible) and different accounting treatment to be applied to each component

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Why did/do insurers use FinRe?

- Create additional free assets or convert an intangible VIF asset into cash to:
  - Finance new business strain or to write higher volumes for same strain
  - Finance strategic initiatives, e.g. capital expenditure, planned expansion or a business acquisition
- Improve profit recognition and / or profitability measures for new or in-force business:
  - Some accounting bases (e.g. solvency valuation) can give distorted view of profitability
  - Often charge for FinRe < insurers IRR target so FinRe can improve IRR metric
- Improve quality of capital:
  - Lock-in a proportion of an intangible VIF asset reducing volatility
  - May send right signals to the market about focus on balance sheet quality
  - Does not weigh on debt leverage
- **Or, more generally: plan with greater certainty and / or lower risk via availability of financing at acceptable price!**

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Common types of FinRe

- The most common types of FinRe arrangements are:
  - Deficit account
  - Original terms ("OT") reinsurance (or coinsurance)
- Terminology and prevalence of different types varies between territories
- Deficit account arrangements are often thought of as being pure contingent "financing" arrangements
- OT reinsurance is commonly thought of as being traditional risk reinsurance, but it often also provides financial assistance to the insurer (a hallmark of FinRe)
- All types can be applied to new business or in-force business

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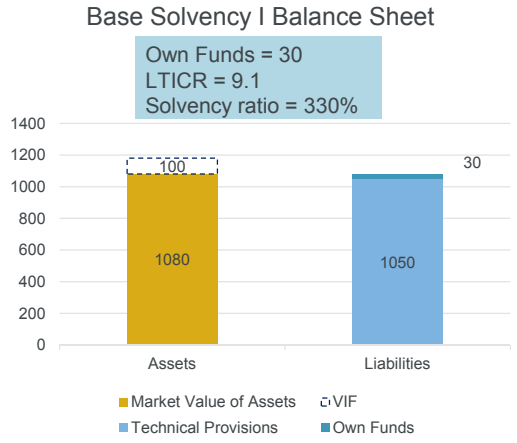
Example: Base Solvency I Balance Sheet

- Assume that we are considering an insurance company writing mainly unit-linked insurance savings products with some death benefit death benefit (say 105% of unit fund)
- From an economic perspective, key risks are therefore market and lapse risk, but the Solvency I regime did not capture this.
- Required capital calculation under Solvency I was not risk sensitive and was calculated formulaically as:
  - 0.3% x Sum at Risk (maximum offset of 15% for reinsurance)
  - 25% x annual maintenance expenses



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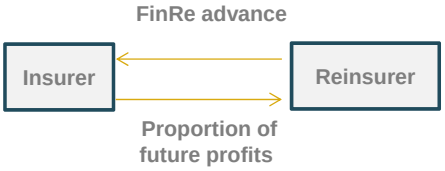
Example: FinRe arrangement

- In the following example, we assume a deficit account FinRe arrangement where:
  - The Reinsurer pays the insurer a FinRe advance (usually defined as X% of the (non-tangible) VIF), and
  - The reinsurer is repaid through the future profits for that block of business as it emerged (i.e. reinsurance premium is Y%)
- The level of the FinRe advance is determined using the economic VIF. Reinsurers determine the advance at a level such that it can be repaid in foreseeable circumstances (as FinRe is effectively a contingent loan rather than a risk transfer arrangement)
- The level of FinRe advance depends on how robust the economic VIF is to stresses (e.g. a higher advance would be provided if surrender penalties exist on the underlying book of business)
- We have assumed that the FinRe advance is 50% of VIF



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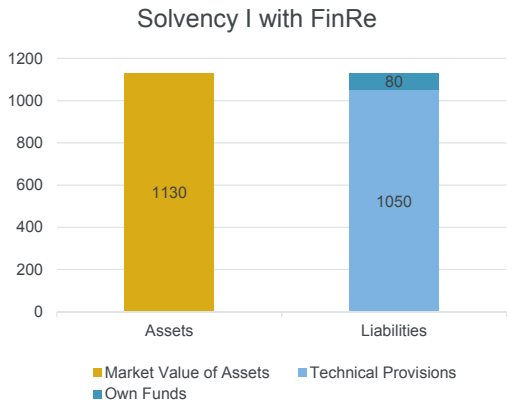
Example: FinRe impact on Solvency I Balance Sheet



Own Funds = 80
LTICR = 9.1
Solvency ratio = 881%

- Only the asset side of balance sheet was impacted by FinRe; Own Funds position therefore increases by the level of FinRe advance
- No change in liabilities as repayments are "contingent" on future profits arising (unambiguously linked to surplus); these profits were not reflected on the Solvency I balance sheet hence the liability to repay was not reflected either
- Efficient: increased liquidity and improves solvency position
- While insurer motivation varied for companies in a Solvency I world, companies of all sizes were using these arrangement to positively impact solvency position

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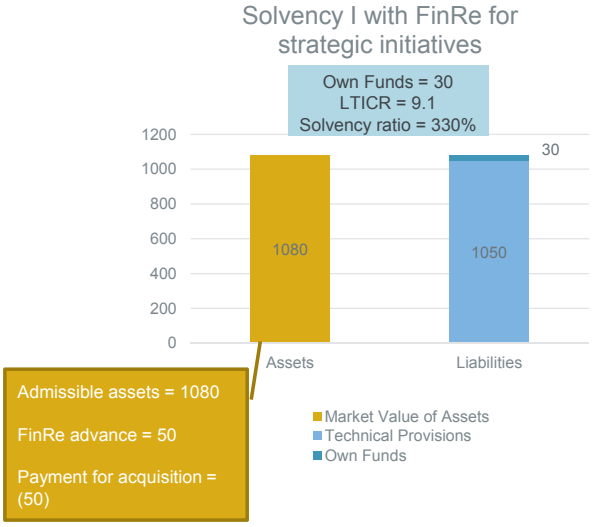
Example: Impact of FinRe used to fund strategic initiatives



- Created cash assets that could be used to fund strategic initiatives
- Sometimes the FinRe advance was loaned up to the parent as an intra-group loan ("IGL"), which was then used to fund the initiative. This was considered an inadmissible asset for Solvency I purposed therefore not reflected on the Solvency I balance sheet.
- No additional LTICR was generated, and the solvency position remained unchanged from the base position.
- Common structure used to fund acquisitions (particularly in the offshore market where materially unit-linked companies are prevalent)

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How has Solvency II influenced the use of financial reinsurance?

Solvency II example: Key assumptions

- Same base company as in the Solvency I example
- The solvency capital requirement (SCR) calculation is a risk based capital calculation
- As the business is primarily unit-linked business, we have assumed the following in calculating the simplified SCR used in the example:
  - Only considered market and lapse risk, as these are the key risks to which the business is exposed, i.e. excluded all other risks from the SCR calculation (including expense and operational risk). We have also ignored the effect of diversification.
  - Unit funds are invested only in equities, and have used the standard formula equity risk stress for the market risk component
  - Mass lapse is the biting lapse scenario and have used the standard formula mass lapse risk stress for this risk component
  - $SCR = \sqrt{[(SCR_{market\ risk}{}^2 + SCR_{lapse\ risk}{}^2)]}$
- Unlike for Solvency I, VIF is already recognised on the Solvency II balance sheet

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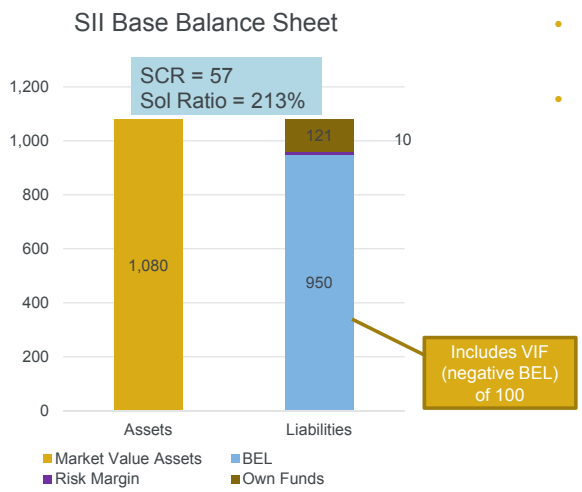
Example: Base Solvency II Balance Sheet



- Unlike for Solvency I, VIF is already recognised on the Solvency II balance sheet
- Solvency position is reasonably resilient to stresses:
  - As this is primarily unit-linked business, movements in Own Funds are largely driven by movements in the VIF
  - The SCR is similarly volatile to market and lapse stresses and mainly driven by the VIF

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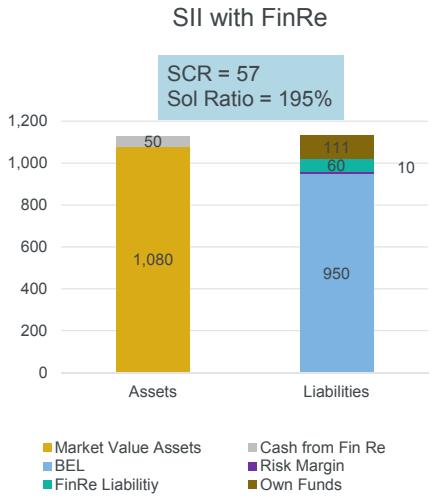
Example: FinRe impact on SII Balance Sheet



- Assume that FinRe of 50% of VIF is provided
- FinRe crystallises the future value of the business and provides liquidity, but not capital relief
- Would expect the structure to be treated as a Deposit under IFRS, where the liability to repay would also be recognised (this is larger than the FinRe advance due to interest capitalisation).This reduces Own Funds and hence has a detrimental impact on solvency
- The repayment of the FinRe is contingent on the VIF materialising, i.e. there is no guarantee that the full FinRe will be repaid
- The additional liquidity is useful to support new business strain (e.g. for non-commission acquisition costs)

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Why could FinRe still be attractive under Solvency II?

Contract boundaries: *Broadly speaking the contract boundary is the point at which the insurer can unilaterally terminate the contract, refuse a premium or amend the benefit or premium without limit. Beyond this point the premiums do not form part of the existing contract and are not considered in the technical provisions.*

Accessing the value of future profits <u>within</u> contract boundaries:

- FinRe still provides an efficient way of increasing liquidity and can be loss absorbing
- Financing new business strain: Can be effectively structured to match new business strain financing very closely when compared to other ways of raising debt
- Financing strategic initiatives: the VIF of the in-force book can be monetised with the cash financing advance used to fund the acquisition of that business

Accessing the value of future profits <u>beyond</u> contract boundaries:

- Contract boundaries: *Cashflows beyond the contract boundary are not recognised on the balance sheet, and reinsurance is consistent with the underlying business. Liability to repay dependent on cashflows beyond the contract boundary is potentially not recognised.*
- FinRe allows insurers to recognise additional value on the balance sheet and can improve the solvency position

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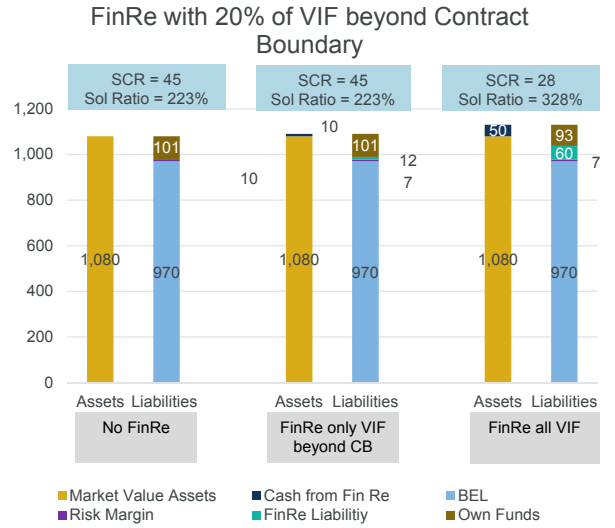
Example: 20% VIF lies beyond Contract Boundary



- FinRe has a detrimental impact on solvency due to the requirement to recognise the future financing repayment
- However, the FinRe liability on the Solvency II BS is restricted to the VIF recognised on the Solvency II BS, while the FinRe cash advance is determined taking into account the (higher) full economic VIF
- FinRe liability to repay is contingent on future profits arising. FinRe liability is always capped at the value of the VIF in the stressed position, and can therefore have a loss absorbing impact on SCR.
- Net effect depends on the size of the unrecognised VIF, the loss absorbency of the FinRe and the type of business (e.g. Group Life business vs IF financing), but is generally favourable

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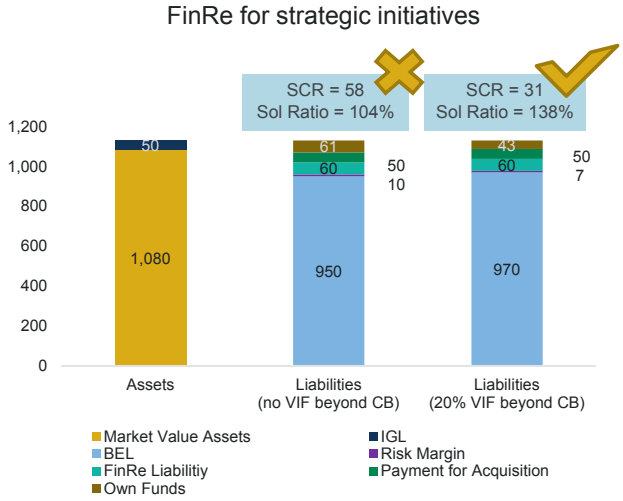
Example: Impact of FinRe used to fund strategic initiatives



- IGL is recognised as an asset for insurance company and therefore needs to be valued in line with SII rules
- Valuation of IGL is expected to be consistent with Article 75 (market value), therefore scope for valuation uncertainty.
- SCR will therefore increase as capital is required to be held against the IGL (assumed 25% of the value of the IGL).
- In reality there will be financing costs earned on the IGL, but we have ignored this in this example.
- Significantly depleted solvency ratio! There are other structuring possibilities but these are not addressed in this presentation.

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Where else could FinRe be applied on the Solvency II balance sheet?

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Where else could FinRe be applied on the Solvency II balance sheet?

One can consider other areas where there is believed to be prudence in the Solvency II balance sheet that could be 'financed', areas include:

- Risk Margin
- Discount rate:
  - Prudence in risk free return used to calculate best estimate liability
  - Prudence in the fundamental spread

However, the lack of an "unambiguously linked to surplus" clause in Solvency II has caused challenges to firms where it means some contingent value is recognised:

- Under Solvency I it was allowable to disregard liability payments that arose only where experience was better than the valuation assumption, this often allowed a zero liability to be recognised
- Under Solvency II this approach disappears and firms need to value on a probability weighted basis

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FinRe on the Risk Margin

- The Risk Margin is considered high on certain product types e.g. longevity business.
- Reinsurance commission can be provided as part of traditional reinsurance with repayment contingent on future releases of Risk Margin.
- Repayment of the commission must be recognised in the Solvency II balance sheet.
- The contingent repayments are recognised as a liability on the balance sheet but potentially with value lower than the face value of the loan.
- Technical provisions would remain unchanged and own funds are increased by difference between the value of the commission and that of the contingent liabilities.
- Primary issue is the extent of the benefit may be small unless significant risk transfer. However could this financing be considered as either Tier 2 or Tier 3 Own Funds?

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Alternative approaches to FinRe on Risk Margin

Risk margin financing has proven difficult and hence firms have focused on real risk transfer which also removes risk margin. Longevity business has been a particular area of activity:

- Longevity swaps used to transfer longevity risk at market price, removing much larger risk margin from the balance sheet
- However challenge if firms believed that risk margin will move towards market prices, led to investigation of other structures
- Concern from PRA over extent of use of reinsurance, led to need to notify in advance and see requirement via matching adjustment rules in recent consultation paper

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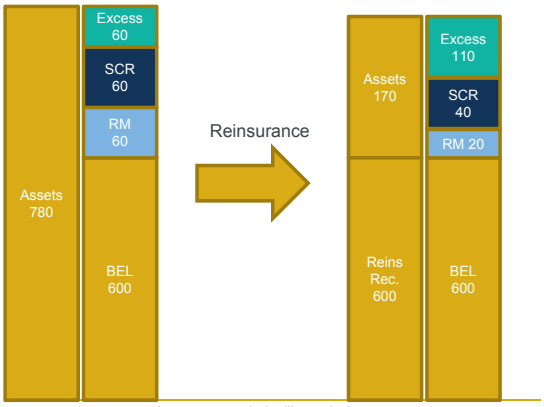
Alternative approaches to FinRe on discount rate



(Amounts purely for illustration)

- Assets fall but largely offset by reinsurance recoverable
- RM and SCR both fall due to reinsurance
- Excess own funds rise

Quota share reinsurance with reinsurance commission based on the return achieved in each year, either inside or outside of the matching adjustment portfolio:

- Where insurer and reinsurer believe that assumption of risk free return is overly prudent then scope for reinsurance to reinsure on a quota share basis paying something close to technical provisions as premium
- Cedant benefits from reduction in SCR as risks on underlying replaced by counterparty risk. Also receives reinsurance commission over time as prudence in investment return unwinds and has cover in event of extremely adverse experience.
- Reinsurer takes on risk at premium it believes is excessive, and passes back element of experience via commission to cedant, less a fee for risk transfer and financing
- Generally works best where reinsurer able to reserve on a different basis, so reinsurers outside of Solvency II may be in best position to offer

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What lies in the future for financial reinsurance?

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Future developments

Some other areas where insurers or reinsurers may look to develop:

- Exploring alternatives to deficit account financing and “level” at which financing is provided
- Cracking the risk margin “nut”, structuring to allow this to be funded either on specific blocks of business, or as capital for the entity
- Use of the developing UK SPV regime to allow segmentation of blocks of business

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Questions

Comments

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