Financial Regulator
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Life Finite Reinsurance

April 2008

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1 Introduction

1.1 Scope

On the 15th of July 2006, Statutory Instrument 380 of 2006 ("S.I. 380") transposed into Irish law Council Directive 2005/68/EC ("Reinsurance Directive"). Part 13 of S.I. 380 details specific provisions with respect to finite reinsurance.

The Irish Financial Services Regulatory Authority ("Financial Regulator") is issuing this paper to outline the regulatory requirements that will apply to those reinsurance undertakings carrying on life reinsurance business that classify their business, or a material part[1] thereof, as finite reinsurance (hereinafter referred to as "life finite reinsurance").

The Financial Regulator acknowledges that finite reinsurance is primarily a non-life reinsurance concept and is not commonly used in the life reinsurance industry. The Financial Regulator thereby accepts that a reinsurance undertaking's classification of its business will be on the basis of industry practice. Notwithstanding this, the Financial Regulator is of the view that the specific provisions with respect to finite reinsurance in S.I. 380 should be available to the life reinsurance sector, as per the requirements of this paper.

The Financial Regulator also acknowledges that reinsurance undertakings operate within an evolving global reinsurance marketplace. For reinsurance undertakings that currently do not carry on life finite reinsurance, opportunities may arise in the future to do so, depending

[1] "Material" in this context must be determined by the reinsurance undertaking. The Financial Regulator's view is that "material" for life finite reinsurance should be judged in the context of the application of Regulation 62 (1) of S.I. 380. Therefore, the Financial Regulator's view is that, for the purposes of this paper, an amount of substance is material whereby either the gross written premium of the life finite reinsurance business exceeds 3% of the gross written premium of the total reinsurance business, or the gross technical provisions of the life finite reinsurance business exceeds 3% of the gross technical provisions of the total reinsurance business, or the maximum economic risk of the life finite reinsurance business exceeds 5% of the reinsurance undertaking's available solvency margin. This view does not however imply that a lesser amount is necessarily immaterial.

upon market circumstance. For such reinsurance undertakings, the requirements in this paper must be implemented as soon as is practical, but not later than their next reporting date to the Financial Regulator or otherwise as agreed by the Financial Regulator, following the entering into a life finite reinsurance contract(s) that would make the reinsurance undertaking subject to the requirements of this paper.

Except for the legal requirement of S.I. 380 whereby all finite reinsurance business is subject to Regulation 62, any life finite reinsurance deemed not to be a material part of the business of the reinsurance undertaking will not be subject to the requirements of this paper and may be treated in a manner similar to that of its other life reinsurance business.

1.2 Legal Basis

Chapter 3 refers to contract documentation for life finite reinsurance required under Regulation 62 of S.I. 380.

Chapter 4 contains prudential rules pursuant to Regulation 61(1) of S.I. 380 for the available solvency margin, the required solvency margin and the guarantee fund that an authorised reinsurance undertaking established in the State is required to establish and maintain in respect of its life finite reinsurance activities.

Chapter 5 states the opinion of the Financial Regulator for the purposes of Regulation 20 of S.I. 380 for reinsurance undertakings carrying on life finite reinsurance. All reinsurance undertakings, with the exception of special purpose reinsurance vehicles (SPRVs), are subject to the opinion of the Financial Regulator for the purposes of Regulation 20 of S.I. 380 as outlined in the paper "Corporate Governance for Reinsurance Undertakings"[2] (hereinafter referred to as the "Corporate Governance paper"). Accordingly, Chapter 5 outlines the additional systems and controls to those outlined in the Corporate Governance paper that, in the

[2] The paper referenced above is currently dated December 2007 (and to include any amended or updated papers that may supersede the December 2007 paper in the future).

opinion of the Financial Regulator, can be considered to be sound and adequate for the purposes of Regulation 20 for reinsurance undertakings carrying on life finite reinsurance.

Chapter 6 requires authorised reinsurance undertakings carrying on life finite reinsurance established in the State to lodge certain additional information with the Financial Regulator, pursuant to Regulation 21 of S.I. 380.

Any opinion in this paper may be amended or supplemented by the Financial Regulator from time to time.

Failure by a reinsurance undertaking carrying on life finite reinsurance to comply with the rules, standards and requirements in this paper may be the subject of an administrative sanction under Part IIIC of the Central Bank Act 1942 and shall, except where there is a reasonable excuse, constitute an offence in accordance with S.I. 380.

2 Finite Reinsurance

2.1 Introduction

The Financial Regulator acknowledges that finite reinsurance is primarily a non-life reinsurance concept and is not commonly used in the life reinsurance industry. The Financial Regulator thereby accepts that a reinsurance undertaking's classification of its business will be on the basis of industry practice.

The Financial Regulator further acknowledges that reinsurance contracts commonly written in the life reinsurance sector, including the different principal forms of life reinsurance detailed in the IAIS paper[3], can be highly structured and complex transactions with many features designed to meet the needs and characteristics of the business of individual cession undertakings.

The purpose of this paper is not to impose restrictions that will become a barrier to entry for reinsurance undertakings carrying on finite reinsurance business nor place restrictions on reinsurance undertakings carrying on business commonly known as traditional reinsurance within the broad life reinsurance marketplace.

Reinsurance undertakings that experience difficulties in interpreting specific elements of this paper should contact the Financial Regulator directly.

[3] International Association of Insurance Supervisors ("IAIS") Guidance Paper No 11 issued October 2006 entitled "Guidance Paper on Risk Transfer, Disclosure and Analysis of Finite Reinsurance" (available at www.iaisweb.org).

2.2 Definition

S.I. 380 defines finite reinsurance as reinsurance under which the explicit maximum loss potential, expressed as the maximum economic risk transferred, arising both from a significant underwriting risk and timing risk transfer, exceeds the premium over the lifetime of the contract by a limited but significant amount, together with at least one of the following two features:

i) explicit and material consideration of the time value of money,

ii) contractual provisions to moderate the balance of economic experience between the parties over time to achieve the target risk transfer.

2.3 Interpretation

Finite reinsurance is a broad term used to describe an entire spectrum of limited risk transfer reinsurance contracts, from relatively simple transactions to sophisticated individually designed structures. For the purposes of the definition of finite reinsurance in S.I. 380, underwriting and timing risk can be defined, in the Financial Regulator's opinion, as follows:

"Underwriting Risk" is the possibility that losses and expenses recoverable by the cession undertaking from the reinsurance undertaking will exceed the consideration received[4] by the reinsurance undertaking, thus resulting in an underwriting loss to the reinsurance undertaking.

"Timing Risk" is the risk arising from uncertainties about the timing of the receipt and payment of losses and expenses recoverable by the cession undertaking and consideration received[4] by the reinsurance undertaking.

[4] Such consideration received must be gross of commissions or brokerage paid to parties other than the reinsurance undertaking and the cession undertaking.

2.3.1 Risk Transfer

In the Financial Regulator's opinion, significant risk transfer, whether from underwriting risk or timing risk, can be taken to mean that the reinsurance undertaking must be able to incur a net present value loss under the reinsurance contract whereby such an amount:

1) is material relative to the potential maximum net present value profit of the reinsurance contract, and
2) arises from at least one future uncertain event that is possible and of commercial substance to the business of the cession undertaking.

All references to "reinsurance contract" herein include any related contract, as defined in Regulation 62 of S.I. 380, meaning a contract that alters the commercial effect of a finite reinsurance contract and is entered into between the parties to the finite reinsurance contract, or between those parties and a person with whom either of those parties has a close link.

A retrocession contract, as defined in S.I. 380, between the reinsurance undertaking and another 3rd party reinsurance undertaking (or an SPRV) would not, in the Financial Regulator's opinion, fall within Regulation 62 as a related contract. Such a retrocession may become a related contract if the risk(s) covered by such a retrocession contract is further indemnified in whole or in part by another reinsurance undertaking controlled by the original reinsurance undertaking or any other undertaking or persons linked to the original reinsurance undertaking[5].

The net present value loss [or profit] is the value of a loss [or profit] under the contract as calculated by discounting the expected cash flows to and from the reinsurance undertaking at an appropriate interest or

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[5] This refers to arrangements such as circular contracts that are designed to look like an ordinary retrocession contract that cedes risk to a 3rd party retrocessionaire but where in fact the risk is retroceded again back to the original reinsurance undertaking or a party with close links to the original reinsurance undertaking.

discount rate. The expected cash flows in such calculations are those as determined by the reinsurance undertaking from the reinsurance undertaking's underwriting process.

2.3.2 Finite Reinsurance

In the Financial Regulator's opinion, life finite reinsurance contracts are reinsurance contracts of significant risk transfer whereby the economics of the business ceded under the reinsurance contract has not been entirely transferred from the cession undertaking to the reinsurance undertaking as a result of a limitation to the maximum loss potential of the reinsurance undertaking through the inclusion of one or a number of risk limiting features or a combination of risk and profit limiting features in the reinsurance contract.

3 Contract Documentation

Regulation 62 of S.I. 380 prescribes mandatory policy conditions with which life finite reinsurance contracts must comply where they are entered into on or after the 15th of July 2006. An exception to this is Regulation 62(1)(d), which is only required to be included in finite reinsurance contracts entered into on or after the 1st of January 2007.

These requirements do not apply retroactively, for instance to multi-year or continuous reinsurance contracts first entered into before the above dates. A continuous contract is one whereby the terms and conditions remain in force unless cancelled or terminated by either the cession undertaking or the reinsurance undertaking.

A reinsurance undertaking must determine when a contract was entered into or what constitutes a continuous contract based upon a review of the contractual terms and conditions. Reinsurance undertakings that experience difficulties in making such a determination should consult their legal advisor(s) [6] and, where such difficulties persist, may contact the Financial Regulator directly with a summary of the issue(s) from their legal advisor(s).

In accordance with Regulation 62, finite reinsurance contracts must reflect the substance of the agreement between the reinsurance undertaking and the cession undertaking and include the required mandatory policy conditions. Reinsurance undertakings must ensure that all reinsurance contract documents are clearly drafted, setting out the type of reinsurance contained in the contract, including the nature of any subsections, with terms and conditions of the contract set out in a manner that does not confuse the substance of the transaction.

[6] Such legal advisor may be an employee of the reinsurance undertaking, an affiliate of the reinsurance undertaking, or an external advisor.

A retrocession contract, as defined in S.I. 380, between the reinsurance undertaking and another 3rd party reinsurance undertaking (or an SPRV) would not, in the Financial Regulator's opinion, fall within Regulation 62 as a related contract. Such a retrocession may become a related contract if the risk(s) covered by such a retrocession contract is further indemnified in whole or in part by another reinsurance undertaking controlled by the original reinsurance undertaking or any other undertaking or persons linked to the original reinsurance undertaking[5].

4 Prudential Rules

The requirements of this Chapter, other than section 4.3, are hereby made pursuant to Regulation 61 of S.I. 380.

4.1 Available Solvency Margin

The available solvency margin must consist of items detailed in S.I. 380 and be consistent with the requirements of the Financial Regulator[7].

4.2 Required Solvency Margin

The required solvency margin ("Required Solvency Margin") to be held in respect of life finite reinsurance business must be determined on the basis of a risk based model called the Augmented Solvency Model for life finite reinsurance ("ASM_{LFR}"), as outlined herein, except where an application is made as per section 4.5 herein.

The ASM_{LFR} is a stress test based capital model involving a series of stress tests to key risk parameters, as outlined herein, combined with a number of disclosures on other key risks[8]. Reinsurance undertakings carrying on life finite reinsurance should separately identify the solvency requirement calculated in respect of each of the stress tests described herein for all of the business classified as life finite reinsurance.

4.2.1 Stress Tests Required

Reinsurance undertakings carrying on life finite reinsurance business must determine the solvency capital required by the undertaking implied by the occurrence of each of the tests set out herein.

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[7] Please refer to the papers "Requirements for Life Reinsurance Undertakings" or "Requirements for Composite Reinsurance Undertakings", whichever applicable, dated February 2008 (or any subsequent amended or updated papers that may supersede the February 2008 papers).

[8] The required solvency margin may be calculated, at the sole option of the reinsurance undertaking, at a life finite contract level, or at a subset of the life finite portfolio level, or at an overall life finite portfolio level, with any individual results aggregated to get the total required solvency margin for the portfolio.

Reinsurance undertakings that experience difficulties in applying the stress tests should contact the Financial Regulator directly.

The solvency capital for each stress test is the assets minus liabilities before the stress test minus the assets less liabilities after the stress test.

The assets and liabilities referred to here relate solely to the assets and liabilities pertaining to the life finite reinsurance business being tested. If such assets and liabilities are not easily identifiable, the reinsurance undertaking must determine such assets and liabilities according to a reasonable and prudent methodology. The Financial Regulator may ask to review the methodology and underlying assumptions used.

In formulae, the solvency capital in respect of stress test X ("S_x") is

$$S_x = \max(S_{pre} - S_{post}, 0) \text{ where}$$

S_{pre} = assets minus liabilities before the stress test, and

S_{post} = assets minus liabilities after the stress test.

Each stress test[9] should be considered independently and therefore separately, before amalgamating the results as described herein. The stress tests should be applied to both assets and liabilities (including shareholder assets and liabilities). The stress tests should be assumed to be instantaneous with no allowance for management actions.

4.2.1.1 Asset Risks

The four asset stress tests (A to D) include:

A: an immediate 40% fall in the value of equities held.

B: an immediate 30% fall in the value of property held.

C: an immediate change in government bond yields of +/- 150 basis points (whichever is the more onerous).

[9] The reinsurance undertaking may assume a zero result for those stress tests that are not applicable to the underlying portfolio or subset being tested.

D: an immediate rise in credit spreads on financial instruments (to include, amongst others, municipal bonds, corporate bonds, and structured credit products) consistent[10] with a rise in spreads on a financial instrument (other than those in C above) with a maturity of 10 years (provided the spreads are below) at the following levels for each Grade (as per **Appendix 1**):

Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
0.60%	1.60%	1.75%	2.10%	5.00%	10.00%

4.2.1.2 Mortality Risks

The four mortality stress tests (E to H) include:

E: a 30% increase in mortality rates at all ages assumed in respect of the year following the calculation.

F: a 2.5% long-term annual improvement in mortality rates in perpetuity.

G: a recalculation of technical reserves using an increase to the long-term mortality assumptions of 10% at all ages.

H: mortality rates are increasing to an absolute level of 2 per mille per annum for all ages in respect of the year following the calculation.

4.2.1.3 Morbidity Risks

The morbidity stress test (I) is:

I: a 60% increase in male critical illness rates and a 30% increase in female critical illness/disability rates in respect of the year following the calculation.

4.2.1.4 Lapse Risks

The two lapse stress tests (J to K) include:

J: an 80% increase in lapse rates or 50% decrease in lapses rates (whichever is more onerous) in respect of the year following the calculation.

[10] Reinsurance undertaking must determine the appropriate rise in spreads for financial instruments with maturities other than 10 years based upon a reasonable and prudent methodology (e.g. as per the technical specification consultations for Solvency II such as QIS4 Technical Specifications as per MARKT/2505/08).

K: a recalculation of the technical reserves using a long term adjustment to the lapse assumptions of 50% of the once off change to lapses defined in J above.

4.2.2 Correlations

In determining the required solvency, the Financial Regulator permits reinsurance undertakings to take account of the following correlations without further justification:

	Govern. Bond	Fin. Inst (Grade 1)	Fin. Inst (Grade 2)	Fin. Inst (Grade 3)	Fin. Inst (G4+)	Equity	Property
Government Bond	100%						
Fin Inst (Grade 1)	30%	100%					
Fin Inst (Grade 2)	20%	60%	100%				
Fin Inst (Grade 1)	-10%	40%	60%	100%			
Fin Inst (G4 & below)	-30%	10%	40%	70%	100%		
Equity	-10%	-10%	-10%	-30%	-50%	100%	
Property	30%	10%	10%	0%	-20%	10%	100%

A reinsurance undertaking may employ different asset correlations to those set out above. Furthermore, a reinsurance undertaking may argue that it is appropriate to make allowance for further correlations in addition to the correlations above. In particular, reinsurance undertakings may argue that they have sufficient evidence of the existence of correlations between demographic and economic movements (e.g. lapse rates may be affected by changing economic conditions). A full statistical analysis justifying any such alternative or additional correlations must be submitted by a reinsurance undertaking to the Financial Regulator to ensure no objection prior to use in the solvency calculations herein.

4.2.3 Capital Calculation

Once a reinsurance undertaking has completed each of the applicable stress tests described above, the capital requirement must be aggregated using a square root of sum of the squares approach as follows:

Total additional capital (S), =

$$S = \sqrt{S_A^2 + S_B^2 + S_C^2 + ... + S_K^2 + \rho_{AB} S_A S_B + \rho_{AC} S_A S_C + \rho_{AD} S_A S_D + ...}$$

where:

S_X = additional capital arising from stress test x where x equals the stress tests A through K as detailed in section 4.2.1 herein.

ρ_{xy} = correlation coefficient between stress test x and y (where x is not equal to y)

The Financial Regulator will require reporting of capital calculations under each stress test above separately, as well as the aggregated results and the correlations used.

Due to the risk profile of life finite reinsurance business, as per Chapter 2 herein, an adequate amount of solvency margin must be applicable to all life finite reinsurance business. Therefore, in the event that the calculation of S above equals zero, an add-on to the total additional capital (S) must be applied (hereinafter referred to as the "S_+").

The add-on to the total additional capital (S_+) shall be equal to one of the following:

1) An adequate capital charge applicable to the underlying business, as determined by the reinsurance undertaking and outlined in a submission to the Financial Regulator, subject to receipt of a letter of no objection[11] from the Financial Regulator. Such a submission must address all of the quantifiable risks of the life finite reinsurance business and will be assessed by the Financial Regulator in the context of the tests specified in section 4.5.1.2 (The Calibration Test) and section 4.5.1.3 (The Statistical Test) herein[12].

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[11] Where such a letter of no objection is not forthcoming from the Financial Regulator, the Financial Regulator shall give a written response to the reinsurance undertaking outlining the changes required such that the Financial Regulator will reconsider any revised submission.

[12] A reinsurance undertaking may discuss an intended methodology with the Financial Regulator prior to making such a submission if they wish. The submission may also request a letter of no objection

2) In the absence of a submission in 1) above, S_+ must equal the Investment Charge (A) in the Required Solvency Margin calculation applicable to non-life finite reinsurance business, as per the requirements of the Financial Regulator[13], on the value of the relevant assets, as presented in the audited financial statements of the reinsurance undertaking, covering gross technical provisions (to include any assets held against business classified as finite reinsurance but not accounted for as reinsurance) of the life finite reinsurance business.

The Required Solvency Margin (S_R) shall therefore be equal to the total additional capital (S) or, if the total additional capital (S) equals zero, the add-on to the total additional capital (S_+). The Required Solvency Margin is therefore as follows:

$$S_R = \text{If } (S>0, S, S_+)$$

from the Financial Regulator for the future use of a methodology to derive S_+ by the reinsurance undertaking.

[13] Please refer to section 4.2.1 of the paper "Non-Life Finite Reinsurance", dated April 2008 (or any subsequent amended or updated paper that may supersede the April 2008 paper).

4.3 Disclosures

Reinsurance undertakings carrying on life reinsurance business are subject to the reporting requirements of the Financial Regulator[7].

Reinsurance undertakings carrying on life finite reinsurance must make the following supplementary disclosures in respect of their life finite reinsurance business:

- Credit Risk;
- Liquidity Risk;
- Treaty Risk;
- Concentration Risk; and
- Operational Risk.

These supplementary disclosures are required under Regulation 21 of S.I. 380 and are detailed in the Regulatory Returns section of this paper (Chapter 6).

4.4 Minimum Guarantee Fund

The Required Solvency Margin shall be subject to a minimum guarantee fund ("MGF") of €50 million for those reinsurance undertakings carrying on life finite reinsurance. For the avoidance of doubt, where a reinsurance undertaking classifies a material part of their business as life finite reinsurance, then the minimum guarantee fund of €50 million applies across all of business of the reinsurance undertaking.

4.5 Internal Capital Model

The International Association of Insurance Supervisors ("IAIS") defines an internal capital model as "a risk management system developed by a (re)insurer to analyse the overall risk position, to quantify risks and to determine the economic capital required to meet those risks"[14].

At the sole option of the reinsurance undertaking, as an alternative to the solvency requirements in sections 4.2, 4.3 and 4.4 herein, a reinsurance undertaking may make an application to the Financial Regulator for a letter of no objection to use the economic capital as determined by an internal capital model as the required solvency to be held in respect of life finite reinsurance business[15]. In the event that a letter of no objection is not forthcoming from the Financial Regulator, as notified in writing by the Financial Regulator, the reinsurance undertaking shall be required to hold the Required Solvency Margin and MGF as per sections 4.2, 4.3 and 4.4 herein.

4.5.1 Model Requirements

The Financial Regulator shall apply a basic framework of supervisory standards for an assessment of an internal capital model consistent with IAIS standards and the European Commission Solvency II proposal. The Financial Regulator acknowledges that the current Solvency II proposal[16] will be subject to change and refinement as Solvency II develops, and that flexibility will be required by the Financial Regulator in the assessment of an internal capital model as the Solvency II framework develops and the use of internal capital models by reinsurance undertakings progresses.

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[14] IAIS paper "Guidance paper on the use of internal capital models for risk and capital management purposes by insurers", dated October 2007.

[15] Such an internal capital model may apply solely to life finite reinsurance business or to the whole of the reinsurance business of the reinsurance undertaking. Where the internal capital model applies to the whole of the reinsurance business, the solvency for the life finite reinsurance business will be the economic capital for the whole business less that required for the traditional reinsurance business, subject to the statutory minimum solvency requirements for the traditional reinsurance business as applicable across the EU by the Reinsurance Directive and transposed into Irish law in S.I. 380.

[16] Amended Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the taking-up and pursuit of the business of Insurance and Reinsurance (SOLVENCY II), dated 26th of February 2008.

Within this context, the Financial Regulator will apply the following tests in the process of assessing an internal capital model:

4.5.1.1 The Use and Validation Test

The reinsurance undertaking's internal capital model must be closely integrated, or be in the process of integrating, into the risk management process of the reinsurance undertaking.

A reinsurance undertaking must have, or be in the process of implementing, a regular cycle of model validation which includes monitoring the performance of the internal capital model, reviewing the on-going appropriateness of its specification, and testing its results against experience.

4.5.1.2 The Calibration Test

The internal capital model must be calibrated so as to ensure that all quantifiable risks to which a reinsurance undertaking is exposed are taken into account and must be calibrated at a level that is appropriate, in the opinion of the Board of Directors, for the risk profile of the reinsurance undertaking.

The outputs from any internal capital model must be compared to the solvency requirements of the ASM_{LFR} herein or a similarly calibrated model that reflects a VaR risk measure calibrated to a confidence level of 99.5%, or an approximate equivalent measure, over a time horizon of one year[17].

In order to verify the calibration of the internal capital model, the Financial Regulator may require specific stress testing of an internal capital model by the reinsurance undertaking.

[17] For the purposes of section 4.5.1.2, the Financial Regulator will accept an internal capital model calibration that approximates the technical specifications in the ongoing consultations on Solvency II (e.g. QIS4 Technical Specifications as per MARKT/2505/08).

4.5.1.3 The Statistical Test

Data used for an internal capital model shall be accurate, complete and appropriate. A reinsurance undertaking must be able to justify the material assumptions underlying their internal capital model to the Financial Regulator. The methods used to determine material assumptions must be:

- based on adequate actuarial and statistical techniques,
- consistent with the methods used to calculate technical provisions, and
- based upon current and credible information.

4.5.2 Application

An application for use of an internal capital model, that meet the tests in section 4.5.1 herein, must be signed by at least two directors of the reinsurance undertaking and be made up of a report to include, but not be limited to:

- A brief overview of the internal risk management strategy of the reinsurance undertaking and the procedures used to monitor compliance with the strategy.
- A summary of the structure of the internal capital model with an explanation for the selected parameterisation, the probability of failure and any capital allocation calculations used within an internal capital model.
- A summary of the material input assumptions used in the model with background analysis on historical and industry data performed to substantiate the assumptions.
- Details of any material weaknesses or exceptions found during the course of any review of the model, the effect of the weakness or exception and work undertaken to address the weakness or exception.
- Any proposed material changes to the model currently anticipated or under way and the nature and expected effect of those changes.

- A brief summary of the output of the internal capital model, any stress testing performed, and the capital requirements selected as the recommended capital required by the reinsurance undertaking.
- Confirmation that all relevant professional staff have, or will have, an appropriate understanding of the internal capital model.

Where supplementary documentation is required to support any of the above details, these should be included in an appendix to the report on the reinsurance undertaking's internal capital model.

In the event that such an application is not successful, the Financial Regulator shall give a written response to the reinsurance undertaking, as soon as is practical, outlining the changes required such that the application will be reconsidered in the future.

5 Systems and Controls

The Financial Regulator developed its views in this chapter having considered the provisions of the Reinsurance Directive, S.I. 380, and international standards in this area (including Guidance Paper No. 11 of October 2006 of the IAIS). This Chapter is supplementary to the requirements of the Corporate Governance paper.

5.1 General

The opinion of the Financial Regulator as to what can be considered to be sound and adequate for the purposes of Regulation 20 for reinsurance undertakings is outlined in the Corporate Governance paper.

In addition to those outlined in the Corporate Governance paper, a reinsurance undertaking carrying on life finite reinsurance must have policies and procedures specifically relating to the classification of finite reinsurance contracts (to include risk transfer) as per 5.2 herein and contract documentation as per Chapter 3 herein. The Board of Directors are responsible for endorsing such policies and procedures and ensuring that these policies and procedures are implemented and monitored by the relevant professional staff throughout the organisation.

The Financial Regulator intends to undertake supervisory inspections in the future focusing on systems and controls in reinsurance undertakings and such inspections will include the requirements in this paper for those reinsurance undertakings carrying on life finite reinsurance.

5.2 Classification Policy

The principles-based approach of the Financial Regulator places an emphasis on the responsibility of senior management and the Board of Directors to formulate policies and procedures that are applicable and proportionate to its business. The classification of reinsurance contracts as life finite reinsurance is a matter for the reinsurance undertaking to

determine based upon the substance of the reinsurance contracts written or to be written by the reinsurance undertaking, and reinsurance undertakings must have a written policy for the classification of finite reinsurance business which has been approved by the Board of Directors (hereinafter referred to as a "Classification Policy").

The Classification Policy must have regard, inter alia, to this paper, S.I. 380, relevant IAIS papers, actuarial and accounting standards, the advice of professional advisors, or upon other criteria determined by the Board of Directors. The Classification Policy must also be subject to regular review, particularly pertaining to areas where new practices or standards emerge. Material amendments to the classification policy must be notified to the Financial Regulator as soon as practicable.

There are a number of features used in many life reinsurance contracts in the global reinsurance market that can be adapted to limit risk transfer or profit potential thereby impacting the risk profile of a reinsurance contract. The existence of one or more of these features does not in itself indicate "significant but limited" risk transfer. The risk profile of the reinsurance contract determines the risk transfer present in the contract and whether such a contract falls within the Classification Policy of the reinsurance undertaking determines whether it must be treated as a finite reinsurance contract for the purposes of this paper.

Examples of features that can be adapted to limit risk transfer include (but are not limited to):

i) **Ceding Allowances**: traditional reinsurance contracts may allow for a ceding commission to reimburse the cession undertaking for its acquisition expense plus a portion of the expected profit on the business covered (with the portion of expected profit being an item subject to commercial negotiation between the parties). Ceding allowances can also be set at a level to achieve a specific financial objective, including limiting the risk transferred under the reinsurance contract.

ii) **Termination or Recapture Provision**: traditional reinsurance contracts may allow for the termination, cancellation or commutation of the reinsurance contract at the sole option of the cession undertaking. Such provisions may also be associated, upon the exercising by the reinsurance undertaking of an option or other such contractual provision, with penalties that involve the cession undertaking reassuming losses or making payments to the reinsurance undertakings that have the effect of limiting the risk transferred under the reinsurance contract.

iii) **Commission Slide and Charge-backs**: traditional reinsurance contracts may use features such as a commission slide (a retroactive adjustment to an allowance previously granted) or a clawback (a retroactive adjustment to an allowance previously granted typically when lapse rates exceed a defined level). These features may also be set at levels to achieve a specific financial objective, including limiting the risk transferred under the reinsurance contract.

iv) **Asset Management**: traditional reinsurance contracts, such as coinsurance or modified coinsurance structures, may use features such as funds withheld whereby the cession undertaking retains the management control over the assets associated with reinsured business. The exact terms of these arrangements often depend upon which party to a reinsurance contract retains the investment risk on the reinsured business. The terms of the funds withheld or similar arrangements may be used to credit the reinsurance undertaking with an interest rate other than that actually achieved on the withheld assets in order to achieve a specific financial objective, including limiting the risk transferred under the reinsurance contract.

v) **Loss Carry Forwards**: traditional reinsurance contracts may use loss carry forward provisions to keep track of the cumulative profit position of the reinsurance contract for features such as Experience Refunds or Termination or Recapture Provisions. Loss carry forward provisions may be

used to keep track of the cumulative loss position as well as the cumulative profit position in order to achieve a specific financial objective, including limiting the risk transferred under the reinsurance contract.

vi) **Payback Schedule**: traditional reinsurance contracts may use payback schedules to limit items such as the amount of renewal profits a reinsurance undertaking can receive. Payback schedules may be used to limit the amount of risk transferred if the actual profits of the reinsured business fall below the expected amount and therefore involve an additional payment to the reinsurance undertaking.

vii) **Product Management Provisions**: traditional reinsurance contracts may use features to allow a cession undertaking periodically change or declare economic elements such as interest crediting rates, cost of insurance charges, and policyholder dividends. These features may also be set at levels to achieve a specific financial objective or result in other changes in the reinsurance contract, including limiting the risk transferred under the reinsurance contract.

Examples of features that can be adapted to limit profit include (but are not limited to):

a) **Experience Refunds and/or Deficit Accounts**: traditional reinsurance contracts may allow for the sharing of excess profits (on all or a portion of the subject business) from the reinsurance undertaking to the cession undertaking through experience refunds or deficit accounts. Such experience refunds or deficit accounts may also be used in combination with a risk limiting feature such as a recapture provision to achieve a specific financial objective, including limiting the profit of the reinsurance contract. Such features do not in themselves limit risk transfer but may indicate an asymmetric risk position between the cession undertaking and the reinsurance undertaking.

b) **Risk Fees or Charges**: traditional reinsurance contracts may use risk charges, such as a "use of capital" charge, to define the profit expected by the reinsurance undertaking. Where the profit of a reinsurance contract is determined solely by reference to an explicit fee, a risk charge or an interest rate, the implication is that the reinsurance undertaking's risk profile is commensurate with the rate of return expected from the reinsurance contract.

The senior management of the reinsurance undertaking or the Board of Directors may be required to explain and justify the rationale behind their Classification Policy to the Financial Regulator.

5.2.1 Contract Analysis

Any reinsurance undertaking carrying on life finite reinsurance must undertake an analysis of all reinsurance contracts where risk transfer, as per the requirements of section 2.3.1 herein, is not reasonably self-evident. In determining whether risk transfer is reasonably self-evident, the reinsurance undertaking may use the judgment of its senior management and/or Board of Directors in determining criteria consistent with industry best practice[18].

The contract analysis must be performed on a consistent basis for all life finite reinsurance contracts across the reinsurance undertaking.

The following risks commonly found in reinsurance contracts may be considered in assessing risk transfer for underwriting and/or timing risk:

1) Mortality Risk: This is the risk that policyholders will die and collect benefits sooner than expected (e.g. life insurance) or that policyholders will continue to live and collect benefits longer than expected (e.g. annuity insurance). For life insurance, most

[18] It appears to the Financial Regulator that a net present value cashflow analysis is a reasonable basis for such an analysis. The reinsurance undertaking may wish to refer to the Non-Life Finite Reinsurance paper for guidance on methodologies that may assist in developing such an analysis.

reinsurance contracts reimburse fully all death benefits, even if they exceed expected amounts. For annuity insurance, if the policyholder dies earlier than expected the death benefit can be higher than the cash value, or if the policyholder lives longer than expected, annuitization benefits can be higher than expected. Each, a portion, or a combination of these losses can be transferred through reinsurance.

2) Morbidity Risk: This is the risk that policyholders will need medical care or be disabled more frequently and/or at a higher cost than expected. Each, a portion (e.g. in excess of a stated amount or a stated period), or a combination of these losses can be transferred through reinsurance.

3) Lapse Risk: This is the risk that an insurance policy will voluntarily terminate prior to the recovery of the investment incurred to sell or issue the policy resulting in a loss on expenses incurred or upon a loss of future expected earnings. Each, a portion, or a combination of these losses can be transferred through reinsurance.

4) Investment Risk: Investment risk may or may not be passed onto a reinsurance undertaking through reinsurance depending upon the expected investment performance of the cession undertaking or the reinsurance undertaking. The types of investment risk includes the risk that invested assets ceded or credited to the reinsurance undertaking will decrease in value due to a decline in credit quality, the risk that invested assets of insurance policies will decrease in value due to a decline in credit quality, the risk that investment returns will decrease and assets reinvested will earn less than expected, and the risk that investment returns rise and therefore insurance policy loans and surrenders increase or maturing policies do not renew at anticipated rates of renewal.

6 Regulatory Returns

6.1 Annual Returns

Pursuant to Regulation 21 of S.I. 380, the information specified in this Chapter 6 are hereby required to be lodged with the Financial Regulator by an authorised reinsurance undertaking established in the State carrying on life finite reinsurance under item 8) of the Annual Return, as per the standard reporting requirements of the Financial Regulator[7].

Such an Annual Return must be sent to the Financial Regulator within 6 months[19] after the end of the reinsurance undertaking's financial year. The information required in respect of the life finite reinsurance business of the reinsurance undertaking is as follows (and must be clearly marked as information pertaining to life finite reinsurance business):

1) In respect of Chapter 4: Prudential Rules, the following:
   a. The calculations required under section 4.2 of this paper (such calculations to be supplied in electronic form) and the disclosures required under section 4.3 (and detailed in section 6.2) of this paper, or
   b. The information required under section 4.5 of this paper, if the reinsurance undertaking wishes to avail of that option.
2) A copy of the Classification Policy under section 5.2, if such has not already been submitted to the Financial Regulator, or details of any amendments or Board review of the Classification Policy.
3) Details of any material issues that have arisen in the preparation of the Annual Return or otherwise in respect of the life finite business of the reinsurance undertaking.

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[19] This time interval is under continual review and the stated objective of the Financial Regulator is to reduce this interval to 4 months in conjunction with the introduction of electronic reporting for reinsurance undertakings. Industry will be notified in advance of any change in this regard.

6.2 Disclosures

The disclosures required in section 4.3 by a reinsurance undertaking carrying on life finite reinsurance are required under Regulation 21 of S.I. 380 and are in addition to the standard requirements of the Financial Regulator[7]. Where any of the following disclosures indicate an economic loss potential that is material[20] to the business of the reinsurance undertaking under the prudent person principle, the strategies developed by such a reinsurance undertaking to counter any such risks must be disclosed to the Financial Regulator.

The Financial Regulator may adjust the Required Solvency Margin in section 4.2 herein based upon the following disclosures:

6.2.1 Credit Risk Disclosure

The Financial Regulator requires reinsurance undertakings carrying on life finite reinsurance to disclose any significant credit risks that the reinsurance undertaking faces in its finite life reinsurance business. Credit risk in this context means the risk of loss if another party fails to perform its obligations or fails to perform them in a timely fashion.

6.2.2 Liquidity Risk Disclosure

The Financial Regulator requires reinsurance undertakings carrying on life finite reinsurance to disclose any significant liquidity risks that the reinsurance undertaking faces over the next 24-month period on their life finite reinsurance business and how these will be mitigated, controlled and monitored. Liquidity risk in this context means the ease with which an asset can be converted into cash to pay its liabilities without negative impact.

[20] "Material" in this context must be determined by the reinsurance undertaking. The Financial Regulator's view is that material in this context is an economic loss potential that exceeds 5% of the reinsurance undertaking's available solvency margin. This view does not however imply that a lesser amount is necessarily immaterial.

6.2.3 Treaty Risk Disclosure

The Financial Regulator requires reinsurance undertakings carrying on life finite reinsurance to disclose any specific risks, that have not been the subject of other disclosures herein, that are faced in particular life finite reinsurance treaties, whereby such risks have not been reflected in stress tests in section 4.2 above (for example, large exposures from excess of loss treaties that have not been reflected by any stress tests). For each of these specific risks, reinsurance undertakings must disclose the level of loss required to attach to the treaty, the nature of the loss required, the maximum loss to the reinsurance undertaking that is possible, the premium paid under the treaty, and the reserves (specific and general) currently held under the treaty.

6.2.4 Concentration Risk Disclosure

The Financial Regulator requires reinsurance undertakings carrying on life finite reinsurance to disclose any significant concentration risks that are faced by their finite life reinsurance business and how these are mitigated, controlled and monitored. Concentration risk in this context means concentration in asset class, business class, geographical spread, and retrocession recovery.

6.2.5 Operational Risk Disclosure

The Financial Regulator requires reinsurance undertakings carrying on life finite reinsurance to explicitly identify their top five operational risks and/or exposures from their life finite reinsurance business. Operational risk in this context means the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. In each case, the potential level of financial loss and the estimated likelihood of occurrence under the most severe scenario must be disclosed.

Appendix 1: Credit Grades

The Grades used in this paper are equal to the following ratings[21]:

Key	S&P	Moody's	AM Best	Fitch
Grade 1	AAA	Aaa	A++	AAA
Grade 2	AA+	Aa1	A+	AA+
	AA	Aa2		AA
	AA-	Aa3		AA-
Grade 3	A+	A1	A	A+
	A	A2	A-	A
	A-	A3		A-
Grade 4	BBB+	Baa1	B++	BBB+
	BBB	Baa2	B+	BBB
	BBB-	Baa3		BBB-
Grade 5	BB+	Ba1	B	BB+
	BB	Ba2		BB
	BB-	Ba3		BB-
Grade 6	B+ or below	B1 or below	B- or below	B+ or below

[21] *A reinsurance undertaking may nominate one or more of the rating agencies above to be used in determining all of the calculations herein such as selecting the asset risk factors. If there is more than one credit assessment available from the nominated rating agencies, then the credit assessment that results in the highest capital charge must be selected.*

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