



Institute  
and Faculty  
of Actuaries



## Request for Tender

### Research projects:

- Equity Release Mortgages: No Negative Equity Guarantee (NNEG)

Deadline: 12.00 hours on Friday 7 September

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## 1 INTRODUCTION

### 1.1 Introduction to the Institute and Faculty of Actuaries

The Institute and Faculty of Actuaries (IFoA) is a professional body representing and regulating over 29,000 members around the world. Actuaries provide commercial, financial and prudential advice on the management of assets and liabilities – particularly where long-term management and planning are critical factors. Under its Royal Charter, the IFoA has a public interest duty. Part of this is fulfilled through the development of research outputs that are relevant to actuarial practitioners, policymakers and other stakeholders around the world.

The IFoA places the advancement of actuarial science at the heart of its activities by commissioning and funding research that:

- advances actuarial science as a subject,
- supports industry practitioners,
- helps inform evidence-based public policy development.

### 1.2 Introduction to the Association of British Insurers

The Association of British Insurers (ABI) is the voice of the UK's world leading insurance and long-term savings industry. A productive, inclusive and thriving sector, we are an industry that provides peace of mind to households and businesses across the UK and powers the growth of local and regional economies by enabling trade, risk taking, investment and innovation.

The UK insurance market:

- helps Britain thrive in its global role, adding £40 billion a year to the UK economy.
- is responsible for more than 300,000 jobs in an industry which is highly-skilled and global
- provides peace of mind to businesses and families across the UK
- enables exports and invests in new technologies that will secure Britain's prosperity

The ABI:

- has over 250 member companies, including most household names and specialist providers
- was formed in 1985 and is funded by members' subscriptions on a not-for-profit basis
- our members are major tax contributors, paying approximately £12 billion to the government annually
- all our members agree to our compulsory codes of conduct

Our role is to:

- get the right people together to help inform public policy debates, engaging with politicians, policymakers and regulators at home and abroad.
- be the public voice of the sector, promoting the value of its products and highlighting its importance to the wider economy
- help encourage consumer understanding of the sector's products and practices
- support a competitive insurance industry, in the UK and overseas

Note that the ABI does not sell insurance, nor are we regulators of the sector.

## 2 RESEARCH PROJECT

### Context

The Equity Release Mortgage (ERM) market has significant social importance providing funding for a growing elderly population in the UK who are often “asset rich” but “cash poor”.

The uses of ERMs in the UK include:

- Overcoming shortfalls in retirement income – the so-called “pension gap”.
- Refinancing debt e.g. debts arising from “interest only” mortgages or consumer credit.
- Releasing funds e.g. to pay for home improvements or adaptations, meet care costs in the home or to provide funds for children to buy a new home.

The ERM market also fulfils a secondary but no less important social need, providing secure assets to back annuities. The mortgage assets are an important alternative to corporate bonds which usually have a much higher credit risk to achieve the same return. While the individual annuity market has reduced in size, the bulk annuity market is growing as closed final salary schemes seek to buy out members benefits as cost-effectively as possible. Equity release assets are one of the key alternative assets helping life insurance companies meet that objective.

The actuarial profession has always taken a lead in this area including the publication of the seminal sessional paper Pricing and Risk Capital in the Equity Release Market by Hosty, Groves, Murray and Shah on 29 October 2007 (“the 2007 paper”). However, this paper is now over 10 years old and the ERM market is now significantly larger, growing rapidly with new entrants and subject to Solvency II. It is now time to give an updated, independent professional view for valuation, capital and pricing purposes.

There are also external issues. The Prudential Regulatory Authority (PRA) has indicated its concerns about the assessment of the risks involved in relation to the NNEG in a series of recent publications including DP1/16, CP48/16, PS14/17, SS3/17 and CP13/18. These concerns relate both to the methods and the choice and range of assumptions used.

An initial review of academic literature covering the ERM and housing market has been undertaken by the IFoA’s ERM Working Party (WP) this year. The initial findings are that the papers published cover a number of possible options, but that they do not necessarily put forward solutions which are immediately relevant to the practical assessment of NNEG risks. The papers sometimes use statistical/mathematical techniques which are unfamiliar to practitioners.

In addition, the ERM WP has also carried out a survey of providers which has provided some insight to current approaches and methodologies.

A significant number of IFoA members in the UK are employed by ABI member firms, and the ABI’s members account for a substantial majority of UK’s ERM market. The ABI has therefore taken a close interest in the evolving policy and regulatory environment of ERMs as a product and an asset class, and will continue to do so.

This includes the development of collective industry positions on policy and technical issues that impact ABI members and their customers; a regular dialogue with the PRA and other policymakers; constructive contributions to public debate; and the collection of data and other benchmarking information from member firms.

The ABI has responded to each of the recent series on PRA consultations (referred to above) regarding ERMs and other illiquid assets and plans to also respond to the latest one in this series.

The information outlined above provides reasoning for carrying out this piece of research. Both organisations have decided to jointly commission this piece of work and have set up a joint Review Group to oversee and quality assure the project.

## Background

In January 2018 the ERM WP advised the IFoA's Research and Thought Leadership Board (RTLB) that there was a need to carry out research in this area and in April 2018, the ERM WP's funding request to commission this piece of research was approved.

It was agreed that this research would be carried out in partnership and in June 2018, the IFoA and ABI agreed to jointly commission the work.

### 2.1 Research Goals and Objectives

The objectives of the commissioned research are to determine appropriate methods for determining ERM cashflows and their value:

- To give a more academically rigorous view than previously, given the increasing importance of the market.
- To consider appropriate stochastic models, including the range of demographic and economic factors taken into account, how they are modelled, and the correlations assumed. Any modelling should consider the range of ERM product features and options.
- To give a view on whether it is necessary to model all factors stochastically or could some factors (e.g. mortality) be valued deterministically without any great impact on the results.
- To consider practical approaches to approximating any models proposed.
- To consider whether it is reasonable to use closed form solutions based on Black Scholes (as adjusted) or whether there are alternative closed form solutions which might be better. It is recognised, for example, that the geometric Brownian Motion (GBM) underlying Black Scholes does not truly represent the ERM risks. However, the research proposal is interested in practical solutions, so closed form solutions such as Black Scholes should be supported (or at least not ruled out) if with suitable parameters and adjustments they gave similar results to stochastic modelling.
- To consider the relative merits of 'real world' and arbitrage free (risk neutral) methods and how the assumptions should be set on both bases. In the context of the insurance industry, particular attention is drawn to the different uses to which cashflows and value might be put and the importance of appropriately determining expected cashflows and future outcomes through the economic cycle, distinct from the current price or fair value, and the relationship between the two under different economic conditions, e.g. under a low risk free rate environment.
- To consider whether there are any "halfway house" solutions between real world and risk-neutral approaches given, in relation to the latter, the absence of a deep and liquid market. It should be noted that the 2007 paper suggested that there was a significant difference in the value of the NNEG on the two approaches.
- To consider the theoretical reasonableness of applying a deferred possession cap (positive deferment rate) on the projected ERM cashflows and on the value of the ERM assets and how this cap should be assessed under different economic conditions. For example, the implications when real yields are negative and resulting impact on the difference between real world and risk neutral cashflows.
- To provide results based on detailed modelling. The 2007 paper had a very simple model and it was felt that a more realistic approach was desired. However, it was recognised that there would be significant commercial constraints on providers giving information directly. It is considered that academic research based on real ERM data and past experience would add to the credibility of this research, compared to past professional and academic papers.
- To provide commentary in terms of theoretical coherence, consistency with current and historical market data, ease of implementation and explanation, and objectivity.

### 2.2 Proposed Methodology

The joint Review Group envisage six stages to the research:

1. Review all existing literature on modelling UK residential house prices and no-negative equity guarantees.
2. Determine the way forward and commence development of models and potential stochastic and closed form solutions. Consider how parameters should be assessed and gather market and other information as required.
3. Market Research
  - collect data to support the modelling (historic house price data, ...)

- set assumptions for modelling
  - build models to perform the financial analysis
  - summarise results
  - document models
4. Detailed modelling and summary of initial results and recommendations.
  5. Review findings
  6. Additional market research if required.

### 2.3 Target Audience

This research will assist those who need to model the no-negative equity guarantees, including actuaries who work for insurance companies (including ABI members), consultancies, audit firms and the regulator. It will also be relevant to:

- The UK Government, departments and committees dealing with policy and legislation within this subject area, such as the Department for Work and Pensions and HM Treasury
- Regulatory authorities, such as the UK's Prudential Regulatory Authority and Financial Conduct Authority as well as international regulatory bodies such as EIOPA (the European Insurance & Occupational Pensions Authority) and the IAIS (International Association of Insurance Supervisors)
- Members of the Houses of Parliament and the Lords, and their relevant committees
- UK public and special interest groups
- Indirectly, it is also relevant to the consumer of these financial products – as the findings could eventually impact upon the availability and affordability of products offered to customers

It is envisaged that the outputs from the research will reach these audiences through the mainstream and trade media, direct contact, events, conferences and other IFoA and ABI communication channels. Depending on what the research says, it is likely to specifically attract interest from the financial press if it means that investors in equity release need to hold more capital or can release it.

It should also be noted that all IFoA and ABI jointed commissioned research is published as open access to the public.

### 2.4 Desired Outputs from the Research

It is expected that the outputs of this research will fit with two core IFoA objectives:

- 1) Public Affairs and Promotion
- 2) Learned Society and Thought Leadership.

And two ABI objectives:

- 1) Informing public policy debates
- 2) Supporting a competitive insurance industry

A research report will be produced, covering theoretical approaches for determining NNEG cashflows and their value, but also including a proposal on practical ways to apply these methodologies in practice so that they can be adopted as common actuarial practice for the pricing and valuation of NNEG costs within life assurers. It will:

- Establish the appropriateness of the existing approaches used by life companies.
- Produce recommendations of new approaches and/or enhancements to existing approaches.
- Help the actuarial profession as a whole to understand the various alternative statistical/mathematical techniques, and choosing ones which are most suited to the work at hand. It will help to ensure that actuaries are using the most appropriate methodologies for their valuation on a best estimate, IFRS and Solvency II basis; and ensuring that ERM products can be valued and priced as accurately as possible by product providers. This would ensure that the general public do not pay more than they need to for these products, but also that funders are setting aside sufficient capital to meet the cost of NNEGs within ERMs.

### 2.5 Timescale

Timescales are included in section 3.3.

### 3 SERVICE SPECIFICATION

#### 3.1 Purpose and Expected Outcome

The joint Review Group is seeking to appoint an organisation to undertake the research set out under section 2.

The research should commence at the start of October, with a target completion date to be mutually agreed by the tenderer and the joint Review Group.

#### 3.2 Scope of work and deliverables

The successful organisation will:

1. Liaise with joint Review Group on the design, progress and finalisation of the research,
2. Provide appropriate outputs that are to be defined as part of the tender.

#### 3.3 Timetable

<b>Deliverable</b>	<b>Date</b>
Deadline for submission of proposals	7 September 2018
Award of contract(s)	12 September 2018
Confirmation of research approach and methods	28 September 2018
Research commences	1 October 2018
Research outputs delivered to joint Review Group	To be mutually agreed between the tenderer and joint Review Group.

#### 3.4 Supervision of the project

The project will be supervised by the IFoA's Research and Knowledge Team, working with members of the project's joint Review Group for quality assurance of outputs.

A Project Manager has been assigned to oversee the project. The Project Manager will work closely with the successful research organisation to ensure the project deliverables are being achieved, and to address any issues arising.

The research organisation will provide the Project Manager with regular updates on the project. Reporting methods will be agreed by the research organisation, joint Review Group and Project Manager, however a project kick off and closure meeting are mandatory.

## **4 TENDER INFORMATION**

### **4.1 Notice to Tenderers**

This Request is being made available to Tenderers for their sole use and for purpose of assisting a Tenderer to prepare and submit a Tender to the IFoA and ABI in accordance with the requirements of this Request. It has been made available on the condition that it is used only in connection with the Project and for no other purpose.

Whilst prepared in good faith, this Request is intended only as preliminary background explanation of the Project. This Request does not purport to contain all of the information that a Tenderer may require. Any tenderer considering tendering to the IFoA and ABI should make their own evaluation of the potential opportunity.

None of the IFoA and ABI nor its advisers or staff:

- Makes any representation or warranty (express or implied) as to the accuracy, reasonableness or completeness of this Request.
- Accept any responsibility for the information contained in this Request or for its fairness, accuracy or completeness.
- Shall be liable for any loss or damage (other than in respect of fraudulent misrepresentation) arising as a result of reliance on such information or any subsequent communication.

Only the express terms of the final agreement (available on request) and other related contractual documents as and when they are executed shall have any contractual effect in connection with the Project. It should, however, be noted that this paragraph does not apply to paragraphs 4.2.3, 4.2.5 and 4.2.7 of this Request which shall have contractual effect.

### **4.2 Conditions of tendering**

#### **4.2.1 Right to cancel or vary the Process**

The IFoA and ABI reserves the right to:

- cancel, abandon and/or withdraw from the contract opportunity and procurement process at any time and, therefore, not proceed with this Project or award the Agreement or any other contract connected to the Project; and/or
- require you to clarify your Tender in writing and/or provide additional information as the IFoA and ABI may reasonably require; and/or
- amend the terms and conditions of the tender process.

The IFoA and ABI reserves the right to issue supplementary documentation at any time during the tender process. All such further documentation issued by the IFoA and ABI shall supersede any part of the Request to the extent indicated.

The IFoA and ABI is in no way committed to accepting any Tender.

#### **4.2.2 Right to reject and/or disqualify**

The IFoA and ABI reserves the right not to consider your Tender for acceptance where:

- The Tender is submitted late, is completed incorrectly, is incomplete or fails to meet the IFoA and ABI's Submission Requirements; and/or
- There is a change in identity, control, financial standing or other factor affecting you; and/or
- The IFoA and ABI becomes aware that you have fixed or adjusted your prices or rates in agreement with any other person, communicated to any person the amount or approximate amount of your price (except where disclosure is made in confidence to obtain quotations for the preparation of your Tender) or that the information provided by you in your Tender is intentionally or unintentionally false, misleading or incorrect.

#### **4.2.3 Costs and Expenses**

You are solely responsible for your costs and expenses incurred in connection with the tender process, preparation and submission of your Tender, conduct of any subsequent clarification or any other aspect of this tender process.



#### **4.2.4 Conflicts of Interest**

The IFoA and ABI wishes to avoid or reconcile any conflicts of interest which may compromise its obligations to conduct an open and transparent competitive process. You must, therefore, ensure that participation in the tender process does not in any way compromise the IFoA and ABI's objectives in this regard.

If in doubt, the IFoA and ABI will ask that you declare potential conflicts of interest as soon as possible and inform the IFoA and ABI of the measures it intends to put in place to avoid or reconcile it occurring.

The IFoA and ABI will seek to agree any measures that are necessary to avoid or reconcile any conflict of interest or potential conflict of interest. In the event that an agreement cannot be reached, you may have to withdraw from the tender process.

#### **4.2.5 Confidentiality**

You agree to keep confidential this Request and all information provided therein. The information provided may be made available to your employees and professional advisers directly involved in tendering to the IFoA and ABI (who must also be made aware of the obligation of confidentiality) but shall not be copied, reproduced, distributed or otherwise made available to any other party in any circumstances without the prior written consent of the IFoA and ABI, nor may it be used for any other purpose other than that for which it is intended.

It is your responsibility to develop your Tenders to ensure that the requirements of this Request are fully satisfied.

The content of Tenders, or any other information provided by Tenderers in the course of tendering for this Project, or in the course of their subsequent appointment, may be disclosed by the IFoA and ABI to its employees, volunteers, working groups, committees, professional advisers or other regulatory bodies.

#### **4.2.6 Canvassing and Collusion**

Except as provided in the Request, you shall not approach staff of the IFoA and ABI with a view to providing information or clarification in respect of any part of your tender or proposals or attempting to support or enhance your prospects of being appointed as successful Tenderer.

Please sign and return with your Tender the Non-canvassing Certificate and the Anti-collusion Certificate.

#### **4.2.7 Publicity**

There must be no publicity by you regarding the Project or the future award of any agreement unless the IFoA and ABI has given express written consent to the relevant publicity.

#### **4.2.8 Conditions of Contract**

The main contractual terms include the following:

##### **Standard of care**

The IFoA and ABI requires that all works and activities to be undertaken with due care and attention notwithstanding that research may be exploratory or uncertain. In that respect, depending on the proposed use of the research, we do not usually look for guarantees or warranties as to what certain outcomes will be able to do but we do need care to be taken whilst the work is being undertaken.

##### **Outputs**

The outputs will be known at the time of applying for tender and will need to be included in the agreement. The payment of invoices will be linked to the satisfactory completion of outputs.

##### **Intellectual property**

The starting point is for the IFoA and ABI to hold all intellectual property for research developed or arising through the course of the project, unless agreed in writing between the IFoA, ABI and the researchers.

##### **Publicity**

All media releases, public announcements and public disclosures by the researchers relating to the Project, including promotional or marketing material, is subject to approval by the IFoA and ABI prior to release.

Full draft agreement is available on request from the Research Project Manager, Vanessa Bennett (vanessa.bennett@actuaries.org.uk)

#### **4.2.9 Sub-contracting**

Please set out in your Tender if you intend to use sub-contractors to deliver the Project. You shall be fully responsible for all sub-contractors and must ensure all relevant terms and conditions are applied within any relevant sub-contract. For the avoidance of doubt, this includes the obligation of confidentiality.

#### **4.2.10 Jurisdiction and Governing Law**

The laws of England and Wales shall be applicable to the Request. The courts of England and Wales shall have exclusive jurisdiction in relation to any disputes arising from the Request.

## **5 TENDER EVALUATION CRITERIA**

### **5.1 Evaluation procedure**

The contract shall be awarded on the basis of quality and value for money. As a guide only, the IFoA and ABI intends to evaluate Tenders on the basis of the criteria set out below, but reserves the right to evaluate and award the contract as it sees fit.

In relation to quality, Tenderers will be assessed on the following criteria:

- Expertise of researchers conducting the research and their understanding of the subject matter and related issues
- Capability of the researchers to identify, access and utilise appropriate data and information
- Added value, for example, in terms of insight and analysis and experience with similar projects
- Ability to work to project timescales
- Quality of the submitted tender document by Tender

In relation to price, there will be an assessment comparing the different Tenderers.

Tenderers must clearly demonstrate their breakdown of costs. Please see appendix 1.

### **5.2 Short Listing**

Tenders may be short listed and invited to meet with the IFoA and ABI (at their own expense) to discuss their proposals.

### **5.3 Result**

If a successful Tenderer is selected, the IFoA and ABI will notify the successful Tenderer of the outcome and shall start any relevant contract negotiations.

## **6 COMPLETION AND SUBMISSION REQUIREMENTS**

### **6.1 Clarifications**

Any questions about the project or the terms of this Request should be submitted to:

Research Project Manager: Vanessa Bennett

By email: [vanessa.bennett@actuaries.org.uk](mailto:vanessa.bennett@actuaries.org.uk)

The Project Manger shall respond within one working day.

You may be required by the IFoA and ABI to provide additional information supplementing or clarifying your Tender in order for the joint Review Group to evaluate Tenders. If so required, Tenderers are normally asked to respond within 5 working days of a request. Failure to respond to any request may result in you not being appointed as the successful Tenderer.

### **6.2 Content of Tender**

The Tender must consist of the following:

- Quotation to provide the service
- Non-canvassing certificate (appendix 2)
- Anti-collusion certificate (appendix 3)

### **6.3 Submission of Tenders**

Tenders should be returned electronically to [research@actuaries.org.uk](mailto:research@actuaries.org.uk).

Tenders must be returned by e-mail no later than 12.00 hours on Friday 7 September 2018 and be clear, concise and formatted as follows:

- Language: English
- Financial: all financial information or data forming part of any Tender must be submitted in or converted to pounds sterling, inclusive of VAT.
- Signed by an authorised signatory for your organisation. In submitting a Tender it is assumed by the IFoA and ABI that the signatory is so authorised.

Any Tender received after the Tender Return Date may not be considered by the IFoA and ABI.

## Appendix 1

### Cost Structure and Proposal for delivery of the Project

#### Cost structure

Please provide a breakdown of the expected costs incurred for the project, including VAT.

#### Quality

It would be helpful if the following information could be used as a guide when submitting your proposal for the delivery of the project.

Company	<ul style="list-style-type: none"><li>• Provide a profile of your organisation.</li><li>• Include the location of the offices the allocated researchers will be working from.</li></ul>
Researchers	<ul style="list-style-type: none"><li>• Provide evidence of the experience of the researchers conducting the research.</li><li>• Provide evidence of researchers' understanding of the subject matter and related issues.</li><li>• Include a structure chart of the staff planned for deployment on this project, indicating their grade and line of reporting.</li><li>• Include relevant senior staff CVs.</li></ul>
Target audience	<ul style="list-style-type: none"><li>• Provide details of relevant contacts your organisation has liaised with and examples of the engagement.</li><li>• Provide details of avenues for the identification of relevant research participants.</li><li>• Provide details of the suggested sample size for the research.</li></ul>
Added value	<ul style="list-style-type: none"><li>• Provide examples of similar projects worked on in the past.</li><li>• How will your organisation add value to the current plans for this project.</li><li>• Provide details of how you would plan to analyse the data.</li><li>• Provide details of the deliverables your organisation would expect to provide e.g. executive summaries, reports, presentations etc.</li><li>• Provide details of how the work will be quality assured.</li></ul>
Ability to work to project timescales	<ul style="list-style-type: none"><li>• Provide draft project plan.</li><li>• Provide estimate of the time required and/or any issues foreseen with the timelines outlined in Section 3.3.</li></ul>
Brand	<ul style="list-style-type: none"><li>• Provide a list of clients you have delivered similar projects for.</li></ul>

**Appendix 2**

**Non-Canvassing Certificate**

This certificate is required to be signed by the Tenderer (or each member of the consortium team if applicable) and returned to the IFoA and ABI with the Tender.

**Name of Tenderer**

.....

I/we\* hereby undertake that I/we\* have not canvassed or solicited, nor will in the future, canvas or solicit the IFoA and ABI or any officer or employee thereof in connection with the award of this Tender and that the persons employed by me/us\* acting on my/our\* behalf have not nor will not do any such act.

In this certificate, the word “person” includes any persons and any body or association, corporate or unincorporated and “agreement” or “arrangement” include any such transaction, whether formal or informal, legally binding or not.

Signature of authorised officer of the Tenderer:

.....

Name

.....

Date

.....

\* Delete as appropriate

**Appendix 3**

**Anti-Collusion Certificate**

1. We certify that this Tender is made in good faith, and that we have not fixed or adjusted the amount of Tender by, under or in accordance with any agreement or arrangement with any other person. We also certify that we have not and we undertake that we will not, before the award of any Agreement for the Project:
  - (a). communicate to any person other than the IFoA and ABI or a person duly authorised by them on their behalf the amount or appropriate amount of the Tender or proposed Tender, except where disclosure, in confidence, of the approximate amount of the Tender was necessary to obtain insurance premium quotations required for the preparation of the Tender;
  - (b). enter into any agreement or arrangement with any person that they shall refrain from participating in tendering for the Project, that they shall withdraw any Tender once offered to vary the amount of any Tender to be submitted to the IFoA and ABI;
  - (c). pay, give or offer to pay or give any sum of money or other valuable consideration directly or indirectly to any person or doing or having done or causing or having cause to be done in relation to any other Tender or proposed submission for the Project, any act of thing of the sort described above.
  
2. We further certify that the principles described above have been, or will be, brought to the attention of all suppliers and associated companies providing services on materials connected with the Tender (if so applicable) and any contract entered into with such suppliers or associated companies shall be made on the basis of compliance with the above principles by all parties.
  
3. In this certificate, the word “person” includes any persons or any body or association, corporate or unincorporated; “any” means any agreement or arrangement; “arrangement” includes any transaction, formal or informal and whether binding or not; and “the Project” means the Project in relation to which this Tender is made.

Signature of authorised officer of the Tenderer:

.....

Name

.....

Date

.....