A NEW FINANCIAL ASSET CLASS IN THE UK

In December last year, the government finalised the sale of some student debt to private investors. The sale was the first of its kind and created a new financial asset class in the UK. Valuing and selling these unique assets presented demanding problems which were addressed by drawing in experience from a range of experts from both the public and private sectors. This article looks at some of the main challenges and how GAD was able to provide support to these elements of preparing for the sale.


Andrew Jinks

Why was this sale the first of its kind?

The UK Government has sold student loans before. However these were older 'mortgage style' loans available to students between 1990/91 and 1997/98. With different repayment terms, this first sale of Income Contingent Repayment (ICR) loans represented a unique challenge and has introduced a new asset class in the UK.

The loans sold were pre-2012, Plan 1 loans held by approximately 411,000 students who first entered repayment between 2002 and 2006. Through the sale, future repayment proceeds from the loans will be passed to private investors, in exchange for an upfront payment to the government.

The sale raised around £1.7 billion for UK government and is expected to be the first in a series of sales of the Plan 1 loan book which is targeting £12 billion proceeds.

What are Income Contingent Repayment loans?

Whilst loans have been offered to students going to university or higher education for many years, the introduction of tuition fees in 1998 coincided with a significant change in the student loan terms. In particular:

- loans now cover both tuition fees and maintenance; and
- repayments depend on a borrower's earnings and only start once these earnings reach a certain threshold level.

These loans are called 'Income Contingent Repayment' loans.

What was the government's approach?

In the 2016 Autumn Statement, Chancellor Phillip Hammond reiterated the government's intention to launch a sale of the ICR English Plan 1 student loan book. This required significant planning, analysis and organisation across a number of stakeholders, government departments and advisors.

The sale was structured as a securitisation, meaning that the loans were packaged together and their related cash flows sold to investors as bonds with varying seniority, maturity and interest rates. A key requirement was being able to straightforwardly project and understand those future cash flows expected. UK Government Investments (UKGI), the Government's centre of excellence in corporate finance and governance who are overseeing the sale of the Plan 1 loans on behalf of DfE, asked GAD to develop a computer model to deliver this and inform the sale.

A key requirement ... was having an appropriate model in place to project and understand the cash flows expected.

Who used the model and what does it do?

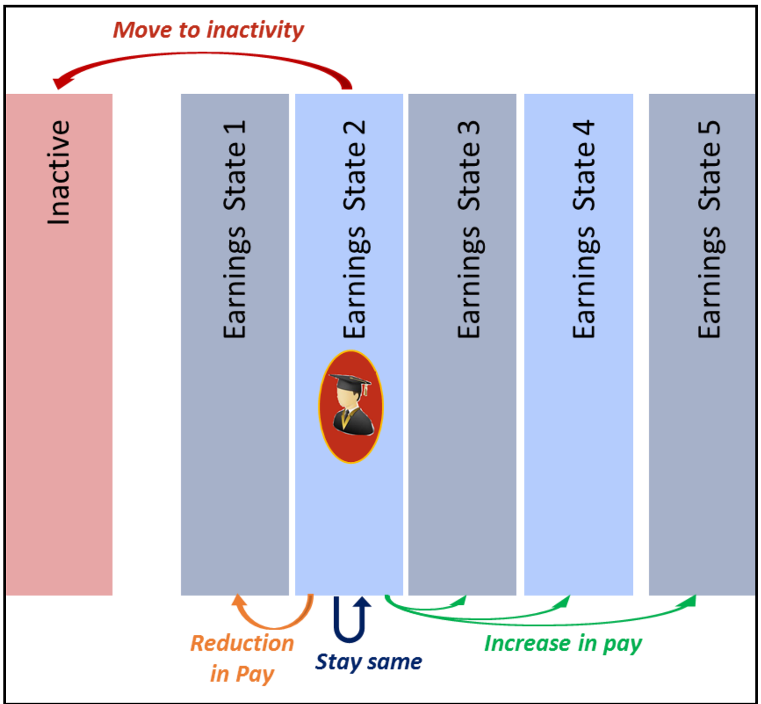
The model was needed by government to better understand and place a value on the cash flows of a particular pool of loans that would be sold to investors, and inform decision making. However, given that investors and other market participants, such as investment rating agencies, were not familiar with this new type of asset, the model was also provided to third parties. This allowed them to increase their understanding of the key characteristics of the loan cash flows and analyse possible outcomes using their own views.

The model provides a projection of the repayments for the group of student loans included in the sale. Projecting cash flows under the sale was done in a number of stages:

- First each borrower's earnings are projected year by year;
- Next, the earnings are converted into repayments, based on each loan's terms and amount outstanding;
- Finally, the payments to investors are determined from the total projected collections and the package loan structure.

GAD's focus was the first part: projection of earnings.

A NEW FINANCIAL ASSET CLASS IN THE UK (cont.)



Projecting borrowers' earnings

GAD's model projects a borrower's earnings as a journey through a number of 'states', which broadly represent different levels of earnings and also periods of economic inactivity. The key assumptions in the model are the probabilities dictating if and when borrowers move between the different states. They depend mainly on the borrower's current earnings.

Working in partnership

Developing a suitable model for the pool of loans to be sold proved challenging for both the private and public sector due to the unique nature of the asset. UKGI ultimately selected GAD's model due to the accuracy of the model output and the simplicity of the modelling approach.

the successful delivery of the model depended critically on building a close working partnership with UKGI

Given the need both to share the model with third parties and to meet the challenging sale timescales, the GAD model needed to be quickly developed to meet a high quality hurdle. Whilst the GAD team worked with dedication and efficiency, the successful delivery of the model depended critically on building a close working partnership with UKGI via:

- on-site working and regular dialogue – managing the project and discussing initial findings;
- developing the model in an agile manner – allowing us to share, discuss and refine the approach and evolve the model as quickly as possible; and
- open engagement and regular challenge meetings – taking stock on progress and testing our approach and assumptions.

GAD gave ongoing support and advice to UKGI throughout the sale process on the appropriate use of the model and the significance of the assumptions and judgements on which it is built. Further GAD assisted UKGI in assessing the "value for money" of the sale.

GAD's working partnership with UKGI has evolved and strengthened through this support and through secondments of GAD staff to UKGI. Secondments at both junior analyst and senior modelling team lead levels have helped embed the model within UKGI and transfer knowledge – as well as providing development opportunities for staff at both organisations.

Next steps

This is expected to be the first in a series of sales of the Plan 1 loan book targeting £12bn proceeds. GAD's focus is now switching to supporting UKGI on future sales and how the model developed between UKGI and GAD might be used in the future.

The successful delivery of this project demonstrates how GAD can apply our skills as actuaries to work closely with other experts to support robust decisions on novel and unique problems. Further, the project demonstrates ways of working to minimise development time and increase our understanding of how the analysis supports the rest of the project.

If you would like further information on how GAD's expertise and skills can support you – particularly on developing models and analysis to support unique and novel challenges – please contact **Andrew Jinks** or **Ian Rogers**.

GAD contacts

Email: enquiries@gad.gov.uk Telephone: 020 7211 2601
For details of our management team and office address please visit:
https://www.gov.uk/gad#people