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How Can Actuaries Help the Mortgage Industry?

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The 2008 collapse of the housing market pushed the government and banks to develop partnerships directed to stabilize the market and heal the mortgage turmoil. The widely advertised Making Home Affordable program and other foreclosure prevention programs are in fact loan restructuring models (“models”) designed to capture and give relief to a specific niche of borrowers: usually people who got into the trouble due to an objective economic, health or other hardship, but who still are “curable” in terms of complying with specific model requirements. The strategic target was to reduce the number of foreclosures, provide extra sustainability and prevent the housing market from future shakedowns. For borrowers the models work as insurance policies (often with zero premiums) against mortgage defaults. In general all current models have strict restrictions in regard to preexisting conditions. According to recent statistics and reports, the models have little effect and are often considered “designed to fail.” While it is not clear what was the role (if any) of actuaries in the development and management of the models, a list of improperly managed complex risks comes forth when applying the models.

A major parameter of current restructuring models is borrowers’ gross (rarely net) household income. Borrowers are required to show that they meet income requirements and that the income stated is sustainable (e.g., would normally last for at least another year). The models failed to incorporate any job sustainability and security measures. For example, people who have worked on the same job for 10 years and others for one year are treated similarly, while they represent different risks of losing jobs and re-defaults. It is obvious that job security varies from one profession to another and that is not reflected in the models. For example, a health care professional and a freelance artist are treated equally. In fact, the quality of income might be more important than the quantity, and it should be assessed and managed carefully.

Loan to property value (LTV) ratio is another major parameter in the spotlight. It is required to have an LTV not less (sometimes not more) than a predefined level. Probably the logic is as follows: a low LTV means more equity in the underlying property and therefore more bor-



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lower assets. More borrower assets mean the borrowers are in less need of help. But a low LTV often means more successful and/or responsible borrowers who are better customers because they managed to knock down their loans more quickly than others. So, when requesting a minimum LTV, the models are promoting an adverse selection.

The consistency of payment history isn't incorporated in the models very well. As a rule, the existing models require a credit check, and the subsequent credit score obtained is used as an input parameter for valuation tests like the net present value (NPV) test of the Treasury. But, if we consider how the determination of the credit score works, it is affected as soon as a borrower misses a payment or is late, which could be the very beginning of the original default. As a result, a borrower with a lower credit score may have a more favorable payment history and hence be more committed to pay back his/her debt than historic nonpayers who recently managed to obtain decent credit scores.

It is not clear how the number of people in households is incorporated into the models. Common sense suggests that lenders care about their public relations and an upcoming image of a villain lender evicting a large number of people to the streets does not benefit them. In other words, the lenders are helping big size households better than small size ones. Big size defines less income per a household member, tighter monthly family budget and a higher possibility of re-default. Plus we know that family size is largely affected not only by income but also

cultural and religious factors. Therefore, the relationship between the size of household and sustainability of models is more complex than it would seem to be and has many dimensions. The existing models also do not reflect any highly probable planned developments like graduations, retirements, etc. Such developments could essentially affect one or more control parameters of the models.

A recent forecast states an increase in the number of mortgage defaults and foreclosures in 2011. Loan restructuring is becoming a new branch of service, and, as an emerging field, it is prone to mismanagement and irregularities (and also is attractive to scammers and criminals). The financial and statistical data on loan restructuring practices collected within the last two years could be evaluated by actuaries and become a base for improving the existing models and developing new ones. The need of integration of fundamental actuarial research and modeling in the area of loan restructuring may be vital to the sustainable development of the lending market, present new opportunities for actuaries and also greatly support prevention of the market from future bubbles and downturns. ☆