MORTGAGE PREPAYMENTS IN PORTUGAL

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Dissertation submitted in

partial fulfillment of requirements for the Degree of

Master in Finance, at Universidade Católica Portuguesa, May 2013

ABSTRACT

Like any other asset, it is important for investors to value accurately their mortgage portfolio. This valuation will not be precise without available information on the underlying cash flows. To evaluate mortgages properly, they need to have reliable information not only on the scheduled payments, but also on all payments not expected to occur over the duration of the mortgage, either partial prepayments (curtailments) or total prepayments.

Currently, in Portugal, the information used is based on international studies. It was not possible to find evidence about Portuguese prepayment studies. The experience of working with mortgages indicated that levels of prepayments referred in most literature (about 6% of the outstanding principal) would be lower in Portugal.

The information about prepayments is relevant to several intervenients in mortgages: financial institutions that lend and need to assess their portfolio; lenders who use scoring systems / pricing and need to incorporate information from expected levels of prepayment; investors in Mortgage Backed Securities (MBS) and rating agencies that evaluate institutions and portfolios.

This work involved a first major challenge of getting data (in significant numbers) from the financial institutions about total and partial prepayments in order to have a reliable data base. This information is not easily available and this goal was achieved only with the support of one of the largest credit institutions in the country (which prefers to remain anonymous due to confidentiality reasons). After clarification meetings about the study and its relevance, COO and Administration became interested in the study, approving data delivery. This institution provided prepayments data from the year 2000 until 2012.

This allowed us to gather about 747.000 records of information. Only knowledge about mortgages, about the institution, its database and the extraordinary collaboration of this institution's staff enabled all data treatment and validation.

Historical prepayments and seasoned prepayments were calculated as a percentage of the total prepayments in each period (month or maturity) over the total mortgage amount. This analysis revealed low levels of prepayment. The average prepayment level of 1,21% was well below the usually referred 6% level.

Then, the data was associated with some macro-economic variables (mainly factors referred to in literature) in order to characterize how prepayments were correlated to those indicators. This analysis allowed us to understand which variables were most strongly correlated with prepayments.

During the analysis period a Decree-Law (DL) was enacted that limited the level of penalties on prepayments. We assayed the DL's effect at the prepayments level.

In order to get a predictive tool, we regressed prepayments as a function of most significant variables and formulated a predictive model, with a 12 months lag. This model revealed to have a considerable level of significance.