

Management of distressed consumer loans

BANKS SHOULD IMPLEMENT AN INTENSIVE CARE PROCESS BASED ON A RIGID STATISTICAL TOOLSET TO SUBSTANTIALLY INCREASE LOAN RECOVERY RATES.

It is still common practice among many German retail banks to treat all customers that have not paid two or more monthly instalments on their consumer loans the same. If the debtor did not pay the outstanding amount after several reminder letters the loan was terminated. As a consequence recovery rates have been very low and information about the true reasons for default is still sparse. Only lately, some banks have started to contact selected distressed clients to identify the reasons for the default and to suggest individual remedial actions accordingly. This intensive care process promises to benefit both the debtors and the bank. It is expected that enhanced average recovery rates and opportunities to earn extra margins from future business with the customer will compensate the bank for the marginal cost to be incurred.

The aim of our study was to analyze the intensive care process of a large German retail bank, to measure its impact on bottom-line results and to elaborate how statistical methods could improve the effectiveness of

the underlying decision models. Our data set contained 1,397 consumer loans with an average volume of 7,600 euro. The average shortfall of the credits at the time of analysis was 387 euro. The banks had negotiated workout arrangements with 337 out of the total of 1,397 customers (intensive care in a narrow sense). For the rest of the loans the bank was not able to make a workout arrangement either because the customer could not be contacted, because he had already paid the outstanding amount or because the debtor was too distressed and the loan had to be recalled right away.

The group which experienced an intensive care was benchmarked to a control group which was dealt with conventionally in order to compare the effectiveness of both approaches and to gain deeper insights into the success factors of workout management. The observation period was eight months. After this period 41% of the intensive care creditors had paid all open balances. This was only true for 29% of the loans that were conventionally managed (see Figure 1).

Moreover, intensive care helped to significantly reduce the portion of defaulted loans, i.e. loans where the open balance was greater than two instalments even after the eight month grace period from 41% to 20%. One of our key findings is therefore that intensive care can increase recovery rates substantially. Even after taking process costs into account we estimate that banks can enhance their profits by 8% of the outstanding volume of distressed consumer loans due to an effective workout management.

In order to enhance the quality of the existing workout management we developed a scoring model. The model estimates the expected

recovery rate of all distressed loans and thereby allows to identify loans for which marginal benefits of intensive care exceed marginal cost.

The recovery rate per loan is estimated by means of a logit regression model and based on all available data on the debtor. Data points included e.g. age, profession, Schufa information, and data regarding the credit history and current account history. An additional piece of information, namely the distress reason could only be retrieved for those customers that had been already contacted by phone. As a consequence, we estimated a standard model and an extended

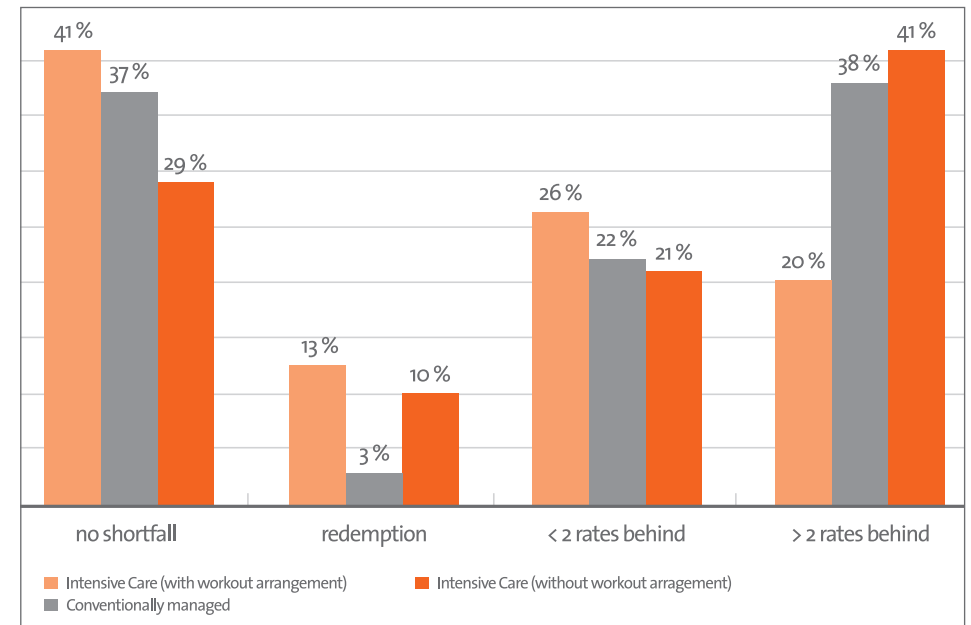


Figure 1: Intensive Care versus conventional management of distressed consumer loans

UMORGANISATION UND FORTSCHRITT

Wir übten mit aller Macht - aber immer, wenn wir allmählich zusammengeschweift wurden, wurden wir umorganisiert. Ich habe später im Leben gelernt, dass wir oft versuchen, neuen Verhältnissen durch Umorganisation zu begegnen. Es ist eine phantastische Methode! Sie erzeugt die Illusion des Fortschritts, wobei sie gleichzeitig Verwirrung schafft, die Effektivität vermindert und demoralisierend wirkt.

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model. The standard model supports agents in deciding whether to contact a client and the extended model permits agents to evaluate whether to aim for a workout agreement with the distressed client.

Table 1 displays the results of the two regressions, with both having the recovery rate as the dependent variable. In model 1 (the standard model) the most significant variables are related to the financial status of the client. Moreover, the variable “number of reminder letters” has a positive impact on the recovery rate. This can be possibly explained by the large number of clients that are actually not in distress but simply forget

to pay their installments. Most of the variables which were significant in model 1, lose their significance in model 2, i.e. after the telephone call (extended model), because some of newly introduced variables have higher explanatory power. As an example, distress reasons like divorce or relocation have a strong negative impact on recovery rates.

The higher explanatory power is also reflected in the higher overall accuracy of the second model, which is displayed in the lower panel of table 1. Model 2 correctly classifies 88% of all loans, which translates into an eight percentage point increase compared to model 1. Both models predict fairly accurately whether a loan can be recovered: Over 90% of the loans that were classified as “good” indeed showed no shortfall after the eight month observation period.

Our research findings lead us to the following overall result: An efficient intensive care process which features a workout scoring model as an integral part can substantially increase the profitability of a retail bank. Banks should employ a scoring model to pre-select and prioritize the loans according to their estimated recovery rates. A second scoring model should then be applied to all “good” loans to determine the appropriate reorganization measures. All other loans should be terminated immediately. Alongside

with the introduction of the new scoring model it is important for the bank to streamline their workout processes and improve their IT capabilities to ensure that the maximum of information about the customer is available for an analysis of the client’s solvency.

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	Model 1 Before telephone call	Model 2 After telephone call
Significance of the variables		
Collection of the rates within the first month (yes/no)	++	
Bank transfer of the rates within the first month (yes/no)	++	
Number of the rates behind	+	
Number of the changes in the payment schedule	-	
Number of reminders	++	
Schufa rating (I and M) (yes/no)	-	-
Interest rate	-	--
Ratio rates/balance of current account	++	
Contra account is current account at the bank (yes/no)	-	
Divorce (yes/no)	n/a	-
Insolvency (yes/no)	n/a	
Relocation (yes/no)	n/a	--
Death (yes/no)	n/a	
Other indebtednesses (yes/no)	n/a	-
Reason for shortfall unknown (yes/no)	n/a	-
Period since last wage payment		--
Overdraft of the current account (yes/no)	n/a	--
++/-- :highly significant positive relationship between independent variable and probability of successful workout ($p < 0,01$)		
+/- :significant positive relationship between independent variable and probability of successful workout ($p < 0,01$)		
no sign: no significant relationship		
Probability of:		
Correctly classifying the credit	80.2 %	88.0 %
Correctly classifying the credit as successful workout	89.5 %	92.8 %
Correctly classifying the credit as default	60.9 %	82.1 %

Table 1: Summary of logit regression results