

# When should banks chase debts? New method could help them decide

July 25 2019

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Like Kenny Rogers' gambler, who has to "know when to hold 'em, know when to fold 'em," banks face financial risks and uncertainty when deciding when to chase consumers who default on their credit card

payments and when to let them go.

A new study from the McCombs School of Business at The University of Texas at Austin analyzes delinquent credit card user behaviors and develops a [predictive model](#) for sorting them into categories based on whether they are more or less likely to pay back their overdue debt.

The model was developed by Naveed Chehrazi, assistant professor of information, risk and [operations management](#) at the McCombs School, and co-authors Peter Glynn from Stanford University and Thomas Weber from École Polytechnique Fédérale de Lausanne. Their research was recently published in the journal *Management Science*.

"When you know how much capital is at risk when an account holder defaults, you are able to better assess the risk of an applicant and properly adjust the parameters of the account," Chehrazi said.

Banks typically rely on outside collection agencies to recoup significant credit card debts, but that can be expensive. Chehrazi and his fellow researchers worked with banks and collection agencies to develop a model so banks can determine when to chase a delinquent account and when to let it go.

Using information such as the likelihood of repayment and the amount still in debt, the method can help bankers decide the optimal collection strategy based on the state of the account and information about the user.

The optimal collection strategy maps any possible state of the account to an action. The model can help collection managers identify the right time and nature of an action, which can take the form of establishing contact, negotiating a repayment plan, or filing for a lawsuit. For example, the higher a person's unpaid debt, the more it makes sense for the bank to invest in strong actions to spur repayment. For smaller

delinquencies, the cost of pursuit may not be worth it.

The research also develops an "economic balance threshold," a point at which the active pursuit of reclaiming debt no longer makes economic sense. For example, if a person initially owes \$1,000, but after being contacted numerous times by credit collectors, pays his [debt](#) down to \$100, the bank may be better off ceasing collection activities. This is because the person's inferred willingness and ability to pay suggest the portion of \$100 that would be recovered by pursuing collection would not be enough to cover the cost of taking further action. From this perspective, the economic balance threshold of an account can be viewed as the minimum expected loss that a bank could incur when an account defaults.

The model could make it much easier for banks to determine what accounts are worth spending time and money on, but Chehrazi said the method can also be used in many different stages of the collection process.

"One application of this is determining how much capital reserve banks have to hold in order to properly take into account the risk of delinquency and loss," Chehrazi said. "It is useful for an account, it is useful for banks and also it is useful for the general consumer population. The benefit of this for the whole economy is that the risk of default is better accounted for and that the general population would have easier access to credit they need."

**More information:** Naveed Chehrazi et al, Dynamic Credit-Collections Optimization, *Management Science* (2019). [DOI: 10.1287/mnsc.2018.3070](https://doi.org/10.1287/mnsc.2018.3070)

Provided by University of Texas at Austin

Citation: When should banks chase debts? New method could help them decide (2019, July 25)  
retrieved 22 May 2024 from <https://phys.org/news/2019-07-banks-debts-method.html>

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