

Remarks on Credit Card Stress Testing

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Stress Testing Model Symposium
Federal Reserve Bank of Boston

September 2012

CC Portfolios

Outstanding CC debt: 2010 revolving debt 850B\$.

Average balance (for those w/ + balance) 7.1k\$.

Average Default Rates: 2010 around 6+%, now down below 4%.

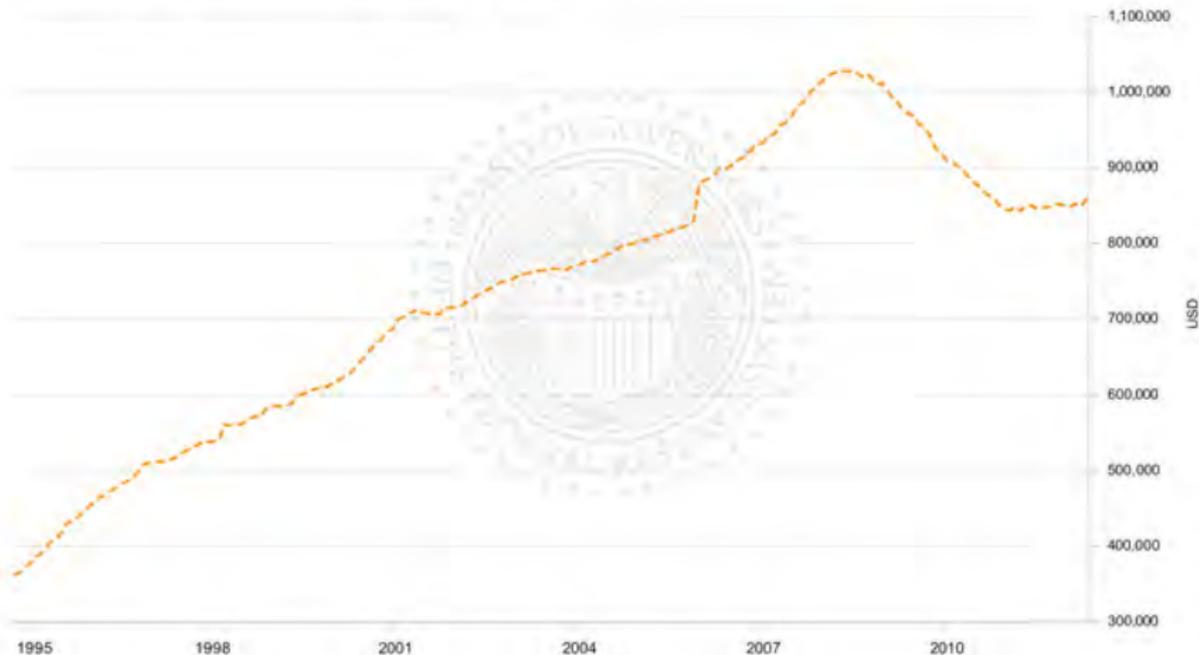
Default is 90dpd?? LGD ?? When?

Average: ~ 2.9% of total household debt is CC debt.

Understanding the performance of a CC portfolio

Dist of credit scores through the portfolio crucial. (and dist of balances across scores).

Revolving consumer credit owned and securitized, seasonally adjusted level



Source: Federal Reserve Board 2012

Stress Testing Issues

1. Macro drivers. Modeling the track of important variables when the stress vars are changed. When unemployment rates, house prices, etc are changed in the stress scenario, how do interest rates, consumer spending, disposable income and perhaps bank balance sheet vars change? Assume same modeling across banks?
2. Defaults and the distribution of credit scores through the portfolio. Differential effects on default by credit score.
3. Fed stress testing issues: historical differences in performance across banks. How to handle?
4. Bank reaction in CC policy to stress. Model?

Stress Models and Business Analytics

Ideally, these should be the same models. This is in line with Basel expectations.

If a model "works" it should work for all scenarios.

Else: when switch models? Combine models and change weights?
(If well-defined fn of data, then it becomes one model ...)

Realize the model cannot be expected to work as well for stress scenarios - less data. Mostly, out of sample forecasting. Tricky.

Scores and Defaults

Scores are better at ranking credit risks than at quantifying credit risks.

Glennon, Kiefer, Larson, Choi 2008 developed scorecards predicting defaults well in sample and out of sample but within time. Over time, ranking was sound, default estimates deteriorated rapidly. We think this is common.

FICO emphasizes scores are for ranking, not default prediction.

Many parties provide default rates associated to scores.

This relationship changes in complicated ways as macro conditions change.

Historical Differences across Banks

Some banks seem to respond consistently better or worse (not for long) than others to stress.

WHY? This should be modeled!

Bank-specific "effects" - adjusting constant terms, fixed effects, etc is a stop-gap approach to improve fit.

May not improve prediction, especially over longer time periods.

Essentially this is assigning a name to a correlated residual - a common practice but not really satisfactory.

Why are the banks different?

Bank Reaction to Stress

This is a big issue. How banks will react is probably not part of any useful model.

In extreme conditions, managers will adjust policies - origination policy will surely change.

Much more attention will be given to the riskier accounts - credit limits adjusted, quicker cancellation on late payment, etc.

How can a stress test accommodate this reaction? Difficult. It is a game.

Role of Judgment (not just CCs)

This cannot be evaded. Stress testing involves predicting reactions to events outside of historical experience.

Extrapolation requires judgment (in the form of assumptions).

Involves guessing why banks are different and what differences will remain under stress.

Responses to stress events must be thought through. These are probably not part of models.

The next crisis will probably be initiated by unforeseen events that have not been stress tested.

Why Credit Card Debt is Risky

