The Economist

Subprime borrowing and innumeracy

The fear of all sums

The role of mathematics in America's housing bust

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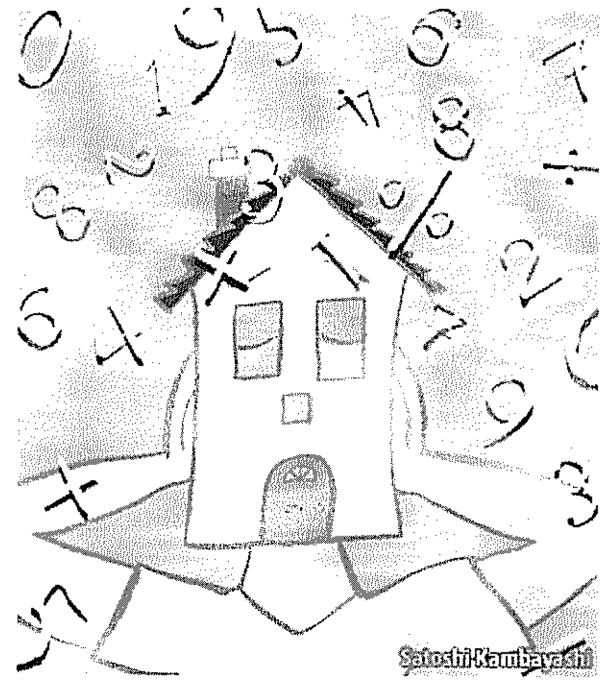

IN HINDSIGHT one of the worst things about America's subprime housing bust is how predictable it was. Subprime borrowers were by definition people of limited means with poor credit histories. Yet economists who have looked at the pattern of payments on subprime mortgages point out that even when house prices topped out and then began to fall, not all subprime borrowers defaulted. Only a minority of borrowers abruptly ceased to make payments, as someone choosing to default would.

More typically, payments went from being regular to being erratic: borrowers fell behind, then became current again, only to fall behind once more. Those patterns are indicative of people trying, but struggling, to keep up with their payments. A trio of economists set out to find out what differentiated those borrowers who did not keep up with their payments from the rest. Their answer, according to a new working paper from the Federal Reserve Bank of Atlanta, is simple: numeracy.

The economists tracked down a large number of subprime borrowers in New England on whom they already had detailed information, including the terms of their mortgages and their repayment histories. These borrowers were then subjected to a series of questions that required simple calculations about percentages and interest rates*.

Even accounting for a host of differences between people—including attitudes to risk, income levels and credit scores—those who fell behind on their mortgages were noticeably less numerate than those who kept up with their payments in the same overall circumstances. The least numerate fell behind about 25% of the time. For those who did best on the test, the number of payments they missed was almost 12%. A fifth of the least numerate group had been in foreclosure, but only 7% of those who were more numerically adept had.

Surprisingly, the least numerate were not making loan choices that differed much from their peers. They were about as likely to have a fixed-rate mortgage as the more numerically able. They did not borrow a larger share of their income. And loans were about the same fraction of the house's value.

Stephan Meier, one of the study's authors, reckons that the innumerate may be worse at managing their daily finances, leaving them with little room for manoeuvre when things get difficult. Those better at sums might, for instance, have put a bit more aside in more plentiful times. Normally, such differences might not matter much. But in bleaker circumstances, a small pot of savings may be all that stands between homeownership and foreclosure.