includes tools for managing customer relationships and improving risk management decisions. By using these tools, HSBC hopes to be able to create strategies for individual applicants, assess the value of each applicant, and then customize a loan offer that suits the customer's needs as well as the bank's business.

HSBC also made changes in both personnel and policy. The company ceased originating and purchasing stated-income loans and boosted the required FICO score for some loans. Tom Detelich, who had led the transition from Household to HSBC's consumer lending business, was appointed head of HSBC Mortgage Services. HSBC doubled the number of customer representatives who call on borrowers who have missed payments and discuss payment plans that are more manageable. Those operations now run seven days a week. HSBC is also utilizing information technology to pinpoint ahead of time which customers are most in danger of failing to meet their monthly payments once their ARMs jump from their initial teaser interest rates to higher rates. In some cases, the adjustment can increase a monthly payment by $500.

Major investment banks like Bear Stearns and Lehman Brothers failed in the fall of 2008 because they were holding massive amounts of unsold CDOs and other derivative products, as did AIG, the single largest insurer of these instruments. Critical attention turned to the models used to support what turned out to be a very risky activity. While most blamed the models, and modeling in general, others pointed a finger not at modeling as an activity, but at the faulty application of the modeling, poor assumptions encouraged by senior executives who did not want to understand the "real" risks they were taking as long as they made money, and the failure to take into account human behavioral issues. These human behavioral factors included bankers around the world acting like herds rather independent decision makers, all relying on the same convenient models and assumptions, which predicted incredible profits and a rosy future. The models also failed to understand that when one multitrillion dollar credit market collapsed in a global banking system, other credit markets would shut down, and major financial institutions and millions of ordinary citizens would panic, run for the exits, and just stop borrowing, lending, and spending. In fact, there is no model for inter-market risk or for the behavioral factors that drive correlation across markets.

Sources: Saul Hansell, "How Wall Street Lied to Its Computers," *The New York Times*, September 18, 2009; Steve Lohr, "Wall Street's Math Wizards Forgot a Few Variables," *The New York Times*, September 13, 2009; Julia Werdigier, "HSBC Seeks $18 Billion in Capital and Cuts 6,100 Jobs," *The New York Times*, March 13, 2009; Jeffrey Goldfarb, "HSBC is Hardier Than Most Banks," *The New York Times*, March 2, 2009; Joe Nocera, "Risk Mismanagement," *The New York Times*, January 4, 2009; Steve Lohr, "In Modeling Risk, the Human Factor Was Left Out," November 5, 2008; Carrick Mollenkamp, Serena Ng, Liam Pleven, and Randall Smith. "Behind AIG's Fall, Risk Models Failed to Pass Real-World Test," *The Wall Street Journal*, October 31, 2008; Carrick Mollenkamp, "In Home-Lending Push, Banks Misjudged Risk," *The Wall Street Journal*, February 8, 2007; and "HSBC Implements Experian-Scorex Decision Support Software," www.finextra.com, February 23, 2007.

Case Study Questions

1. What problem did HSBC face in this case? What people, technology, and organization factors were responsible for the problem? Did HSBC management correctly identify the problem?
2. HSBC had sophisticated information systems and analytical tools for predicting the risk presented by subprime mortgage applicants. Why did HSBC still run into trouble?
3. What solutions is HSBC relying on to deal with its problem going forward? Will these solutions be sufficient to turn the subprime mortgage business around? Are there additional factors for which HSBC has not accounted? What are they?
4. HSBC made a decision to pursue subprime mortgages as a segment of its business. Explain how this was a structured, unstructured, or semistructured decision. Then, present your opinion about where in the decision-making process HSBC went wrong. Finally, apply the decision quality concepts of accuracy and comprehensiveness to this case.
5. Do you think one solution to HSBC's poor risk management practices is more and better information supplied to decision makers, or is something else required to improve its risk management?