

## **Predictive Analytics in a Banking Scenario – demo script**

### Slide 1

Analytics in retail banking are very similar to analytics in the retail industry. Advanced analytics, data mining in particular, can be leveraged in three key areas in the banking marketplace to deliver value through revenue growth, customer retention, profitability and cost savings.

### Slide 2

In this scenario, the bank's practice is to allow some customers to overdraw their accounts temporarily, similar to a small, short-term loan, charging fees for this privilege. However, sometimes customers abandon their accounts in the negative balance state, resulting in a charge-off or loss to the bank. If the bank can predict which customers are most likely to abandon their accounts, then they could reduce the allowed overdraft limit thereby reducing the bank's exposure to charge-offs. The goal here is to enable regional managers to better understand and manage their at-risk accounts through a web-enabled, embedded data mining solution.

### Demo

A regional manager accesses the account abandonment application tool using his browser. In the upper portion, we can review the overall account status for a region. Since he is the regional manager for Harris County, he is going to select Harris County from the drop-down list and can now see a summary for Harris County. The table identifies the total number of accounts, the number of accounts which are open, the number of accounts that have been voluntarily charged off, and the number of accounts that have been closed. This summary is also reflected in the pie chart to the left.

The table also lists the total number of accounts that are currently at risk. The data mining scoring model suggests that of the 7,439 accounts, 48 are currently at risk. In the lower portion of his dashboard, the regional manager can get another view of the account summary and use it to compare multiple regions. It also lists the amount of fees generated for closed, open, and charged off accounts. At this point the regional manager may want to investigate the at-risk accounts in more detail so he drills down to look at individual account information.

This report lists the account ID, the average balance, the current balance and the number of fees incurred due to insufficient funds over the lifetime of the account. The Total Revenue Earn column refers to fees generated for items such as NSF fees, but also items such as loan interest. The next column is percentage of prediction of the likelihood of abandonment which has been generated from the data mining model. The last column gives the regional manager the ability to take action and limit the amount allowed for overdrafts. The Action Taken column indicates whether or not the regional manager has chosen to limit a specific account.

To investigate the accounts further, the manager can sort the report by clicking on any of the account headings. As an example, looking at account number 4446, the regional

manager can see that the average balance over the lifetime of the account has been slightly negative, and the current balance is \$385.00 in the negative with 46 insufficient fund events. This customer has generated close to \$400.00 in fees. Although this account is at risk, it has a relatively low likelihood of abandonment. The regional manager can also filter the report to only show a certain percentage prediction for account abandonment. In this example, he selects a 90% threshold. Once the regional manager has selected the accounts he wishes to limit, he can go to an account summary report to review the loss avoidance due to the actions he has chosen. Of the 48 accounts that were at risk, the regional manager has chosen nine accounts. In a worst case scenario, if all 48 accounts were overdrawn to the maximum of \$500.00, and then abandon the account, the probabilistic loss would be almost \$19,000. For the nine accounts which he took action against, meaning limiting their account to a maximum of \$200.00, he has reduced his potential loss by nearly \$2,500.00.

By using an embedded data mining solution accessible through a Web portal, regional manager are better able to understand and manage their at-risk accounts. Through the insight and functionality of this solution, they are able to take actions to limit account overdrafts and understand the potential loss avoidance from this action.