




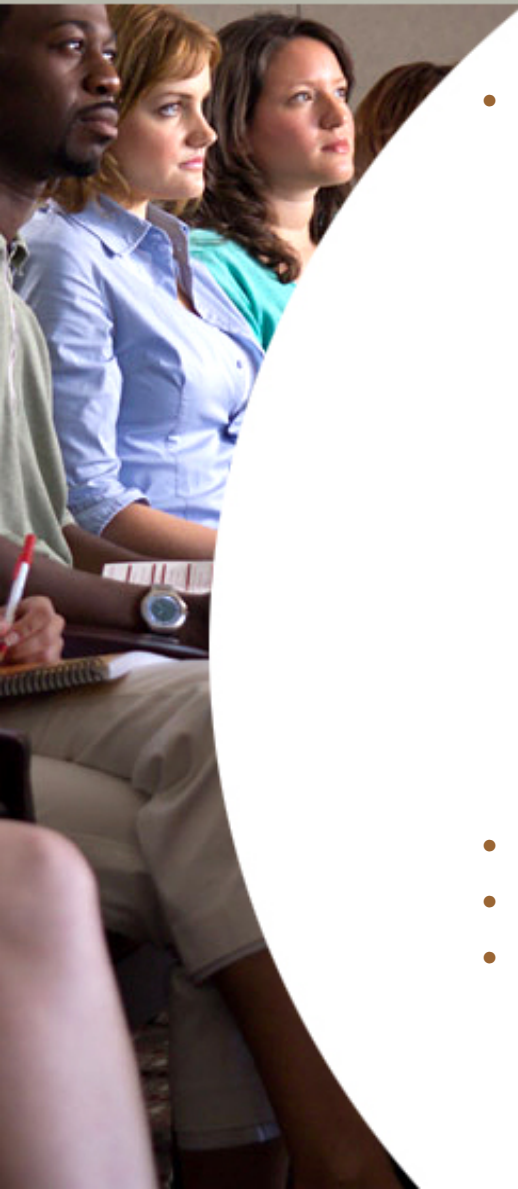
Measuring Fraud Prevention Tools and Techniques

MBA Fraud Conference
March 13, 2008


So Much Fraud, So Many Vendors

- 
- There seem to be as many new fraud tools as there are fraud schemes.
 - How do you select the right vendor & tool?
 - How do you measure performance?
 - **Benefits:**
 - Reduced application fraud
 - Lower unit costs
 - Lower losses
 - **We will discuss:**
 - Which tools to select
 - How to test
 - Evaluation
 - Benefits
 - Measure and Monitor

Which Tools To Test

- 
- **Tools Assessment Preparation**
 - Before you begin
 - ✓ Clearly identify objectives, probable tool placement, timing, data available at various points in time, resources available for review (both in testing and production)
 - ✓ What type of fraud do you want to detect?
 - Preliminary review of tools
 - ✓ Tool Approach: Single comprehensive tool vs several specific? Pattern matching vs data validation?
 - ✓ Vendor considerations:
 - Size & reputation
 - Availability of data, record of innovation
 - Market penetration (could be good or bad)
 - Flexibility and user customization of tool, what portion of the company's resources are spent on developing tools
 - Data sources to fight emerging fraud
 - **Choose tools for testing that seem to be most feasible fits**
 - **Get testing agreements signed**
 - **Vendor due diligence – Data and physical security; contingency plans; financial strength; IT expertise and controls; E&O, Fidelity, etc.**

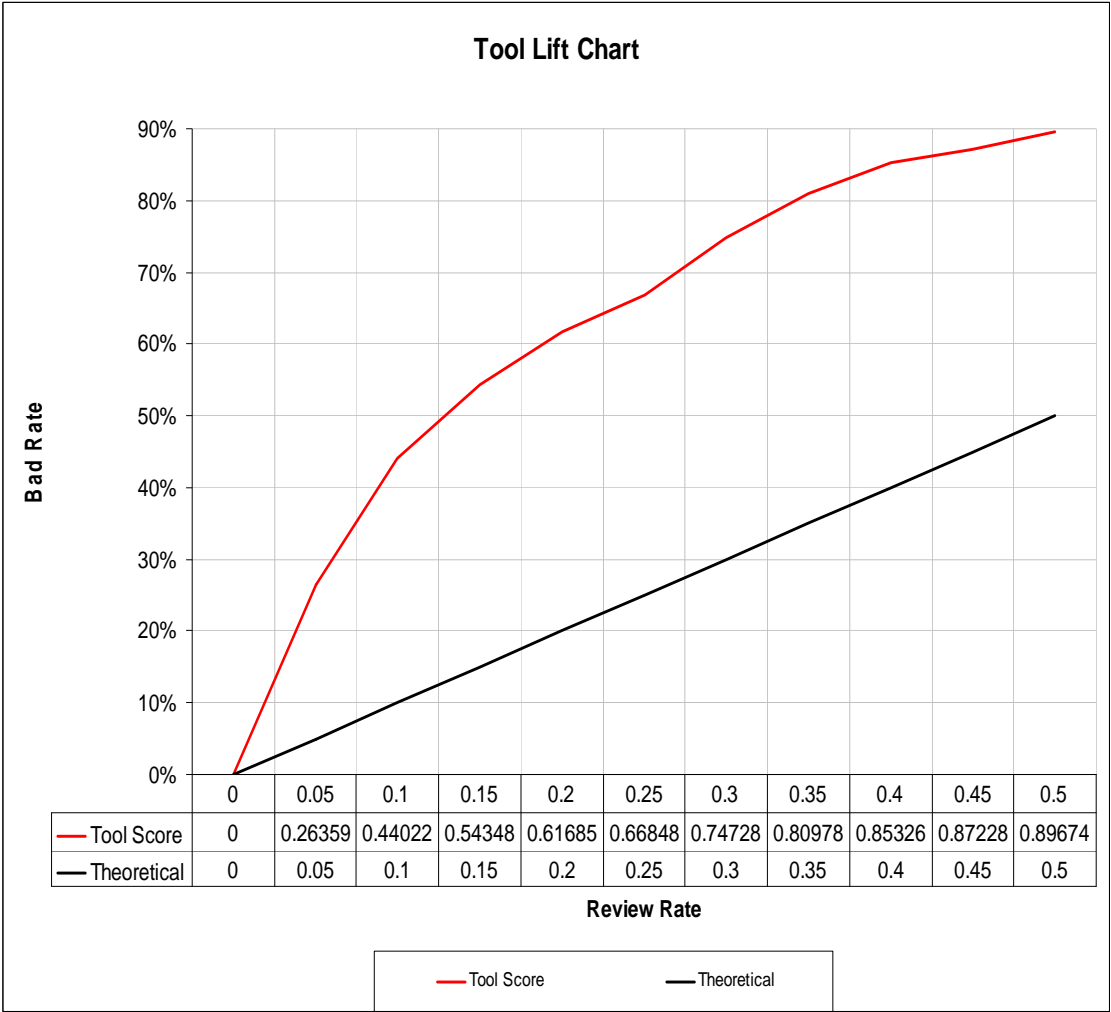
How To Test

- 
- **Testing your choices**
 - What are the measures of success?
 - Test on live loans in a production environment: Pros/Cons
 - Retrospective testing (groups of known closed bads/goods): Pros/Cons
 - Testing a new tool against existing tools or processes (champion/challenger)
 - **Testing performance over time (large production sample, compare scores against EPDs): Pros/Cons**

Evaluation

- **Measuring performance**
 - Overall or incremental?
 - Lift curves, false positive rates
 - What is the quality of the finds? Uncovering a schematic fraud is much more valuable than certain one-offs
- **End user & subjective evaluation**
 - Is information actionable and easy to use?
 - Is there too much information?
 - Are false positives so high that true positives are ignored?
 - Can alerts be turned off or can the sensitivity be adjusted?
 - How good is the user interface?
 - Can interface be adjusted to fit into your existing systems?
 - Is tool customizable and what is the cost/time?
 - Do other users of the tool have to agree with customization / changes?

Lift Chart



Records in sample 1000

Expected defects 40

Sample	Random	Desired	Tool
50	2	40	10
100	4	na	18
150	6	na	22
200	8	na	25
250	10	na	27
300	12	na	30
350	14	na	32
400	16	na	34
450	18	na	35
500	20	na	36

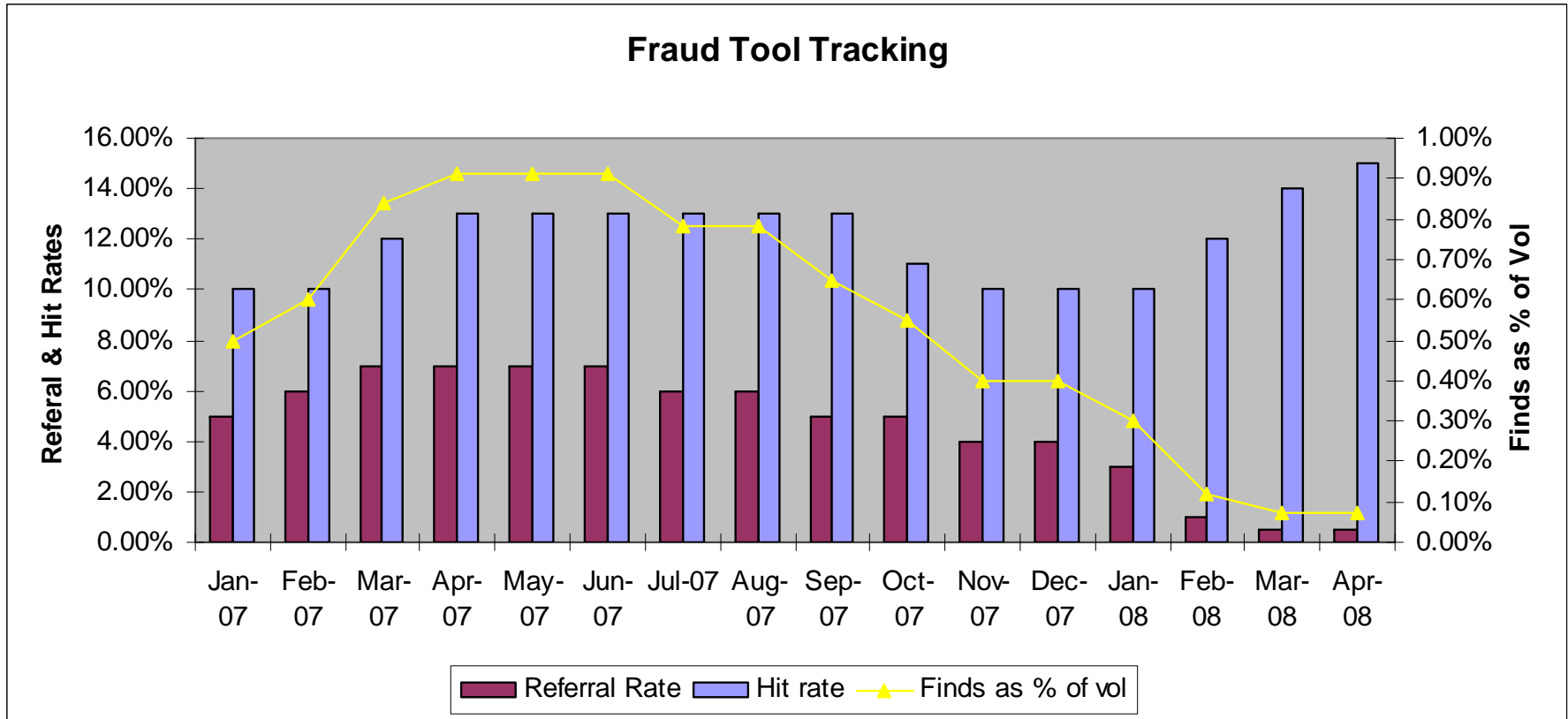
Benefits

- **Determining Cost Benefit Analysis**
 - Cost factors include cost of tool, cost of implementation, cost of increased review & associated hard costs (BPOs, 4506Ts) for all loans put through the system
- **Benefit factors include loan size, probability of loss, and severity of loss for true positives**

Measure and Monitor

- **Monitor and report on “referral rates” and “hit rates”**
- **Develop “cost per dollar loss avoided” measurement**
- **Monthly management review and reporting**
- **Cautions**
 - Paper the file mentality – lots of data does not mean the file is OK
 - Move/countermove – bad guys don’t stand still
 - Lack of diversity - everyone using the same tools may make systems easier to game and speeds up evolution/weak spots
- **Silver bullets - there are none – you need a multi-layered approach**





- What caused Referral Rates to begin to decline in Jan '08?
- Why did the Hit Rate increase beginning in Feb '08?
- Were these changes expected?
- Look for differences by product type and channel
- The devil is in the details