

Swiss Re



Credibility

CARe Seminar, 6-7 June 2011, Philadelphia

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Credibility Review

- You observe Ben Franklin dropping a key in a field (He has learned that putting a key on a kite string is dangerous)
- Your task is to guess where Ben will drop another key



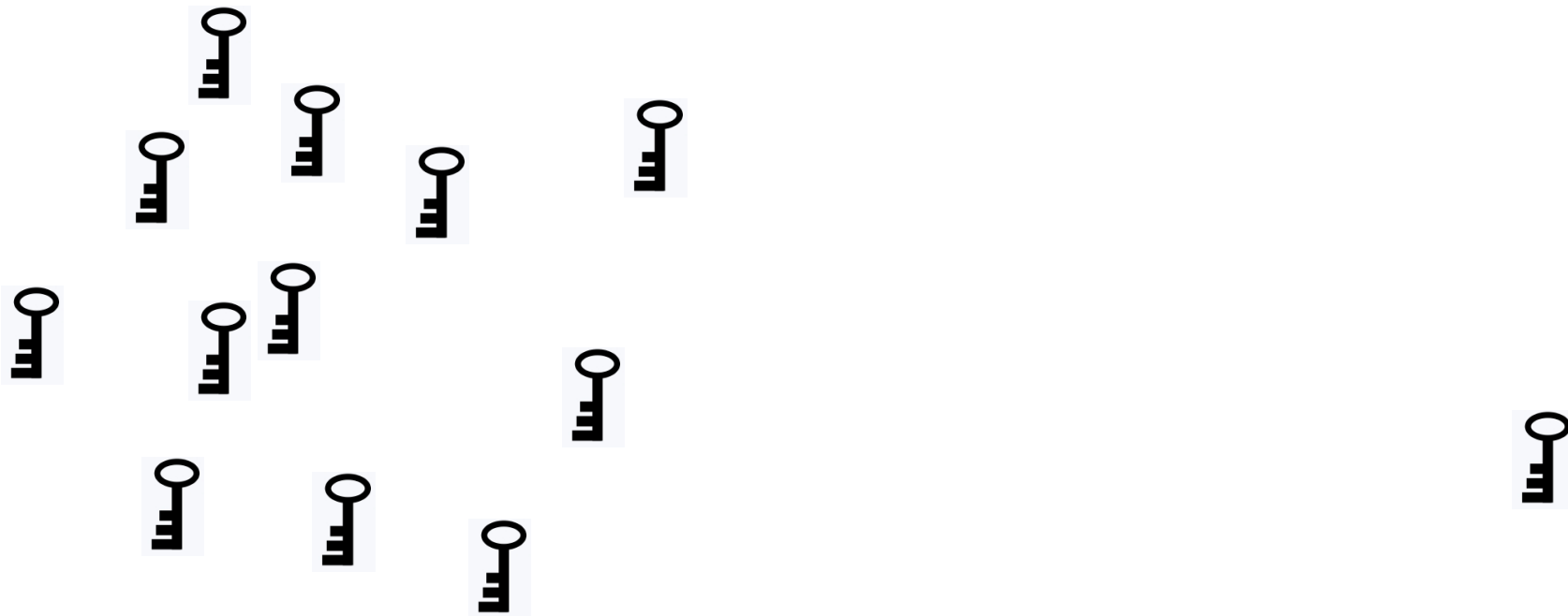
Check what Information you have

- If you have NO other information, the best guess is that a future key dropped will be in the same location
- However, we typically have other information



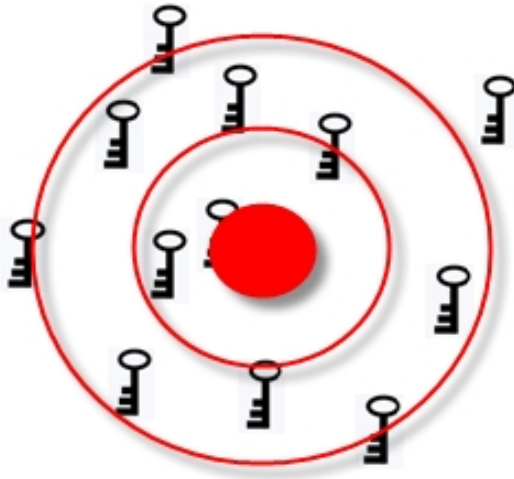
Analyze past, relevant data

- We might have observations of prior drops



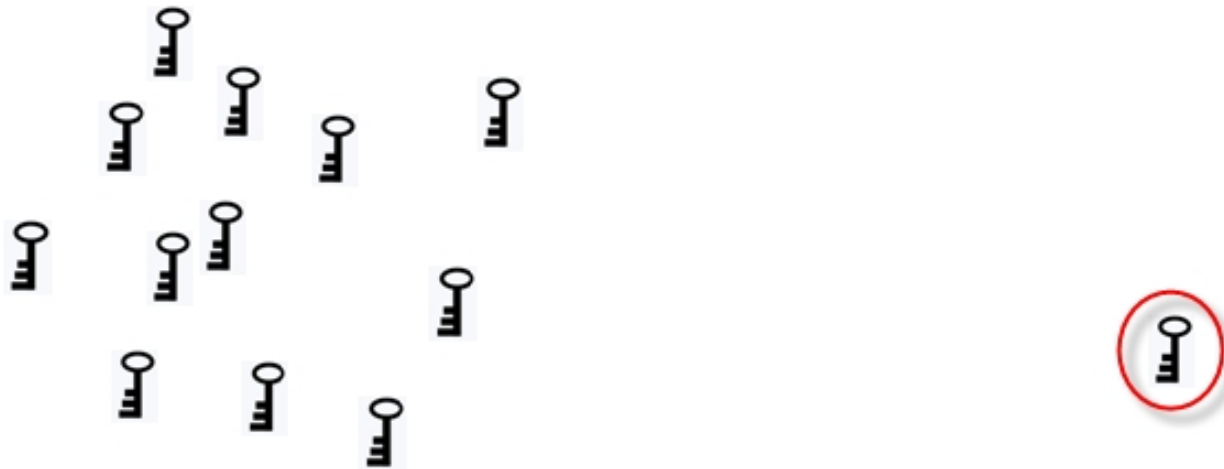
Calculate historical averages

- We could assume Ben is "aiming" at a target, and we can estimate the center from the historical information



Handling extreme observations

- What do we do when we have this observed history, and the latest (circled) observation is so far away?

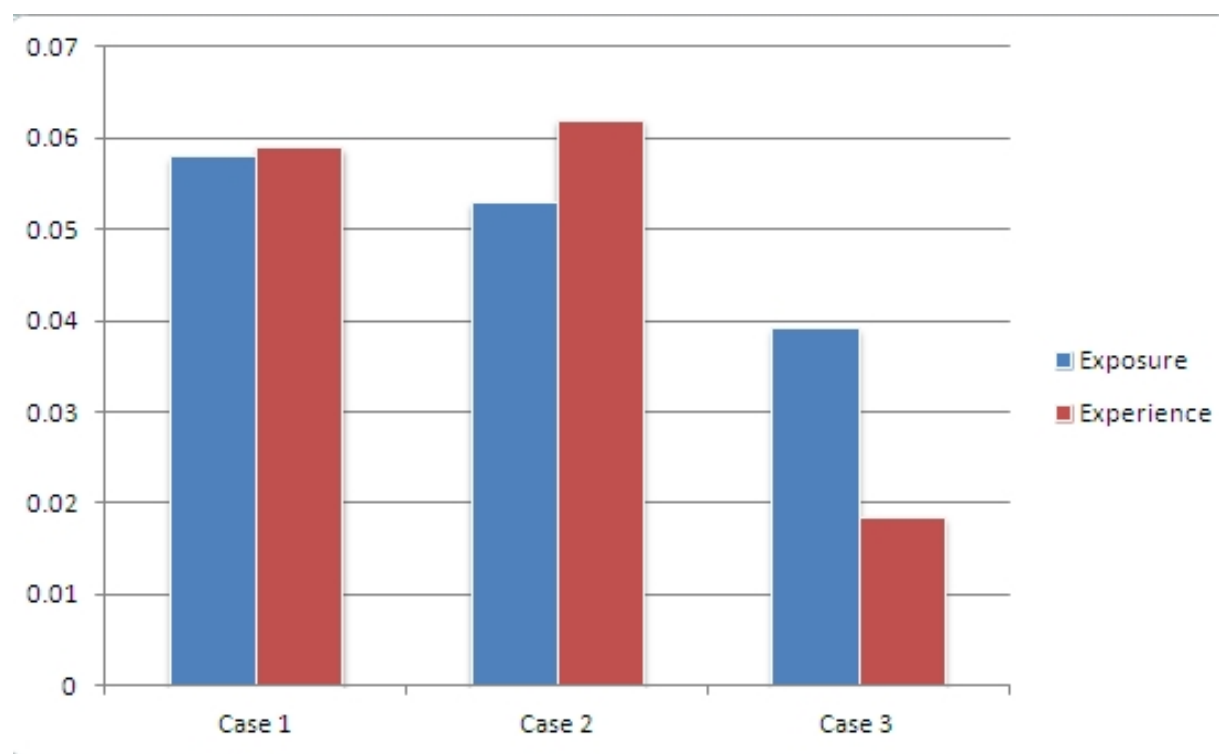


Question your assumptions

- Maybe it wasn't Ben in the history
- Maybe it was Ben but he decided a new location is better
- Do NOT simply credibility weight the new observation with prior results, as it can be extremely misleading

Exposure and Experience 1/2

- Let's consider three cases
- Case 1
 - Two indications are close
- Case 2
 - Two indications differ a bit
- Case 3
 - Two indications differ a lot



Exposure and Experience 2/2

- Case 1
 - Who cares? (with a caveat)
- Case 2
 - Credibility may be appropriate
- Case 3
 - Credibility is Not your next step

The caveat?

- Experience and Exposure may both be wrong
- Talk to Isaac Mashitz for real world example

Lessons

- Resolve differences between Exposure and Experience
- Resolve differences between Historical experience and recent experience
 - What is changing?
- Resolve differences between Exposure and specific client reality
 - Exposure is always an assumption that this client is like a group of clients for the layers of interest
 - Never exactly true, but sometimes badly wrong
- After resolution, what remains should be noise.
- Then credibility can help

Swiss Re



Thank you



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