

SEJ Breaking News

Roger M. Cooke

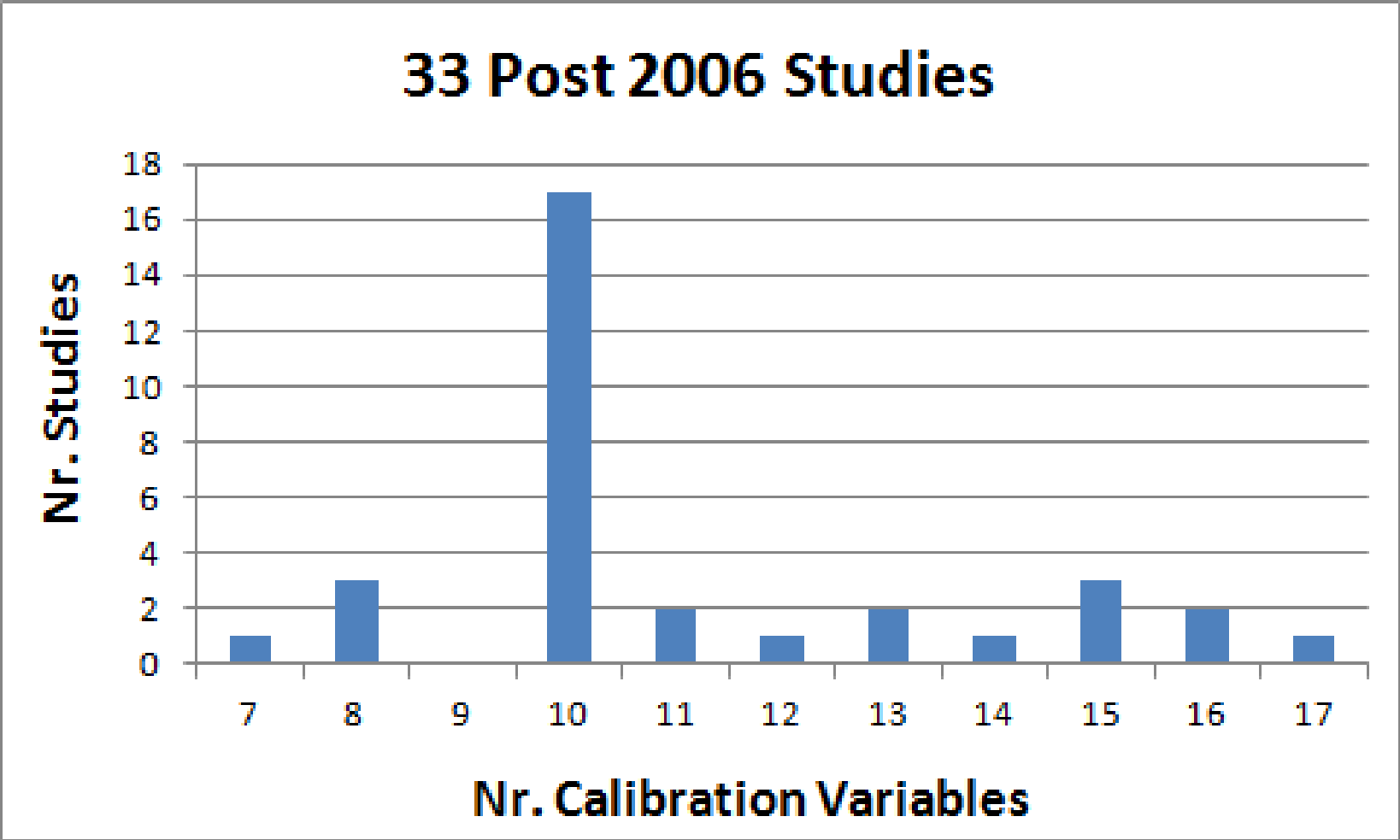
Resources for the Future

Delft Oct 12,2015

Please Add

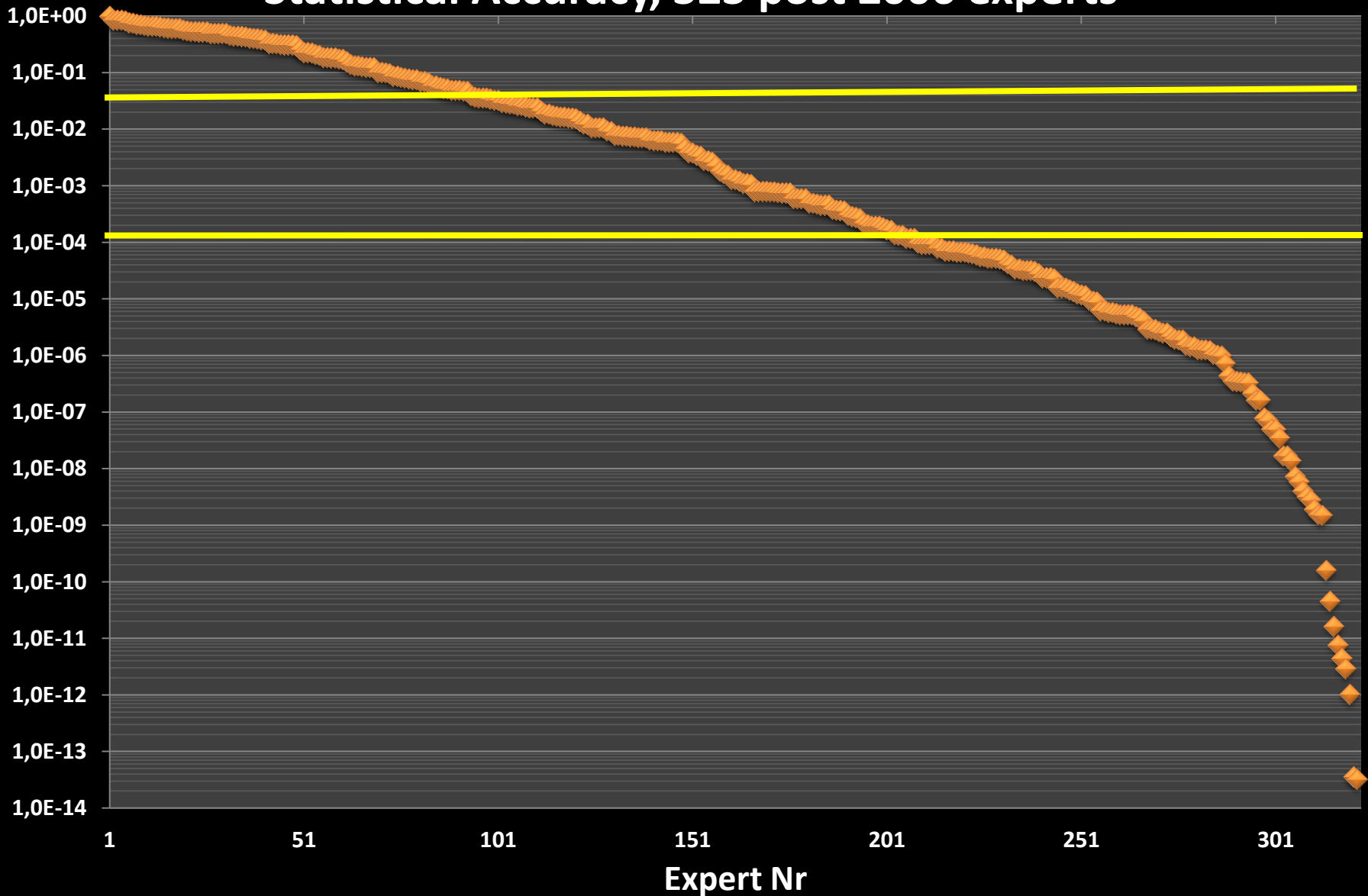
- [Wikipedia SEJ](#)
- [Expert Judgment Respectability Looming](#) RFF Blog
- [Princeton Press Release expert judgment, nature climate](#)
- [Effects of Breastfeeding on IQ-SEJ Study](#) RFF discussion paper
- [World Health Organization Estimates of the Relative Contributions of Food to the Burden of Disease Due to Selected Foodborne Hazards: A Structured Expert Elicitation \(PLOSone\)](#)
- [Evaluation of Performance: WHO SEJ study of global burden of disease](#) (PLOSone)
- [Stormwater Management in Chesapeake Bay; SEJ study](#) (Elementa)
- [Impacts of Asian Carp Invasion of Lake Erie - SEJ](#) (Conservation Biology)
- [Ask the Experts](#) (Ismail and Reid; The Actuary)
- [Risk Analysis and Bioeconomics of Invasive Species to Inform Policy and Management](#) (Annual Review of Environment and Resources)
- Expert judgement for dependence in probabilistic modelling: A systematic literature review and future research directions (Werner et al)
- 2 Forthcoming articles on out-of-sample validation (Colson, Cooke REEP, RESS)

33 Post 2006 Studies (Colson & Cooke)

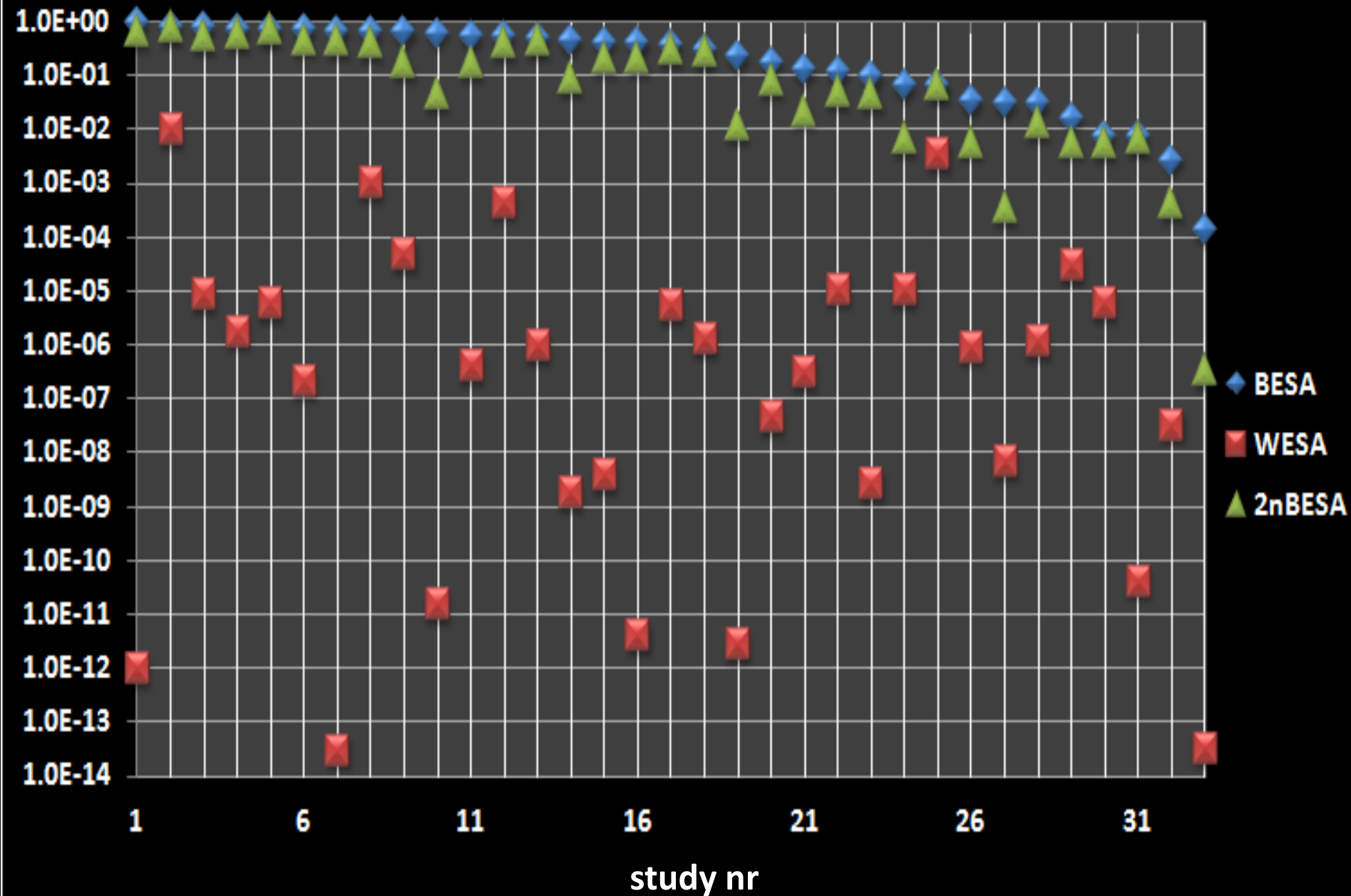


323 Post 2006 Experts

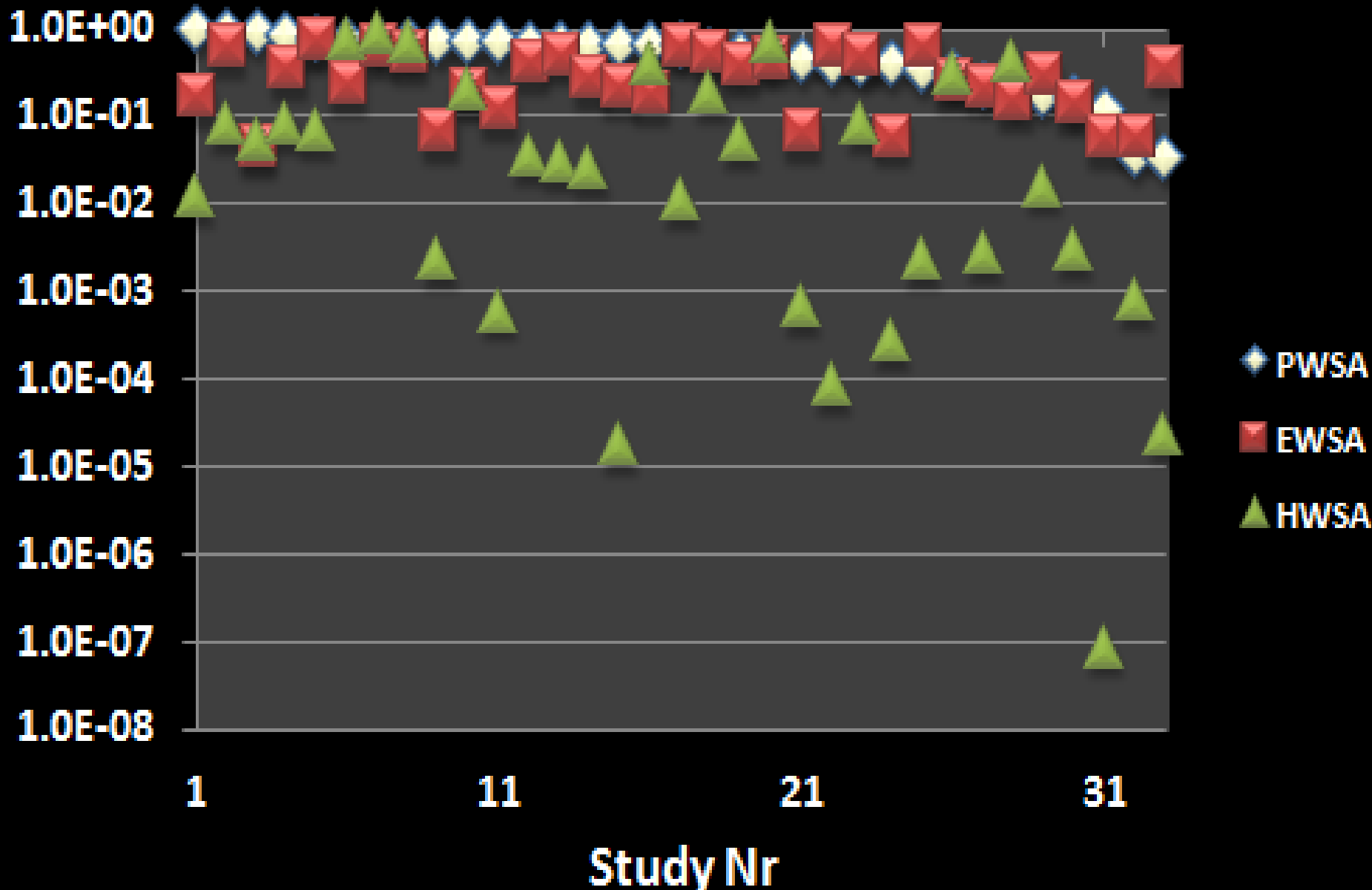
Statistical Accuracy, 323 post 2006 experts



Statistical Accuracy: Best, 2nd Best and Worst experts



Eq Wgts, Harmonic Wgts, Perf Wgts (in-sample)



In sample validation (Ismail & Reid)

P-value
(Statistical accuracy)

Information

Combined score

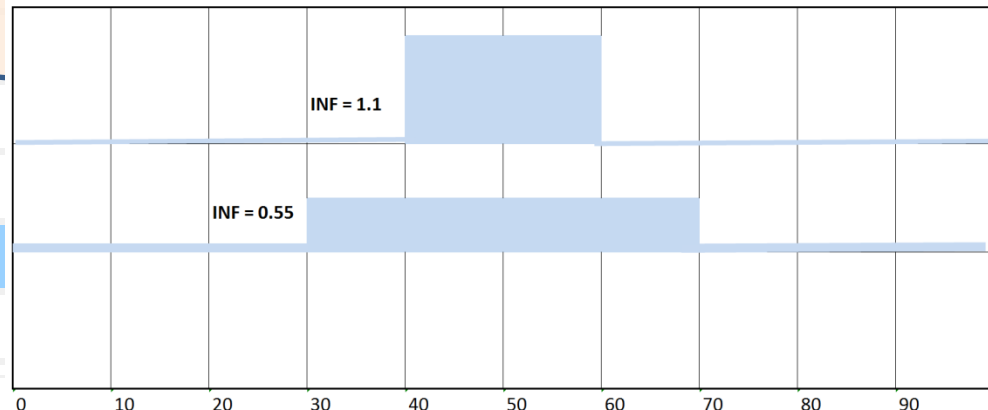
Results of Bayesian Significance

Weight

483 Calibration over:

Nr.	Id	P-value	Mean relative total	Mean relative realization	Number real	UnNormalized weight
1	Ex1	0.08316	1.801	1.801	18	0.1498
2	Ex2	4.913E-007	1.677	1.677	18	0.1498
3	Ex3	4.985E-005	2.102	2.102	18	0.1498
4	Ex4	0.01483	1.645	1.645	18	0.02438
5	Ex5	4.931E-006	2.215	2.215	18	0.1498
6	Ex6	9.038E-007	3.22	3.22	18	0.1498
7	Ex7	1.462E-007	1.518	1.518	18	0.1498
8	Ex8	2.895E-008	2.525	2.525	18	0.1498
9	Ex9	0.0001382	0.8457	0.8457	18	0.1498
10	PerfWgt	0.6371	1.373	1.373	18	0.1498
11	EqWgt	0.5917	0.6991	0.6991	18	0.1498

Does PW's statistical accuracy score hold when predicting variables NOT used to initialize the

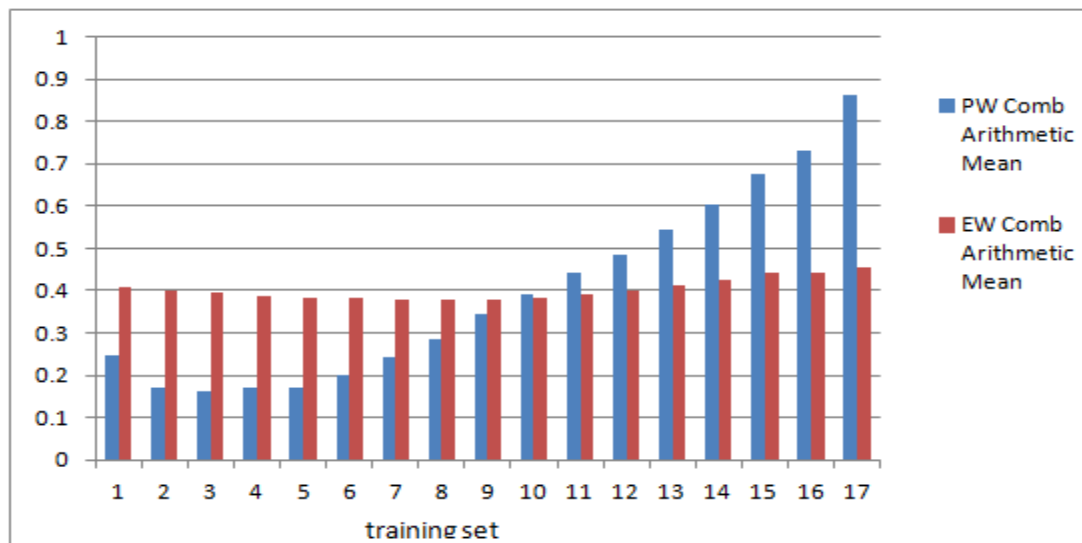
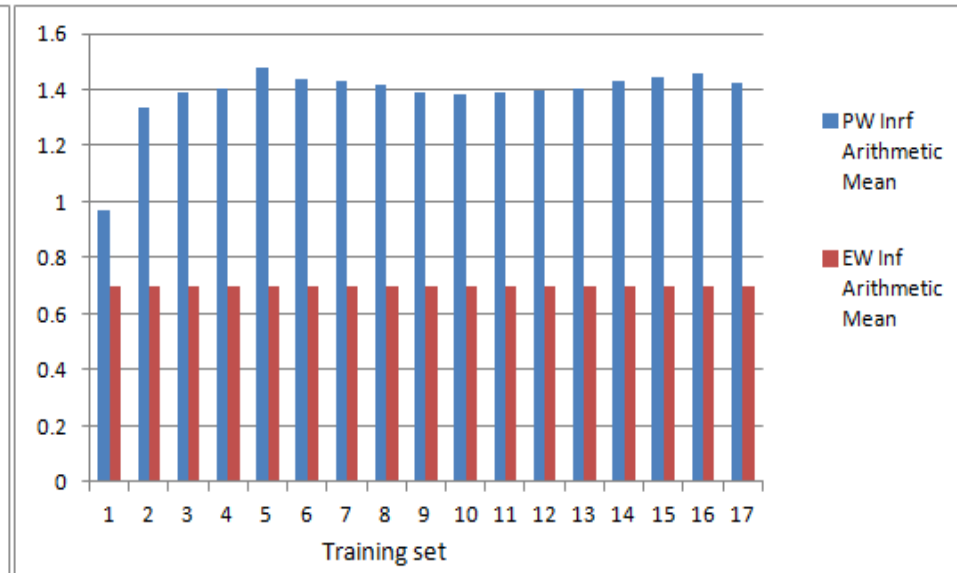
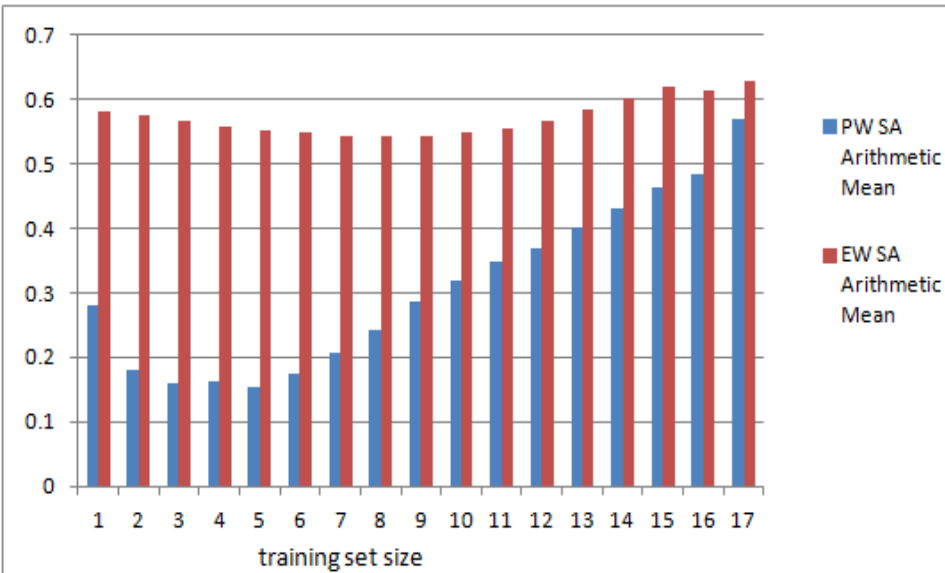


Out-of-sample validation?

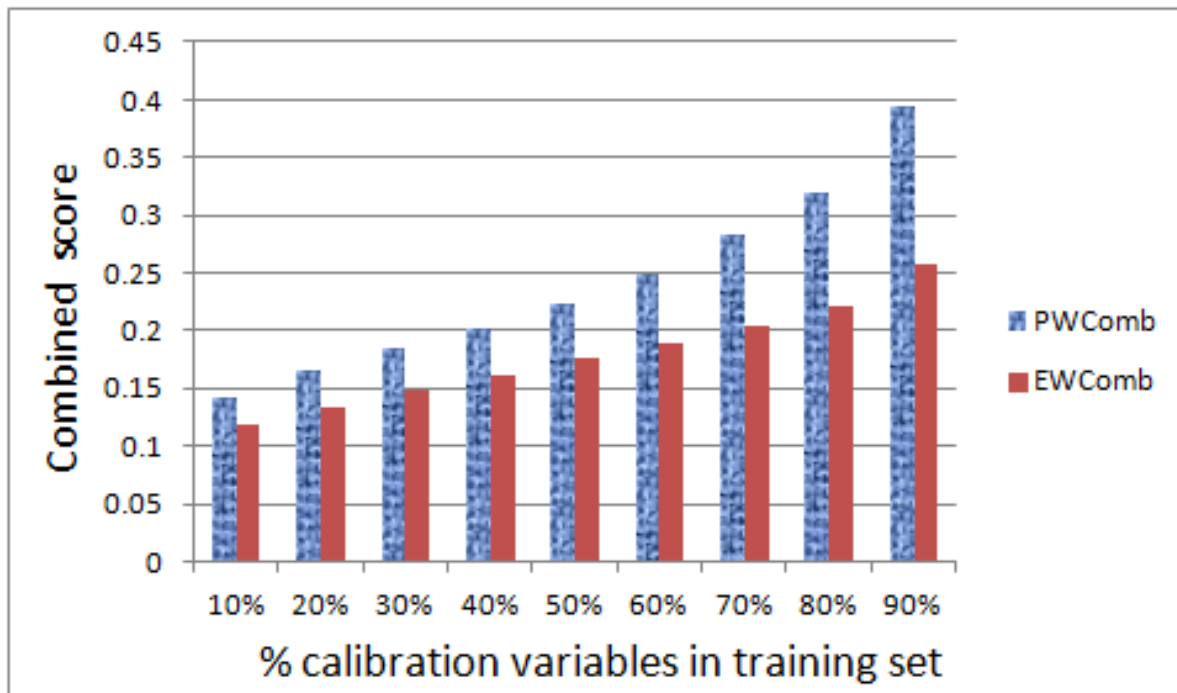
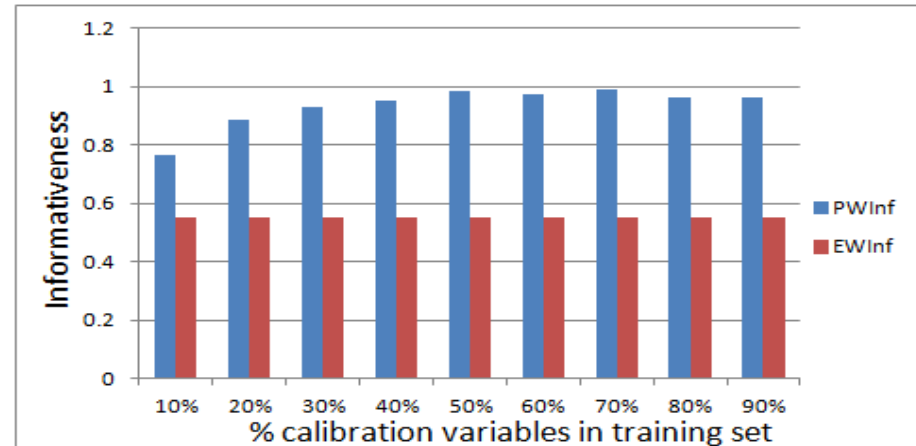
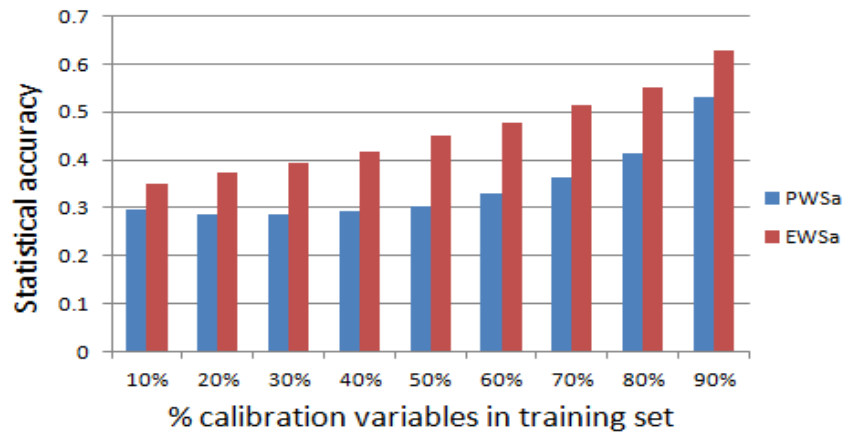
Cross-Validation, Compute wghts on training set

Compute scores on Test set

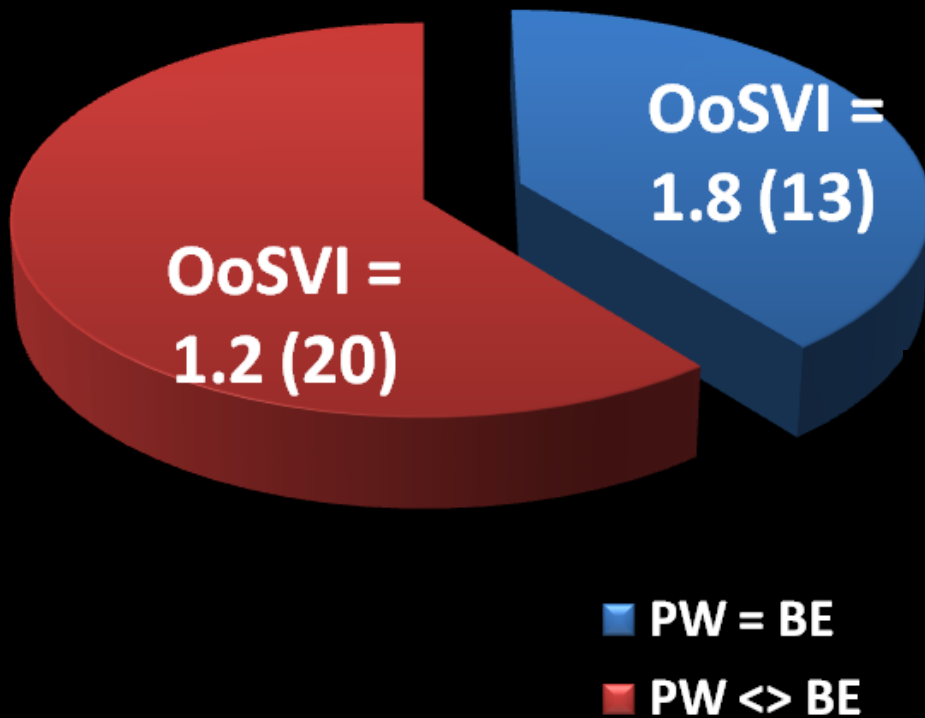
Ismail & Reid Data:



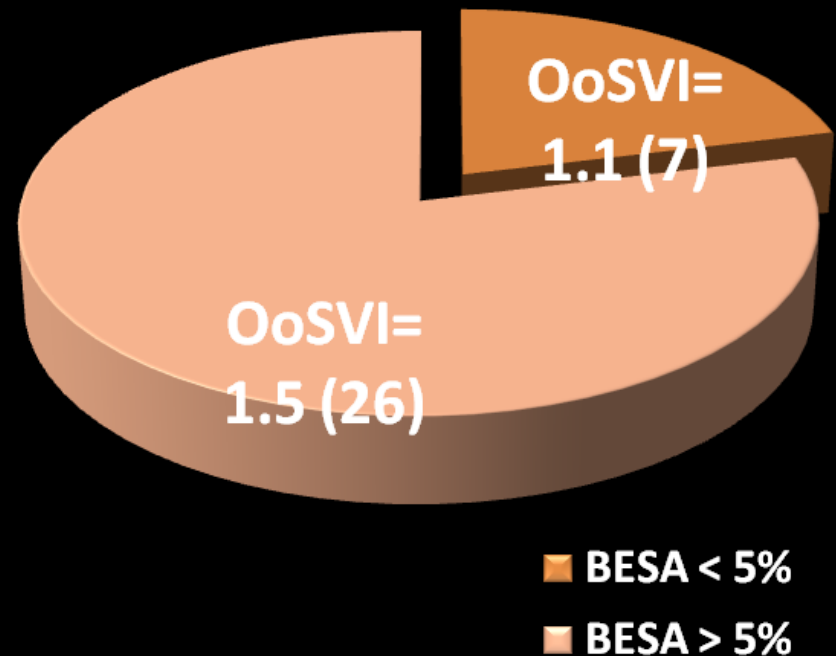
For all 33 studies post 2006



Geomean of Out-of-sample Validity Index (PW/EW, 80% training)



OoSVI doesn't predict current DM, but predicts a swarm of DMs related to current DM



To Do...

- Item weights
- Covariates
- More studies
- More eyes

THANKS!