Response to referee 2.

Referee 2 states that “. . . the author provides a mechanical ad hoc analysis of what leverage would be optimal and shows that leverage was too high, but that is something everyone could see just from eyeballing the raw numbers.”.

My response is that:

(a) I show how Greenspan, Bernanke, and the Quants did not see from eyeballing what the referee thinks was obvious. The warnings were disregarded. I quote from Greenspan’s retrospective where he asserts that the crisis was unpredictable. This is not anecdotal material.

(b) I show how and why the Quants assumed very high leverages.

(c) The question is then can one derive on the basis of theory what is an optimal, and an excessive debt that increases the probability of a crisis.

(d) The technique that I use is stochastic optimal control SOC. In no way can this elegant mathematical technique be considered ad hoc or mechanical.

(e) On the basis of this SOC I derive operational early warning signals. Whereas Greenspan claims that the crisis was unpredictable, the SOC analysis rejects that feeling.

(f) The governance problem has to rest upon a theoretically based measure of excess risk. The SOC does this whereas as I show, the BIS and regulators had no theory.