



# Tail Risks: Information Gaps Recommendation # 3



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## Recommendation # 3:

**“...in consultation with national authorities, and drawing on the *Financial Soundness Indicators Compilation Guide*, ... investigate, develop, and encourage implementation of standard measures that can provide information on tail risks, concentrations, variations in distributions, and the volatility of indicators over time.”**

## Analytical insights to tail risks

- ❖ ***Operational framework for monitoring systemic risk***, the IMF's so-called "SysMo" toolkit to test a variety of "near-coincident" market-based indicators to give imminent predictions of a systemic financial crisis
- ❖ ***A new "simple heuristic" measure***, as an enhancement to stress testing to shed light on the possibility of non-linearity in tails and tail shocks
- ❖ ***The usefulness of distributional statistics arising from financial soundness indicators (FSIs)***

# Systemic Risk Monitoring

**Blancher, N., S. Mitra, H. Morsy, A. Otani, T. Severo, and L. Valderrama, 2013, “SysMo—Practical Guide on the Toolkit for Systemic Risk Monitoring,” IMF WP, forthcoming**

- ❖ Guidance to policymakers on how to use multiple monitoring tools to effectively monitor systemic risk
- ❖ Different types of indicators to monitor different phases of systemic tail risk through time, including low and high frequency indicators

## Systemic Risk Monitoring (2)

**Arsov, I., E. Canetti, L. Kodres, and S. Mitra, 2013, “Near Coincidence Indicators of Systemic Stress,” IMF WP/13/115**

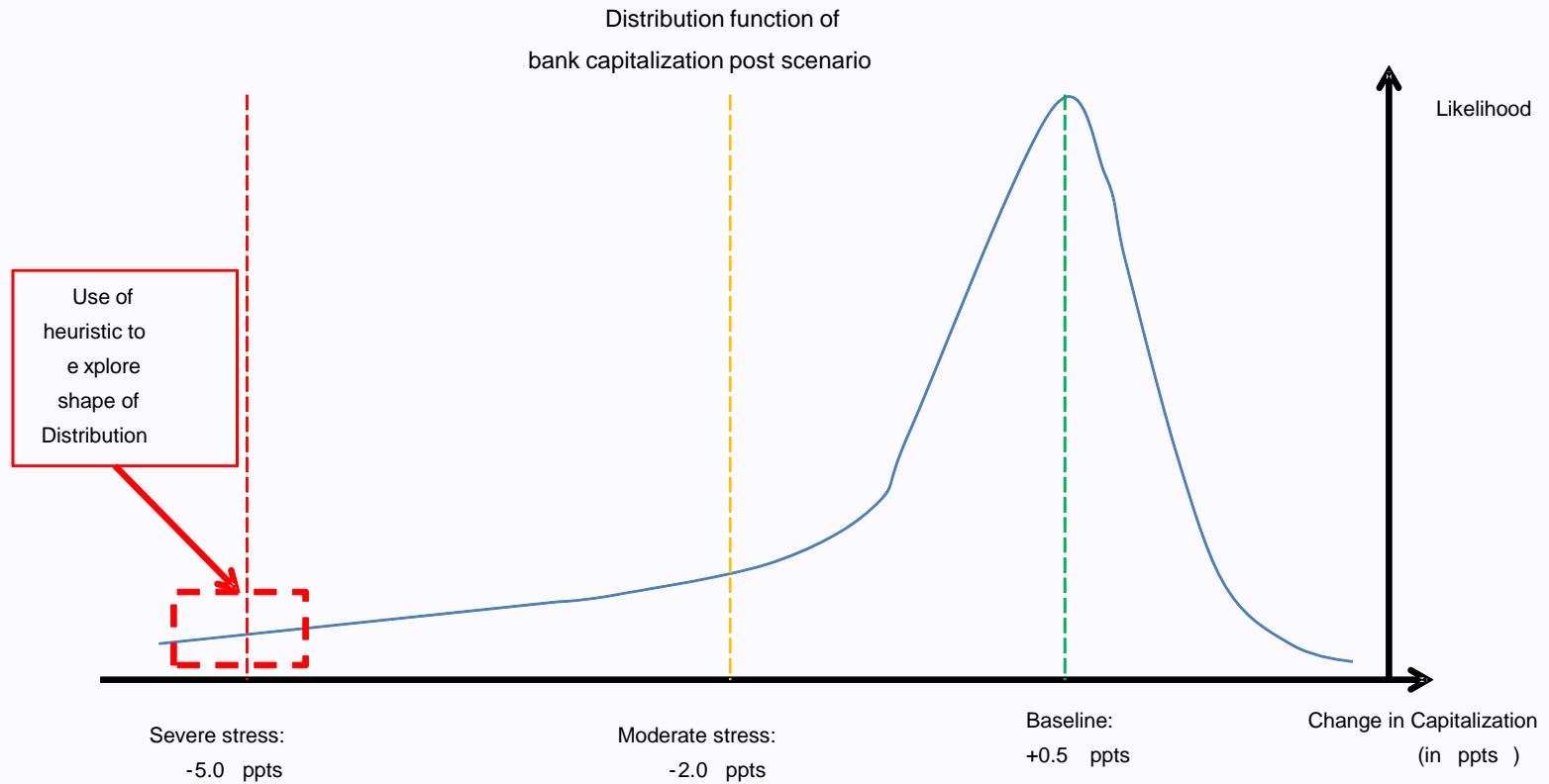
- ❖ Measure of systemic stress (tail) events to assess the performance of 11 near-coincident indicators
- ❖ “Systemic financial stress index” (SFS) = fraction of the number of financial institutions experiencing large negative abnormal returns
- ❖ SFS can be used as a coincident measure of a tail event

# New Heuristic Measure of Tail Risks

**Taleb, N., E. Canetti, T. Kinda, E. Loukoianova, and C. Schmieder, 2013, “A New Heuristic Measure of Fragility and Tail Risks: Application to Stress Testing,” IMF WP/12/216**

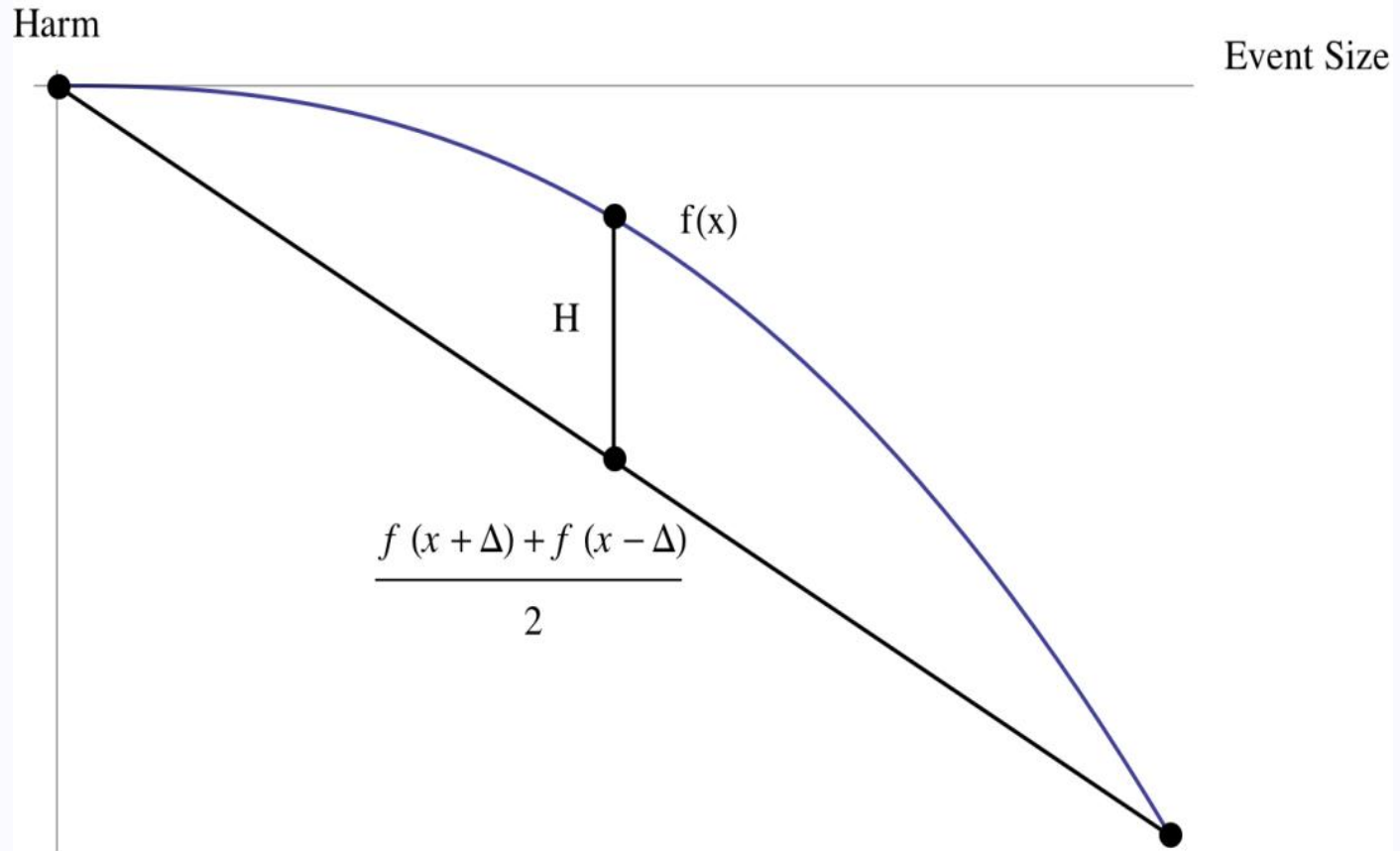
- ❖ Results of stress testing can be misleading in the presence of model error and uncertainty on the accuracy of parameters
- ❖ Simple heuristic measure evaluates a possibility of convexities in the tails of a distribution to better capture the impact of a tail event
- ❖ Thus, the heuristics can be seen as a second order stress test to detect outsized responses to shocks

# New Heuristic Measure of Tail Risks (2)





# New Heuristic Measure of Tail Risks (3)





# Financial Soundness Indicators

- ❖ Danger of relying simply on average FSIs for financial system as a whole
- ❖ SIFI can trigger a financial crisis
- ❖ Therefore, need for developing, collecting, and disseminating summary measures with information on distribution and volatility over time of the health of the financial system
- ❖ Developing additional indicators on emerging systemic risks, using distributional characteristics of FSIs

## Financial Soundness Indicators (2)

**Following statistics can be collected for FSIs**

- ❖ *Standard deviation*
- ❖ *Quintiles*
- ❖ *Deciles (especially 10-percent tails of the distribution)*
- ❖ *Min/max values*
- ❖ *Concentration indices*

**Statistics should be collected for all FSIs**

**Dissemination should take into consideration confidentiality concerns**

**Based on FSI Reference Group's feedback we are considering a pilot on dispersion/concentration measures**

**Thank You!**

**Happy to entertain questions.**

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