

Comments on :  
"News and narratives in financial systems:  
Exploiting big data for systemic risk assessment"  
by D. Tuckett

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# Summary of the paper

## Main results (in the version I received ...):

- Based on text-based approaches, construction of 2 types of indexes : Financial risk and Narrative Consensus metric
- 3 types of financial risk indexes are constructed using 3 various sources of information: BoE internal reports, Broker reports and Reuters
- The indexes reflect the differences between *Excitement* and *Anxiety*
- Potential gain to forecast financial volatility, uncertainty, consumer confidence; based on correlation and Granger-causality
- A Narrative Consensus metric is constructed based on clustering of articles and seems useful to detect sheep-like behaviour

# Summary of the paper

## Main innovations:

- 1 Application of text-based approaches as in Baker, Bloom and Davis (NBER, 15) for policy uncertainty or Husted, Rogers, So (FRB, 16) for monetary policy uncertainty, but for *systemic financial risk*
- 2 Choice of specific words based on theory in the social-psychological field to construct the indicators
- 3 New Narrative Consensus metric to detect sheep-like behaviour : potential application to detect bubbles

## but I have some comments ...

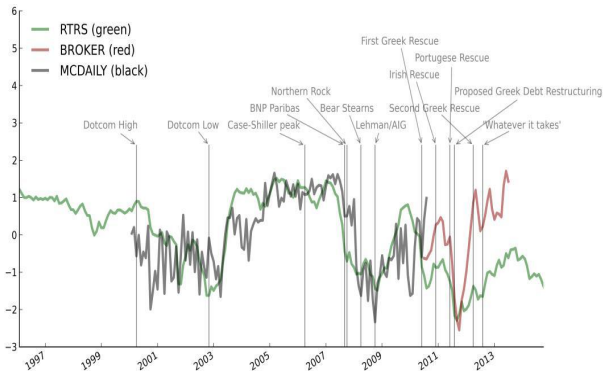
- 1 C1: More empirical evidence is needed
- 2 C2: What do we want to anticipate?

# C1: Lack of empirical evidence

The 3 indexes "*tend to move together*" ...

Is BROKER useful? Short series, not correlated with 2 others

Is MCDAILY useful? Noisy, similar to RTRS and stops before



## C1: Lack of empirical evidence

RTRS and MCDAILY *"show sharp falls well in advance"*

Caution with this claim, should be based on stronger econometric evidence than looking at peaks or correlation/causality analysis.

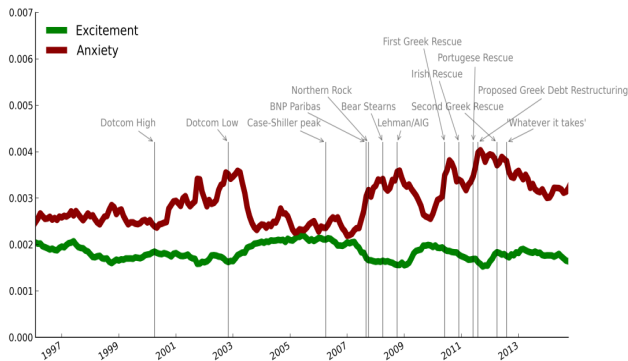
For example:

- Use well known statistical tests to identify breaks in your series (eg: Sensier and van Dijk, 04, ReStat)
- A business cycle turning point analysis (peak vs trough) using standard tools (eg: Bry-Boschan algorithm)
- Real-time assessment. How to identify in real-time a turning point ? Not an easy task (Hamilton, 11, IJF).  
An option: use of non-linear models (eg: Markov-Switching models, Threshold models)

# C1: Lack of empirical evidence

Indexes  $\sim$  *Excitement-Anxiety*. But *Anxiety* is the main driver of the indexes (see below for RTRS): contribution of *Excitement*?

Analogy with uncertainty measures : only bad events seem to increase uncertainty (Bloom, JEP, 14). Any insights?



## C2: What do we want to anticipate?

A gap between the objective : *systemic risk assessment* and what we get from the paper: a correlation/causality analysis with some uncertainty measures (VIX, EPU by Baker, Bloom, Davis, NBER WP, BoE uncertainty) or confidence index (Michigan Consumer Sentiment)

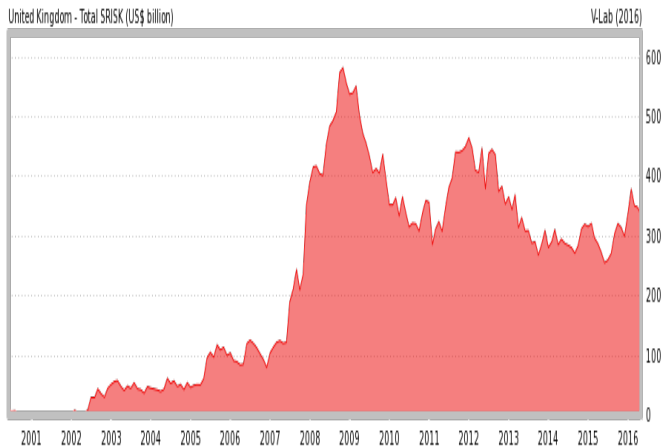
**Alternative 1** : Focus on systemic risk

Difficult to define/identify, but comparison with other systemic risk measures are welcome (see eg: V-Lab or Acharya et al., WP 10 )

Question to answer: Global risk measure or UK risk measure?

## C2: What do we want to anticipate?

### V-Lab estimation of systemic risk in the UK





## C2: What do we want to anticipate?

Important for the understanding and to help policy-makers: disentangle the channels of transmission of a systemic risk shock using your indexes, using a bunch of financial variables.

Analogy with uncertainty, Alfaro, Bloom and Lin (16) show that an uncertainty shock tends to:

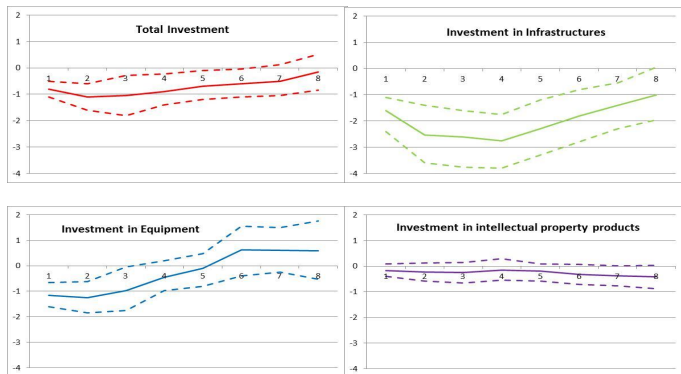
- to cut debt (especially short-term thus increases maturity)
- to cut equity pay-out
- to increase cash holdings

## C2: What do we want to anticipate?

### Alternative 2 : Focus on macro

(i) Approaches to measure impact on macro: VAR-type modelling.

Ex: Standard IRF from uncertainty shocks (Ferrara and Guerin, BoC WP, 16)



## C2: What do we want to anticipate?

(ii) Approaches to forecast macro based on your indexes

A huge literature about the role of financial variables on macro : Estrella and Mishkin (ReStat, 98), Stock and Watson (NBER, 01) Gilchrist and Zakrajsek (AER, 12) ...

Recently, a focus on financial second-order moments: Cesa-Bianchi, Pesaran, Rebucci (14, WP), Ferrara, Marsilli, Ortega (14, EcoMod) Chauvet and Zeynuz (IJF, 16),...

Potential non-linearities: Macro-financial linkages may differ according to the business cycle: Guérin and Marcellino (JBES, 13), Galvao (IJF, 13), Hubrich and Tetlow (JME, 15) ...

## A step further

1/ Identifying **the sources** of systemic risk within the same framework of *Excitement vs Anxiety* would be useful from a policy point of view.

Typically, a split between:

- Domestic risks: Housing market, Non performing loans, Macro risks ...
- International risks: Outlook in specific countries, Commodity prices, Economic policy ...

2/ Exploit the **high-frequency dimension** of your indexes, can be computed on a daily or weekly basis.

Then try to reconcile with macro events and financial crisis occurring at lowest frequencies through the use of Mixed-Frequency models (MIDAS, MF-VAR ...)