DRAFT

March 22, 2016

To: Jared Bernstein, Ben Spielberg, and Interested Colleagues

From: Lloyd Etheredge [1]

Re: **Preventing the Next Recession: Early Warning, Prevention, and Big Data**

Re yesterday's Brookings symposium and a rapid learning system for economics: Here are three ideas about developing an early warning/prevention sub-project to prepare for the next recession (US and G-20):

1.) Real-Time Data & an Early Warning System

If we think of recessions as downward cascades, seeing the early warnings may help us to create and implement a new universe of standby interventions. You might want to get the private sector suppliers of real-time Big Data, and brilliant hedge fund managers (who already may be using real-time Big Data), into a room and challenge them to improve on the somewhat puzzling, conventional forecasting model record assembled by CBO (for government models and about 50 Blue Chip models, showing stagnation since the late 1970s). The data are included in my **"The Optimistic Case for Rapid Learning Economics"** paper (p. 2). Some suppliers (e.g., Mastercard International) can do this research retrospectively and internationally. If a new rapid learning system and academic center, for example, can work with them to build a linked R&D dataset and discover synergies and improvements, all of them could have a new global universe of governments and other clients – and we could have a better early warning system of developing problems

- [For example: Mastercard International presented at a Wolfram Global Data Summit several years ago. The data aren't in their slides but they described being able to look back and watch, in real time, the downward cascade and pathways after 2008. It's only consumer data and 1.8 billion users of Mastercard, but it's real-time and more reliable than US government data will be for several quarters of revisions, and also extends into G-20 and other national economies.[2]]

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[2] Rohit Chauhan, "Mining Consumer Data for Insights and Trends." Online at https://www.wolframdatasummit.org/2012/attendee/presentations/. In 2012, they reported 1.7 petabytes online for 5+ years, 1.8 billion cards, 32 million purchase sites, and (worldwide) about 160 million transactions/hour.

2.) Data About Emotions and Options for Political Leaders (as Applied Psychologists)

- I'm not yet persuaded by Hal Varian's early Google "search" measures for economic forecasting, but Google now has added an exciting cornucopia of new kinds of data that can help with the psychological (and especially the emotional) dimension of economic policy in recession prevention, recovery, and growth. Three dimensions of successful economic policy: fiscal, monetary, *and* psychological.

If you scroll to the bottom of the **http://kalevleetaru.com/** page and look at Google's global content analysis resources there and at **gdeltproject.org**, the ability to capture emotions and public psychology is a new universe of data for understanding causal pathways (e.g., beyond interest rates) that could affect confidence and limit or accelerate cascades and recoveries. [Includes real-time news monitoring, event data, and reliable translations from 65 languages; half a million hours of television news with transcriptions; several dozen cloud analysis tools for human emotions and themes]. There are a lot more, stronger, and more complicated emotions - fear, anger, despair, apathy and alienation, helplessness, betrayed trust and loss of moral credibility in major institutions – to be understood and that engage and grow in prolonged recoveries and major recessions. And that are affected by growing political instability. The fast feedback is important to political leaders: they understand and can respond to emotions in a way that econometric models do not. They also can respond more quickly.[3]

Policy implications: PBS has accepted the (self-fulfilling prophecy) idea that it should keep being upbeat to prevent panic and support recovery, but PBS only has 2%-3% market penetration – viewers who can, thereby, live in this sense of reality, while many more Americans who get news from television have nervous systems wired to Fox News and to fear, mistrust, chaos, and anger. One lesson for political leaders in Washington – to suggest a theory - is that they may want to rethink the needs for their sustained, genuine, public leadership in recoveries: they probably are being too technocratic and should be communicating with good emotional connections – much earlier and 100x more than they think is necessary.

3.) "Asset Bubble" Watch Lists and Automatic "Special Risk" Triggers

Inventing precision policy options linked to early warning systems will depend on the types of recessions in the US and G-20 and causal pathways that are discovered by the

[3] One lesson from 2008 may be that major institutions (e.g., governments and financial institutions) and elected leaders did not restore confidence in themselves quickly enough. And perhaps they still have not done so – without realizing that low interest rates are not enough.

rapid learning system in the data. For example: 1.) At a recent Brookings panel, Alan Greenspan spoke about an "inventory adjustment" recession in the Ford Administration; 2.) An early warning discovery may be that a changing world of investors is more likely to create asset bubble recessions – like the dot.com bubble and 2008 (in the US and possibly worldwide).

Thus, the next asset bubble recessions might be prevented if we are prepared with sophisticated and special early warning systems and a universe of creative, fast-trigger, tools. [By now, the leading hedge funds must have global lists of asset bubbles. And the analysis can be localized: e.g., housing bubbles in Nevada and South Florida before 2008.] The Fed and all of the G-20 Central Banks might want to create an <u>Asset Bubble Watch List</u> with fast triggers to activate "special risk" reserve requirements, insurance fees for all financial institutions invested or trading in these assets, etc. There also could be an escalating series of creative policy tools and thresholds to slow the rate of trading and hyper-gambling in these assets or remove capital gains benefits of gambling by requiring these assets be held for three years to qualify, etc. These and other automatic “Watch List” mechanisms can be public safety requirements, recognizing the wider, recession-triggering potential. It’s like the Precision Medicine intervention systems evolving at NIH.