

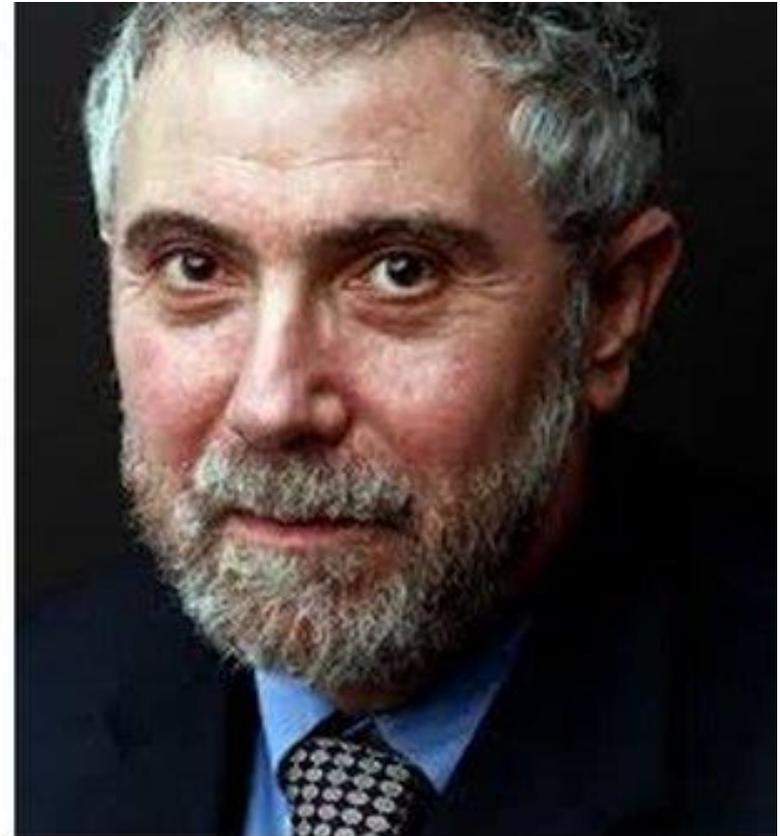
Webinar
**The audacity of slope:
How fast a recovery?**

WITH PAUL KRUGMAN
COLUMNIST, NEW YORK TIMES
PROFESSOR, CUNY

Friday, May 15, 12:30 PM ET
Pre-Registration Required



PRINCETON ECONOMICS



Intro: MARKUS BRUNNERMEIER

Twitter: @MarkusEconomist

Markus' intro

- Previous/future webinars
 - Jeremy Stein
 - John Cochrane
- Speakers

Fed-Treasury Credit Programs
Economics of reopening



The 3 crises

■ Health crisis

- Health
- Gaining time

contagion

■ Economy crisis

- Supply (chains), demand (hoarding)
- Shutdown

Shut-down

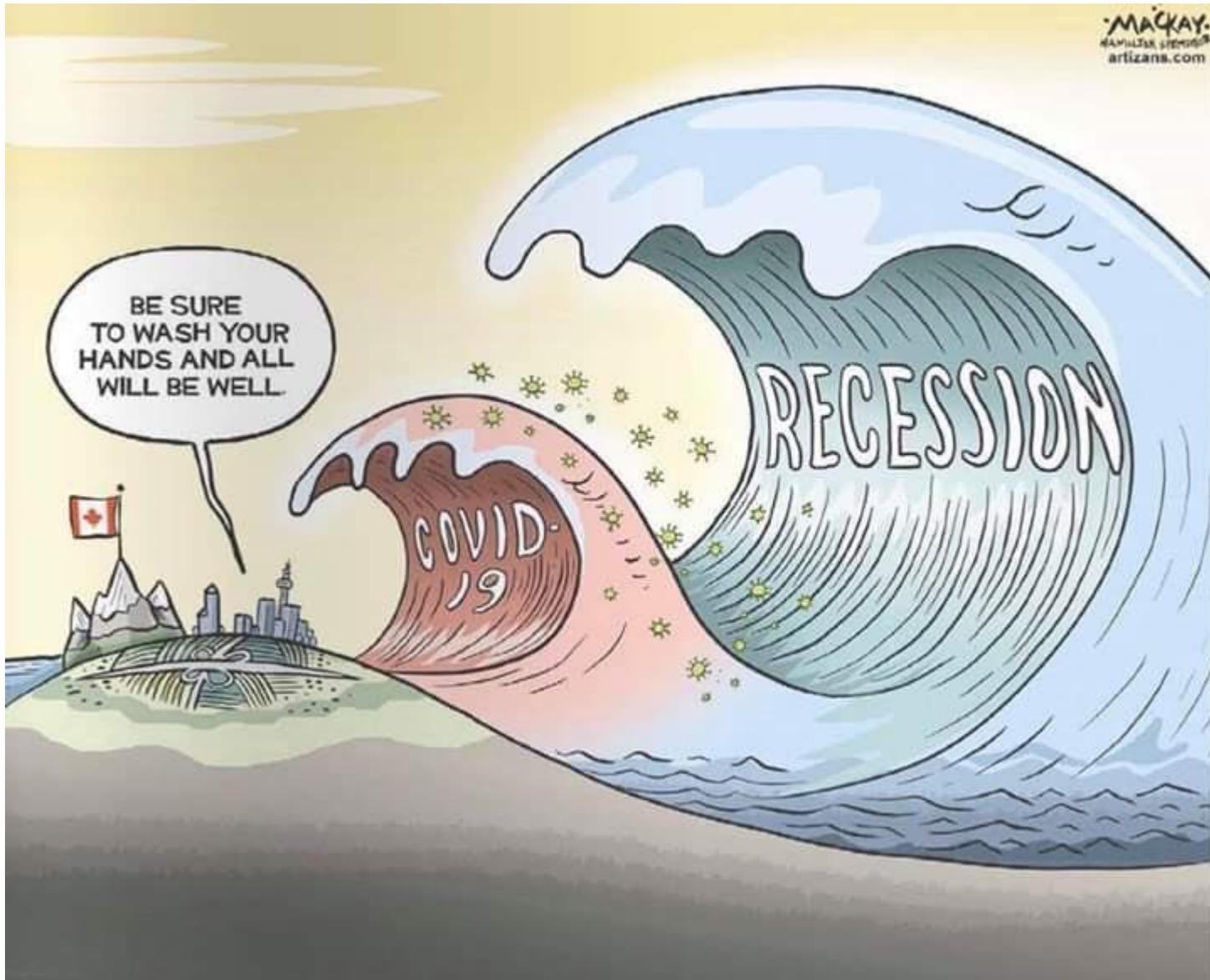
■ Financial crisis

- Liquidity, solvency

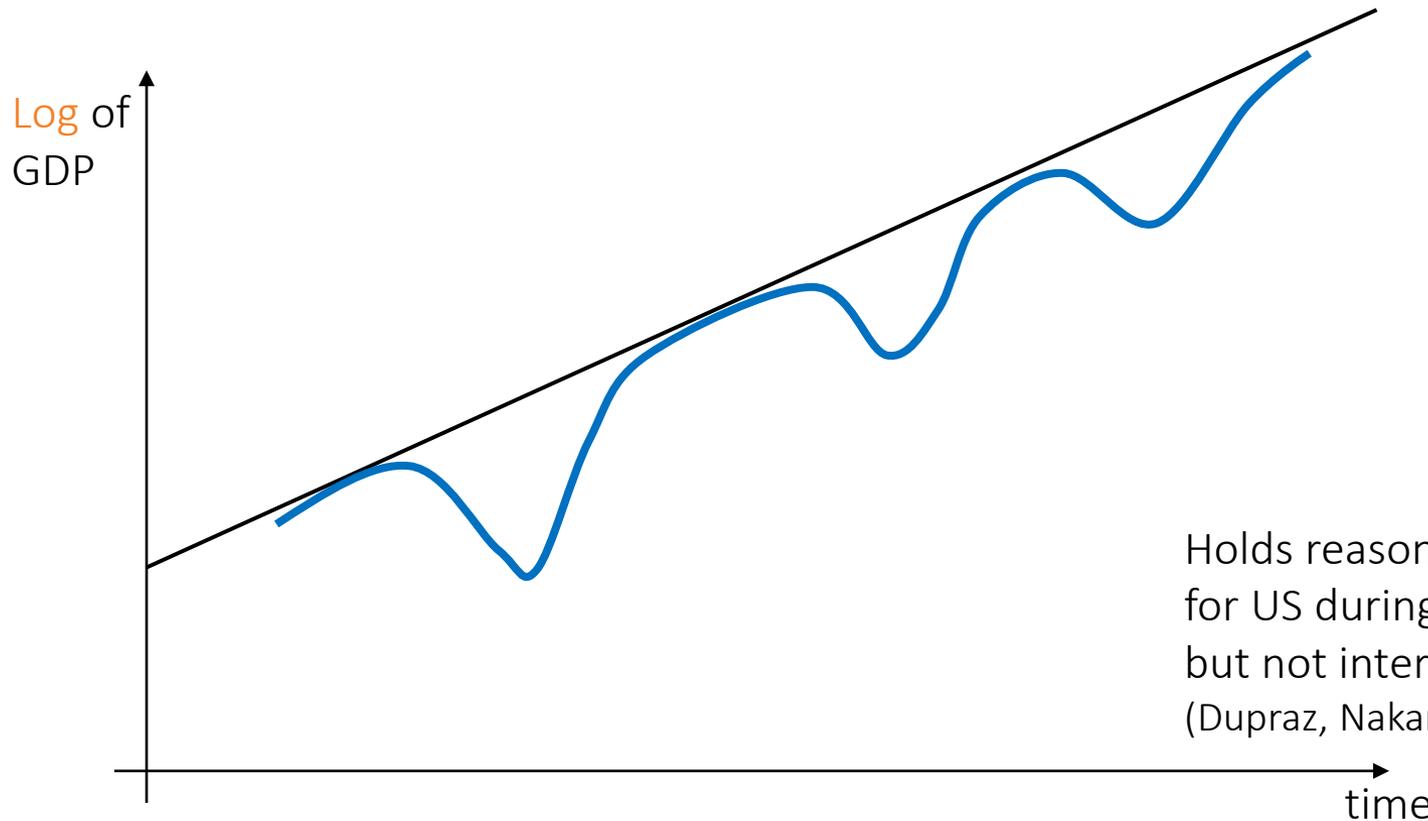
contagion



Health and economic crisis



Friedman “plucking model”



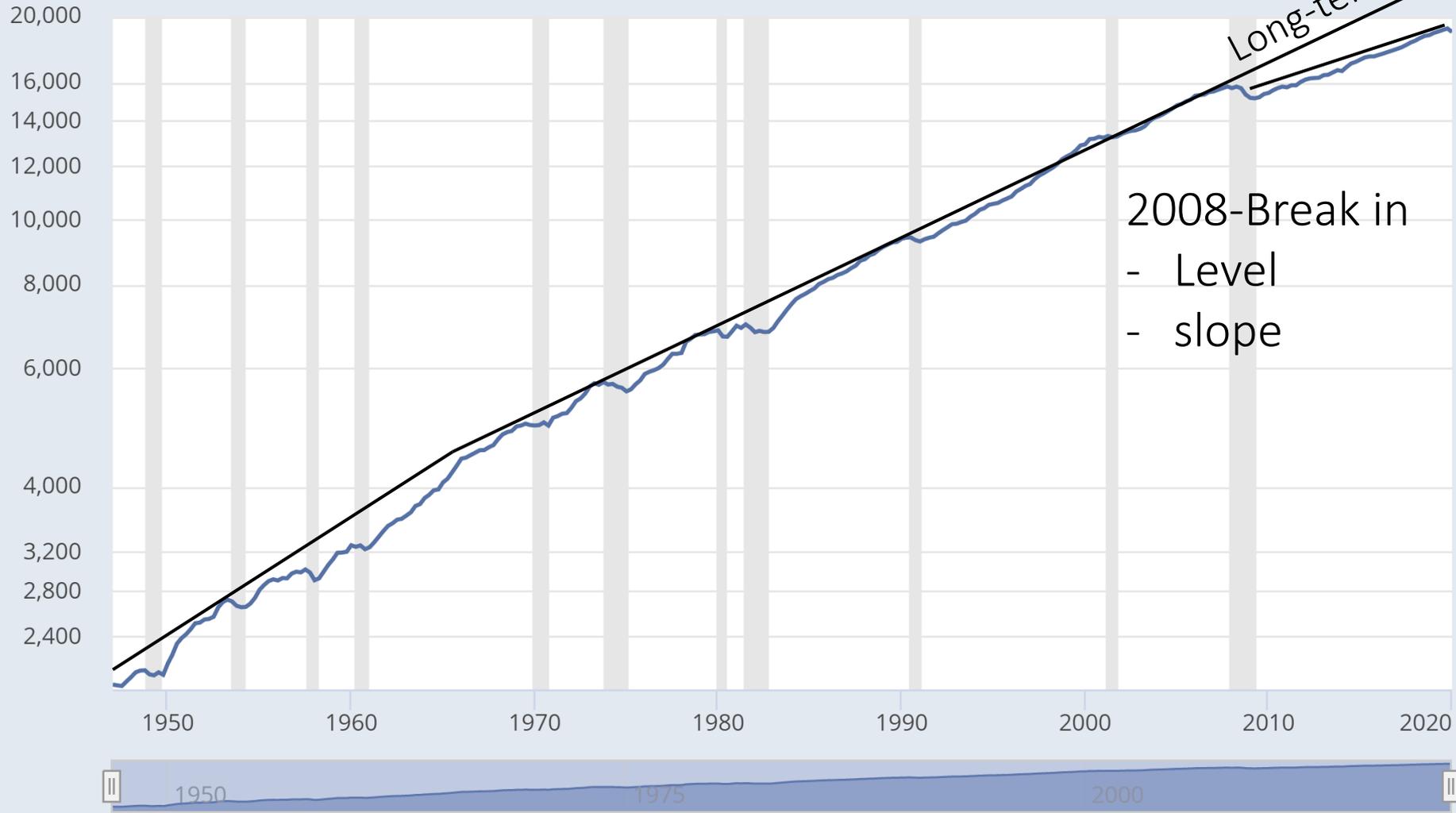
Holds reasonable well
for US during 1960 - 2008
but not internationally
(Dupraz, Nakamura, Steinsson 2019)

- What if there can be **bubbles** building up and bursting?



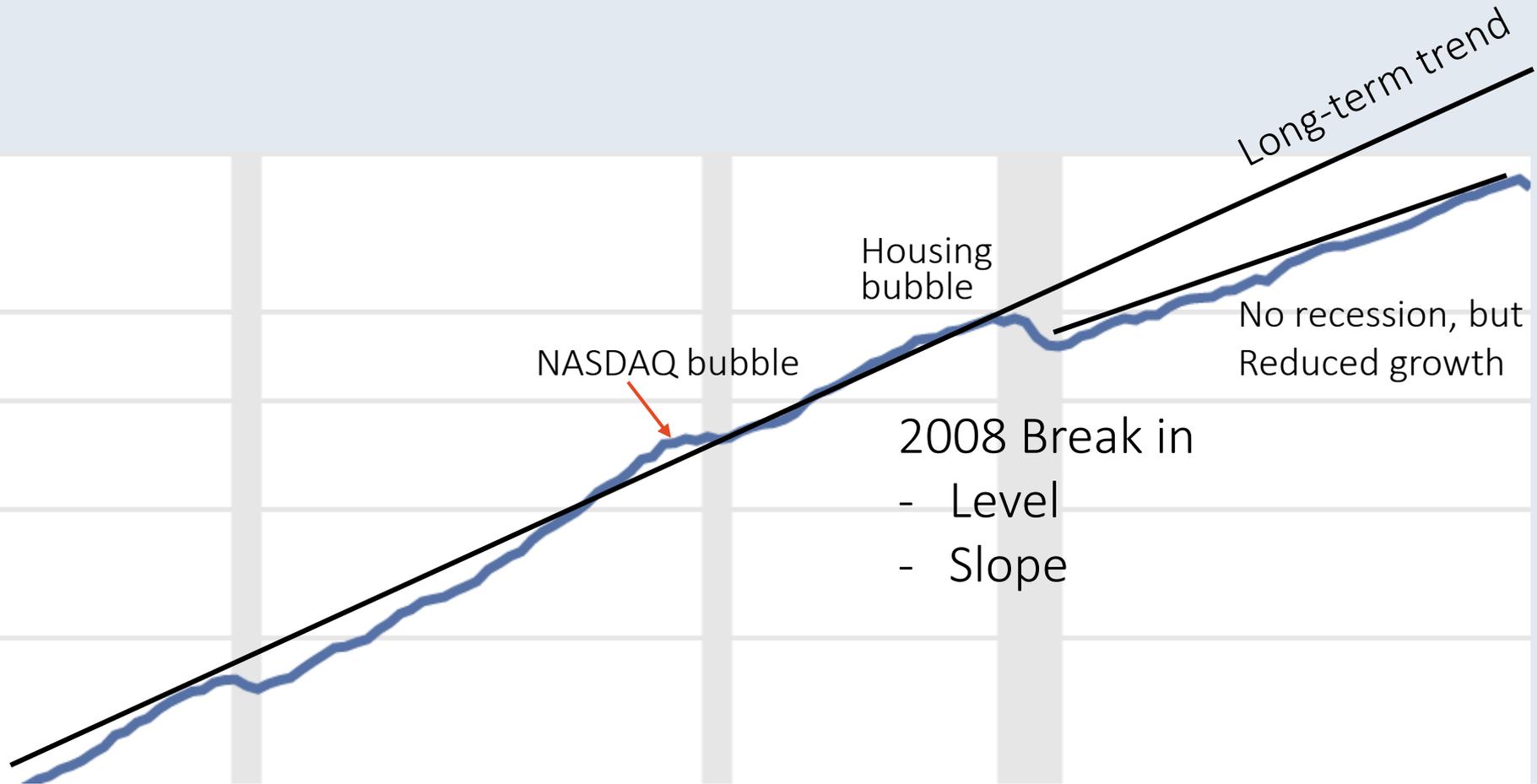
US GDP in log scale

FRED — Real Gross Domestic Product





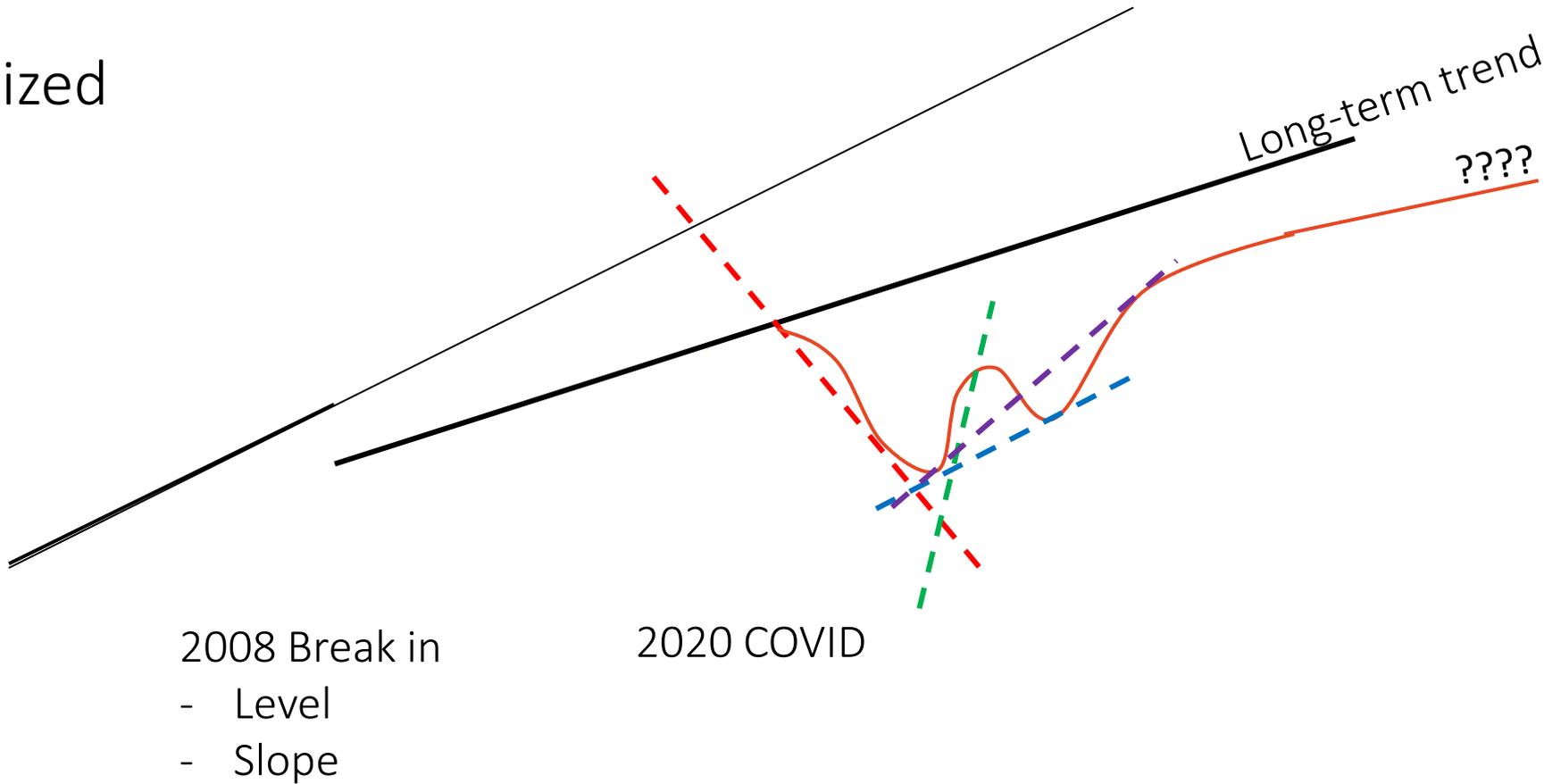
US GDP in log scale





Audacity of what slope?

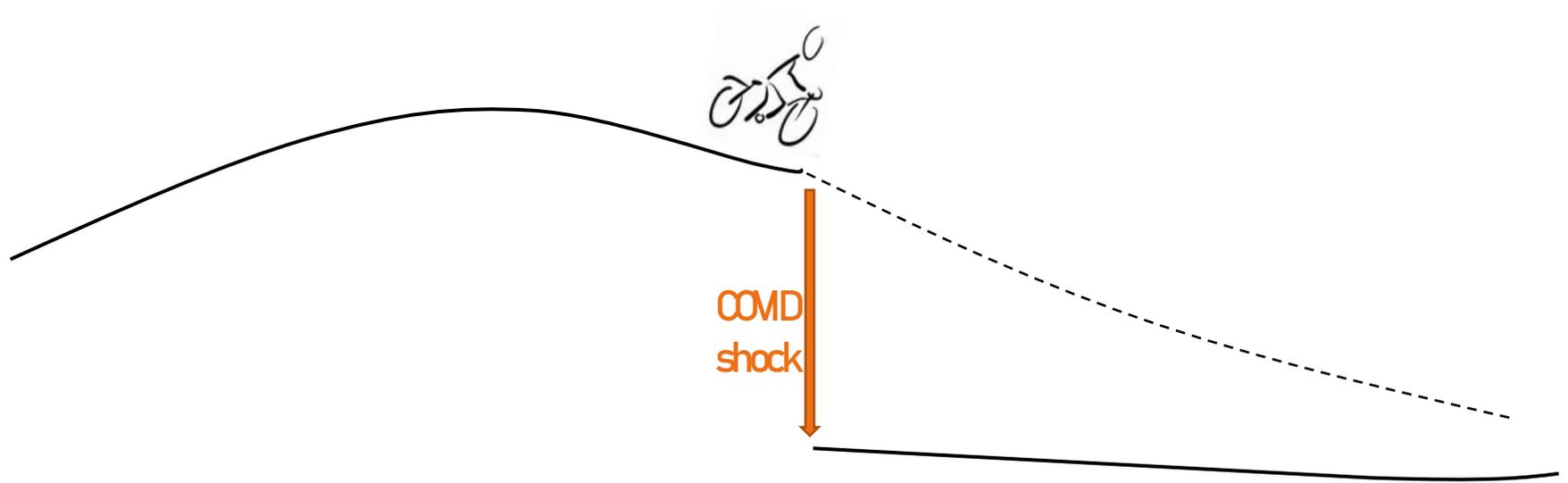
■ stylized



COVID speeds up existing trends?



- Long-term trend



- Negative or positive trends (home-office, tele-medicine, ...)
- See Tyler Cowen's YouTube video



Shocks and amplification

- Pre-crisis buildup
- Nature of the initial economic shock
 - Temporary vs. permanent (V, U, L-shaped)
 - Supply vs. demand (1970s)
 - Aggregate vs. idiosyncratic (finance)
 - ...
- Nature of amplification/feedback effects/spirals/non-linearities
 - Risk-on to risk-off: Flight-to-safety
 - Runs, spirals
 - Multiple equilibria



Permanent vs. temporary shock

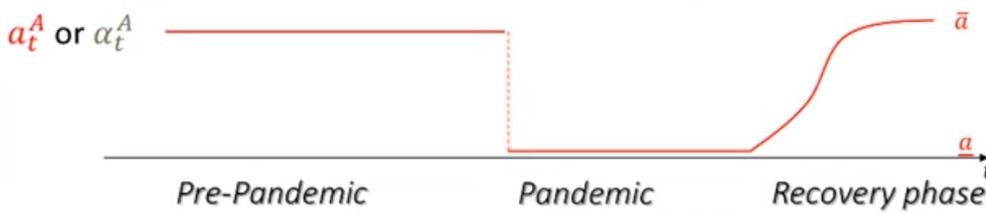
- What's optimal policy?
 - Blanchard's 2 phases of crises
 - “Whatever it takes” phase
 - “Oh my god, what have we done” phase
- Optimal policy measures
 - Short-term work (Kurzarbeit)
 - Less damage since current relationships are maintained
 - Less adjustment to potentially new environment
- Uncertainty and policy measures
 - Flexibility & contingent policies (if foreseeable)
 - Jeremy Stein's stage financing Venture Capitalist analogy
 - Extent guarantees
 - Less planning certainty for citizens

Inflation/Deflation pressures

- ... in a model with uncertain length of pandemic (with Sebastian Merkel, Jonathan Payne & Yuliy Sannikov)

|| Shocks: Pandemic + Recovery

- CES:
$$c_t^I = \left[\alpha_t^A (c_t^{Ai})^{\frac{\varepsilon-1}{\varepsilon}} + \bar{a} (c_t^{Bi})^{\frac{\varepsilon-1}{\varepsilon}} \right]^{\frac{\varepsilon}{\varepsilon-1}}$$
- Output:
$$y_t^{Ai} = a_t^A k_t^{Ai}, \quad y_t^{Bi} = \bar{a} k_t^{Bi}$$



Pre-Pandemic Pandemic (random length $\lambda e^{-\lambda \tau}$) Recovery phase

Sector A		Sector B		Sector A		Sector B	
Money	Gov.debt	Money	Gov.debt	Debt	Money	Gov.debt	Debt
$q_t^A k_t^{Ai}$		$q_t^B k_t^{Bi}$		$q_t^A k_t^{Ai}$		q_t^{B+Bi}	
Net worth n_t^{Ai}		Net worth n_t^{Bi}		Debt n_t^{Ai}		Net worth n_t^{Bi}	

Markus Brunn...

20:06 / 1:28:44

- Inflation depends on
- length,
 - redistribution,
 - ...



Poll 01:

1. Which recovery scenario do you think will be most likely
 - a) V
 - b) U
 - c) L
 - d) W

2. Will we return to a pre-COVID economy or will the economy be fundamentally different?
 - a) Yes
 - b) No

End of MARKUS' INTRODUCTORY REMARKS

Now

Please ask questions in Q&A box



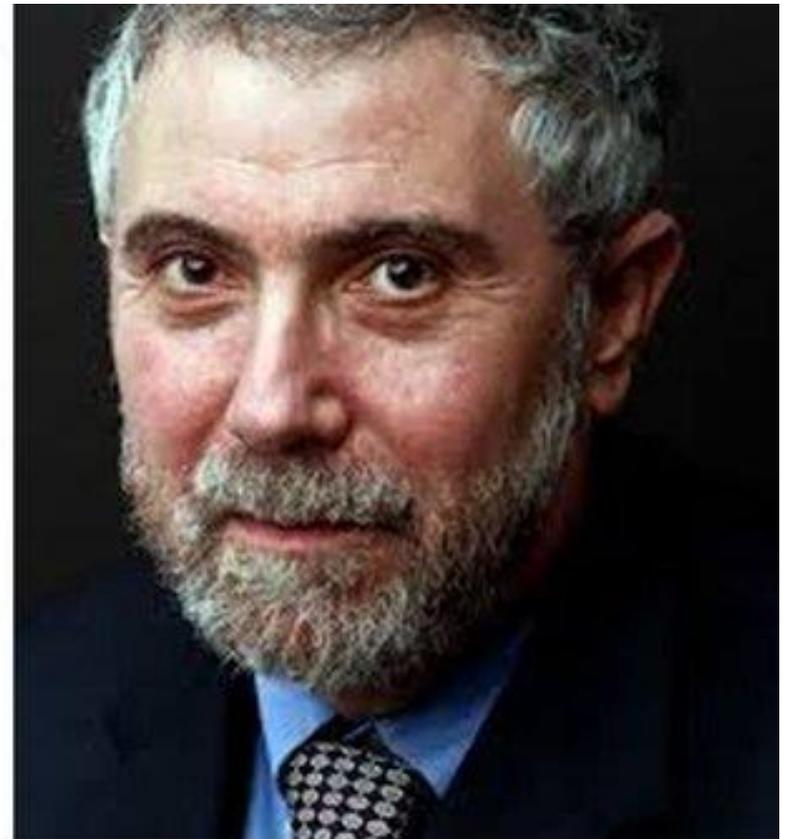
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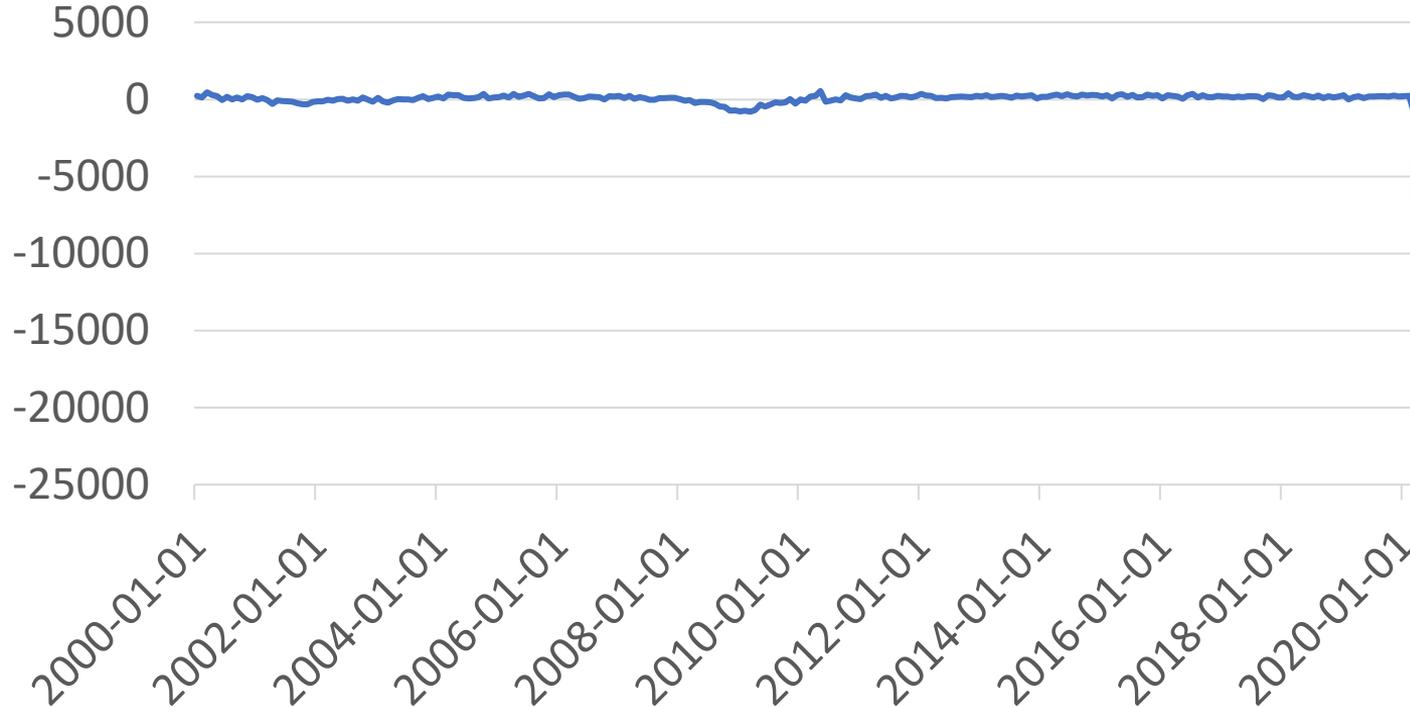


The audacity of slope: How fast will we recover?

Paul Krugman

Apocalypse already

Change in employment (thousands)



Theoretical models generally don't have intrinsic dynamics — use the two-period cheat (which is fine, up to a point).

Macroeconomic Implications of COVID-19: Can Negative Supply Shocks
Cause Demand Shortages?

Veronica Guerrieri, Guido Lorenzoni, Ludwig Straub, Iván Werning

NBER Working Paper No. 26918

Issued in April 2020

NBER Program(s): **Economic Fluctuations and Growth, Monetary Economics**

A Model of Asset Price Spirals and Aggregate
Demand Amplification of a “Covid-19” Shock

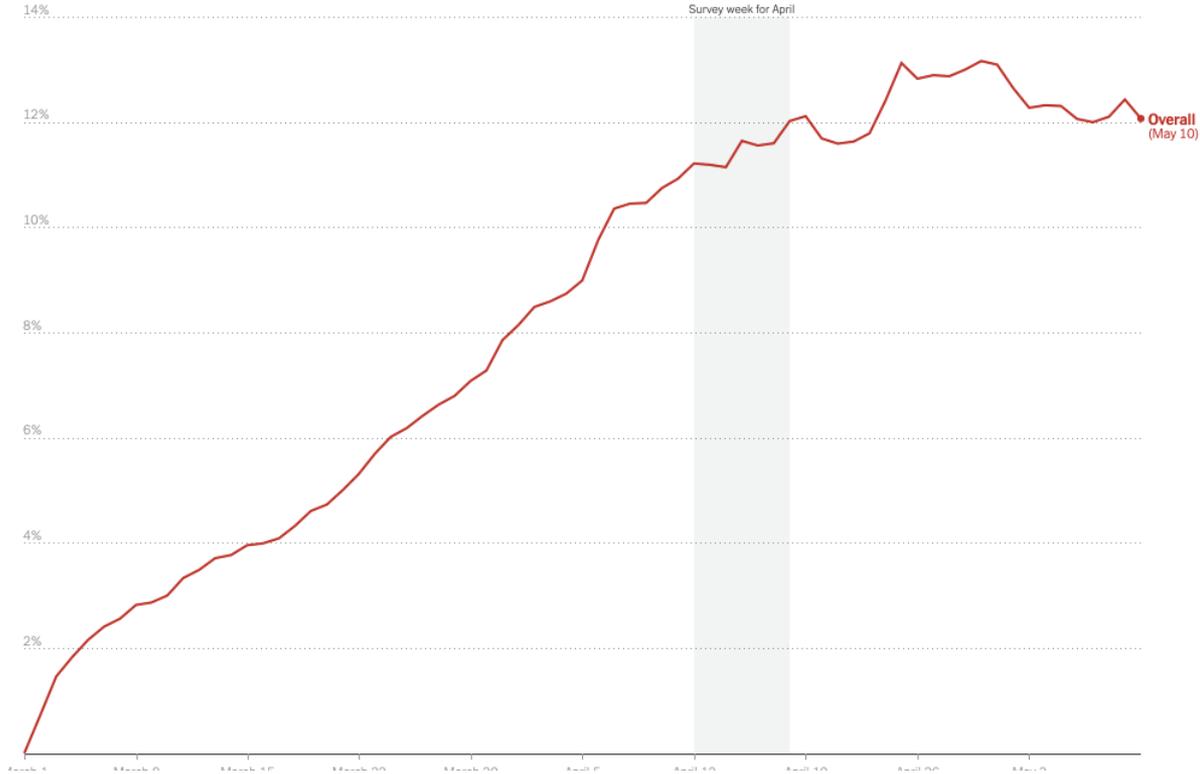
Ricardo J. Caballero and Alp Simsek*

April 22, 2020

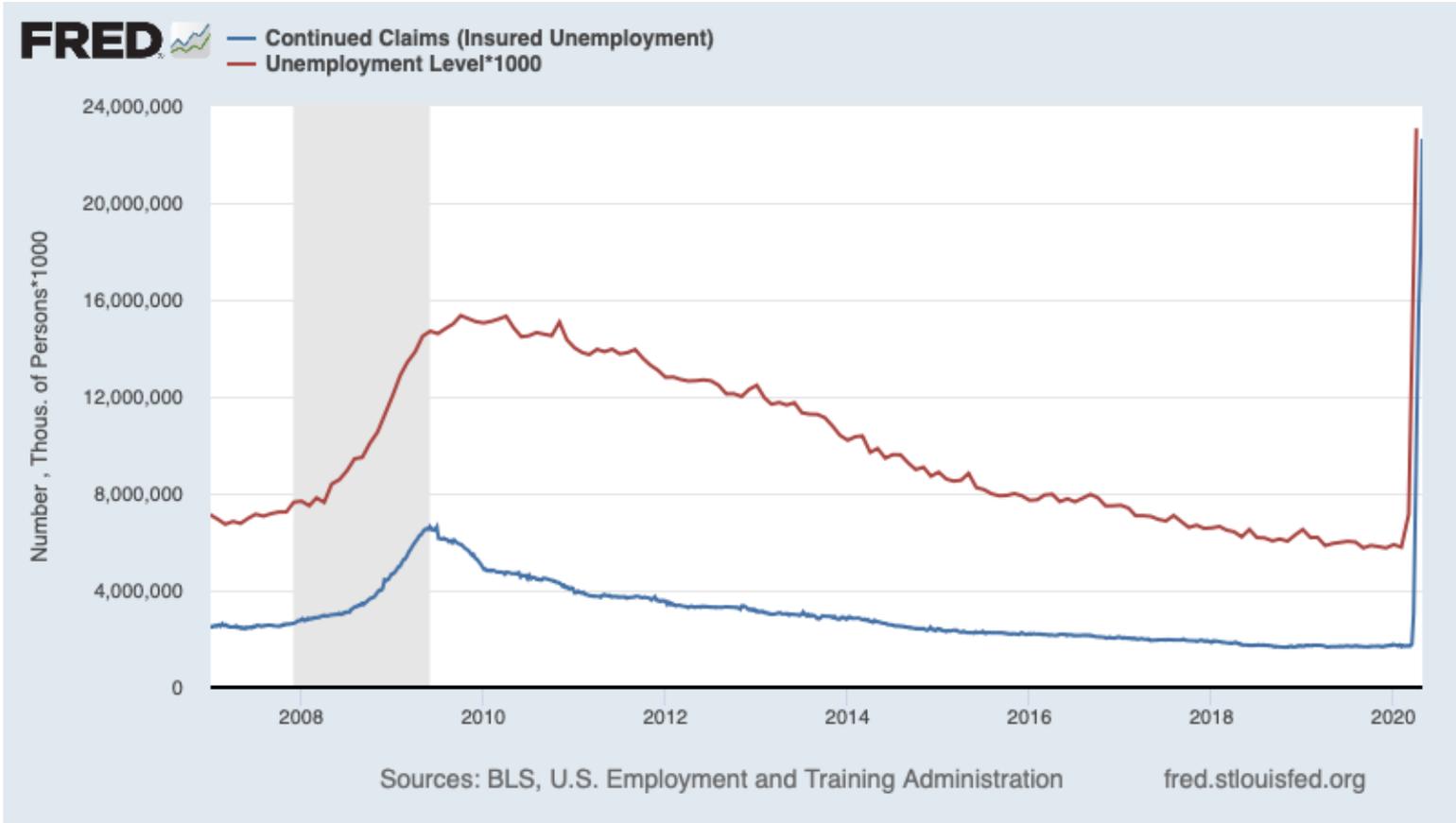
But period 1 has already happened

March and April were devastating, but May seems to be flattening

Percent of workers newly nonemployed since March 1, 14-day rolling average

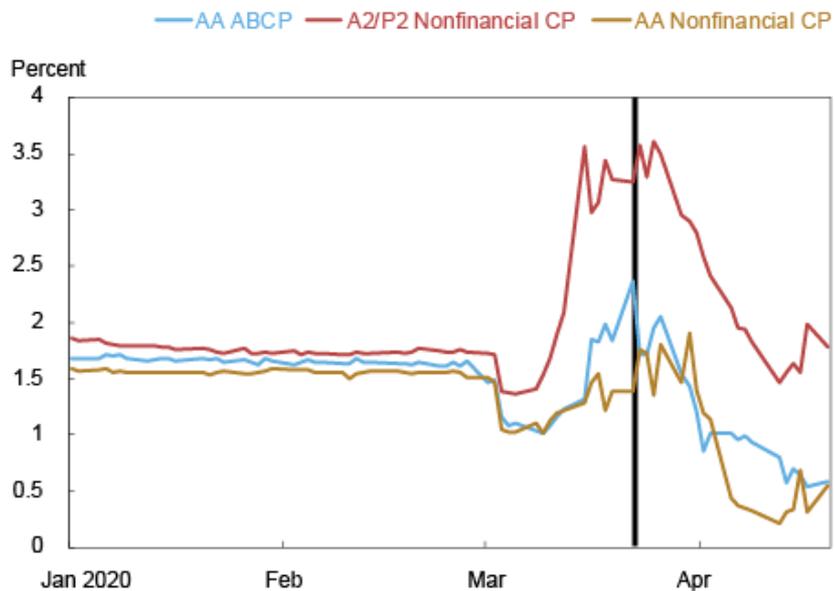


Why? Safety net has contained income losses



Fed action has contained financial spillover

Rates on 30-day Commercial Paper Ease

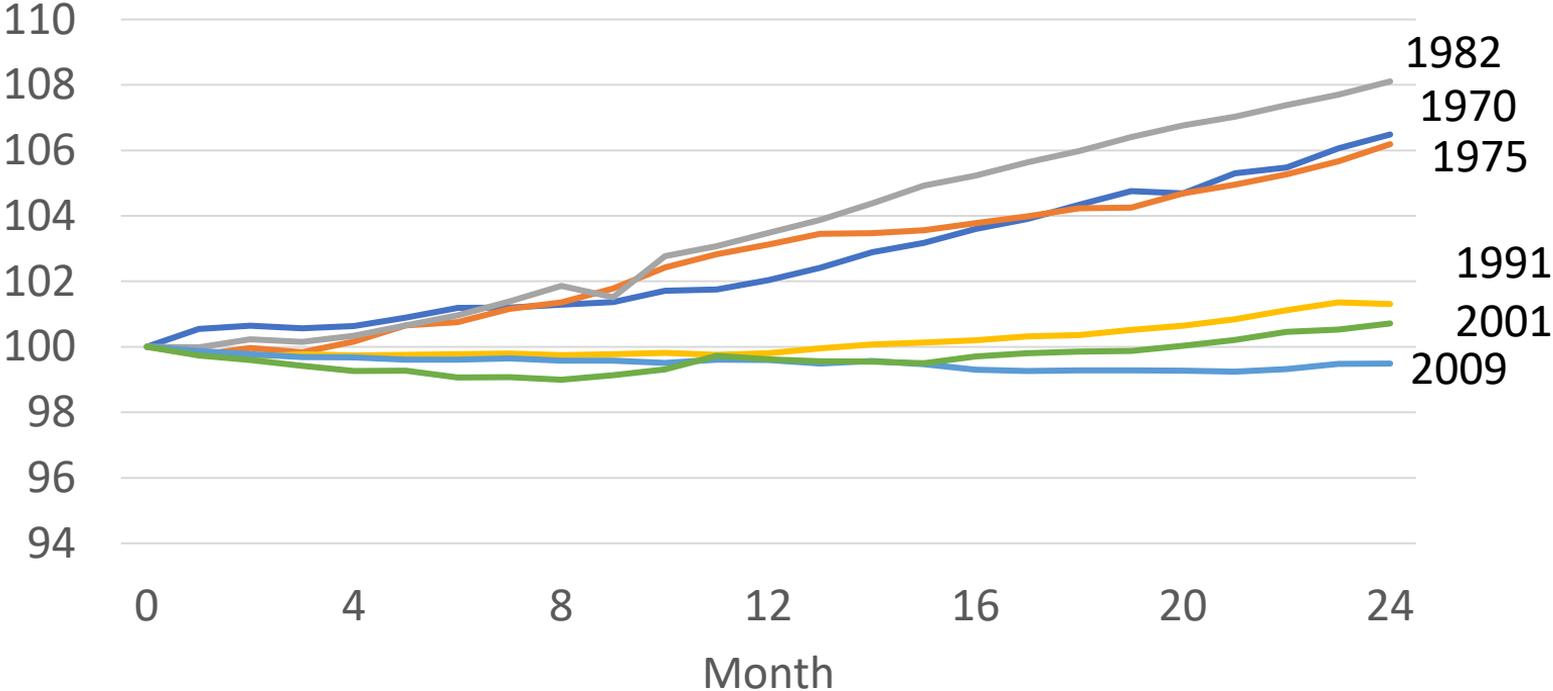


Source: Board of Governors of the Federal Reserve System.

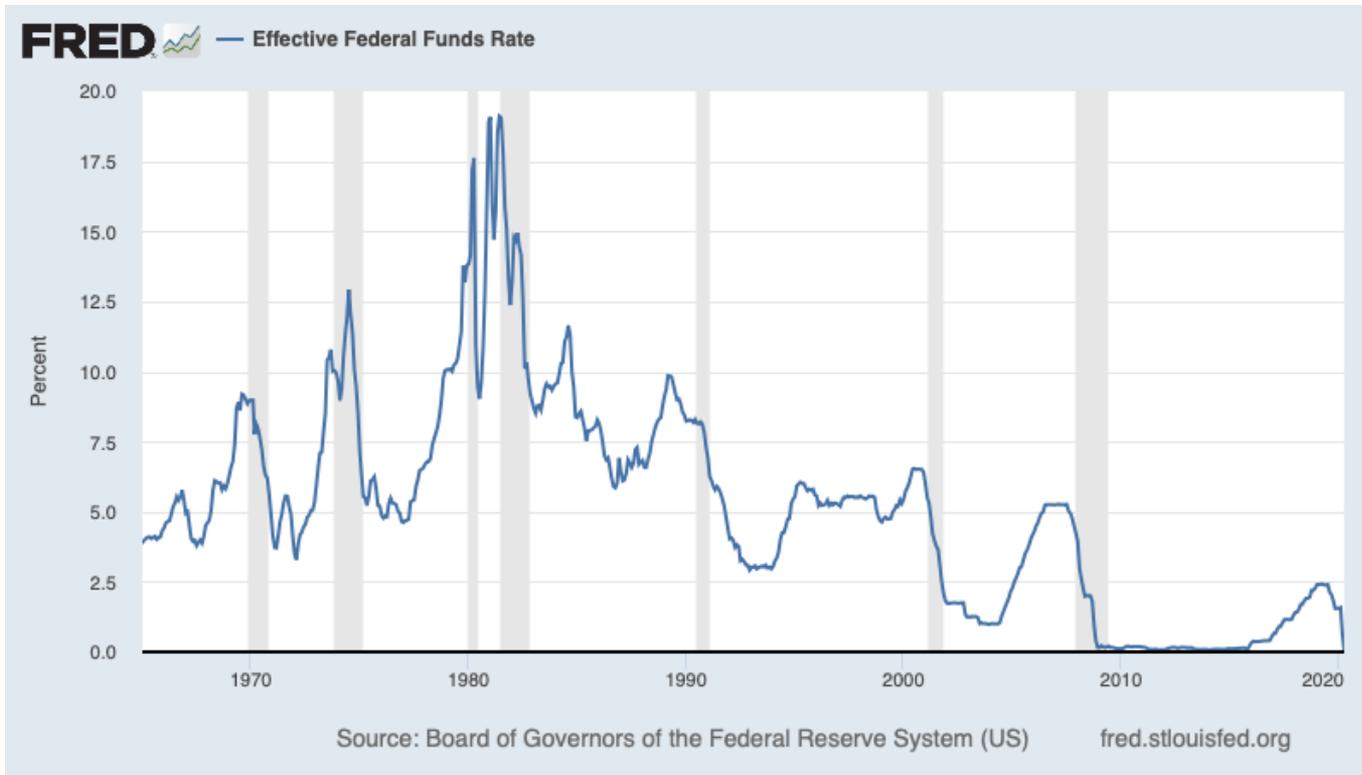
Notes: ABCP is asset-backed commercial paper. CP is commercial paper. The vertical bar marks the day of the facility's inception.

History suggests two kinds of recovery, perhaps linked to cause of recession

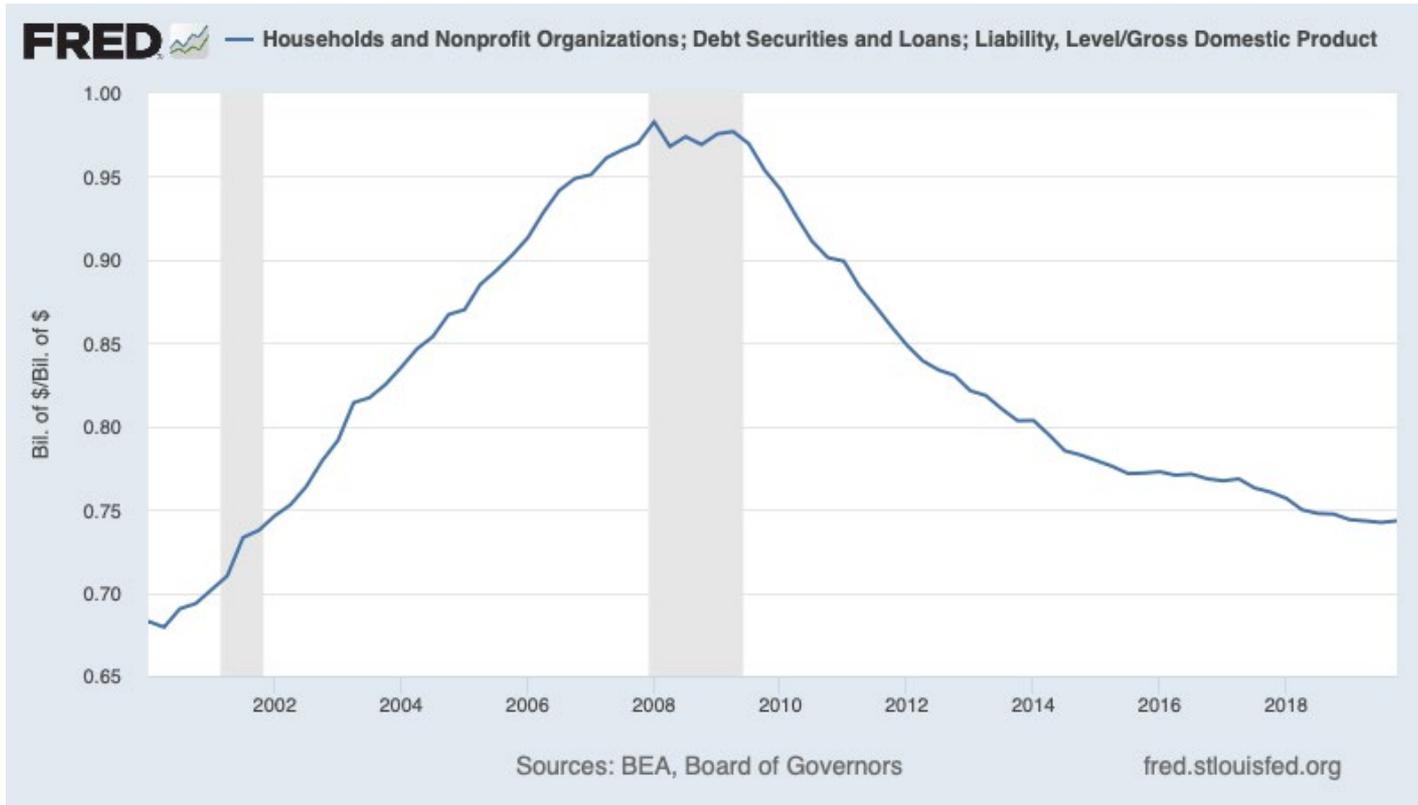
Employment growth in recoveries



Fast recoveries followed severe monetary tightening; slow followed slumps caused by private-sector excesses



Slow recoveries seem to have followed periods of unsustainable spending, ending in Minsky/Wile E. Coyote moment



PS: Sluggish recovery from 2008 crisis widely predicted

Is the 2007 U.S. Sub-Prime Financial Crisis So Different? An International
Historical Comparison

Carmen M. Reinhart, Kenneth S. Rogoff

NBER Working Paper No. 13761
Issued in January 2008



The Conscience of a Liberal

PAUL KRUGMAN

Deep? Maybe. Long? Probably.

JANUARY 22, 2008 11:09 AM

How does this apply to Covid-19 shock?

Hypothesis: difference in recession shapes not fundamentally about interest rates but rather about whether headwinds are externally or internally generated

If so, Covid slump more like 1979-82 than like 2007-9: economy could spring back quickly if viral threat lifted

But:

That's a very big if

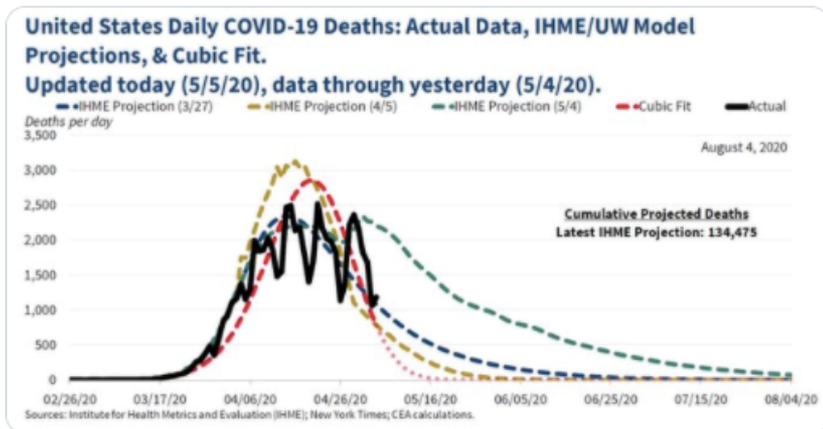
Market doesn't seem to agree

How not to predict the course of the pandemic



CEA
@WhiteHouseCEA

To better visualize observed data, we also continually update a curve-fitting exercise to summarize COVID-19's observed trajectory. Particularly with irregular data, curve fitting can improve data visualization. As shown, IHME's mortality curves have matched the data fairly well.



10:35 AM · May 5, 2020 · [Twitter Web App](#)

Bond market seems to be predicting slow recovery — but has been wrong in the past

