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#### **OVERVIEW**

Lessons from the Global Financial Crisis of 2008-09

- Market-based signals this time around
- A table-top COVID stress test
- Promoting dynamic resilience in times of stress
- Some specific policy recommendations



# LESSONS FROM THE GFC





Note: Red line denotes day of peak stock price over respective sample

- In hindsight, was a major policy failure not to stop payouts and push for equity raises sooner.
- Not appealing for banks to issue equity at 40% decline from peak. But by waiting, had to do it after a 70% decline, with support from government and specter of nationalization.



### LESSONS FROM THE GFC



- Bank stock prices as useful early warning signal.
- In cross-section, pre-Lehman stock price decline is highly informative about subsequent loan losses.
- Much better than accounting-based metrics.



## MARKET-BASED SIGNALS THIS TIME AROUND

- Bank stocks down by about 40%: much more than overall market, or even value stocks.
- In cross-section, bigger price declines for banks with more loans/assets, especially C&I loans and consumer loans.
  - As in GFC, seems to be real fundamental information in bank stock prices.
- C&I leveraged loan prices down by 10% (even with Fed support of credit markets).
- Weighted CMBS prices down by 9%.



#### A TABLE-TOP COVID STRESS TEST

- We use slightly modified version of Fed's CLASS model: maps macro assumptions into evolution of category-level loan losses and bank-level capital ratios based on historical time-series relationships.
  - Unemployment rate as primary macro driver; also residential and commercial real estate indices.
  - Study 21 BHCs included in 2020 CCAR.
- Obvious caveats about extrapolating past history to the present case: dynamics of unemployment path are very different.
- Think of as a crude attempt to get a handle on magnitude of what could happen if things continue to go south.
- In our most optimistic case, with unemployment peaking at 17.8%, CET1 drops by \$389B and CET1 ratio falls from 11.5% to 7.3%. In most pessimistic case, with unemployment peaking at 28.7%, CET1 ratio falls to 5.5%.

## A TABLE-TOP COVID STRESS TEST

Effect of different unemployment rate scenarios on loss projections



Effect of scenario severity on CET1 ratio

Effect of scenario severity on on net charge-offs Cumulative projected NCOs as percentage of 2019Q4 loan balance







All less adverse All more adverse



## STRESS TESTS AND STOCK PRICES TELL A SIMILAR STORY



 Cross-validation: banks with bigger stock-price declines show bigger hits to CET1 ratios in our stress tests.

#### These tend to be consumer-focused banks.



# THE PRINCIPLE OF DYNAMIC RESILIENCE

- In a simple model, Greenwood et al (2017) show that optimal response to a major shock to bank capital consists of two elements:
- A loosening of marginal capital-ratio requirements on new loans and other desired activities.
  - As would happen e.g. with relaxation of a counter-cyclical capital buffer.
  - Or with exclusion of Treasuries and reserves from denominator of SLR.
- An increase in *dollars of equity* in the banking system.
  - Dividend stoppages and equity raises.
  - Was a fundamental insight of 2009 SCAP: focus on dollars raised, not just capital ratios.
- Analogy to taxation: want to simultaneously broaden the base to maintain revenues, while cutting marginal tax rates to encourage desirable activities.
- US policy thus far has been almost entirely focused on loosening capital-ratio requirements.
  - Unlike many other countries which have imposed dividend stoppages on banks.



### POLICY RECOMMENDATIONS

#### Short run

- Immediate halt to all bank dividends and share repurchases.
- Encourage substantial new common equity raises.

#### Longer-term

- Consider ways to more explicitly incorporate market-price information into stress-testing process. Not mechanically, but as a way of imposing some discipline on forward-looking assumptions during times of rapid change.
- Make it a default setting that counter-cyclical capital buffer is turned on in good times. Gives more scope to relax in a crisis.
- Exclusion of reserves from denominator of SLR is likely to be (and should be) semi-permanent. Not at all clear that Treasuries should be excluded on ongoing basis.