Discussion of “Spillovers from Systemic Bank Defaults,” by Mink and de Hann

Gary Gorton
Yale and NBER
The Question

• Does an increase in the probability of default of a single large bank affect other banks’ stock returns? (“contagion”)
• Evidence generally negative on contagion.
• But, hard to test.
Answering the Question

\[ y_{n,t} = \alpha_n + \beta_n f_t + \sum_{m \neq n} \gamma_m p_m + \varepsilon_{n,t} \]

\( y_{n,t} \equiv \Delta \text{bank n's stock market value (as % of start of period market cap)}; \)

\( p_m \equiv \Delta \text{prob of default of bank m (\( \Delta \text{CDS} \) or \( \Delta \text{DtD} \));} \)

\( f_t \equiv \Delta \text{common factor; orthogonal to } p_m \text{'s (the common component of the } p_m \text{'s).} \)

• 100 largest banks; 2007-2012; weekly data.
• Standard errors bootstrapped.
Hmm . . .

• This is basically an asset pricing equation for bank stock returns.
• The common factor should be priced.
• But, the individual bank default probabilities are diversifiable and should not be priced.
• Basically the test is whether bank equity markets are efficient.
Results

• What we would expect:
  – Coefficients on bank default probs are zero and insignificant;
  – Common factor is significant.
  – $p_m$’s jointly affect other banks (F test) but not economically significant.

• No evidence of “contagion”—consistent with literature.
Some Comments

• Not clear that a test for “contagion” can be based on asset pricing. Really testing whether idiosyncratic risk is priced.

• Though--Kelly, Lustig, van Nieuwerburgh find that the difference between out-of-the money put options on individual banks and puts on the financial sector index increased 4x in the pre-crisis period (portfolio of options more valuable than an option on the portfolio). Their interpretation: i) common factor (govt intervention) is priced; ii) idiosyncratic risk is priced.
Comments cont.

• Complicating factors:
  – Both the U.S. and Europe imposed short sale bans on bank stocks.

• Interesting to know if the bank common factor affects the real economy—nonfinancial firms stock returns. See Adrian, Etula, Muir JF forthcoming.
Contagion?

• “Contagion” is the (vague) idea that a shock to one bank can cause other banks to default.
• Obviously banks are linked, via interbank borrowing and lending, and via derivatives.
• But these positions are collateralized and positions not concentrated.
Final Thoughts

• How does a crisis arise with “contagion”?  
• It’s a “big shock” “theory”.

• A crisis is an information event which causes a bank run: info-insensitive debt $\rightarrow$ sensitive.