


Too big to fail?

By Michael Hardy | Spring 2016

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The Proof is in the Stock Market

When Lehman Brothers shocked the world by declaring bankruptcy on September 15, 2008, triggering the Great Recession, Priyank Gandhi was just beginning his third year of doctoral study in finance at UCLA.

Gandhi easily could have been working on Wall Street at the time; he previously worked in his native India for three years at HSBC, and recently earned an MA in financial engineering, a degree that could have gotten him a job at almost any investment bank.

"I could have gone to Wall Street, but inspired by my professors, I said, 'I want to do a Ph.D.,'" said Gandhi, now an assistant finance professor at the Mendoza College of Business. "Then the financial crisis happened, and that had a major impact on people like me who were studying finance. In a sense, it was a perfect experiment to test economic and financial theories."

Gandhi watched from the sidelines as Congress debated whether to let more banks go the way of Lehman Brothers, or to bail them out with taxpayer money. With top bankers issuing apocalyptic warnings that ATMs might stop working, Congress approved the Troubled Asset Relief Program (TARP), a \$700 billion pot of money intended to rescue failing banks.

The doctoral student soon noticed something odd about news coverage of the crisis. "You would open the newspaper, and everyone was talking about this implicit guarantee to the large financial institutions — how that's bad, how that affects the behavior of the financial institutions. There was this perception that the government won't allow the banks to go down."

What effect, Gandhi wondered, did that belief — that the U.S. government wouldn't let a major bank like Chase or Wells Fargo fail — have on those banks' stock prices?

“One of the first things we tell finance students when they walk through the door is that risk and reward go hand in hand,” Gandhi said. “If you want a higher rate of return, sure, you might find a gem of an investment here or there. But generally speaking, if you want higher returns, you have to take on more risk. And of course the converse is also true: If the amount of risk you're taking is low, you generally can't expect to earn a high rate of return on that investment.”

If it was really true that the biggest banks had an implicit government bailout guarantee, if they really were “too big to fail,” that would make their stocks far safer than the stocks of smaller banks, which didn't have such a guarantee (since they didn't pose systemic risk to the financial system). And since big banks would be safer, they would presumably give investors smaller returns.

To test this hypothesis, Gandhi and his research partner, Hanno Lustig of Stanford University Graduate School of Business, decided to study the historical performance of big banks versus small banks in the equity markets. Using stock market data from 1970 to 2013, they found that a portfolio comprising only big-bank stocks significantly underperformed a portfolio of small-bank stocks, providing a significantly lower rate of return. Gandhi and Lustig recently published their findings in *The Journal of Finance*, in a paper with the rather innocuous title “Size Anomalies in U.S. Bank Stock Returns.”

“It's kind of funny,” Gandhi said. “If you look at other measures of risk, large banks are more risky. They're more leveraged, they generally use a lot more debt to finance themselves, and those kinds of risks mean that their cash flows are more exposed if something bad happens to the U.S. economy. So the big banks should be more risky, but the equity markets are saying the opposite.”

Why would small banks, which are generally far more conservative in their investments, be perceived as riskier than highly leveraged big banks, with their exotic financial instruments like collateralized debt obligations and asset-back securities? The only explanation, Gandhi and Lustig decided, was that investors perceive the big banks as less likely to fail in a financial crisis.

At first glance, Lehman Brothers might look like a counter-example. After all, it was a big bank, and the government let it go bankrupt. But Gandhi's research found that the “too big to fail” effect is far less pronounced for investment banks such as Lehman

Brothers and Goldman Sachs than banks including Citibank and Bank of America that have both investment and commercial arms.

"The prices in the market are telling you that there is a very high probability that the government is not going to let Citibank fail," he said. "With Lehman and Goldman, well, there's a chance the government will step in. Which is what happened — they looked at it and said, No, Lehman Brothers going down isn't going to be as big of a problem. And they may be right about that, because what the government is concerned about is, is the average consumer going to be able to access his or her deposits? Is the average business going to be able to take out a bank loan if they need it? They are also worried about one bank's bankruptcy bringing down other banks. Lehman and Goldman, while definitely providing a lot of useful services, don't usually make those kind of loans."

The consequences of the big banks' implicit bailout guarantee are far-reaching. Being too big to fail allows big banks to borrow money at lower rates than smaller banks, and it allows them to make riskier investments with that money, knowing that if the investments go bad, as they did in the 2007 housing collapse, the government will step in. Furthermore, Gandhi said, the bailout guarantee encourages groupthink. If the American economy is doing well and Citibank suddenly starts struggling because of bad investments, the government is unlikely to step in to save it. Only if all of the big banks are failing simultaneously, as they were in 2008, will there be the political pressure to bail everyone out.

"The thinking is, if just one of us falls, nobody's going to save us. Especially after the repeal of Glass-Steagall [in 1999], what the big banks did was start shifting their investments toward the same type of risk. For instance, they all invested in foreign sovereign debt, then they all bought securitized assets, then they all bought subprime mortgages. And if you think about it, it's sensible for them to do this, because as long as they're all investing in the same kind of risky asset and something bad happens, all of them get in trouble at the same time, and the government will likely step in."

How to remedy the too-big-to-fail effect? One thing the government could do, Gandhi said, is impose a tax based on bank size that would discourage banks from getting too big. However, that runs the risk of discouraging successful small banks from legitimately growing their business. The best thing would be to remove the implicit bailout guarantee, Gandhi and many others argue. But that's easier to say than to do.

“The government can come out and say, Look, the next time there's a crisis we aren't going to bail you out,” Gandhi said. “But that's not a credible statement, because the next time there's a crash, there's going to be enormous pressure on the government to do something, and the most obvious solution is to throw money at the problem. And if the banks still believe government will bail them out, their behavior isn't going to change.”

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