BANK POLICY INSTITUTE

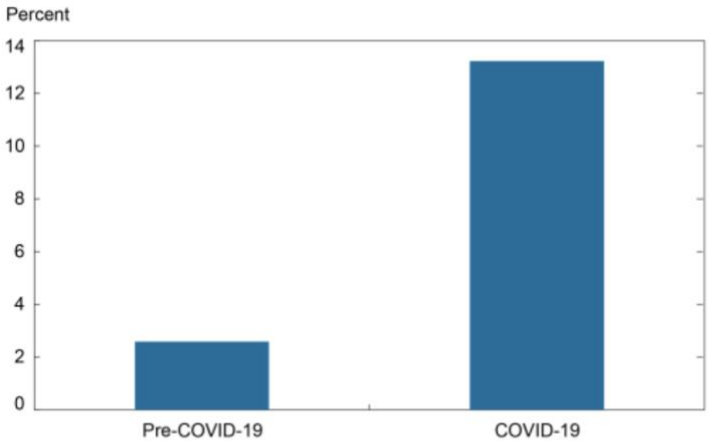
The Fact that Big Banks' Stock Prices Got Hammered This Spring Hardly Proves They are TBTF

Bill Nelson | Feb. 11, 2020

This morning, the New York Fed released a new blog post, "Did Subsidies to Too-Big-To-Fail Banks Increase during the COVID-19 Pandemic?" (available here). Counterintuitively, the author concludes that yes, subsidies did increase, because the stocks of the largest financial firms did *poorly* during the pandemic. The author reaches this conclusion because he assumes that the relatively poor performance of the stocks of the largest financial firms reflected a lower risk premium required by investors to hold those stocks. A more plausible explanation for their underperformance is that the stocks of the largest financial firms did poorly because those firms were seen as more exposed to losses caused by the pandemic, or that investors required a *higher* risk premium to hold the stocks, driving the stock price down.

The author first examines the stock returns of the very largest financial firms globally relative to the stock returns of large financial firms. The post labels the difference in the returns of the two groups of financial firms "the Systemic Risk Premium." But, to be clear, what is reported is the average returns, not a direct measure of a risk premium. The average is reported for two time periods: the eight years before March 2020, and the five months starting last March. As shown in the exhibit reproduced from the post, the difference in stock return is much higher during the pandemic period, rising from 2 percent to 13 percent. That is, the stocks of the large financial firms did better than the stocks of the very largest financial firms in both periods, but they did significantly better during the pandemic.

The Systemic Risk Premium Increased during the Pandemic



Sources: Eikon; author's calculations.

Notes: The chart shows the systemic risk premium (estimated as the annualized return to the "too big to fail" [TBTF] risk factor) for a global portfolio of large financial firms. The TBTF risk factor is constructed from a short position on the largest 8 percent of financial firms and a long position on the next largest 8 percent of financial firms globally. The pre-COVID-19 period is January 2012-February 2020. The COVID-19 period is March 2020-August 2020.

From this result, the author concludes, " . . . during the pandemic, investors have required more compensation for holding the stocks of large financial firms, as compared to the very largest financial firms." The author's idea is that if large financial firms[1] are seen as more likely to get a bailout, their stocks will be seen as less risky, so investors will require a lower return to hold the stock. Required returns equal expected returns, and over time, expected returns should equal average returns. So, the reasoning goes, if investors see TBTF financial firms as less risky, their average stock returns will be lower over time than those of smaller financial firms. If the largest financial firms were perceived as even more likely than normal to get bailed out during COVID, their stock returns would be especially low relative to those of smaller financial firms.

Of course, the simplest explanation for the results in the graph is that the relative returns of large financial firms and the very largest financial firms during the five-month COVID-19 sample period were driven by incoming news about the exposures of the two groups to the economic fallout of the pandemic, *not* by changes in required investor returns. But insofar as the results were driven by changes in required returns, the pattern indicates the required returns investors demanded to hold the very largest financial firms went *up, not down,* relative to large financial firms, causing a capital loss. What the analysis misses is that when the required return of a stock goes down, its value goes up, and that causes a large capital gain. Over the short time (five months) for the COVID-19 sample period, the capital gain would have dominated the results.

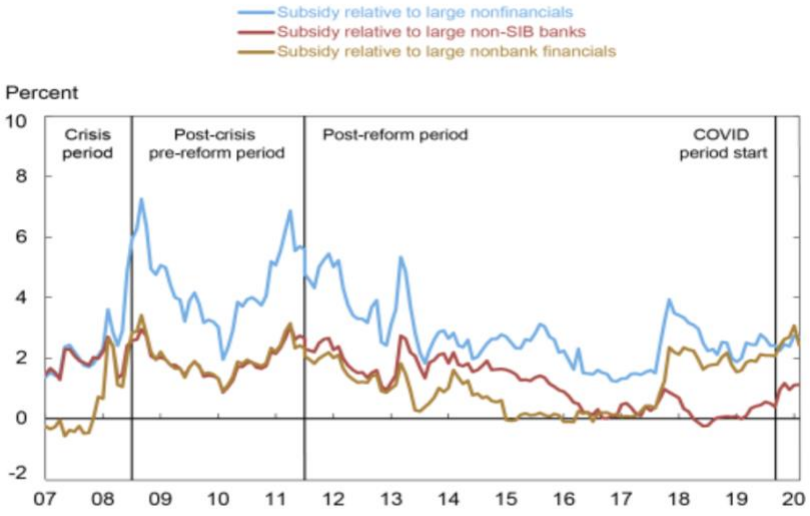
Suppose a stock pays a constant $10 annual dividend. If investors require a 5-percent return, they will pay $200 for the stock because $10/$200 = 5 percent. If investors require a 4-percent return, they will pay $250 because $10/$250 = 4 percent. In this case, the stock experiences a 25-percent capital gain the instant the investors reduce their required return. While the stock will, in fact, earn a lower return over time after the change, averaging over a short period, the huge capital gain will swamp the lower return. So the average stock return will be higher, not lower.

The subsequent analysis in the blog post is a bit more complicated but suffers from essentially the same shortcoming. The next graph presents estimates of the relative subsidy between the largest financial institutions and other firms. It reports that the subsidy increased because, as can be seen, the lines moved up in the recent period (the reported results end in August 2020). Each point of the line is estimated by examining how each firm's average stock return over the previous five years is related to the stock's correlation with the systemic risk premium measure reported above. If the average return is *lower* for firms more correlated with the systemic risk premium, the analysis concludes the subsidy associated with having a lot of systemic risk is higher.

Each of the points of the lines as they enter the COVID-19 period still use five years of data, but the five years now include a few months of the pandemic period. Not surprisingly, given the huge negative returns seen at the start of that period, as those returns roll in, they have a large impact, and the estimates of the subsidy rises. Again, that increase is because the stocks of the very largest financial firms performed poorly relative to those of the other groups.

[1] In a classic example of question begging, the note, both in title and text, assumes that such firms are TBTF and labels them as such.

The Implicit Subsidy to SIBs: 2007-20



Sources: EIKON; author's calculations.

Notes: The chart shows the implicit funding subsidy to a global portfolio of systemically important banks (SIBs). The subsidy is expressed as the reduction in SIBs' equity cost of capital on an annualized basis, relative to three control groups: large non-SIB banks, large nonbank financials, and large nonfinancials. The crisis period is July 2007-December 2008. The post-crisis pre-reform period is January 2009-December 2011, the post-reform period is January 2012-February 2020, and the COVID-19 period is March-August 2020.

Luckily, it is not actually necessary to infer what investors require in returns using equity price performance and estimates of expected return. Required returns on debt, which are more sensitive to whether or not a firm will be bailed out, can be observed directly. Covas and Dionis (2020) (available here) report that following the COVID-19 shock, the bond spreads of GSIBs widened by more than those of non-GSIBs, demonstrating that investors required a higher return from GSIBs during the pandemic. As is shown, the Covas and Dionis result actually does a better job explaining the recent performance of the stock returns of the very largest financial firms, because their results suggest the stock prices of those firms would fall relative to the price of the financial firms that were not GSIBs. This is exactly what happened.

Disclaimer: The views expressed do not necessarily reflect those of the Bank Policy Institute's member banks, and are not intended to be, and should not be construed as, legal advice of any kind.