

The Federal Reserve's Capital Buffer Framework Effectively Constrains Bank Dividends in Stress

Francisco Covas and Anna Harrington | October 26, 2020

The Federal Reserve Bank of New York (FRBNY) recently published a [blog post](#) analyzing the effect of dividend suspensions on bank capital ratios during the recent coronavirus stress event (COVID stress event). The post found that the industry-average common equity tier 1 (CET1) ratio would have been up to 150 basis points higher if banks had suspended their dividends beginning in the first quarter of 2020.

We revisit this analysis for two reasons. First, the FRBNY analysis assumed banks would continue to pay dividends as scheduled throughout the COVID stress event, even though the Federal Reserve's own regulatory capital buffer requirements (the "buffer framework") would have prohibited banks from doing so. Second, the FRBNY analysis included all U.S. banks, whereas we believe the more relevant cohort is the banks subject to the Federal Reserve's Comprehensive Capital Analysis and Review (CCAR) stress tests ("CCAR banks"), because those are the banks currently subject to the limitations on capital distributions whose efficacy the FRBNY seeks to analyze.

We find that taking into account the capital buffer framework, dividend payments by CCAR banks reduced their capital by only 64 basis points, or two fifths of the upper bound estimate provided by the FRBNY.

Next, we show that dividend payments would have declined considerably faster under the regulatory capital buffer framework relative to the levels of large bank dividends paid during the 2008–09 financial crisis. Under the capital buffer framework, banks are subject to limits on capital distributions that depend on trailing profits over the prior year. So, when banks have capital ratios that are in the buffer – i.e., above minimum requirements but below minimum plus buffer requirements – capital distributions generally have to be immediately halted under the U.S. capital rules because average net income is typically negative when that happens. This demonstrates the buffer framework is working as intended to limit dividend payments.

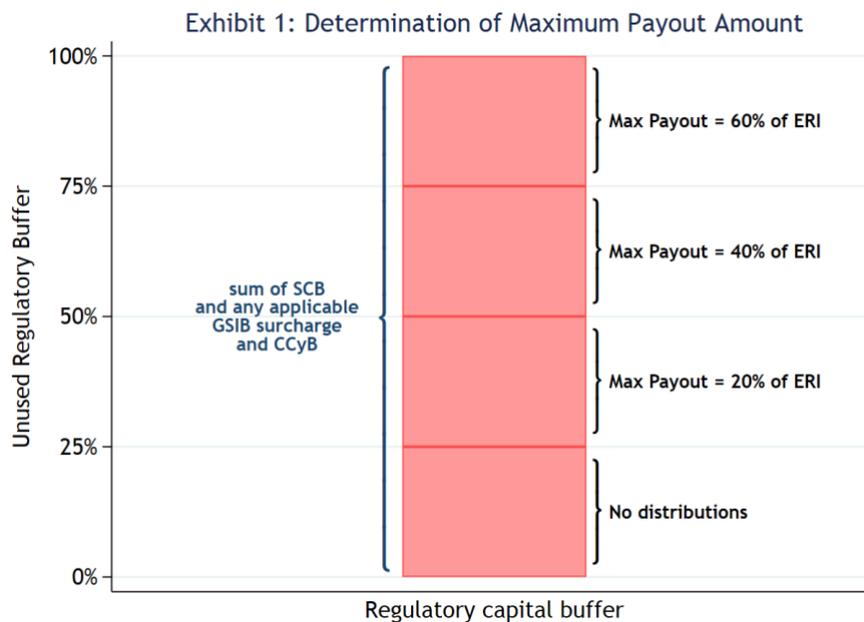
Finally, given the small effect of dividend payments on capital ratios, we do not believe a suspension of dividends would incentivize banks to dip into their capital buffers and lend more. In fact, such a ban would make banks less likely to use their buffers, for fear that they would be unable to resume shareholder distributions after the ban on payouts is lifted.

Background

The U.S. capital framework has a mechanism in place that automatically restricts capital distributions and discretionary bonus payments as banks' regulatory capital ratios dip below regulatory capital

buffers.¹ For this reason, it is counterfactual to assume that a bank would continue to make dividend payments over a planning horizon regardless of its capital ratio.

The risk-weighted capital buffers applicable to CCAR banks include the stress capital buffer (SCB) (equal to the decline in the bank’s capital ratio under stress floored at 2.5 percent), any applicable global systemically important bank (GSIB) surcharge (ranges generally from 0 to 3.5 percent) and any countercyclical capital buffer (currently set at 0 percent in the U.S.).² When a bank’s regulatory capital ratio is less than its regulatory capital minimums plus all of its regulatory buffers added together,³ the bank’s maximum payout ratio cannot exceed a certain percentage of eligible retained income (i.e., average net income over the prior four quarters, per the recent interim final rules).⁴ The limit on the maximum payout ratio falls to 60 percent of eligible retained income (ERI) when a bank uses up to 25 percent of its regulatory buffer, 40 percent when using between 25 and 50 percent, 20 percent when using between 50 and 75 percent and zero if it is using more than 75 percent of its buffer (see Exhibit 1). In reality, banks treat regulatory capital buffers as effective regulatory capital minimums and try to stay above them to avoid limits on capital distributions and discretionary bonus payments. Importantly, when a bank’s ERI is negative, shareholder payouts generally are prohibited, regardless of how much buffer capacity a bank has available if the bank is within its buffer.⁵



¹ 12 CFR 217.11.

² The analysis assumes the CET1 capital ratio is the binding requirement for each bank in the sample. That is an accurate approximation under the stress capital buffer rule. We also use “bank” to refer to bank holding company.

³ CET1 capital requirements (minimum plus buffers) range from 7 to 13.6 percent. See <https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200810a.htm>.

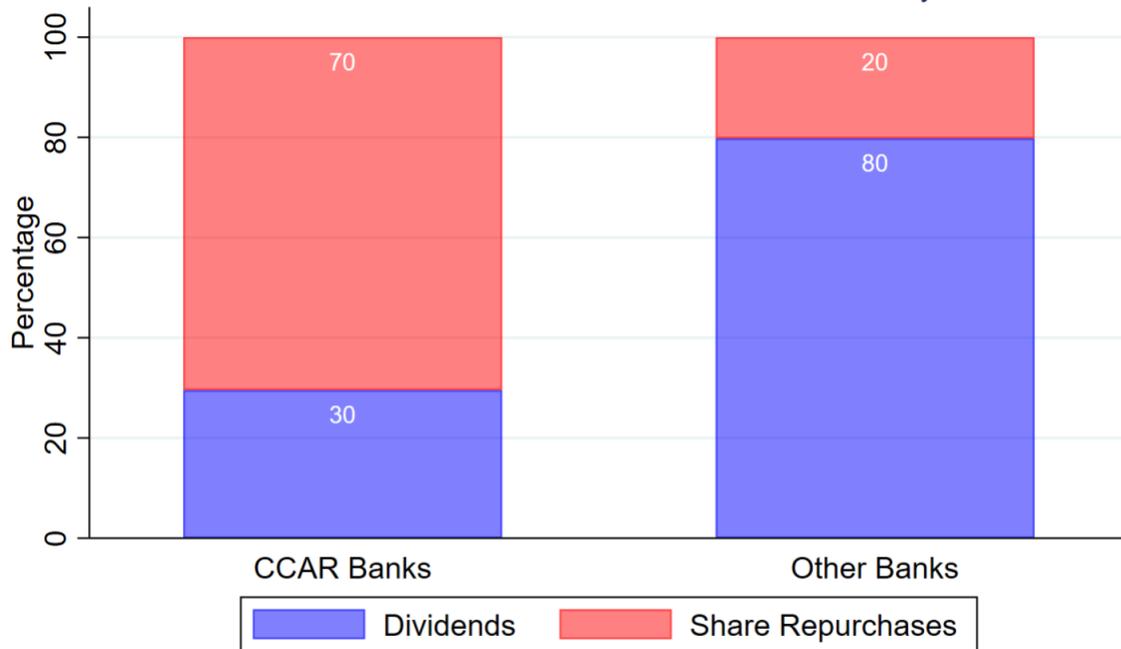
⁴ See 85 Fed. Reg. 15,909 (March 20, 2020); 85 Fed. Reg. 63,423 (Oct. 8, 2020).

⁵ See, e.g., 12 CFR 217.11(c)(1)(V).

The Share of Dividends in Total Payouts of Large Banks

Our analysis considers only banks subject to CCAR since the Federal Reserve has suspended repurchases and limited their dividend payments in connection with the 2020 stress tests. Moreover, some would have preferred to impose a full suspension on dividend payments of large banks. It is important to note that the share of dividends in total payouts is significantly lower for CCAR banks. As shown in Exhibit 2, dividends on common and preferred stock accounted for 30 percent of all capital distributions at CCAR banks and 80 percent of such distributions for other banks as of the end of 2019. Consequently, dividend payments have a much greater effect on the capital ratios of non-CCAR banks. In the rest of this analysis, we focus on CCAR banks and provide an estimate of the sample change on the effect of dividend suspensions on bank capital ratios.

Exhibit 2: Share of Dividends in Total Shareholder Payouts



Source: Federal Reserve Y-9C reports and BPI calculations.

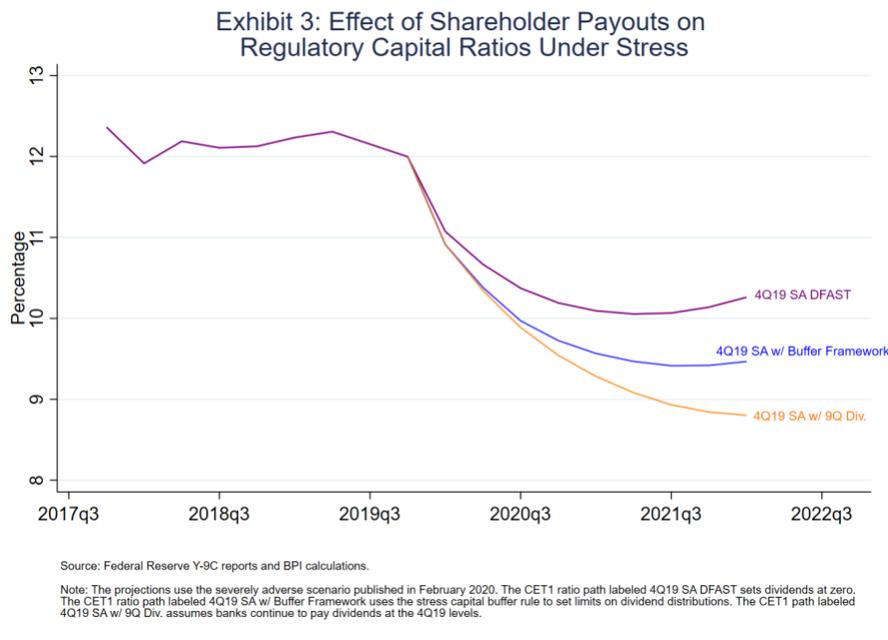
Note: The data are as of 4Q19. Dividends include common and preferred dividends. Share repurchases are defined as purchase of treasury stock plus conversion or retirement of common stock.

Simulation of Bank Capital Ratios under Stress

To assess the impact of dividends on regulatory capital ratios and the role of regulatory capital buffer requirements for banks, we must project net income and the CET1 ratio of each bank over a planning horizon. Specifically, we need to calculate average net income to determine the limit on dividends when a bank moves below its regulatory capital buffer. We used the [CLASS model](#) developed by Hirtle, Kovner, Vickery and Bhanot (2015). This is extremely useful in helping us to understand the impact of the

various assumptions on shareholder payouts on bank performance under stress. That said, BPI’s own version of the CLASS model uses different model specifications to generate the projections of loan losses and pre-provision net revenue. For example, the projections for pre-provision net revenue include bank-specific fixed effects (more specifically, a trailing multiyear fixed effect) to capture each bank’s average performance in recent years, and loan losses are modeled using quantile regressions. The percentiles of the quantile regressions are chosen to match the level of losses projected by supervisory models, which have been [shown](#) to overestimate losses.⁶

Exhibit 3 shows the decline in aggregate CET1 ratios under different assumptions on shareholder payouts for CCAR banks. The analysis uses the severely adverse scenario published by the Federal Reserve in February 2020. Following the FRBNY post, we assume banks stop share buybacks at the start of the planning horizon. The purple line shows the aggregate CET1 ratio path, assuming banks also set dividends to zero throughout the stress planning horizon starting in the first quarter of 2020.⁷ The aggregate CET1 ratio declines from 12 percent in the fourth quarter of 2019 to a minimum of 10.1 percent. The orange line assumes banks continue to pay dividends throughout the planning horizon at the same level as fourth quarter 2019 (4Q19). In that case, the minimum aggregate CET1 ratio declines by another 125 basis points to a minimum level of 8.8 percent.



⁶ Some of our loan loss models include the unemployment rate in levels and do not have autoregressive terms.

⁷ It is unrealistic to assume banks would stop paying dividends in the first quarter of 2020, because those decisions were made by bank boards of directors in the fourth quarter of 2019 prior to the onset of the COVID stress event in the U.S.

The blue line in Exhibit 3 shows that, using each firm's stress capital buffer disclosed by the Federal Reserve in August, the aggregate CET1 ratio would fall by 64 basis points to a minimum of approximately 9.4 percent if the SCB rule governed each firm's capital distributions. In all three cases, because the buffers are added to regulatory capital minimums, the minimum level of the CET1 ratio under stress remains well above the minimum requirement of 4.5 percent.⁸ As noted, our estimate of the decline in the aggregate CET1 ratio is lower than the one reported in the FRBNY post for two reasons: it takes into account the existence of the regulatory limitations on dividends in Exhibit 1 (i.e., the buffer framework), and it includes only the CCAR banks. Regarding the last point, the FRBNY post reported that when banks maintain dividends at their 4Q19 levels, the projected CET1 ratio would be 150 basis points lower. Under that assumption we show that the CET1 ratio of CCAR banks would be 125 basis points lower. Thus, expanding the sample to non-CCAR banks increases the overall effect of dividend distributions on CET1 ratios by approximately 25 basis points.

Capital Buffer Framework Reduces Dividend Payments Quickly in Stress

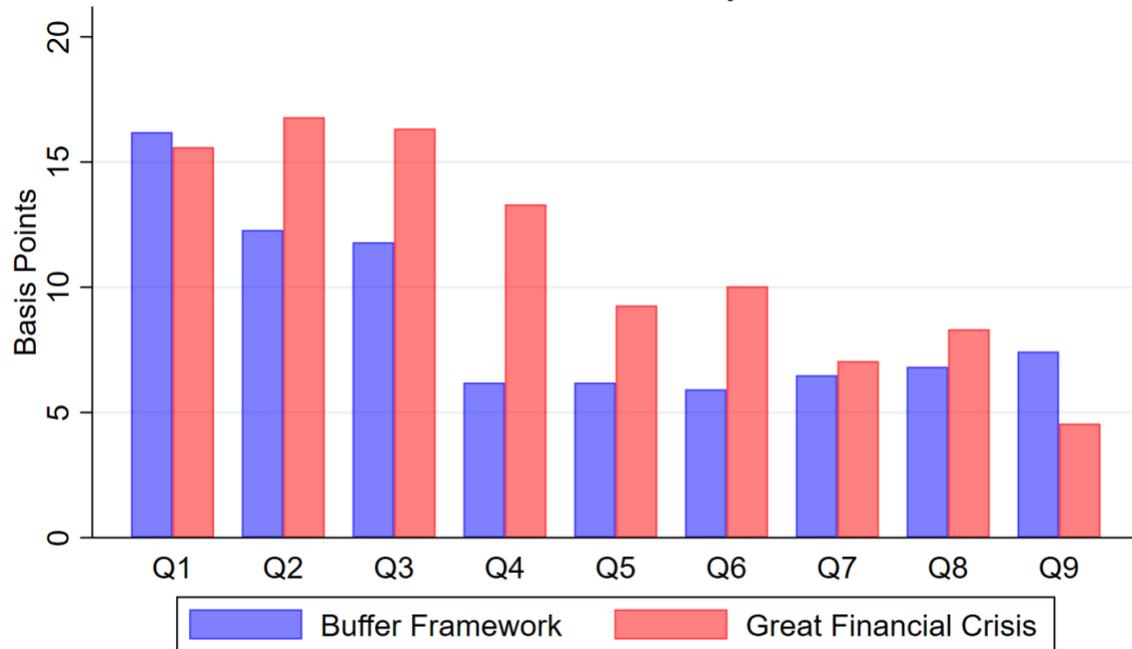
In this section, we examine the behavior of dividend payments under the capital buffer framework had economic activity followed the severely adverse scenario used in the first stress test of 2020 and compare it with dividend payments made by large banks during the Great Financial Crisis (GFC).⁹ Regulatory capital buffers did not exist during the GFC, so it is useful to compare the behavior of dividend payments under the two regimes for a realistic depiction of the impact of the buffer framework on dividends in stress.

Exhibit 4 shows dividend payments under the buffer framework scaled by risk-weighted assets over the planning horizon of the first stress test of 2020. As shown by the purple bars, the capital buffer framework is quite effective in reducing dividend payments by CCAR banks during a stress event. Aggregate dividends paid by the stress-tested banks fall from 16 to 6 basis points between Q1 and Q4 as a result of the capital buffer framework's automatic limitations on dividends. Given that the shock is very severe, average net income is negative when banks dip below their buffers, so capital distributions generally have to be immediately halted under the U.S. capital rules when that happens. Moreover, dividend payments remain quite low for two additional quarters since banks inside their buffers continue to have a negative average net income. In the CLASS model, the trough in the aggregate CET1 ratio is Q7, so dividends paid in Q8 and Q9 do not lead to a further drop in CET1 ratios.

⁸ 12 CFR 217.10. The minimum CET1 ratio in our top-down projections across all 33 banks is 5.7%. The minimum CET1 ratio in the Fed's June 2020 DFAST disclosures was 5.4%.

⁹ For comparison purposes, we included the top 33 banks during the first quarter of 2008 and the first quarter of 2010.

Exhibit 4: Dividend Payments



Source: Federal Reserve Y-9C reports and BPI calculations.

Note: Dividends include common and preferred dividends and are scaled by risk-weighted assets. The GFC period is between 1Q08 and 1Q10.

By contrast, during the GFC, dividend payments changed little for about the first three quarters into the crisis, as shown by the red bars. They dropped afterward to a level similar to the one delivered by the buffer framework as a result of Lehman’s failure at the end of 2008 and the first stress test conducted by the Fed in 2009. As shown in Exhibit 4, dividends were never zero during the GFC, despite the significant capital support the government gave the banking sector during that time. So, it would be surprising if the Fed were to prohibit dividends by large banks in the current crisis, during which banks have not received any direct government capital support and remain extremely well capitalized.

Dividend Restrictions Do Not Incentivize Banks to Lend More

In addition, a ban on dividends seems unlikely to encourage banks to dip into their regulatory capital buffers to support lending, as regulators apparently hope. Banks are unlikely to dip into their buffers out of a concern that they would be unable to resume shareholder distributions after the ban on dividend distributions is lifted. A key motivation for the European Central Bank and the Bank of England in banning all payout distributions was to encourage banks to move below their regulatory buffers to promote lending. With a ban in place, banks could in theory be less risk averse, since dipping below the buffer would not be associated with limitations on capital distributions. However, this logic is [flawed](#). The restrictions on payouts are temporary, and banks want to make sure that they are able to resume distributions after the ban is lifted. Restrictions on shareholder payouts therefore do not encourage

banks to move below their regulatory capital buffers. As noted earlier, average net income is also typically negative when banks dip below their buffers, so capital distributions generally have to be immediately halted under the U.S. capital rules when that happens.

We also believe there are costs to a dividend ban—the major cost being that banks may be discouraged from lending at exactly the time they should be supporting a recovery, because they want to conserve capital and have the ban lifted. There is also the reduction of banks’ franchise value and likely costs to investors who cannot reliably determine banks ability to pay dividends as a result of a dividend ban instituted on top of an extensive rule set governing bank dividends. Therefore, the costs of a dividend ban seem to well exceed the benefits, especially because the buffer framework kicks in quickly to restrict shareholder payouts.

Final Thoughts

As has been widely acknowledged by regulators and investors, banks entered the current crisis with large amounts of capital and liquidity and continued lending during the stress event. Despite the extraordinary resiliency of U.S. banks, dividends for CCAR banks have been capped for the last two quarters and generally cannot exceed average net income over the prior four quarters. Those that advocate for a temporary ban on dividend payments say it would incentivize banks to lend more. In this post, we have demonstrated that a dividend ban would have increased capital considerably less than recent estimates from an FRBNY post. We also showed that the current rule-based framework offers an effective mechanism for large banks to preserve capital in a financial crisis. Finally, we argue that banning dividends will not incentivize banks to lend more. It is simply another form of raising banks’ effective capital requirements, and it will have exactly the opposite effect.

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