

Potential Costs Of Banning Capital Distributions By Banks In Bad Times

Bill Nelson | June 16, 2022

This note reports some survey results and analysis concerning the potential consequences of regulatory bans or restrictions on banks' paying dividends or repurchasing stock during economic stress.

In 2020, in response to the deteriorating economic conditions brought on by the COVID-19 pandemic, officials in the euro area and the United Kingdom put in place bans on capital distributions (dividends and repurchases) by large banks irrespective of banks' capital levels or the outlook for those levels. The bans were inconsistent with the post-Global Financial Crisis bank regulatory regime that uses stringent capital requirements and stress tests to determine, based on bank-specific objective criteria, whether a bank should be permitted to make capital distributions.

In the United States the Fed adopted more moderate restrictions, requiring large banks to resubmit their annual capital plans, which triggered a regulatory requirement prohibiting the banks from making any capital distributions until the plans were resubmitted and approved; to moderate that requirement, the Fed authorized the banks to continue to make dividend payments as long as those payments did not exceed trailing profits over the past year. Banks generally were prohibited from making share repurchases for two quarters.

Blanket bans of the type adopted in the euro area and in the UK were intended to conserve bank capital and boost banks' ability to lend more during a period of economic stress and uncertainty. This note analyzes the potential economic results of an EU/UK-style ban and also presents the results of an informal survey asking U.S. bank investors their reaction if the Fed were to move to a EU/UK-style policy -- specifically "the consequences for banks' cost of capital if the Fed were to adopt a policy of banning capital distributions -- dividends and repurchases -- by all banks, irrespective of their capital situation, whenever there was a significant, negative economic development such as a recession."

Bans on capital distributions come with at least two potential serious longer-term costs, which are the subject of this note.

First, going forward, investors in bank equity are likely to require a higher expected return to invest in bank stocks -- that is, they will place a lower valuation on the stocks holding constant expected future earnings -- because of the uncertainty of future capital distributions. That higher cost of capital will reduce the supply or increase the cost of credit and therefore reduce economic growth.

Second, the knowledge that the government may put in place a capital distribution ban in bad times will create an incentive for banks to reduce lending and increase capital distributions when a bad time may be on the horizon. In other words, such a policy is procyclical. The incentives created can raise the likelihood that a feared recession will come to pass, a possibility particularly relevant in today’s economic environment.

Cost of Capital

As showed in an ECB study ([here](#)) evaluating the impact on euro area bank valuations, when capital distributions restrictions were put in place, the share prices of European banks fell in reaction. In particular, the share prices of the banks affected by the European ban fell 7 percent. As noted in that study, the declines were probably due to an increase in the return investors required to own the stock because a delay in distributions should not alter its present value.

A recent informal survey of investors in bank stock provides some support for the view that blanket bans on capital distributions raise banks’ cost of capital. An executive at a BPI bank that works with investors in bank stocks recently submitted a survey to those investors about how they would react if the Fed adopted a policy to ban capital distributions in bad times. The investors are managers of long-only funds and hedge funds.

Three-quarters of the 12 respondents indicated that such a policy would lead them to reduce their valuations of bank stocks by 5 percent or more while the remainder said the policy would have a slight negative impact.

If the Fed were to adopt such a policy, how would this change how you value bank stocks? Select one

Answer	Percent	Count
Positive 5% or more	0.00	0
Slight positive	0.00	0
No impact	0.00	0
Slight negative	25.00	3
Negative 5% or more	75.00	9
Total	100	12

Most investors stated that the capital distribution limits that the Fed put in place in 2020 are having a negative impact on how investors value banks currently.

How have the blanket capital distribution limits put in place in 2020 affected how you value bank stocks today vs pre 2020? Select one

Answer	Percent	Count
Positive 5% or more	0.00	0
Slight positive	0.00	0
No impact	16.67	2
Slight negative	50.00	6
Negative 5% or more	33.33	4
Total	100	12

Half of the investors stated that the Fed’s blanket limit on capital distributions is still having a slightly negative effect on valuations, while one third stated that they reduced their valuations of bank stocks by 5 percent or more because of the limits.

The investors generally indicated that a dividend ban would have a more negative effect than a share repurchase ban.

If you feel this restriction on capital return would be negative on bank stock valuations, which statement best describes your view? Select one

Answer	Percent	Count
A dividend ban would have a bigger impact than a repurchase ban	75.00	9
A repurchase ban would have a bigger impact than a dividend ban	8.33	1
Either type of capital distribution restriction would have roughly the same negative impact	16.67	2
Total	100	12

In particular, three quarters of the respondents indicated that a dividend ban would have a bigger impact than a repurchase ban.

Procyclicality

The logic behind the capital distribution limits was spelled out in a Brookings Institution working paper ([Blank, Stein and colleagues, 2020](#)). The paper was presented at Brookings by former Fed Governor and Harvard economist Jeremy Stein (see the webinar [here](#), see our response [here](#)). The model that Blank and colleagues used to show that a dividend and repurchase ban on banks was an optimal response to the COVID shock assumed that all banks were identical and hit with a simultaneous, massive, totally unexpected increase in losses. The model ignored what could be the most important negative consequence of the policy: bank behavior going forward once they knew that such a policy was possible.

As demonstrated using a simple, two-period model in the appendix, a policy of banning all capital distributions in bad times creates an incentive for banks to cut back on lending when the probability of bad times rises. Such a reaction increases the likelihood of the bad times happening.

For those who find equations the opposite of illuminating, here is the basic intuition: The goal of combining a reduction in capital requirements with a restriction on capital distributions is to simultaneously free banks up from capital shortfalls owing to losses and to deter them from paying out capital and cutting back on lending in response to a decline in the demand for loans. If banks were acting simply to maximize shareholder value, they would reduce lending in a downturn because the demand for credit falls. But because banks would be prevented from pursuing value-maximizing behavior if a capital distribution ban was put in place, they would respond to the anticipation of that restraint by returning capital to shareholders *now*. They would also lend less *now* so that they remain in compliance with capital requirements. As a result, the anticipated possible future change in policy adds a shadow cost to providing credit now.¹

If the Fed adopted a capital distribution ban in bad times, how would you want a bank to proactively address their distribution policy as the economy heads into a downturn where capital restrictions may be put in place? Select one

Answer	Percent	Count
Increase distributions relative to what they would be without the ban	0.00	0
Decrease distributions relative to what they would be without the ban	16.67	2
Should have no impact on how much a bank plans to distribute	83.33	10
Total	100	12

¹ Despite the logic, the survey found no evidence that investors would want banks to increase capital distribution into a downturn if a capital distribution restriction policy was going to be in place.

Conclusion

In game theory, cheating in a one-shot game can be an optimal strategy, but cooperation may be the best course in a repeated game. Similarly, throwing out the regulatory rulebook and imposing a blanket ban on capital distributions once might have seemed like sound policy in the moment but not when the longer-term consequences are considered. The action was particularly ironic given that the rulebook, along with prudent risk management by banks, is what left the banking system so robust going into the pandemic that it was a source of strength for the rest of the economy.

One of the consequences is that banks now need to pay more to raise capital. Banking is a mature, dividend-paying industry, and increasing uncertainty about those payouts makes bank stocks less attractive. That higher cost, while probably modest, will be a constant drag on credit creation and economic activity, a price paid every day.

Another consequence is that using a blanket distribution ban once means such a ban can be used again. Knowing that, banks will adjust their behavior as the probability of a bad time rises. In particular, there is now a shadow cost associated with raising capital and expanding a loan book in good times because banks could be prevented from responding to a decline in customer demand in bad times by shrinking and returning capital to shareholders. With a material probability that there is a recession on the horizon, that incentive is becoming stronger.

To avoid these outcomes, bank regulators could indicate that they are committed to the current regulatory framework governing capital distributions and will not, in the future, impose *ad hoc* blanket bans on capital distributions. Former Federal Reserve Vice Chair Quarles indicated that *ad hoc* restrictions are not a practice he hopes to repeat in the future:

One lesson in particular I wanted to highlight is that our rigorous, forward-looking capital framework, which includes the stress capital buffer, works very effectively. Beginning in the third quarter of 2020, we required large banks to resubmit their capital plans and restricted their capital distributions. . . . While it was sensible at the time, given that this was the first real-world test of our system, for us to use the belt-and-suspenders approach of additional, temporary capital distribution restrictions, we now know that we can have particular confidence in the stress capital buffer framework, as it is informed by a real-time stress testing regime. In the future, having learned the lessons of this test, we will be able to rely on the automatic restrictions of our carefully developed framework when the stress test tells us the system will be resilient, rather than using ad hoc and roughly improvised limitations.

Appendix: Demonstration of Procyclicality with A Simple Model

The banker chooses the amount of equity to invest and deposits to borrow to determine a loan amount to maximize present discounted value. The model is linear, so the results pivot between “invest and borrow an infinite amount” and “invest and borrow nothing,” a property that can be overcome by making the available quantity of equity or deposits finite or adding some nonlinearity, but doing so would not change the result or the intuition.

The banker borrows the funds that she invests at rate c , which is also her required return on capital. She borrows deposits D that she pays a deposit rate of d . The economy is in an expansion now and could be in an expansion or recession next period. The banker chooses an amount E to invest in the first period and E_e or E_r in the second period depending on whether there is an expansion or recession. The investments determine the amount of loans the bank makes, L , L_e , and L_r , which equal the sum of the deposit funding and the equity funding. The interest rate the bank earns on loans is l_e in the current period and in an expansion next period and l_r in a recessions, with $l_e > l_r$. The bank also has to satisfy a capital constraint k_e in the current period and in an expansion next period and k_r in a recession next period where $k_e > k_r$. The capital ratio is defined as the ratio of equity to assets: E/L or, equivalently, $E/(D+E)$.

In period 2 there will be a recession with probability p . If there is a recession, in addition to the loan interest rate and capital requirement both falling, the bank will face a capital distribution ban that restricts E_r to be equal to or greater than E . The banker chooses E , E_e , and E_r to maximize the present value of her investments.

Lastly, we assume that the bank regulations are not irrelevant, that is, they are binding. In particular, in the current period or in an expansion in the second period, return on equity is higher than the required return c and the leverage ratio requirement is binding – the banker wants to invest and wants to become more highly leveraged than allowed by the regulation. In the recession, the configuration of interest rates is such that return on equity is less than c so banks would prefer not to invest even when ROE is maximized by levering up to the allowable maximum, so banks are bound by the requirement that the equity investment must be no less than the investment in the first period.

We solve using backward induction.

Period 2, expansion.

The profits if there is an expansion in period 2 are irrelevant to the choice of equity investment in the first period, so we can ignore them. If there is an expansion, the bank will invest as much as it can and lever up as much as is allowed.

Period 2, recession

As noted, the interest rates in a recession are such that the capital distribution ban is binding. In particular, if unrestricted, the banker would choose not to invest. In that case, she would invest E (the equity investment in the first period) because she had to.

$$E_r = E$$

She would borrow D up to the limit allowed by the eased capital requirement because doing so maximizes the return on equity.

$$D_r = (1 - k_r)E$$

Profit would be

$$\pi_r = ((1 - k_r)E + E)l_r - (1 - k_r)Ed - Ec = E \left(((1 - k_r) + 1)l_r - (1 - k_r)d - c \right)$$

Period 1

In period 1, the banker would choose an equity investment E to generate profits in that period but also cognizant that she would have to maintain that investment in a recession.

Profits in period 1 would be

$$\pi = E \left(((1 - k_e) + 1)l_e - (1 - k_e)d - c \right)$$

Recall that the probability of a recession is p . The banker chooses E to maximize the present discounted value of expected profits. As noted, profits in an expansion in the second period are not relevant for this decision.

$$\max_E E \left(\left(((1 - k_e) + 1)l_e - (1 - k_e)d - c \right) + \frac{p}{1 + c} \left(((1 - k_r) + 1)l_r - (1 - k_r)d - c \right) \right)$$

So if the term multiplying equity is positive, the banker invests. If it is negative, she doesn't. Invest if

$$\left(((1 - k_e) - 1)l_e - (1 - k_e)d - c \right) > -\frac{p}{1 + c} \left(((1 - k_r) - 1)l_r - (1 - k_r)d - c \right)$$

Even if a recession is certain, that is, $p=1$, this inequality may hold. It may be sufficiently profitable in the first period and not so unprofitably in the second period that investment makes sense no matter what. Lower capital requirements, lower deposit rates and higher loan rates make such an outcome more likely.

On the other hand, if capital requirements are higher, loan rates are lower, or deposit rates are higher, the inequality may not hold when a recession is certain. In that case, if a recession is highly unlikely, p is near zero, the inequality holds and the banker invests. As the probability of a recession rises, at some point the banker chooses not to invest in period 1 or in a recession. Not only is the supply of credit

lower in a recession, the banker cuts back on lending as a recession becomes likely, an action that could increase the likelihood of a recession.

Reality, of course, does not dictate such a binary outcome of invest/don't invest. There would be franchise costs associated with adjusting the amount of investment and the size of the deposit borrowing, and many other things that would produce an interior solution. But the underlying logic would remain – if the distribution ban is relevant, meaning it would be value-maximizing for banks to shrink when the economy shrinks, then the prospect of a ban creates an incentive for the bank to shrink *now* that increases with the likelihood of a recession.

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