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Bank Stock Repurchases

In 1994, bank holding companies (BHCs)—including such large ones as Wells Fargo, Bank of America, and Citicorp—bought back roughly $10.5 billion of common and preferred stock, two and one-half times more than they did in 1993. In addition, 1994 marked the first time in several years that BHCs' total repurchases of stock exceeded their total issuances of new stock—by about $4.3 million. Available data for 1995 indicate that BHCs have continued to buy back their stock in large amounts.

In this *Weekly Letter,* I discuss the theories that economists have given for why companies buy back their stock. I then examine the characteristics of the BHCs that were primarily responsible for the increase in repurchases to see which of the theories may help explain the increase.

What is a repurchase?

Firms can buy back their own stock, thereby reducing the number of shares outstanding in the market, in several ways. The most common way is for the firm to buy the stock in the open market; in this case, a company announces that it will buy up to a certain number of shares at the market price, whatever that may be. Another way is with a tender offer; in that case, a firm announces that it will buy a certain number of shares at a price of its choosing. A third way is for a firm to negotiate a private purchase with specific sellers.

When thinking about repurchases and the reasons firms do them, it is important to keep in mind that although the repurchased shares were assets of whoever sold them, they do not become assets of the repurchasing firm. The firm simply retires the shares or keeps them as "treasury stock," which makes them available for reissuance.

Why do firms buy back their stock? Some explanations.

One of the simplest economic explanations of why a firm buys back its own stock is that it does so to reduce the firm's ratio of capital to assets, or at least to control its growth, while maintaining asset growth. (Of course, the firm *could* reduce the growth of capital by increasing stock dividends, but that does not have the same tax advantages as stock buybacks.) The capital-to-assets ratio reflects a firm's mix of equity and debt financing, and changing that can have an effect on the firm's overall value. For example, a firm (or a BHC) may want to increase its debt financing if it perceives that market participants distrust management's investment decisions. In particular, because investors may not be able to tell when a firm has profitable investment opportunities, they may suspect that firm growth beyond a certain size is due solely to managers' desire to increase the resources under their control. As a result, the market may suppress the stock prices of firms that grow too much. Realizing this, managers can restructure their financing to demonstrate that they really do have profitable projects. Specifically, they can fund investments with relatively more debt than equity. The fixed payment pattern of the debt allows management to argue credibly that it has profitable projects whose proceeds will be transferred back to the financial claimants rather than being at management's disposal. For a BHC, the existence of deposit insurance may mute this type of signal but should not completely eliminate it.

For banks in particular, the capital-to-assets ratio is affected by regulatory capital requirements. (A critical reason for such requirements is deposit insurance, which gives BHCs an incentive to hold less capital than they otherwise would—it reduces the cost of debt relative to equity by partially insuring debtholders against loss, and partially insured debtholders do not demand as high a return on their investment as they would if they were not insured.) In the early 1990s, regulations designated new minimum acceptable and "well-capitalized" levels for three types of capital-to-assets ratios (with differing definitions of capital and assets), and, on average, BHCs exceeded these levels by the end of 1993. For example, BHCs' weighted average "leverage ratio," calculated with more weight given to larger BHCs, increased from 6.0 percent at the end of 1990 to 7.9 percent at the end of 1993, much above the "well-capitalized" level of 5.0 percent. Having exceeded the regulatory requirements, some BHCs may have begun to consider ways to control further increases in their capital-to-assets ratio.

Economists have posed explanations for stock buybacks other than for the purposes of adjusting capital-to-assets ratios. Some have suggested that firms may repurchase stock when they lack profitable opportunities, such as acquiring other firms, or investing in new or existing projects. In that case, a firm may choose to return earnings to shareholders, in the form of dividends or share repurchases, thereby reducing the growth of capital and assets.

In the short run, the amount of debt likely would not decrease too much, so the growth of the capital-to-assets ratio would slow. For the reasons discussed above, this might be an acceptable, or even welcome, consequence of such a slowdown in asset growth. Again, because of tax differentials, the firm might choose to repurchase shares rather than pay dividends. With more money in hand, shareholders can then increase their profitable investments.

However, some firms repurchase because their stock is a "good investment." As pointed out above, a firm does not obtain assets when it buys back its stock. However, under certain circumstances, repurchasing can increase the value of the remaining outstanding shares, thereby increasing the market value of the capital-to-assets ratio.

In particular, suppose that the firm's managers know that the market price of its stock is lower than it should be. That is, the managers know that the future earnings prospects of the firm really are better than investors think. If the firm repurchases shares under such circumstances, and the market eventually corrects its valuation of the firm, the price of the remaining shares will increase, as will the market value of assets. So, when the market undervalues the stock, a repurchase can be a good investment, made by the firm's managers on behalf of its shareholders.

Other reasons for repurchasing stock are more idiosyncratic and therefore not likely to have played a major role in the large increase in BHC repurchases in 1994. These include repurchasing to defend against takeover or acquire another firm or to meet the needs of employee incentive compensation programs or security conversions.

Which theories fit?

Each explanation suggests a different outcome. If the capital adjustment explanation holds, then (assuming that optimal capital-to-assets ratios did not rise) BHCs that increased their repurchases should have decreased their capital-to-assets ratios with little change in asset growth. If the explanation involving lack of investment opportunities holds, then the increase in repurchases would have been accompanied by decreases in asset growth and, in the short run (which includes 1994), decreases in the growth rates of capital-to-assets ratios. If the undervaluation explanation holds, then the stocks' prices should have risen relative to the market and so should have the market capital-to-assets ratios.

What do the data tell us about the validity of these explanations? First, between 1993 and 1994, 319 BHCs increased their repurchases by a total of about $6.9 billion, while 258 BHCs decreased their repurchases by a total of about $0.5 billion. Second, ranking BHCs by the amount of their increase in repurchases between 1993 and 1994, the top 30 account for 90 percent of the gross increase in repurchases. Therefore, these 30 BHCs constitute a convenient sample for studying the possible reasons for the large increase in the dollar volume of BHC repurchases between 1993 and 1994.

Capital-to-assets ratios for these 30 BHCs suggest that these firms were attempting to decrease their capitalization levels because they were near their desired levels. Between 1993 and 1994, the average capital-to-assets ratio of these 30 BHCs declined from 7.9 percent to 7.6 percent, while the average capital-to-assets ratio of all other BHCs increased, from 8.5 percent to 8.7 percent. Moreover, 76.7 percent of the 30 BHCs saw a decrease in their capital-to-assets ratio, while only 46.7 percent of all other BHCs did. These comparisons are consistent with *estimates* of the target capital-to-assets ratios for the two groups. Banks' capital-to-assets ratios between 1989 and 1994, and the rates at which they adjusted those ratios, suggest that, on average, the 30 largest repurchase increasers had a desired capital-to-assets ratio right around 8 percent, while other BHCs were aiming much higher, for 11 percent or more. Thus, at the end of 1993, the group of 30 BHCs found themselves, on average, just about at their target capital-to-assets ratio and might have wanted to avoid overshooting that bound. In contrast, other BHCs still had far to go.

In addition, asset growth rates for the two groups suggest that a relative lack of investment opportunities also may have played a role. Between 1993 and 1994, the average growth rate of assets of the

30 BHCs declined from 10.8 percent to 9.2 percent, while the average growth rate of assets of all other BHCs just barely decreased, from 8.0 percent to 7.9 percent.

Finally, a look at bank stocks provides evidence that can be consistent with the undervaluation hypothesis, as well as the other hypotheses. I located repurchase announcement dates for 11 of the top 30 repurchase increasers. Although 7 out of these 11 repurchase announcements generated negative stock price reactions, the other 4 were large enough that, on average, the group of 11 announcements generated a positive and statistically significant stock price reaction. The positive average reaction is consistent with the undervaluation hypothesis and also with the hypotheses that the bank may be moving toward a more favorable capital-to-assets ratio or wisely returning money to shareholders for investment elsewhere.

Conclusion

In 1994, BHCs increased their purchases of their own stock by about $6.4 billion. There are three main explanations of why firms repurchase stock, and all three seem to have played at least some role in the repurchase increase—indeed, it is important to note that the explanations are *not* mutually exclusive. Specifically, it appears that some of the BHCs most responsible for the increase were explicitly attempting to decrease their capital-to-assets ratios, some were reacting to a lack of investment opportunities, and some were taking advantage of the market's undervaluation of their stock.

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