Coming:
A New Phase for Regulation Q

Recent Experience and the Traditional View

&
Upward Biases in Government Spending?
COMING:
A NEW PHASE FOR REGULATION Q
A Commentary by Edward G. Boehne

BANK DIVIDEND CUTS:
RECENT EXPERIENCE
AND THE TRADITIONAL VIEW
Howard Keen, Jr.

... Recent studies show that cutting dividends may not hurt banks nearly as much as many bankers have feared.

UPWARD BIASES
IN GOVERNMENT SPENDING?
Anthony M. Rufolo

... In principle, cost-benefit analysis should improve government spending decisions, but difficulties in carrying the analysis through may produce a tendency toward overspending.
COMING:
A NEW PHASE FOR REGULATION Q

By Edward G. Boehne, Senior Vice President
Federal Reserve Bank of Philadelphia

The authority for placing interest rate ceilings on time and savings deposits at commercial banks and thrift institutions, generally referred to as Regulation Q, is due to expire in December. Although renewal has become almost routine, there is still a good deal of concern about what the longer run future holds. Will the differential be eliminated? Will ceilings be phased out? There is a tendency to forget that Regulation Q is not what it once was nor is likely to be in the future what it is today.

PHASE I
Phase I began with the inception of Regulation Q in the 1930s and runs to the 1950s. The original philosophy of interest rate ceilings was to protect the banking system from unprofitable rate competition by limiting what could be paid on deposits. “Destructive” rate competition in the 1920s was believed by many to have helped precipitate the bank failures of the 1930s, although later research has failed to substantiate this claim.

PHASE II
Phase II runs up to the mid-1960s. Regulation Q ceilings in this period were thought of more as an instrument of monetary control, a dusted-off tool for the new era of active countercyclical policy. Bank credit could be limited, it was reasoned, if banks were kept from competing for funds during periods of monetary restraint. Bank credit, indeed, could be limited, but total spending could not, because alternative sources of credit were used to circumvent Regulation Q. Mortgage credit, in addition, was hard hit by the combination of rising interest rates and rate ceilings, thus raising the social and economic cost of monetary restraint.

PHASE III
Phase III dates from these lessons of the
mid-1960s. Since then, interest rate ceilings on time and savings deposits have been associated more with helping housing by making mortgage money available at thrift institutions. A big step in the evolution of Regulation Q was the general realization that housing and homeowners could be helped more by letting ceilings rise rather than by holding them down during periods of credit restraint. Higher ceilings allow thrifts to pay more competitive rates and to increase the supply of funds to mortgage borrowers. Higher rate, available mortgages finance more houses than lower rate, unavailable mortgages.

Higher Q ceilings, however, raise costs for thrift institutions substantially faster than thrifts themselves are able to raise revenues. Unlike commercial banks, which generally have more diversified loan portfolios with shorter maturities, thrifts mainly have fixed-rate mortgages with lengthy maturities. The unhappy tradeoff with ceilings in Phase III has been between protecting the strength of thrift institutions and maintaining an adequate flow of mortgage funds. Too high a ceiling (or no ceiling), it is argued, weakens thrifts, and too low a ceiling causes mortgage funds to dry up.

Most of the changes in Regulation Q during the past dozen years, plus some other government programs to support home financing, have been aimed at trying to strike a better balance between ceilings that are "too high" and those that are "too low." Ceilings have been raised (eliminated for large denominations), maturities for time deposits lengthened, special certificates introduced, direct lending to thrifts substantially increased, and a thriving secondary market for mortgages developed, among other actions. As a result, mortgage funds have not evaporated and housing has fared much better during the current period of rising interest rates than during similar periods in the past. In addition, the wider variety of savings instruments at thrifts and banks has enabled the small saver to take better advantage of higher yields.

PHASE IV

Phase III is fading into a new Phase IV as financial institutions become more homogenized. As now written, Regulation Q allows thrift institutions to pay a premium rate on most time and savings deposits. The justification for this differential is that thrifts need an advantage in order to compete with banks that traditionally have offered a wider variety of services. To the extent that thrifts gain broader lending powers and what amount to checking accounts, the case for preferential treatment diminishes. It would make more sense, if one is searching for a rationale, to grant preferential treatment on the basis of the share of residential mortgages in the loan and investment portfolio than on the legal type of institution. It is, after all, the availability of mortgage financing that society wishes to favor and not a particular competitive relationship between financial institutions whose differences are rapidly eroding.

PHASE V

Beyond the elimination or modification of ceiling differentials, some might envision a Phase V—the complete disappearance of interest rate ceilings. All this tinkering with ceilings has been anathema to those who favor unfettered markets. Perhaps the logic of market economics over the longer pull will prove compelling and Regulation Q will be dropped, especially as thrifts become more adaptable to fluctuating interest rates. When it comes to money and housing, however, people have a habit of placing less than full trust in the unregulated marketplace. Phase V would appear to be a considerable distance away.
Bank Dividend Cuts: Recent Experience and the Traditional View

By Howard Keen, Jr. *

Slashing the dividend on common stock may be considered all right for firms in some industries, but when it comes to banking, it's been a different story. From the 1930s until very recently, dividend cuts were all but unthinkable for commercial bankers. The traditional view was that no banker would cut dividends unless his bank were in a severe earnings or liquidity crunch and that such a move would have a chilling effect on the bank's health.

In the past few years, however, several large banking firms have taken the plunge—with less than disastrous results. Share prices have fallen, but deposits have held up surprisingly well. All the evidence isn't in yet, but it appears that for some banks, under some circumstances, where other options seem to be closed off, a dividend cut may be taken without producing the catastrophic results that bankers traditionally have feared.

DIVIDENDS IN BANKING

One of the important tasks a banker faces is that of choosing the right dividend policy for his bank. How he decides to split his bank's income between cash dividends and retained earnings can affect the cost of his equity capital and the wealth of his bank's shareholders. (In this article, 'bank' is used for both banks and bank holding companies.)

A banker has to resolve two basic issues about dividends. First, the dividend payout ratio—the average ratio of cash dividends to after-tax earnings over the long term—must be chosen. What payout ratio is best will depend on the earning opportunities of the

* The author, an economist at the Philadelphia Fed, specializes in banking and business conditions analysis. Arthur L. Morath, Jr., Assistant Vice President, and Judith Hanson, Banking Analyst, assisted at various stages in the preparation of this study.
bank and the circumstances of investors (see DIVIDENDS AND RETAINED EARNINGS). Second, after choosing the average payout ratio, bankers still must decide what pattern—stable or unstable—they want the level of their cash dividends to have. Over time, a bank could pay out an average of 30 cents of every dollar of earnings, for example, but quarterly dividends could follow many different patterns. There are reasons to believe that the more stable these payments, the more attractive the bank will be to investors and the more they will pay for a share of its common stock.

For one thing, dividends may be used by shareholders as a regular source of funds for current spending, and dividend payments that deviate a lot from previous levels can impose costs on investors. Also, stable dividends might be taken as providing more information than fluctuating ones both to current and to prospective investors. Income statements may provide incomplete information about a company’s true financial health. Dividend changes may be viewed as a supplementary signal from management of coming changes in profitability. To the extent that more information about a firm makes an investment in it less risky, its share price will be higher.

The informational content of dividend announcements is discussed by R. Richardson Pettit and Ross Watts in The Journal of Business 46 (1973) and 49 (1976).

DIVIDENDS AND RETAINED EARNINGS

Like their counterparts in other industries, bankers try to build up the value of their firms. Typically, a firm’s value is measured by the share price of its common stock. And this share price can be influenced by the payout ratio—the average ratio over time of dividends to after-tax earnings—which is determined when bankers decide how much of their earnings to pay in cash dividends and how much to retain.

Whether earnings are paid out in dividends or are retained, they still belong to the shareholders. But the decision to retain earnings makes a difference to shareholders because it can affect the return they make on their investments.

Retained earnings are put back to work for shareholders by the bank. If the bank has better earning opportunities for these funds than are available elsewhere, a higher level of retained earnings will boost shareholder returns. If the bank’s earning opportunities are not as good, shareholders will do better with more cash dividends. When earning opportunities are equal, other considerations may sway investors toward either retained earnings or cash dividends.

Retained earnings provide a relatively inexpensive source of equity capital because they permit bankers to avoid the flotation costs associated with new issues of common stock. Thus using earnings instead of other sources of funds can increase bank profitability, share prices, and returns to investors.

Also, current tax laws encourage investors to favor retained earnings. Dividends, except for the first hundred dollars, are taxed at a relatively high rate as ordinary income, while increases in share prices are taxed as capital gains at a lower rate.

Some investors may prefer to take their earnings in cash dividends, however, because dividends are easier to spend than increases in the value of common stock. While any part of a cash dividend can be spent, a capital gain can be spent only if shares of stock are sold. The investor who sells shares will incur transaction costs and may have to sell a share worth many times the amount of money he wants to spend.

Choosing the most favorable payout ratio is no easy task. Current dividends may well be important to investors in bank stocks. Yet every dollar paid out in dividends could have been retained. Thus bankers face a challenge in their efforts to use earnings as equity capital and to do it in such a way that the price of their banks’ shares won’t suffer.
The aggregate payout ratio of commercial banks has been trending downward over the past 15 years. This is not, however, because of reductions in cash dividends. While dividends have not increased as fast as earnings, they have followed a steady upward path. Apparently, the arguments in favor of dividend stability carry some weight with bankers. Moreover, one of the arguments—the one about the information provided by a change in dividends—seems to be at the heart of the traditional view on dividend cuts. The message that comes through loud and clear from that view is, "Avoid a dividend cut."

TRADITIONAL VIEW OF DIVIDEND CUTS

This view was evident in responses by financial experts to a 1975 survey question concerning what would happen if a major money center bank were to cut its dividend. The responses had an overwhelming air of crisis and doom about them. One respondent noted that the reason for the cut would be of prime importance, but virtually all seemed to assume that a cut would occur only under severe earnings or liquidity pressures.

The traditional view of bank dividend cuts has perhaps been best summarized by Paul Nadler: "Dividend cuts are drastic and are undertaken only when a bank has no alternative. A bank that cuts its dividend is giving a signal to the entire financial community that it has trouble that will not go away soon. The result is that individual depositors start shying away from that bank, it finds it hard to sell certificates of deposit to corporate or municipal investors, and generally the bank's entire posture suffers."

Why the Fear of Cuts? Several reasons have been advanced for the strong fear of dividend cuts by banks. First, current dividends are deemed to be important to investors in bank stocks. This may be because investors tend to count on dividend income as a source of spending on a regular basis. A dividend cut, when it represents a break from past practice, can be disconcerting to current shareholders and might lead prospective shareholders to lower their evaluations of the bank's stock.

Second, cutting dividends may be interpreted as a sign that the bank is in much worse shape than it actually is. According to one writer, "Forgoing or even reducing a dividend is generally interpreted as an indication that a bank is in serious financial difficulty." And another remarks, "Cutting dividends has a negative connotation with investors and reflects a pessimistic view of the future by management." When a bank has paid steady or increasing dividends in the past, investors may interpret a dividend cut more unfavorably than the facts warrant. Such a misperception could lead to a disproportionate reduction in the bank's share price and an unnecessary increase in its cost of funds.

If a dividend cut is taken as an indication that the cutting bank has a bleaker future than it was thought to have, potential investors may offer less for its shares than they did before. And the reduction in share price that follows will reduce the wealth of current shareholders. Part of their wealth consists in the market value of their holdings of stock, and if the share prices of their bank stocks fall, that portion of their wealth will be reduced.

Finally, other suppliers of funds may view the bank as being riskier. Those suppliers might include buyers of the bank's debt securities and buyers of CDs in denominations that are not covered by deposit insurance.

The upshot of all of this is the possibility of

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a greatly increased cost of funds to the bank. And every banker knows what that can mean to the bottom line of the income statement. Thus it's easy to understand the concern bankers have over the issue of dividend cuts.

AN UNCOMMON OCCURRENCE: A HOST OF DIVIDEND CUTS

For about forty years after the Depression, so far as the records show, bank dividend cuts were relatively infrequent. The picture began to change, however, when Central National Chicago Corporation announced on December 18, 1974 that it was cutting its quarterly dividend from 30 cents to 15 cents a share. And since the Central National Chicago cut, there has been a good deal of dividend-cutting activity.

Profile of the Cuts. For the period 1974-77, 28 banking institutions cut their quarterly dividend. Out of the 28 banks, 2 cut in 1974, 10 in 1975, 12 in 1976, and 4 in 1977. These institutions range in size up to over $5 billion in assets, and they are located in many areas of the country, with concentrations in the Northeast and Southeast (Figure 1).

The cuts ranged in size from 3 cents to 50 cents a share and from 25 percent to 100 percent of the dividend level paid in the preceding quarter. Thus some of the cuts were sizable. But even where they weren't, the mere fact that they occurred was remarkable (Figure 2).

Performance Before the Cuts. A look at the financial condition of these banks prior to the dividend cut shows that dividends were not cut from a position of strength but

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5 The banks that cut their dividend were identified from annual data for the period 1973-77 on the 350 largest banking institutions as contained in Keefe Bankbook 1978 (New York: Keefe, Bruyette & Woods, Inc.). The information from this source was then checked for stock splits, stock dividends, and declaration dates using Moody's Dividend Record (New York: Moody's Investors Service, Inc.). The statistics presented in the text mainly reflect performance of bank holding companies rather than of individual banks.
FIGURE 3
PERFORMANCE AT CUTTING BANKS DOWN BEFORE CUTS

<table>
<thead>
<tr>
<th></th>
<th>1973</th>
<th>0.58%</th>
<th>0%</th>
<th>0.32%</th>
<th>$2.48</th>
<th>$1.31</th>
<th>52.2%</th>
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<td>CUTTING BANKS</td>
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<td>0.58%</td>
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<td>0.32%</td>
<td>$2.48</td>
<td>$1.31</td>
<td>52.2%</td>
<td></td>
</tr>
<tr>
<td>1974</td>
<td>0.43</td>
<td>2.27</td>
<td>0.53</td>
<td>1.76</td>
<td>1.30</td>
<td>63.8</td>
<td></td>
</tr>
<tr>
<td>1975</td>
<td>-0.003</td>
<td>7.12</td>
<td>1.10</td>
<td>-0.48</td>
<td>1.18</td>
<td>128.1</td>
<td></td>
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<tr>
<td>MATCHING BANKS</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>1973</td>
<td>0.80</td>
<td>0</td>
<td>0.23</td>
<td>3.19</td>
<td>1.22</td>
<td>37.3</td>
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<tr>
<td>1974</td>
<td>0.79</td>
<td>2.06</td>
<td>0.44</td>
<td>3.39</td>
<td>1.30</td>
<td>38.9</td>
<td></td>
</tr>
<tr>
<td>1975</td>
<td>0.67</td>
<td>6.18</td>
<td>0.84</td>
<td>3.00</td>
<td>1.36</td>
<td>49.7</td>
<td></td>
</tr>
</tbody>
</table>


took place because of serious earnings and liquidity problems. Information on assets, earnings, dividends, and stock prices was collected for 16 of the 28 cutting banks, and these 16 in turn were paired by size and geographic location with 16 matching banks that didn’t cut dividends (Figure 3).

In general, the banks that eventually cut their dividends were not performing as well as their counterparts. Their earnings-to-assets ratio had fallen 0.58 percentage points from 1973 to 1975 while that for the matching banks was down less at 0.13 percentage points. Earnings per share of the cutting banks fell $2.96 while their dividends per share fell 13 cents. Over the same period, earnings were down 19 cents but dividends rose 14 cents at the matching banks. The payout ratio for the cutting banks increased by 76 percentage points while that for the control group rose 12 percentage points over this period.

Most of the dividend cuts have been attributed to a combination of financial setbacks either caused or exacerbated by the economic recession that began in late 1973. Many of the losses were related to a depressed real estate market and some were the result of unprofitable nonbank subsidiaries. As asset quality deteriorated, chargeoffs increased and earnings were depressed by the need for additional provisions for loan losses.

All in all, at least one part of the traditional view seems to apply to these dividend cuts—the part which says that banks cut dividends only under severe earnings conditions. The other part of that wisdom says that a cut is

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6 For the most part, the analysis of the operating performance of the cutting banks was done by Judith Hanson, Banking Analyst, Federal Reserve Bank of Philadelphia.

7 The sample was restricted to the 16 banks for which information was readily available. How the cutting banks fare in this kind of comparison can depend upon which banks are chosen as matching banks. For a bank to be selected as a matching bank, it had to be of the same approximate size as the cutting bank, be headquartered in the same approximate geographic location, and have maintained or increased its quarterly dividend during the period under study.
nearly disastrous. What is the evidence on this from the group of banks under consideration?

WERE THE CUTS DISASTROUS?

In a certain sense, whether the dividend cuts were disastrous for the cutting banks is impossible to determine. What might be viewed as a disaster by one banker could be seen as merely some tough going by another. What can be done, however, is to consider deposits, share prices, and operating performance at the cutting banks.

Impact on Deposits. If it's true that a dividend cut is a "signal" of "trouble that will not go away soon," a cut could make depositors begin to worry about the safety of their deposits. Fortunately, most depositors have little to be concerned about in this regard. Bank accounts are insured for up to $40 thousand by the Federal Deposit Insurance Corporation; so as long as the cutting bank carries FDIC insurance, there is little need for account holders with $40 thousand or less in each account to worry. Accounts of more

than $40 thousand are not insured for the excess, however, and so their owners might be expected to be scared off by a dividend cut if anyone would. But even here the cutting banks don't appear to have suffered steep deposit losses.

While checking the movement in just this latter category of deposits requires very detailed records, we can make a rough pass at determining the impact of the dividend cuts by examining movements in total deposits around the time of the cut. Average total deposits for the cutting banks and for a group of matching banks that didn't cut dividends are plotted in Figure 4. The matching banks are comparable in size to the cutting banks and are located in the same geographic areas. Around the time of the dividend cuts, deposits for the matching banks were rising while those for the cutting banks were falling slightly. This is generally what the traditional view says will happen. Nevertheless, tests on these movements in deposits do not show a statistically significant decline on average in the deposits of the cutting banks as compared
to the matching banks. If the cutting banks suffered losses in any deposit category, these losses apparently were not severe enough to affect their overall deposit positions relative to those of the matching banks.

**Impact on Stock Prices.** The share price of a bank can be taken as an indication of investors' assessments of that bank. If the dividend cut indicates to investors that profit prospects are declining, their evaluation of the bank could become less favorable and the price of the bank’s stock could drop after the announcement of the dividend cut.

Average stock prices for the cutting group and the matching group are shown in Figure 5. The average share price for the cutting banks falls in the quarter of the cut and shows little recovery in the five quarters that follow the cut.

Statistical tests were conducted for total deposits, share prices, and three measures of operating performance. In every case, the value for each cutting bank was divided by the corresponding value of its matching bank, and the change in this ratio from one period to the next was computed. The one-tail t-test then was used to test the hypothesis that the average change in these ratios from one period to the next was equal to zero. The tests were conducted for three consecutive periods beginning with the one immediately preceding the dividend cut. Data for total deposits were taken from *Polk’s World Bank Directory* (Nashville, Tenn.: R. L. Polk & Co.), various issues, and are as of either June 30 or December 31. Share prices are the bid prices as published in the *Commercial and Financial Chronicle* and are as of the last week in either March, June, September, or December. The three measures of operating performance are earnings to assets, nonperforming assets to loans and other real estate owned, and earnings per share. Data for these are as of December 31 and can be found in *Keefe Bankbook 1978*. The tests were conducted using the 95-percent confidence level.

The impact of a dividend cut might be reflected also by measures that haven’t been examined in the course of this study. These include holdings of Federal funds (excess reserves that banks lend to one another for short periods) and rates paid for borrowed funds.

In the case of share prices and deposits, it was assumed that no new information about the bank became available to investors or depositors between the dividend cut announcement and the next share price or deposit observation. It was assumed also that any loss of deposits was the result of actions initiated by depositors and not the result of a bank decision to reduce the level of its deposit liabilities.

**FIGURE 5**

*AVERAGE SHARE PRICES FALL AROUND TIME OF DIVIDEND CUT*

*The quarter of the cut is designated zero. The numbers of quarters preceding the cut and following the cut are given by (-) and (+) respectively. Share prices are averages of prices as of the last Friday in the calendar quarter.*

**SOURCE:** *Commercial and Financial Chronicle.*
follow. For the matching group, the average share price rises slightly at first and then more rapidly in subsequent quarters.

Statistical tests show that in the quarters surrounding the cut, the share prices of the cutting banks did not fall significantly compared to those of the matching banks. In the quarter of the cut, however, the share prices of the cutting banks dropped an average of 21 percent while prices for the matching banks rose by an average of three percent.9

Operating Performance After the Cut.
The impact of a dividend cut on a bank's ability to attract equity capital and deposit funds at a reasonable cost obviously has to make a difference to bank management. Perhaps the bottom line, however, is how it affects operating performance. While this is not easy to determine, a look at some measures of operating performance can provide an idea of how the cutting banks have fared since the time of the dividend cut.

On the whole, cutting banks have made significant strides toward improving their operations (Figure 6). Nonperforming assets dropped from 7.1 percent of total assets in 1975 to 5.3 percent in 1977, and earnings per share increased from an average loss of 48 cents to a gain of $1.11 in two years. As might be expected, the average dividend per share at the cutting banks was down to 48 cents from $1.18 over the same two years. In addition, the cut in dividends along with the improvement in earnings permitted a drop in the payout ratio from an unsustainable 128 percent to a much more manageable 40 percent. All in all, it appears that the cutting banks made significant inroads into the conditions that led them to cut their dividends. They not only survived the dividend cuts but also made progress in getting their financial houses back in order.

TOWARD A REASSESSMENT
How does the traditional view stack up in

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9Depositors may view the dividend cut favorably since it provides them with additional protection against future losses. Investors may view it unfavorably, however, since it reduces current income and occurs at a time when the bank's earning opportunities don't promise a higher return later on.

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**FIGURE 6**
OPERATING PERFORMANCE IMPROVES AFTER CUTS

<table>
<thead>
<tr>
<th></th>
<th>Nonperforming Assets/Loans and Other Real Estate Owned</th>
<th>Net Chargeoffs/Loans</th>
<th>Earnings per Share</th>
<th>Dividends per Share</th>
<th>Payout Ratio</th>
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<td></td>
<td>Earnings per Assets Owned</td>
<td></td>
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<tr>
<td>Cutting Banks</td>
<td>1975: -0.003% 7.12%</td>
<td>1.10%</td>
<td>-0.48</td>
<td>1.18</td>
<td>128.1%</td>
</tr>
<tr>
<td></td>
<td>1976: -0.02 7.11</td>
<td>1.55</td>
<td>-0.37</td>
<td>0.56</td>
<td>99.5</td>
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<tr>
<td></td>
<td>1977: 0.22 5.28</td>
<td>0.91</td>
<td>1.11</td>
<td>0.48</td>
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<td>Matching Banks</td>
<td>1975: 0.67 6.18</td>
<td>0.84</td>
<td>3.00</td>
<td>1.36</td>
<td>49.7</td>
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<tr>
<td></td>
<td>1976: 0.61 4.86</td>
<td>0.78</td>
<td>2.90</td>
<td>1.39</td>
<td>52.2</td>
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<td></td>
<td>1977: 0.64 3.56</td>
<td>0.49</td>
<td>3.31</td>
<td>1.44</td>
<td>44.6</td>
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Source: Keefe Bankbook 1978.
light of these recent dividend cuts by large bank holding companies? First of all, the part of the view that says dividends are cut only when a bank has no alternative does seem to hold in these cases. It appears that dividends were cut reluctantly and only after maintaining them became extremely difficult. The cuts did not take place because bankers spurned the conventional wisdom. Secondly, the part that says a dividend cut will have dire consequences doesn't fit as closely, at least not in its extreme versions. Investors appear to have lowered their assessments of the banks, since, on average, the share prices of the cutting banks fell significantly compared to those of the matching banks. In terms of total deposits, however, there is no evidence that the cutting banks suffered in relation to the matching banks around the time of the dividend cut.

With the traditional view in mind, it would be tempting to attribute the drop in stock prices to the fact that the dividend was cut. But to do this would be jumping the gun. Investors may have received other information that caused them to lower their assessments of the banks' prospects. They might be reacting to a drop in earnings, announcements by management, or public forecasts by bank stock analysts. Without detailed systematic information on these other possible sources of bad news, there's no way to tell how much of a negative impact, if any, is the result of the dividend cut.

But while the verdict isn't in on the precise impact of dividend cutting, a look at the performance of cutting banks shows that whatever that impact was, it has not prevented these banks from making steady progress in getting their financial houses back in order. In short, while the recent experience with bank dividend cuts suggests that the traditional view still has some truth to it, the part of it that says a dividend cut will be the deathknell of a bank should be reexamined. For banks that find themselves in the same boat as the cutting banks, a dividend cut may be a prudent step toward improving long-run health.

**SUGGESTED READINGS**


From the Philadelphia FED...

THE RULE OF 78's
or
What May Happen When You Pay Off a Loan Early

Copies of this pamphlet, which explains how to figure the interest when you pay off a loan early, are available without charge from the Department of Consumer Affairs, Federal Reserve Bank of Philadelphia, P. O. Box 66, Philadelphia, Pennsylvania 19105.
Upward Biases in Government Spending?

By Anthony M. Rufolo*

A recent cartoon showed a fleeing government employee shouting: “Run! Jarvis is coming to town!” Somehow, the notion has gotten around that Proposition 13 erupted quite unexpectedly. But it may be just one manifestation of a growing awareness and concern about the level of government spending.

Since spending is closely related to services, proposals to cap expenditures represent opportunities for taxpayers to focus on the tradeoff of spending against services. Debate on these proposals, however, rarely takes the form of a cool discussion of tradeoffs. Those who speak most ardently for the disadvantaged want more services and deemphasize the tax burden. Those who speak most ardently for the taxpayer want lower taxes and deemphasize the importance of services. Although both sides seem reluctant to admit it, issues of equity and efficiency in the volume and allocation of government spending underlie the exchanges. What hard evidence exists for helping to make the tradeoff choice?

The issues that bring town meeting participants to their feet are equity issues—concern about abandoned housing, concern about the tax burden of the middle class, and concern about welfare, to name a few. These concerns are more likely to be resolved through the dialogue of democracy than through a marshalling of hard evidence.

But the efficiency issues underlying debates about such matters as housing subsidies, farm price supports, and aid to education, for example, can be examined more precisely. Government spending decisions flow from a

*The author, who joined the Philadelphia Fed's Department of Research in 1974, received his Ph.D. from the University of California at Los Angeles. He specializes in urban economics, microeconomics, and public finance.
framework of calculations of program costs and benefits. While the procedures underlying this framework are sound in principle, implementing them produces some difficulties, and these difficulties may result in a tendency toward overspending by government.

WHAT DOES GOVERNMENT SPEND?

It's estimated that government expenditures in 1977 totaled $621.2 billion—an increase from only $11.1 billion in 1930. While inflation and the growth of the economy explain much of this jump in dollar outlays, government expenditures have been growing not only in absolute dollars but also as a percentage of GNP. From a relatively low level of slightly over 12 percent in 1930, they rose to well over 40 percent of GNP during World War II, fell off to around 20 percent in the postwar period, and then grew steadily to their present range of 30-35 percent.

The percentage dipped in 1976 and 1977, probably reflecting the relatively rapid growth in GNP and reduction in social welfare programs that occur as the economy comes out of a recession. But except for the drop following World War II, there has been no five-year period since 1930 in which government expenditures have not shown growth both in absolute terms and as a percentage of GNP.

Of all governments in the United States, the Federal government has been the biggest spender and has had the fastest rate of growth since 1949 (see GOVERNMENT SPENDS A GROWING SHARE...). Much of this growth has been in the form of

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<td>23.8</td>
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* Preliminary.

transfer payments to individuals (such as Social Security) and to other governments (revenue sharing, for example) which totaled about $237 billion in 1977. State and local governments, with the help of Federal transfer payments, increased their direct purchases of goods and services to almost $250 billion in 1977.

These numbers can be put into perspective by considering that over the last year, Federal, state, and local governments in the U.S. spent about $8,400 for each household in the country. Households were not taxed this amount directly, though they did finance it indirectly (see DO YOU PAY MORE TAXES THAN YOU REALIZE?). And expenditures seem likely to continue growing. The full impact of these expenditures, however, is not entirely visible even from these sizable dollar numbers.

THE FORMS OF GOVERNMENT SPENDING

Government spending usually is thought of in the very simplest terms—direct procurement, direct expenditures to run operations, and direct outlays to designated citizens. We think of government as the buyer of pencils, the employer of recordkeepers, and the supplier of prekindergarten education to disadvantaged children. But different types of expenditures can have very different effects.

If government spending finances the production of desirable goods and services which would not be produced otherwise—sending a man to the moon, perhaps—allocation of resources may reflect citizens' preferences more fully than private-sector spending would. If dollars are dispensed in the form of matching funds or other financial incentives to get

DO YOU PAY MORE TAXES THAN YOU REALIZE?

When people hear that governments spent $8,400 for each household, they probably feel that they must be coming out ahead. After all, not many families appear to pay over $8,000 a year in taxes. But the fact is that most people pay far more in taxes than they realize. Certain taxes are more visible than others—taxes on income and retail sales, for example. Not only these, however, but all taxes ultimately are paid by individuals.

Take, for example, the corporate income tax. This tax, though not always in any obvious way, comes from customers through higher prices, from employees through lower wages, or from stockholders through a reduced return on investment.*

The incidence of a tax—how its burden is distributed—will fall more heavily on some than on others, depending on what kind of tax it is. But, in the end, the tax will be paid by some set of people. Thus, to get a better estimate of his total tax burden, an individual would have to figure out how much higher prices are because of taxes, how much lower his wages are, and what additional return he would get from his investments.

The tax bills which he receives are a misleading guide to each person's contribution to government spending, however, not only because some taxes aren't visible but also because government can finance its spending by borrowing as well as by taxing. Government spending, not current taxation, determines what percentage of the nation's resources eventually goes to the public sector. Thus government collects more in taxes than most people realize, and expenditures are greater than taxes because of debt financing.

*Public Service Electric and Gas Company of New Jersey recently circulated a notice to its customers pointing out that 17 percent of its revenue went to paying taxes. Since Public Service is a regulated utility, it seems reasonable that prices are at least 17-percent higher because of the taxes. For other companies, the people who pay the tax seldom can be identified so readily.
someone else to do something desirable, society as a whole may benefit. The Federal government, for example, often uses financial incentives to shape the behavior of local governments. And spending can bring about a desired change in the distribution of income to individuals by providing them with cash grants or with goods and services such as medical care. (From one point of view, government provision of any item equally to all is a change in the distribution of income because, in a free market, people don’t all buy the same things in the same amounts.)

Further, tax forgiveness can act as a substitute for government spending. Tax deductions, credits, preferences, or loopholes can alter private-sector behavior by reducing tax payments. Selective tax reduction has the same effect as collecting taxes and then offering subsidies, which vary with the recipients’ tax brackets, for engaging in certain activities. It is estimated that these selective tax provisions are equivalent to additional government spending of tens of billions of dollars per year. ¹

Finally, taxes are used not only to finance government expenditures but also to promote other goals. Redistributing income is one added aim of Federal taxation: the personal income tax increases in rate with higher incomes, and the intent of the corporate income tax appears to be to tax shareholders, who are regarded as the relatively wealthy. Raising the price of underpriced goods or undesirable items is another aim: in practice, few taxes appear to have been enacted to offset items not captured through the market, such as pollution, but some taxes have been designed at least partially to curb consumption of certain goods, such as cigarettes and liquor. And tax provisions designed to cut energy consumption have been proposed. For some items taxes are designed to act as prices for government-provided goods and services: the gasoline tax and, to some extent, the Social Security tax are examples. And taxes are used also in attempts to stabilize the economy.

The role of government expenditures, then, is larger than it first appears. Besides the direct and obvious outlays, there are large and less obvious impacts through the alterations that expenditures and revenue raising make on our economy. It is little wonder that the size of government expenditures has become a serious issue for the nation and that the bases on which the levels are determined has come in for urgent questioning (see THE AIMS OF GOVERNMENT SPENDING).

DECIDING HOW MUCH TO SPEND

Many noneconomic considerations enter into government decisionmaking on how much to spend. Political scientists recognize that the squeaky wheel may have to be oiled; elected officials may want to be reelected, and getting reelected may require support for government expenditures that are not justifiable on economic grounds. But an accurate analysis of economic efficiency can be of great assistance to decisionmakers. Most economists agree that a thoughtful application of the cost-benefit framework can help to identify efficient program spending levels.

Does Government Spend Enough? State and local governments, quite naturally, focus on the benefits that expenditures will bring to their own constituents. This behavior suggests an economic argument for the position that government spends too little.

While the local taxing jurisdiction often can tax only its own residents, nonresidents also may be affected by the government’s actions. Community A may decide to spend

THE AIMS OF GOVERNMENT SPENDING

The U.S. and other predominantly capitalist nations rely heavily on the free market system to direct resources toward their most productive use, to produce the goods that people want, and to allocate much of the final product. But unhindered markets are not always the best instruments for achieving these economic goals. And so most agree that government spending should be used to exercise some influence over the private economy. Among the most common aims of government spending are redistribution of income, correction of imperfect pricing, provision of goods and services that private markets can’t provide, and stabilization of the economy when it runs off course.

**Income Redistribution.** The market, though it allocates productive resources efficiently, may not satisfy people’s preferences for greater economic equality.

The market’s efficiency shows up in rewarding people for using their labor and their other resources where they will be most productive. But the productiveness of resources, and so the price they bring, will vary with circumstances. Many people believe that something should be done to counterbalance the effects of resource ownership and unforeseen circumstances on income, and so they have supported government programs of unemployment insurance and educational assistance.*

**Markets With Deceptive Signals.** In a market economy, prices tell consumers the value of the resources used in producing goods and services, and they tell producers how highly consumers value additional units of goods and services. Thus prices make it possible for a decentralized economy to allocate resources efficiently. But not all prices provide reliable information.

Some prices don’t convey the full cost of production—as, for example, when a firm pollutes water as it manufactures consumer goods and then fails to include the cost of cleaning that water up when it prices its products. Other prices may overstate the real cost of production because the producing firm is a monopolist and doesn’t have to worry about losing customers to competing firms. Further, prices may not reflect the total value of certain goods and services to consumers because people other than the purchasers place value on these outputs.

When prices don’t carry correct information, then government may be able to improve the allocation of resources by regulating the market directly or through taxes and subsidies.

**Goods and Services Without Markets.** Not all goods and services can be sold in a private market. The only feasible choice for some of them, such as national defense, is to have government provide them and finance them through taxes. In even more cases, government provision, though not the only available method, may be the most efficient. Thus governments construct and maintain most roads and parks.

**Economic Stabilization.** Many economists believe that leaving the market to run by itself may not keep the economy fully employed. And so, when demand and supply conditions at prevailing prices make for an underuse or overuse of resources, they counsel government intervention.

In principle, stabilization policy should have no permanent effect on the size of government spending. But, in fact, programs initiated or expanded to increase spending during an economic slump often are not cut back when the economy approaches full employment. Thus stabilization efforts may tend to ratchet government spending upward.

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very little, for example, on street repairs and traffic control, and this decision may create traffic tie-ups in Community B by causing some people to change their travel routes. The residents of B would benefit if A were to spend more on traffic control, but this consideration may not enter into the decision-making in A.

**Or Should It Spend Less?** On the other side, there are a number of economic efficiency arguments which suggest that government
tends to spend too much. Perhaps the most important of these arguments is that special interest groups have a strong incentive to get programs passed that favor themselves while taxpayers at large do not have an equally strong incentive to fight such programs. The benefit to the special interest groups can be large for each of a small number of members: they have a strong incentive to lobby. But a very large number of taxpayers will be splitting the bill, and so the tax savings to any of them for opposing the program are small. On net, then, projects sponsored by special interests have an unduly high probability of being enacted.

A recent example of such a situation can be found in the farm aid program. Federal aid to farmers in fiscal 1978 is expected to exceed $10 billion. And although consumer food prices already are higher than they would be in the absence of government programs, it’s expected that both direct Federal aid to farmers and food prices will continue to rise. Farmers clearly want protection from price fluctuations, and they work effectively to obtain it despite the fact that taxpayers at large would prefer lower food prices and lower taxes. And farmers are not alone in receiving special treatment for their products. Thus government may be spending too much on programs that mainly benefit certain relatively small groups.

How To Decide. Economists have proposed a conceptually simple test to help guide them in identifying efficient levels of government spending. The efficiency of any government program is to be evaluated by examining its costs and its benefits and calculating a net value. If benefits exceed costs, then the program is presumed desirable and may be a candidate for expansion. But if benefits are smaller than costs, then the program probably should be cut back or eliminated. And the appropriate size of the program can be judged by considering whether a small increase or decrease in expenditures will lead to a commensurate change in benefits.

The concept is simple, but the implementation is difficult. Many costs and benefits resist measurement, and many are not even perceived. What is the precise benefit of building one more missile, for example, or of training one more unemployed person? What are the precise costs of eliminating a recreation area to make way for a reservoir? These cost-benefit questions, which are hard enough to answer for the present or the near term, become even harder as the time horizon being considered recedes into the future.

Attempts often are made to answer these questions in actual evaluations of government programs. But it is hard to trace out program impacts. The fact that the private market is not doing it, and government is, has certain costs associated with it. These added costs are not included in the standard cost-benefit calculation although they tend to bias the analysis toward overstating the benefits and understating the costs of government programs.²

BIASES TOWARD HIGHER SPENDING

Dollar figures can be estimated for many costs and benefits, including many of the nonmarket ones. Much work has been done, for example, on valuing a human life. And adjustments can be made for the differences in timing of costs and benefits. But plugging these figures into the cost-benefit calculation usually won’t give a complete picture of the effect government programs have on people and on the economy at large.

Current Tax Dollars Understate Program Costs. Tax revenue is the most obvious source of information on the cost of govern-

²Even when cost-benefit analyses of government programs avoid these difficulties, the question of production efficiency remains an open one. Production costs usually are taken for granted in cost-benefit analyses with no attention to whether they are higher than they should be. The acceptance of historical production costs doesn’t tend to make these costs look any smaller (or larger) than they are, but it may lead people to put up with costs that are larger than they have to be.
ment programs. But just adding up the dollars spent will understate the true cost of direct expenditures. Government creates distortions in the economy through its taxing activities. Many programs themselves generate compliance costs. And government sometimes can create monetary liabilities which don't show up in current accounts but will have to be paid in the future.

How Do Taxes Distort? Take the case of Mr. Smith, who wants some painting done. Smith and his painter both earn $6 per hour and pay a quarter of their income in taxes. If Smith elects to do the job himself, it will take him twelve hours, while the painter can do it in ten. Without the tax, it would be cheaper to have the painter do it; Smith would have to work more than thirteen hours to earn enough (after taxes) to pay the painter; so it will save Smith more than an hour's wage to do it himself, even though it would have been more efficient to have the painter in. Thus the distortion caused by the tax leads to an inefficient allocation of resources: Mr. Smith wastes two hours of productive time. This effect is multiplied many times over in the U.S. economy but would not be picked up in even a careful cost-benefit calculation.

Besides the dislocation cost, there is the cost of compliance with government regulations, and this cost usually isn't included in cost-benefit analyses of government programs (see DOES GOVERNMENT REGULATE TOO MUCH?). Most individuals and firms appear to feel the cost of compliance most keenly in the time they spend on record-keeping for tax purposes. Indeed, some cor-

**DOES GOVERNMENT REGULATE TOO MUCH?**

Government can change the allocation of resources by regulating as well as by taxing and spending. In fact, government has a pervasive influence on the economy because it makes the legal rules of the economic game. Generally, this just takes the form of providing the legal framework in which private participants act, but it can extend up to very strong controls on some industries.

In direct regulation of utilities, for example, rates are set and some production decisions may be made by government agents to avoid the high prices and low output that a monopoly might choose. Regulations about pollution, building codes, and worker safety also influence how resources are allocated in the private sector with a relatively small amount of government spending. Regulation can have an impact also on the distribution of income. It appears that some airlines and railroads are allowed to charge prices greatly above costs on some routes so that they can run other routes where prices are below costs and still make a profit. This amounts to a redistribution from some customers to others although it doesn't show up in figures on government taxation and spending.

Regulation may be an effective tool for achieving government's aims, and it often is favored because its direct costs are relatively low. But regulation also generates some hidden costs which must be added to the actual expenditures when evaluating the results. In trying to achieve the government's goals, regulators may create important economic distortions. One such distortion comes from setting prices without sufficient regard for the appropriate measure of cost. It has been argued, for example, that the rates railroads are required to charge put them at a disadvantage to trucks for a number of commodities in which they are the more efficient carrier. Such price regulation is estimated to inflate national freight costs by $1 billion per year or even more.* In other words, if regulators were to set prices so that they more closely reflected the cost of providing services, railroads would be expected to win back some types of business now going to higher cost trucks. And the nation's freight bill would be lower by at least $1 billion per year. Thus the costs of regulation are often much higher than they appear to be.

Corporations and other institutions maintain whole staffs of tax accountants and attorneys. But the IRS is not the only source of compliance costs; regulations issued by other agencies at all levels of government create additional costs. The Commission on Federal Paperwork recently estimated that the cost of paperwork required by the Federal government alone may exceed $100 billion per year and that at least $10 billion of this is unnecessary. Clearly some administrative costs are required in the operation of government, but ignoring the private and public costs of compliance in determining the desirability of government action understates the total cost of government.

Further, the tax bite is an inadequate guide to government program costs because government can spend money it hasn’t collected. Pension programs offer the main examples of this hidden expenditure. When governments make pension commitments without collecting enough funds to cover them, they are in effect borrowing money, because those funds, along with the interest they would have earned, will have to be raised when current workers retire.

In short, because of the dislocation and compliance costs that taxes impose on the economy, and because government finances some of its programs with unfunded liabilities rather than revenue (current taxes), the true total program costs are not fully represented by present-year dollar expenditures.

**Dollar Value May Be a Poor Measure of Benefits.** Likewise, the true total benefits of government programs may not be measured correctly by the dollar value of the goods and services they provide. Starting the evaluation of benefits from the dollar value of inputs can lead to an overstatement of benefits. The overstatement may occur because the direct recipients of the benefits may not value them at their cost.

Suppose, for example, that government provides a family with housing that the family could have rented for $200 per month. Is the housing worth $200 to them? Presumably not, since, if it were, they would have rented the space already. So far as the family is concerned, they would appear to be satisfied better by a cash grant of $200 which they could use to increase their consumption of goods other than housing. In fact, they might rather have a cash grant of, say, $150 than a housing unit worth $50 more.3

But there are many hard-to-document links between programs and effects on society that are not reflected in the dollar numbers. And this may lead to an understatement of benefits. Headstart and Follow Through programs, for example, may raise the skills of the participants, and this improvement might be reflected with some accuracy in the calculations of benefits. But it is possible that other, long-run consequences of better education—perhaps lower crime rates and better health—may not be included in the calculation.

Returning to the housing example, government may see benefits in housing of a certain grade that the recipients of that housing don’t see. Continued use of substandard units, for example, might pose fire or health hazards to residents of other units nearby, and the cost of offsetting these hazards might exceed the cost of relocating the occupants of the substandard units. Since the total benefit of a housing program may exceed the dollar value of the units it provides, using the dollar value of those units as if it represented the total benefit provided may understate the benefits. Thus getting accurate benefit estimates for government programs is a slippery business at best.

**On Balance, a Bias.** There are overstate­ments and understatements in the estimates of the benefits from government programs. But the government program funding process does appear to suffer from a tendency to

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understate the costs of compliance and dislocation. The net effect is to bias the calculation—to make the net costs appear to be lower than they are. Thus government may be led to authorize some expenditures which would be recognized as undesirable if the full costs were tracked through. The information that the competitive market provides about consumer preferences and costs of production usually is not available to government enterprises. And when that information is available, the discipline of the marketplace is not available to ensure that it is acted upon. As a result, even well-intentioned government personnel may be providing goods and services which are not worth their cost or which are produced inefficiently.

WHAT CAN BE DONE?

The movement to place limits on government spending appears to be growing. Even before Proposition 13, Congress began to set itself overall spending ceilings to use as it considered individual items of legislation each year. And there are a number of state and local governments which have statutory or constitutional limits on government spending. This approach does not guarantee that government is left with the appropriate amount of money to spend nor does it take into account the differences in the size of the cost errors in different programs; but it can restrict the tendency of governments to spend too much money.

Cost-benefit analysis of government programs can provide a useful framework for some of the information needed for an efficient allocation of resources both between the public and private sectors and within the public sector. Already it appears to have led to a number of improvements in the way government expenditure decisions are made. Now, for example, the Congressional Budget Office provides members of Congress with estimates of the costs of proposed Federal legislation for the next five years; and zero-base budgeting and sunset legislation make it easier for legislatures to reevaluate the costs and benefits of programs periodically.

Cost-benefit analysis cannot provide a framework for resolving the equity issues underlying the debates on government programs. Equity concerns, however, should enter the decision process after there is a clear understanding of the efficiency considerations. Such efficiency evaluations would be considerably sharpened by greater attention to the deeper costs and benefits.

If this were done, it almost certainly would be concluded that while government action is desirable in some areas, there are other areas where less government activity is called for. The benefits of government spending are significant, but there appear to be tendencies to understate its costs. While it is clear that the criterion of economic efficiency is not appropriate by itself for judging government actions, it provides an important discipline for voters and policymakers as they strive to make reasoned judgments on appropriate levels of government spending.
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