Research Department
Federal Reserve
Bank of
San Francisco

September 5, 1975

Shortage of Savings?

One of the most widely-discussed issues of the decade is the possibility of a shortage of capital to finance foreseeable investment needs. It is generally agreed that there will be a vast increase in the demand for capital over the next ten years. Estimates of the cumulative demand from all sectors of the economy range from $4 trillion to $5 trillion.

There is somewhat less agreement as to whether this amount of funds can actually be generated. A Brookings Institution study by Barry Bosworth, James Duesenberry and Andrew Carron concludes that "We can afford the future, but just barely." A study of the New York Stock Exchange projects a cumulative shortfall of approximately $650 billion over the next decade. Even after adjustment for inflation, the demand for capital could be 70 percent higher in the next ten years than in the last ten. Thus, the needs for investment are plain enough; less clearly seen are the means for financing these capital needs.

Why so much capital?
The most obvious need for capital in the decade ahead is in the field of energy. The supply of domestic petroleum must be intensively utilized and alternative sources of energy developed and exploited. A number of studies have suggested a requirement of $1 trillion to meet our energy needs, and if the nation were to become totally self-sufficient it would require even greater capital outlays.

Pollution control represents another major source of demand for capital over the next decade. Currently, about 5 percent of total plant-equipment spending is channelled into pollution-abatement equipment. This adds to fixed or overhead costs without a corresponding increase in output of the final product. However, cleaner air or water is a concomitant product and must be figured into the cost of the investment and the final product. In the private sector, this cost would be a part of the price to the consumer. In the public sector, it would appear as a tax for service or as an interest cost on funds borrowed to construct the needed facilities.

Despite energy and environmental requirements, the bulk of the $4-5 trillion needed over the next decade will be required for the modernization and expansion of existing industrial capacity. The argument is sometimes put in terms of the United States falling behind in international markets because of the smaller proportion of real output of goods and services which it devotes to fixed investment; in the 1960-73 period, for example, the figures were 17½ percent for the U.S. as compared to 35 percent for Japan and 25 percent for all major industrial countries. International comparisons of this sort are subject to a number of caveats, of course. The U.S. has the largest capital plant of all industrial nations, so that increments to its capital base are bound to be small in relative terms. Also,

(continued on page 2

Research Department
Federal Reserve
Bank of
San Francisco

Opinions expressed in this newsletter do not necessarily reflect the views of the management of the Federal Reserve Bank of San Francisco, nor of the Board of Governors of the Federal Reserve System.

the U.S. economy is essentially a consumption economy with a large (17 percent) and growing proportion of the labor force engaged in service occupations, which are typically less capital intensive than manufacturing. Even so, the nation's large industrial plant is aging, so that a comparatively large part of its capital investment must be committed to replacement and modernization rather than to expansion of existing facilities.

Determinants of savings

The ultimate source of capital funds is savings, whether of consumers, business or government. (The other actors involved—banks, thrift insitutions and other institutions—serve as financial intermediaries, operating in the money and capital markets to channel funds from savers to investors to borrowers.) As a group, corporations and state-and-local governments typically are borrowers, selling securities to finance capital-equipment expenditures, while consumers in the aggregate are net savers. Thus, a critical role in the savings-investment process is played by the Federal government. Should it run a deficit, it may make inroads into the pool of savings available to other borrowers, in some cases actually depriving these borrowers of needed funds, or at least making the terms of borrowing more onerous than might otherwise be the case. On the other hand, if the Federal government realizes a surplus, it may retire debt and make funds more readily available to borrowing entities.

The level of savings in the economy is determined by the rate of real growth—that is, the rate of expansion of physical output—and also by the rate of price inflation and the structure of the tax system. With full employment of industrial and human resources, consonant with a 4-percent real rate of growth, personal and business savings typically will be high and the government sector typically will run a surplus or a small deficit. A high rate of growth generally will have a favorable impact upon all sectors of the economy, thereby promoting the needed growth of savings.

If growth is accompanied by inflation, the impact can vary greatly from sector to sector. Consumers may be pinched as living costs run ahead of income, and may revise their savings plans downward accordingly. Or conversely, they may choose to cut back spending and increase the nominal value of their financial assets to offset the effects of inflation.

Inflation may increase business profits in terms of current dollars, thus adding a rather dubious aura of strength to corporate income statements. In fact, the cost of replacing worn-out equipment accelerates in this situation, and so does the cost of

borrowing at the higher market interest rates that accompany inflation.

The impact of inflation upon the government sector depends upon the progressivity of the tax structure. State-and-local governments are heavily dependent upon property and sales taxes, which respond fairly slowly to rising prices. On the other hand, the Federal tax structure relies more heavily upon the progressive income tax, which pushes taxpayers into higher brackets as their incomes rise with the upward drift in prices.

Taxes and savings

Compared with other nations, the U.S. Federal tax structure tends to favor consumption at the expense of savings. Turnover taxes and excises upon consumption goods provide a large proportion of total revenues abroad, whereas personal and corporate income taxes provide the major share of Federal revenues in the U.S. Consumption-based taxes clearly favor a high rate of investment, since they restrain the amount of resources flowing to the production of consumption goods. Consequently, a number of tax proposals have been made in an attempt to channel more funds into investment. For example, the Administration would incorporate the tax on dividend income into the personal-income tax, in order to eliminate what amounts to double taxation of dividends, first as part of corporate earnings and then as part of corporate shareholders' income.

Most observers foresee a massive task ahead in supplying the volume of savings needed to meet the nation's investment requirements over the next decade. The task is manageable, but it would require an increase in gross private saving, which has been stable at about 16 percent of GNP for the past two decades. An interest in this ratio would require relatively favorable conditions, with real output growing slightly faster than the 4-percent long-term trend, and with the inflation rate held relatively low (say, below 4 percent) in order to restrain the cost of capital goods, including interest costs.

In the final analysis, the volume of savings generated and the amount of funds available for investment will depend considerably upon Treasury budget policy and the Federal tax structure. The Budget Reform Act of 1974, if implemented as intended, will provide a better matching of Federal expenditures and revenues in the years ahead, ending more than a decade of large-scale deficits and the resulting Treasury incursions into the financial markets. Such a development would tend to reduce the aggregate amount of demands upon the credit markets. It would also make more funds available for business borrowers to meet their expansion and modernization needs, and at a lower interest cost.

Herbert Runyon