Research Department
Federal Reserve
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San Francisco

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Business & Financial Letter

Capital Spending and Capacity

At midyear, forecasters are beginning to assess the size and shape of the 1978 economy, and they're finding that capital spending may be the answer to all their econometric questions. A healthy two-year-old expansion has received little help to date from business spending for new plant and equipment. Consumers initiated the recovery by sharply expanding their purchases of autos and other goods and services (including single-family housing), and business inventory purchases increasingly have supported that expansion. Yet almost all will agree that those sectors will be unable to keep the economy going in 1978 and thereafter unless there is more improvement in capital spending than there has been to date.

Capital spending questions

The latest Commerce Department estimates of business expenditure plans are somewhat puzzling. Although forecasting a 12.3-percent increase for 1977 as a whole, they indicate a marked deceleration during the second half of this year. That deceleration may never occur, however; actual spending recently has been outstripping initial estimates, after lagging in the early stages of the recovery, and more of the same seems to be in store. For one reason, business cash flow looks uncommonly strong, following the financial restructuring of the past several years. Besides, the continuing strength of business sales suggests that firms may have to expand capacity soon to meet the markets of the late 1970's.

If the expansion continues at about its present pace until mid-1978, most forecasters see capacity pressures then developing at perhaps an 88-percent capacity-utilization rate. Without sufficient new plant and equipment in place to meet new capacity needs, bottleneck pressures could arise at that point to choke off the expansion and to generate inflationary pressures. But several questions arise concerning the nature of capacity-expanding capital expenditures. Will the spending now envisioned actually expand capacity, or will it go for other purposes? Again, will capital spending occur too late, only after major capacity shortages have already developed?

Shifting relationship

Expansion of capacity usually depends upon substantial spending for new structures as well as new equipment, yet in both the post-1970 and post-1975 cyclical recoveries, the ratio of new equipment to new structures has been somewhat higher than previously. In the present recovery, for example, equipment has accounted for 67 percent or more of total expenditures, compared with the 55-percent average share of earlier cyclical recoveries. Moreover, in the first quarter of this

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year, equipment spending rose at a 29-percent annual rate while plant spending actually declined, and most of those purchases were not machinery, but rather autos, trucks and buses.

The rise in the equipment share of total spending has been accompanied by a slower-than-expected rise in new capacity. The explanation may lie in part with the effect of legislation mandating the type of spending that doesn't add to capacity—specifically, pollution-control and safety legislation. Pollution-control expenditures tend to go for equipment rather than structures, and those expenditures are now substantial because of certain deadlines that must be met in the 1976-77 period under the terms of the basic legislation.

A bunching of deadlines for pollution-control (or safety) spending thus could result in a discernible shift in the capital-spending mix such as we have witnessed. A return to a more equal balance between equipment and structures might be expected after the deadlines have passed—or after pollution or safety standards have been modified. At that time, a faster growth of capacity expansion could also be expected, as fewer dollars are allocated to such essentially non-productive purposes.

Businessmen's increased emphasis on modernization and cost reduction may also help explain the disproportionately high level of spending for equipment at this stage of the expansion. During the inflation and recession of the mid-1970's, corporate survival in many cases dictated increased efforts to stem the upsurge in unit labor costs, and this frequently meant increased installation of modern labor-saving equipment. Also, to the extent that industry had met its needs for new building space in the record construction boom of the late 1960's, the success of cost-cutting via more capital-intensive operations thereafter depended upon the increased utilization of modern equipment.

The recent strength in both new construction contracts and new orders for nondefense capital equipment suggests a sustained upturn in business plant-equipment spending. The strength in both of these leading indicators also suggests a reasonable balance between structure and equipment, and hence a

growing improvement in new capacity as well.

Shifting trigger-point?
A separate question concerns whether a higher level of capacity utilization is now required to trigger an upsurge in business investment than in the past. This possibility, recently raised by the economist Kathryn Eickhoff (of Townsend-Greenspan), would suggest that we may hit supply bottlenecks before investment picks up, and thus encounter a renewal of severe inflation and perhaps a new recession.

In the 1954-69 period, according to her argument, when the capacity-utilization rate was below 85 percent, a one-percent increase in that rate would induce enough investment to increase capacity by .15 percent. But when the utilization rate was above that 85-percent figure, every one-percent increase in the rate elicited a .75-percent rise in capacity. Since 1970, however, the trigger point for that acceleration in investment appears to have increased to an 87-percent utilization rate. Moreover, any given level of utilization now seems to be associated with a lower rate of capacity expansion than in the past.

Eickhoff attributes this change to the increased caution among business planners, because of higher inflation rates, fear of renewed wage-price controls, growing government regulations, and environmental delays on construction contracts. Because of the higher utilization rates now required to stimulate capacity expansion, she argues that the economy may soon run into supply bottlenecks. As a result, the recovery could end in another inflation-induced recession in the next year or two.

When we examine the change in manufacturing capacity in relation to the capacity-utilization rate, we see that some kind of trigger point did exist at least in the pre-1970 period. We also see that, on average, the rates of capacity expansion associated with any level of utilization have been lower in the 1970's than previously. However, there is little evidence to suggest that any precise relationship normally exists between utilization rates and capacity expansion. Indeed, the incipient upturn may belie the fears of bottleneck pressures arising from the type of relationship discussed here.

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BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT

(Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding 6/8/77	Change from 6/1/77	Change from year ago Dollar	Change from year ago Percent
Loans (gross, adjusted) and investments*	98,481	+ 1,102	+ 10,001	+ 11.30
Loans (gross, adjusted)—total	75,695	+ 764	+ 9,066	+ 13.61
Security loans	3,198	+ 1,144	+ 1,671	+ 109.43
Commercial and industrial	23,806	– 161	+ 1,737	+ 7.87
Real estate	23,185	+ 101	+ 3,058	+ 15.19
Consumer instalment	13,085	+ 25	+ 1,984	+ 17.87
U.S. Treasury securities	9,590	+ 329	– 253	– 2.57
Other securities	13,196	+ 9	+ 1,188	+ 9.89
Deposits (less cash items)—total*	96,311	+ 427	+ 7,900	+ 8.94
Demand deposits (adjusted)	27,480	+ 479	+ 2,345	+ 9.33
U.S. Government deposits	203	– 27	– 66	– 24.54
Time deposits—total*	66,847	+ 471	+ 5,249	+ 8.52
States and political subdivisions	5,686	– 128	– 733	– 11.42
Savings deposits	31,772	– 68	+ 5,747	+ 22.08
Other time deposits‡	27,442	+ 508	+ 467	+ 1.73
Large negotiable CD's	10,515	+ 527	– 1,102	– 9.49

Weekly Averages of Daily Figures	Week ended 6/8/77	Week ended 6/1/77	Comparable year-ago period
Member Bank Reserve Position			
Excess Reserves (+)/Deficiency (–)	– 5	– 8	– 48
Borrowings	5	8	1
Net free(+)/Net borrowed (–)	– 10	– 16	– 49
Federal Funds—Seven Large Banks			
Interbank Federal fund transactions			
Net purchases (+)/Net sales (–)	+ 496	– 378	+ 1,110
Transactions with U.S. security dealers			
Net loans (+)/Net borrowings (–)	+ 562	+ 214	+ 737

*Includes items not shown separately. ‡Individuals, partnerships and corporations.

Editorial comments may be addressed to the editor (William Burke) or to the author. . . . Information on this and other publications can be obtained by calling or writing the Public Information Section, Federal Reserve Bank of San Francisco, P.O. Box 7702, San Francisco 94120. Phone (415) 544-2184.