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FRBSF Weekly Letter

Deficits, Interest Rates, Crowding Out

A spectre is haunting the financial community —the spectre of rising Federal budget deficits. Fears are rampant that coming deficits, by keeping interest rates high, will severely retard —'crowd out' —private investment, particularly in key sectors such as housing and autos. Almost certainly, these worries help explain the present extraordinarily high level of long-term interest rates, which in turn has dimmed hopes for a vigorous recovery from the present recession.

Not all observers, though, see such dire consequences. Supply-siders maintain that the Administration's tax cuts will stimulate private savings enough to finance higher government borrowing *and* a boom in investment. Moreover, one former administration advisor, John Rutledge (President, Claremont Economics Institute) argued recently in the *Wall Street Journal* that private investors would be willing to absorb projected increases in Federal debt without substantial interest-rate hikes, in part because of the increasing attractiveness of financial assets in an environment of declining inflation.

Still, both sides of the controversy generally view deficits, interest rates, and crowding out as inextricably linked, in the sense that any crowding out would be accomplished through the mechanism of interest-rate increases. Pessimists thus tend to see interest rates as remaining very high for some years to come, while optimists on the matter of deficits and interest rates are often more optimistic about crowding out as well. But in fact (see below) the government actions behind the deficits are likely to lead to changes in many relative prices, and not simply in interest rates—suggesting that interest rates and crowding out are not so rigidly linked.

Two channels

To many, increased deficits must push up interest rates because of the higher Federal borrowing they entail. With the government taking a larger share of the supply of loanable funds, private businesses and individuals must be persuaded to borrow less (or lend more)—and how else unless borrowing is made more expensive? This reasoning is plausible, but it is also incomplete because deficits actually force two distinct types of adjustment on the economy. The first is a *financial adjustment* to the higher government debt the public must be induced to hold. But since such borrowing is needed to finance expenditures on business capital, housing, and other goods and services, deficits also force a *real adjustment* on the public's spending. Both of these adjustments can affect interest rates, but the question in each case is, by how much? And which is the more important?

The first problem —persuading the public to alter its existing holdings of securities to make room for more government debt—may not cause much of an interest-rate increase. Projected deficits, large as they are, are substantially smaller than the private sector's present holdings of government debt—and only a fraction of its total wealth. The composition of private portfolios (i.e., the shares of alternative assets) thus would not have to change drastically to accommodate projected increases in Federal debt. Furthermore, the public's desired allocation of its wealth, among short-term assets at least, apparently is fairly responsive to changes in their yields. This suggests that the public is apt to digest the extra government debt without any substantial rise in interest rates—particularly as declining inflation makes financial assets generally more attractive (relative to tangible assets).

The real deficit problem concerns what happens to the spending of those private borrowers that cannot obtain funds when the government takes more. But this worry pri-

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marily concerns commodity and factor markets rather than financial markets.

Basically, deficits must compete with private investment for those real resources not being used to meet current consumption needs, that is, the resources provided by the nation's saving. The deficit and private investment thus are jointly constrained by the level of saving; given a certain level of saving, the more the government takes, the less private investors must be content with. (Admittedly, some resources can be borrowed from abroad through a current-account deficit, but typically the amount is fairly small in comparison to total saving, or even to projected deficits). Higher budget deficits thus *must* crowd out some private investment in the absence of a rise in private saving. True, a conflict may be avoided temporarily if there is excess capacity in the economy, and thus enough resources for all needs. But some crowding out is virtually inevitable once full employment is attained—unless the supply-side argument is correct about the effects of tax cuts in stimulating private saving. The only remaining question is *how* this crowding out will be accomplished: how will private investors be persuaded to spend less?

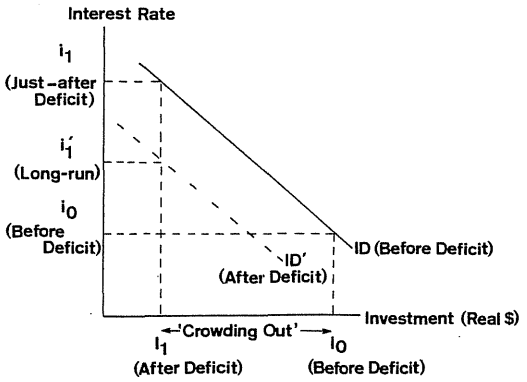
Many ways

Higher interest rates need not be the only mechanism of crowding out, in part because investment decisions depend on far more than interest rates alone. Typically, a firm contemplating an investment project will first estimate its internal rate of return (IRR)—the rate that equalizes a project's (discounted) present cost with the present value of the revenues raised from the project. This return is, of course, higher the more output is obtained for each dollar, and the higher the price that output can be expected to fetch. And the internal return is clearly lower the higher are the costs of labor, materials, and other factors used to produce the output. But in any case, generally only those projects are undertaken whose IRR's (allowing for risk) exceed the market interest rate, since it is these projects than can pay off the interest and amortization on the funds borrowed while still leaving some profit for the firm.

This argument can be demonstrated by a textbook illustration (see chart). For the economy as a whole, the level of investment demanded (ID) is simply the total value of all projects with internal returns above the market rate. What happens, then, when the government crowds out investment (from I_0 to I_1) by raising its deficit?

Plainly, with no change in productivity, commodity prices, and production costs—with no change in the investment-demand schedule—interest rates may rise substantially. Indeed, they may rise high enough to force the cancellation of enough previously-worthwhile projects to release the saving-resources the government requires. This assumption is implicit in most analyses, and certainly it is hard to dispute claims that interest rates will have to rise very high to crowd out private investment *if they are the only mechanism for doing so.*

But surely, given enough time, other prices are nearly certain to change. After all, deficits arise from government tax and expenditure decisions that directly affect demands and supplies (and hence prices) for commodities and productive factors. Suppose, for example, that the deficit rises because of increased defense spending. To expand production, defense industries will have to attract resources away from other sectors by bidding up their prices. Non-defense sectors, faced with increased production costs, will experience lower internal returns to investment, and so will reduce their demand for investment at any given interest rate (in the aggregate, the investment-demand schedule, ID, shifts back). Or suppose the deficit results from a tax cut which raises private demand for consumption goods. Then consumption, rather than defense, industries will bid up factor costs in an effort to attract resources. Still, as before, production costs will rise in other industries, particularly capital-goods industries, and investment will again fall.



Ultimately, then, crowding out will involve changes in commodity and factor prices that lower investment demand—and not only interest-rate increases. Naturally, interest rates then will rise less (say to i_1' rather than i_1) when other prices vary than they would if they alone bore the burden of adjustment. (Conceivably, interest rates might have to rise very little if the adjustments in these other prices were great enough). Of course, price changes may take considerable time, so interest rates *may* have to rise very sharply *at first* when a deficit begins to crowd out private expenditures. Subsequently, though, as these other prices adjust, interest rates are apt to fall back—though such declines would *not* signal any reduction in 'crowding out', but only the working of other mechanisms to accomplish it.

Crowding out, then, may be simply an aspect of a more general problem: how the private sector adjusts to its 'loss' of the real resources used up by government expenditures. Government spending for goods and services always subtracts from resources available for other purposes—resources which the private sector must somehow be persuaded to relinquish. True, there may appear to be no crowding out when expenditures are completely financed by direct taxation. But this is only because the private sector releases the required resources mainly by the tax-caused reduction in disposable income rather than by adjustments in relative prices. Financing expenditures by borrowing generally causes a smaller reduction in current income, so that more of the adjustment is apt to fall upon prices, including interest rates. So clearly, the actual adjustment to a government deficit is apt to depend much less on the size of the deficit than upon the exact tax and expenditure measures producing it. For this reason, there is hardly likely to be any fixed relation between deficits and interest rates.

Two lessons

What, then, do future deficits imply for interest rates and crowding out? Much depends on the course of saving: without a larger-than-expected rise in saving, crowding out *will* result. However, crowding out may not entail interest rates remaining at anywhere near present levels over the next several years. Rates may now be high because deficit fears are exaggerated, or because interest rates now must bear the full burden of deficit, or because of market uncertainties about the future course of monetary and fiscal policies, or for some other reason. But in any case, rates could well fall substantially in coming years—even if crowding out turns out to be severe and persistent. Of course, if interest rates do fall we would still be premature to claim that that meant an end to the deficit problem, since crowding out might simply be accomplished in other ways. For example, the housing industry is now depressed because high interest rates make the cost of owning a home so expensive. But, the industry's troubles will not be removed by falling interest rates if defense-department demands bid up carpenter wages and lumber prices—and thus the *price* of houses—to prohibitive levels.

Still, the industries apparently hurt the most by deficits—the interest-rate sensitive industries—may not be the worst sufferers in the long run. If interest rates fall considerably, the most seriously affected sectors may instead be those which use the same (or similar) resources as those the government is now demanding in increasing quantities. For example, the defense build-up might drain scarce engineering and other technical talent from those high-technology electronics and other industries which are now producing for consumer and business needs—even though such industries are generally hurt less by high interest rates than are housing and autos.

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BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT

(Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding 6/16/82	Change from 6/9/82	Change from year ago Dollar	Change from year ago Percent
Loans (gross, adjusted) and investments*	159,294	− 613	9,472	6.3
Loans (gross, adjusted) — total #	138,712	− 529	10,763	8.4
Commercial and industrial	43,494	− 525	5,516	14.5
Real estate	56,923	35	4,245	8.1
Loans to individuals	23,327	5	318	1.4
Securities loans	2,158	− 28	565	35.5
U.S. Treasury securities*	6,521	32	88	1.4
Other securities*	14,061	− 116	− 1,379	− 8.9
Demand deposits — total#	40,016	1,063	− 761	− 1.9
Demand deposits — adjusted	27,384	− 633	− 519	− 1.9
Savings deposits — total	30,786	− 232	550	1.8
Time deposits — total#	95,035	− 8	14,920	18.6
Individuals, part. & corp.	85,339	192	14,523	20.5
(Large negotiable CD's)	35,124	− 375	4,436	14.5

Weekly Averages of Daily Figures	Week ended 6/16/82	Week ended 6/9/82	Comparable year-ago period
Member Bank Reserve Position			
Excess Reserves (+)/Deficiency (−)	21	114	111
Borrowings	8	199	125
Net free reserves (+)/Net borrowed(−)	3	− 84	− 14

* Excludes trading account securities.

Includes items not shown separately.

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