Editors' Summary

THIS ISSUE of *Brookings Papers on Economic Activity* contains papers and discussions presented at the forty-fourth conference of the Brookings Panel on Economic Activity, which was held in Washington, D.C., on September 10 and 11, 1987. The first major article analyzes the thrift industry crisis. The second looks at the role of government policymaking in Korea's economic success and at issues raised by that country's trade surplus. The third examines the likely effects of the Tax Reform Act of 1986 on U.S. corporate and total private saving. Three shorter reports explore, respectively, Japan's low level of imports, the use of exit bonds as a way to resolve the LDC debt crisis, and the low U.S. national saving rate.

Not since the Great Depression have thrift institutions been in as much trouble as they have been during the 1980s. Of the 890 failures of insured thrift institutions from 1934 through 1986, 75 percent occurred since 1980. The current crisis and its resolution may have dramatic effects on financial and housing markets and on the level of federal budget expenditures. Indeed, depending on how it is managed, the crisis may threaten the survival of the industry itself. In the first paper of this issue, R. Dan Brumbaugh, Jr., and Andrew S. Carron review the thrifts' difficulties during the decade, analyze the regulatory and policy responses to the crisis, and make their own recommendations for dealing with the crisis and the future of the thrift industry.

The authors begin by providing a historical backdrop for the industry's current difficulties. During the past twenty-five years, the two major classes of thrifts, Savings and Loan Associations and Mutual Savings Banks, have been among the fastest-growing and least-diversified of all financial intermediaries. While thrifts never challenged commercial banks as the first among financial depository institutions, by the end of 1986 their assets had grown to be roughly half those of commercial

banks. Traditionally thrifts have invested predominantly in mortgages and relied heavily on time and savings deposits as sources of funds. In 1960, for example, 73 percent of their assets were mortgages, and 88 percent of their funds came from deposit accounts. The industry's specialization in mortgages, financed by short-term and mobile liabilities, contributed to the thrifts' rapid growth during the postwar housing boom, but it also made them particularly vulnerable to variations in monetary conditions and housing markets. As their vulnerability to interest rate increases became evident, they gradually shifted their behavior. By 1986 mortgages had fallen to 51 percent of their financial assets, and time and savings accounts had declined to 79 percent of their liabilities.

Despite various warning signals during the 1970s, little was done to address the industry's problems. As rising interest rates pushed up the cost of funds, the net worth of the industry as a percentage of its assets dropped from 7 percent to 5.6 percent. Competition for short-term funds grew fierce. Regulation Q, which had been designed to limit competition, actually triggered disintermediation: funds deserted thrifts whenever market interest rates rose above controlled rates. Money market funds, which were close substitutes for thrift and bank accounts, came into existence in 1972 and began to attract funds from thrifts. At the same time, the thrifts remained heavily constrained in their asset portfolios. Except for state-chartered thrifts in certain states, they were not even allowed to offer variable-rate mortgages.

The rapid run-up in interest rates beginning in 1979 was predictably catastrophic. Thrifts' average cost of funds rose from 7 percent in 1978 to 11 percent in 1982 and still lagged well behind the rate being paid on money market mutual funds. This differential itself triggered record withdrawals, resulting in a net loss of more than \$34 billion of deposits over six quarters in 1981–82. In the face of enormous operating losses, many thrifts sold their best assets, which were undervalued on their balance sheets. These transactions reduced reported losses after taxes to \$4.6 billion in 1981 and \$4.3 billion in 1982, and concealed a real decline in net worth.

The authors blame the two accounting principles used to monitor the financial condition of thrifts for the misleading picture of the thrifts' status. Both the generally accepted and regulatory accounting principles (GAAP and RAP) rely primarily on historical rather than market values and thus both understated the industry's reported losses in 1981–82 and

misleadingly showed profits in 1983. In 1982, while these two accounting methods recorded industry net worth as 3.0 percent and 3.7 percent of assets, respectively, the authors report estimates of net worth using market values to be -12 percent of assets. Not only do book values provide an inaccurate measure for depositors and managers themselves, they are an imperfect and biased basis for regulators to use in deciding whether a particular institution is in difficulty. A thrift is categorized as a "supervisory case" when its net worth by regulatory accounting principles falls below a specified percentage of liabilities; typically a thrift is not closed until its net worth on that basis is zero or negative. When an institution is closed, it will thus almost certainly have a negative market value, leaving the regulatory and insurance authorities with a much larger problem than the official RAP accounts would indicate.

The crisis of the early 1980s prompted substantial regulatory changes, some of which, say Brumbaugh and Carron, contributed to the current crisis. To enable thrifts to survive variations in interest rates, the Depository Institutions Deregulation and Monetary Control Act of 1980 phased out interest rate ceilings and allowed thrifts to issue variable-rate mortgages and a wider range of other assets. The 1980 act also relaxed safety and soundness controls in ways that subsequently worsened the industry's problems. The relaxed controls lowered minimum net worth requirements, reduced the quality of assets needed to meet those requirements, and allowed deferral of losses on sales of selected assets. These actions decreased the number of institutions officially in trouble. But they did not change fundamentals and, if anything, provided incentives that, combined with the moral hazard inherent in the deposit insurance system, led to greater risk taking.

Because thrifts' deposit insurance premiums are set without regard to the probability or cost of an institution's failure or to the risk of its portfolio, managers of troubled institutions have an incentive to take inordinate risks. Gains, after all, accrue to them; losses, to the insurer. Federal deposit insurers have attempted to limit the effect of such moral hazard through capital requirements, regulation, and supervision. But by 1982, the dramatic deterioration of the industry left regulators with insufficient insurance reserves and inadequate staff—less than one Federal Home Loan Bank Board examiner per insolvent or nearinsolvent insured thrift. The relaxed standards made it easier for troubled banks to increase their risk taking, and the inability of regulators to close institutions that should have been closed even under the relaxed standards worsened the problem. The industry had, by 1986, split into two segments, one healthy and one not, with the heaviest concentration of troubled institutions in the Southwest, particularly Texas. Despite declining interest rates, by that time one-third of thrift assets were in institutions with GAAP net worth of 3 percent or less.

Having set forth the extent of the crisis, the authors turn to the question of how much money will be required to resolve it and who will have to pay. Using market values of assets and liabilities and taking into account closing costs, they estimate that closing all GAAP-insolvent thrifts would cost nearly \$30 billion-far more than the \$10.8 billion that would be raised by bonds for the purpose of closing thrifts under the new 1987 Financial Institutions Competitive Equality Act. Although at current deposit levels, deposit insurance premiums should cover the estimated service on a \$10.8 billion debt, a decline in the deposit base, because of increased competition or the movement of thrifts from the Federal Savings and Loan Insurance Corporation to the Federal Deposit Insurance Corporation, which insures commercial bank deposits, would make the service of even that amount impossible. The authors calculate various plausible combinations of deposit growth rates and insurance fund needs and conclude that current deposit insurance premiums are unlikely to be sufficient to service the \$10.8 billion of bonds, much less to cover the cost of closing all insolvent thrifts.

Should thrift institutions themselves be responsible for providing the necessary additional funds? The authors suggest that the original intent of the legislation that enacted deposit insurance was to provide protection for society, not benefits to the thrifts. Nor do they believe that the intent of Congress was that deposit insurance premiums should cover extraordinary expenses. They see a risk that firms will be driven out of the industry if the industry itself must provide the funds. The authors also argue that merging FSLIC with FDIC and thereby redistributing some of the burden to commercial banks is inappropriate; indeed, they are concerned that the FDIC fund itself may be no more than adequate to cover commercial bank failures. They therefore regard general tax revenues as a legitimate and needed source of funds for closing insolvent institutions.

In their discussion of regulatory developments since 1983, the authors are critical of the portfolio regulations that limit direct investments and

selected loans, believing that they will be ineffectual in curtailing risk taking by weak thrifts and will artificially limit the ability of wellcapitalized thrifts to diversify their portfolios sensibly and thereby reduce risks. Brumbaugh and Carron applaud the Bank Board's raising the thrifts' capital requirement to 6 percent, but reason that institutions should have been required to meet this requirement promptly rather than gradually, as the Bank Board allowed. In their view an immediate rise in the requirement would have enabled the Bank Board to take tight control of imprudent institutions and would have created an incentive for thrifts to use ingenuity to raise capital. They are especially critical of 1987 legislation allowing thrifts in distressed regions to maintain only 0.5 percent net worth.

Brumbaugh and Carron observe that important changes in the operations of thrifts, which can be traced to evolution of the regulatory and competitive environment, have accompanied the thrift crisis. Traditional thrift activities have declined. Thrifts hold fewer mortgage loans in their portfolios, and an increasing share of those is in the form of mortgagebacked securities. Mortgage banking activity has increased, and the fees for originating and servicing loans have become an important source of revenues. Thrifts are beginning to offer a full range of nonmortgage loans, paralleling the services provided by commercial banks. Looking ahead, the authors believe that these trends are likely to continue and that the roles of banks and thrifts are likely to converge. Hence, it will become increasingly difficult to justify separate regulatory and deposit insurance systems for the two.

Brumbaugh and Carron believe that at the same time that thrifts are becoming more like commercial banks, both will come under competitive pressure because of improved information flows between borrowers and lenders and because of the creation of new financial instruments, such as mortgage-backed securities. The authors see such pressures as both inevitable and desirable. But they warn that, as financial markets evolve, regulators will confront many of the problems they faced in previous thrift crises, and, in responding, must resist the temptation to keep obsolete financial institutions alive.

OVER THE PAST two decades, Korea has been one of the most successful developing countries in the world. It weathered the oil and debt shocks of the 1970s and 1980s without becoming overburdened with foreign debt

or succumbing to an inflationary spiral, and it increasingly rivals Japan in world markets for many manufactured goods. By 1986, expanding exports moved the Korean current account to surplus. In the second article of this issue, Rudiger Dornbusch and Yung Chul Park examine Korea's economic performance, focusing on the role that economic policies have played in these achievements. They also look ahead to what policy changes, if any, are appropriate for Korea in light of its substantial current account surplus and pressures from the United States to reduce that surplus.

The authors provide a brief history of Korean economic performance. Korea's exceptional growth began during the 1960s when it first began narrowing the gap in real per capita income with more developed countries. But despite average real GNP growth of better than 8 percent since the early 1960s, real per capita income in Korea is still only about a third that of the United States. During this period of rapid growth, employment and output in manufacturing rose much faster than GNP as a whole, with resources being transferred from agriculture to manufacturing. The expansion has been characterized by an exceptional rise in exports, with the export share of GNP reaching nearly 40 percent during the 1980s. Investment spending as a share of GNP has been high throughout the period, and has averaged about 30 percent over the past ten years. The proportion of resources channeled through the public sector has also risen markedly, with tax collections reaching 19 percent of GNP during the 1980s. By U.S. standards, Korea has experienced considerable inflation, averaging 9 percent a year over the past two decades and reaching nearly 30 percent a year with the oil shock of 1979-80. But Korea has suffered far less from inflation than has Latin America, and during the past several years inflation in Korea has been negligible.

Dornbusch and Park show that Korea has pursued activist policies of import restrictions, subsidies, and credit allocation aimed at encouraging manufacturing and export industries in particular. A combination of manageable government deficits, high private saving rates, and, until recently, a substantial net inflow of foreign funds permitted high levels of investment. The allocation of investment was, to a degree, centrally directed through the subsidies and credit allocation. Although some mistakes were made in the process, the authors argue that, on balance, investment was concentrated in sectors that developed into highly competitive export industries.

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The authors believe that Korea's success has depended on the interaction of that investment strategy with its educated work force and wage moderation. Koreans work an average of fifty-four hours a week, and the educational level of the work force has risen steadily since 1960. Today the educational attainment of the school-age population approaches that of the industrial nations. Yet hourly compensation in manufacturing in Korea is only 10–20 percent of that in industrial countries.

Although unit labor costs in Korean manufacturing rose sharply during the 1970s relative to those in Japan and the United States, Korea continued expanding the range and total volume of its manufacturing exports. Dornbusch and Park review a formal model of how a less developed country might accomplish this, and they argue that the Korean experience roughly followed that model. Investment and a large pool of skilled workers allowed the Korean manufacturing sector to expand and employ advanced technology that had been developed abroad. The ready surplus of workers, together with government policies that contained, at least until recently, union militancy, restrained the rate of wage growth in manufacturing, which in turn, kept inflation moderate and profits growing rapidly. So although relative unit labor costs were rising on average, the level of unit labor costs continued to be low in the manufacturing sectors in which Korean workers were employed with the newest technology and ample capital. This combination, together with a policy that maintained an undervalued exchange rate, led to improved competitiveness over a growing range of manufactured goods.

Throughout the postwar period, the government maintained a tight control over the financial system. Dornbusch and Park credit financial restraints—the control of capital outflows, domestic lending, and interest rates—with helping to maintain high saving and investment rates and controlling inflation. By controlling capital outflows, the government avoided currency instability even during times of political and economic stress. The authors suggest that avoiding the *extra* real depreciation that capital flight would have provoked saved Korea from the inflation that such real depreciation brought to many Latin American countries. On the domestic front, the government's control of lending and interest rates permitted it to channel funds from depositors to favored investment sectors.

Dornbusch and Park question whether Korea's current account

surplus can be regarded as structural and whether policies should be altered to eliminate it. They argue that part of the 1986 nonfactor current account surplus, which was 5.8 percent of GDP, was transitory, arising from low interest rates that held down the cost of servicing Korea's external debt, from low oil and commodity prices that held down the cost of crucial imports, and from Korea's decision to keep its exchange rate tied directly to the dollar, which improved its competitiveness with Japan. They see the present surplus as a useful cushion against external shocks, including the prospective reduction in the U.S. budget deficit.

Many discussants at the meeting disputed the authors' view that Korea need not reduce its current account. Some proposed reducing it through a combination of trade liberalization, real appreciation, and stimulation of consumption in Korea. Though not agreeing that it would be good for Korea to do so, Dornbusch and Park recognize that international pressures, particularly from the United States, could force Korea to reduce its current account surplus, and they compare alternative policies for doing so. They regard liberalizing private portfolio capital flows as a dubious policy, noting that "capital tends to come when it is unnecessary and leave when it is least convenient," in the process creating exchange rate and macroeconomic instability. If liberalization led to capital outflows, it could even cause real depreciation and enlarge the politically sensitive trade surplus. They regard fiscal expansion as having too small an effect on the trade balance to be worth pursuing for that reason alone.

Real appreciation of the Korean won would reduce Korea's trade surplus, but Dornbusch and Park point out that the impact of such an appreciation on the U.S. trade deficit may be insignificant. To the extent that Japanese, rather than U.S., firms are Korea's main competitors, a won appreciation would simply substitute Japanese for Korean goods in U.S. imports. The authors note that real appreciation of the won would hinder Korea's efforts to promote infant-industry exports. Finally, they caution that real appreciation that comes about through faster wage increases would add to inflationary pressures.

Korean trade is highly protected, and the authors regard the liberalization of inefficient import protection as preferable to revaluation as a way to reduce the trade surplus. But they note that outside of agriculture, much of the resulting increase in imports would come from countries other than the United States. They also favor continued import protection for infant industries that have the potential to become internationally competitive. Rather than a wholesale liberalization of imports, Dornbusch and Park conclude that a bilateral arrangement with the United States for free trade and investment would best serve both Korea's interests in continued growth and the U.S. concern with its own trade deficit.

BY INTERNATIONAL STANDARDS the U.S. saving rate has been low throughout the postwar period. Its further decline in the 1980s, threatening slower long-run growth and worsened competitiveness for the U.S. economy, has heightened the concern of economists and policymakers. Elsewhere in this issue, Lawrence Summers and Chris Carroll describe and analyze the roles of government and private saving in this decline. Corporations are responsible for roughly half of private saving in the United States, yet relatively little attention has been given to corporate saving. Indeed, the Tax Reform Act of 1986, which significantly raises the tax obligations of corporations, was apparently framed with little awarenesss of its possible negative effect on corporate saving. In the third paper of this issue, James M. Poterba analyzes the determinants of corporate saving and examines the likely consequences of the new law. He gives particular attention to the possibility that personal saving will offset reductions in corporate saving, either because households care about total private saving or because of changes in personal taxation under the new law.

Poterba begins with a review of various conceptual issues in the measurement of corporate saving and provides summary statistics on its behavior since 1950. Not surprisingly, given that the capital consumption allowance is a substantial fraction of gross corporate saving, the corporate share of gross private saving is greater than its share of net saving. For less obvious reasons, the comparison of the 1980s with earlier periods is quite different using net rather than gross saving. Whereas gross corporate saving accounted for a larger fraction of GNP in the 1980s than during any previous decade, net corporate saving reached its postwar low, averaging only 2.1 percent of NNP during 1980–86, down from 2.7 percent in the 1970s and 3.8 percent in the 1960s. Presumably this divergence between gross and net saving patterns reflects an increase in the share of short-lived equipment relative to long-lived structures in the capital stock. While recognizing that the level of capital consumption

allowances may contain a significant measurement error, Poterba argues that this problem is not likely to be important in comparing its level at different dates. He therefore focuses on the economically more meaningful net saving rate.

Poterba argues for two adjustments to these National Income and Product Account measures of personal and corporate saving. First, he disagrees with the NIPA treatment of defined-benefit pensions, noting that such plans constitute roughly three quarters of all corporate pension plans. Variations in funding of such plans by firms affect neither firms' total pension liabilities nor the value of the employees' pension claims. Hence, in the absence of information about the change in pension liabilities to employees, he argues that contributions to these plans and earnings on their assets should be considered corporate rather than personal saving. The adjustment implied by this treatment is substantial and changes over time. It shifts from personal to corporate saving amounts that vary from approximately 0.5 percent of NNP in 1950 to a peak of 1.9 percent of NNP in 1980 and back to about 1 percent of NNP by 1986.

The second major adjustment reduces nominal corporate interest payments to allow for the fact that a portion of these payments compensates for the erosion of asset values by inflation and is, in effect, a repayment of principal. This adjustment was not important during the 1950s, when inflation was modest and when nominal assets of financial corporations virtually offset the nominal liabilities of nonfinancial corporations. For the late 1970s, however, when the net nominal liabilities of the corporate sector were substantial and inflation much higher, the adjustment significantly raised the estimate of corporate saving. The inflation adjustment reached a maximum of around 1 percent of NNP during the mid-1970s and has declined with the abatement of inflation in the 1980s to approximately 0.2 percent of NNP.

Taken together, the pension and inflation corrections increase the corporate share of total private saving and correspondingly reduce the personal share, which is reduced still further by the inflation adjustment to government debt owned by households. The adjusted net corporate saving actually exceeds adjusted net personal saving throughout the postwar period. During the past three years, the adjusted corporate share of private saving was nearly two-thirds compared with 40 percent for the unadjusted (NIPA) share. Nonetheless, net corporate saving has been substantially lower in the 1980s than in the two previous decades.

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The dramatic increase in share repurchases by corporations in recent years highlights another conceptual issue. Should corporate saving be measured net of such outlays, which distribute cash from the corporate to the personal sector? In the National Income and Product Accounts, a firm that uses after-tax profits to repurchase shares shows higher saving than it would if it used the money to pay dividends, even though its balance sheet after the transaction is the same in the two cases. Poterba documents that an adjustment for share repurchases would reduce corporate saving nearly 0.7 percent of NNP during the 1980s. Nonetheless, he decides to focus on saving measured without this adjustment, arguing that to do otherwise would require distinguishing stock repurchases from other types of balance sheet transactions and would comingle purchases and sales of assets and liabilities with decisions usually associated with earnings flows.

The accounting identity linking corporate saving to before-tax profits, real interest payments, dividends, and corporate taxes provides an illuminating framework for discussing the proximate sources of the decline in net corporate saving. Falling profitability appears to be the key source. All other factors constant, corporate saving would have fallen 0.8 percent of NNP between the 1970s and 1980s simply for that reason. Higher real interest payments, rising from near zero in the 1960s, to 0.5 percent of NNP during the 1970s, to 1.8 percent of NNP in the 1980s, have further reduced corporate saving. These two factors were partially offset by a substantial decline in the effective corporate tax rate from nearly 50 percent in the 1950s to some 25 percent in the 1980s.

An accounting identity, however, cannot reveal the causes of movements in the components of corporate saving. Corporate financial and dividend policies may respond to tax incentives, but unfortunately there is no consensus about these effects. Even the existence of dividend payments remains a theoretical puzzle because dividends are taxed more heavily than capital gains. It is difficult to understand why firms pay dividends rather than using nondividend channels such as share repurchases to transfer cash to shareholders.

Poterba summarizes three different views of how dividend and corporate income taxation affect corporate saving. The first, the "taxirrelevance" view, in its simplest form assumes that the marginal investor is untaxed on either dividends or capital gains. Hence, changes in the relationship between the marginal tax rate on ordinary and capital gains income for inframarginal investors should have no effect. The fact that untaxed institutional investors held 32 percent of outstanding corporate equity at the end of 1986 seems to lend some credibility to this argument; but it does not explain why the remaining investors in 1986 paid an estimated \$27 billion in taxes on \$81 million of dividends. On tax grounds alone, the individuals paying those taxes should prefer firms that distribute profits by repurchasing shares. Surprisingly, the market has not responded to those tax incentives, and firms continue to pay dividends.

The second view postulates that share prices are set by a marginal investor who faces a higher tax rate on dividends than on capital gains and who has no offsetting nontax reason for preferring returns in the form of dividends. Under these assumptions firms should pay dividends only after financing all profitable projects from internal cash flow. Provided that firms anticipate using retained earnings as the marginal source of funds in all future periods, dividend taxes have no effect on investment decisions. Hence, the level of the dividend tax rate affects neither profits nor investment and therefore does not affect corporate saving. By contrast, corporate taxes directly reduce the supply of retained earnings, and therefore reduce dividends except insofar as they also discourage investment. This second view faces an empirical embarrassment: it predicts that dividend payments will be a residual subject to substantial variation, when, in fact, the standard deviation of dividend changes is less than 15 percent of the standard deviation of changes in real investment expenditures. The recent willingness of firms to distribute cash in nondividend forms is further evidence against this view. Poterba reports that approximately 32 percent of firms that paid dividends in 1985 also repurchased some stock and that the total cash distributed in that form was a little less than 45 percent of cash dividend payments.

The third view considered by Poterba also assumes that stockholders have tax reasons for preferring capital gains but assumes further that they have nontax reasons—such as signaling, consumption planning, and restricting managerial discretion—for preferring dividends. This view makes the dividend payout rate an endogenous variable, with both investment and payout decisions being affected by the tax treatment of dividends and capital gains. A dividend tax reduction lowers the costs of providing the various benefits attributed to dividends and therefore increases the steady-state payout ratio. Since it also lowers the cost of capital, such a tax reduction increases the demand for investment with an ambiguous short-run effect on dividend payouts.

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The lack of agreement on a theoretical model to explain dividend payments suggests that empirical work should be specified in a way that can fit any of the theories. Poterba uses the eclectic specification proposed by John Lintner that provides for partial adjustment of actual dividends to a target level, the target itself depending upon the level of current and lagged earnings and dividend tax variables. Poterba also allows the adjustment of dividends to depend upon recent changes in earnings and the tax law. He constructs a tax parameter with some care, computing for various shareholder categories the ratio of the after-tax income associated with a dollar of dividend payout to the after-tax income associated with the capital gains he assumes would result from undistributed profits. The final tax parameter is a weighted average of the tax parameter of the shareholder categories. He also takes into account the special tax on undistributed corporate taxes that was in effect in 1936 and 1937. The aggregate tax parameter has varied considerably over the past several decades. During the 1930s, on average, a dollar of earnings paid out as dividends yielded the shareholding population about 15 cents less after-tax income than a dollar retained. The tax wedge increased to 30-35 cents between the 1940s and early 1970s, but the growth of institutional ownership and marginal tax rate reductions in the 1980s subsequently lowered the tax burden on dividends. By 1986 the average tax disadvantage of dividend payouts was only 21 cents per dollar, its lowest level since World War II.

In equations explaining dividend payouts, the tax parameter is of only marginal statistical significance, but it is quantitatively important and similar across various specifications that use the different adjustments to corporate earnings already described. A dividend tax rate cut that results in a 1 percent increase in the tax parameter raises real dividends about two-thirds of 1 percent in the short run; in the long run, such a dividend tax reduction raises dividends by 2–3 percent. These results therefore support the third, or "traditional," view that dividends are responsive to tax incentives. The pension and inflation adjustments make relatively little difference to the qualitative results, though the largest response of the dividend target rate to the tax parameter is estimated when all adjustments are included. Poterba regards these estimates as the most realistic ones.

All the estimated equations suggest relatively small short-run responses of dividends to changes in profitability. Dividends take approximately three years to increase by approximately one-third of a change in earnings. Poterba also reports that the undistributed profits tax, which was in place for just two years in the 1930s, appears to have had a much larger short-run effect on dividend payout than the dividend tax, but notes that the transitory nature of this particular tax change makes it difficult to infer much about its long-run effects.

Having found that tax effects are important in the determination of dividends, Poterba analyzes the potential effects of the 1986 Tax Reform Act on corporate saving. He notes first that the combination of tax rate and base changes is expected to raise total corporate tax payments by about \$25-\$30 billion a year during 1987-89. These increased tax liabilities will have an immediate and direct effect on corporate saving but will be partly offset by changes in dividend payout. According to his estimates, the increases in corporate taxes will reduce dividends by \$1.9 billion, \$4.8 billion, and \$8.4 billion a year (1986 prices) during 1987-89, offsetting, by 1989, roughly one-third of the effect on corporate saving of the corporate tax increase itself.

Changing the personal tax, in particular the marginal tax rates on dividends and capital gains, has a further effect on dividends by altering the proportion of after-tax earnings that firms will want to pay out. Poterba reports that the weighted average marginal tax rate on personal dividend income will decline from 33.4 percent to 25.3 percent as a result of the new tax law, while the tax rates on most other investors will be unaffected. Poterba estimates that the tax parameter on capital gains increases from approximately 0.78 in 1986 to 0.88 in 1988 and 1989. Hence, the combined effect is a substantial reduction in the relative taxation of dividends. He calculates that this reduction implies an 8 percent increase in corporate dividends when the new law takes effect and a 20 percent dividend increase in the long run. Adding together the effects of both the corporate and personal tax changes, Poterba estimates that by 1989, the tax reform will have induced a decline in corporate saving of more than 1 percent of net national product.

A key question is the extent to which changes in personal saving are likely to offset this substantial decline in corporate saving. There are distributional reasons why aggregate consumption may be changed by a revenue-neutral tax reform that increases the tax on corporations and thereby on households that own them, while decreasing taxes on other

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forms of income. Poterba mentions a variety of other reasons why such a tax change may change consumption. Some households may be subject to liquidity constraints that are relaxed by the tax change. If managers are investing retentions at below-market returns, then increases in corporate taxes will decrease share values by less than the increase in corporate taxes, so that even if consumers have equal propensities to consume out of capital gains and disposable income, a shift from personal to corporate taxes would raise consumption. It is possible, however, that the funds are worth more inside the firm than outside it, in which case the effects may go the other way.

Finding a plethora of theoretical arguments and ambiguities about how distribution of tax burdens between the corporate and household sectors affects private saving, Poterba takes an empirical look at the question. In his view a major shortcoming of previous work is its failure to treat corporate and personal saving as jointly endogenous variables. Many shocks that affect corporate saving may affect personal saving as well, so that the common procedure of including retained earnings in a consumption function is not persuasive. Poterba attempts to deal with the problem of endogeneity by using changes in the dividend tax as an instrument for studying how households react to changes in corporate saving. He estimates consumption equations both using the dividend tax rate directly as a variable and using it as an instrument to eliminate spurious correlation between corporate saving and personal saving. The level of the dividend tax variable, when entered directly, is negatively correlated with the private saving rate, but is not statistically significant. When corporate saving is used directly in the private saving function, its role is not statistically significant, but point estimates suggest that a one dollar decline in corporate saving reduces private saving about 25 cents, with or without the use of instruments. An increase in pension saving by corporations adds dollar for dollar to private saving. With a longer sample period starting in 1931 but excluding the war years, the coefficients on corporate saving are both larger and statistically significant, with a corporate saving decline of one dollar reducing private saving between 65 cents and 84 cents. Poterba concludes that the Tax Reform Act of 1986, even if it is revenue-neutral, is likely to depress private saving \$10-\$20 billion a year, a serious and unexpected effect of the legislation.

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BOTH CASUAL OBSERVATION and simple comparisons with other countries suggest that Japan imports an unusually small share of its consumption of manufactured goods. Yet the idea that Japan imports "too little" has not been well documented. Furthermore, the reasons for this presumed underimporting are a source of great controversy. In the first report of this issue, Robert Z. Lawrence analyzes Japan's import performance and attempts to resolve both these matters.

Particularly in recent years, as both the U.S. trade deficit and the Japanese trade surplus have grown, popular explanations for Japanese performance have stressed the importance of both formal and informal barriers to imports into Japan. As Lawrence recounts, it is alleged that the Japanese government restricts imports through administrative guidance to firms, discriminatory standards and regulations, selective government procurement, the organization of domestic firms into cartels, and weak enforcement of antitrust laws. In addition, imports are said to be discouraged by particular characteristics of Japanese markets and commercial practices such as strong relations between local suppliers and buyers, "just-in-time" inventory practices that favor local suppliers, and a distribution system that creates substantial entry barriers. In contrast to such explanations, some economists stress that Japan's trade structure is simply a consequence of the fundamentals of the Japanese economic performance. With its high saving rates and diminished domestic investment opportunities, Japan inevitably runs a current account surplus, and, because it must import so many of the raw materials it needs, the surplus shows up in its manufacturing trade. Lawrence observes that studies of Japan's net export position in manufacturing have been able to explain the manufacturing surplus in these terms without any resort to special import barriers in manufacturing.

Lawrence explores a different feature of Japanese trade. Even if one accepted that the Japanese trade surplus results from fundamentals, one might still ask why the large manufacturing surplus is achieved at such low levels of imports. As Lawrence shows, in 1986 Germany had an even larger merchandise trade surplus, relative to its GDP, than did Japan. Yet Germany's imports of manufactured goods were about 14 percent of its GDP, compared with 2 percent for Japan.

To examine Japanese import behavior quantitatively, Lawrence devises econometric tests that are loosely based on a model developed

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by Elhanan Helpman and Paul Krugman. That model acknowledges that most manufactured goods compete with similar goods produced elsewhere, but the goods are differentiated rather than being perfect substitutes. As a result, complete specialization in production does not occur among producers, and countries typically both import and export goods produced in each broad manufacturing industry. The model predicts a relationship between the share of imports in domestic consumption and the share of home production in world production. Lawrence attempts to allow for the presence of transportation costs by using a measure based on the distance of each country from its trading partners. He cannot deal explicitly with differences in tastes, which may make consumers prefer home goods to imports or vice versa, or with trade barriers. Using data for thirteen industrial countries in 1980, he uses his transportation measure and each country's share in world production to explain the share of imports in domestic use for each country. By introducing a dummy variable for Japan, Lawrence estimates whether unobserved variables, including barriers to imports or differences in tastes, keep Japanese imports lower than predicted. For most industries, he finds that they do. And this result is repeated when the regressions are run for different years (1970 and 1983), for aggregate as well as disaggregated manufacturing industries, when the countries of the European Community are treated as one trading unit, and when the share of a country's exports in foreign consumption is used in place of the share of its production in world production.

Lawrence acknowledges that these results contain important ambiguities. For one thing, if the manufacturing trade balance is determined by fundamentals, such as Japan's overall national saving and its domestic investment opportunities together with its need to import raw materials, then factors directly affecting either exports or imports in manufacturing will also affect the other. In particular, if Japan's exports are constrained by barriers abroad, those barriers will lower Japan's imports. However, because there were few constraints on Japan's exports as early as 1970, such constraints could not account for the low level of Japanese imports in that year. And because the regressions for 1970 are so similar to those for the 1980s, Lawrence infers that export constraints did not account for the low 1980 imports either. He also infers that lower imports cannot be explained by the exceptional quality of Japanese goods: the equations that explain import shares using a country's export share of world production, which would be very high if Japanese quality were exceptional, again show Japan's imports to be exceptionally low.

Even if one accepts Lawrence's verdict that there are barriers to Japanese imports, it is not possible to tell from his analysis whether the barriers are policy induced or arise naturally from language or cultural differences, the latter being especially difficult for foreigners to overcome. Lawrence examines the price-responsiveness of Japan's imports as an indirect way of inferring something about the nature of the barriers. He stipulates that the unusually low price elasticities would suggest barriers like quotas due to cartels or prohibitive regulations, while nonlinear price elasticities would suggest significant fixed costs to potential entrants or other threshold effects. Lawrence analyzes different industries, finding low price elasticities in some industries for which there are independent reasons for believing that administrative guidance provides protection-quotas on leather goods and administrative limits on textile imports, for example. Generally, import price elasticities in Japan are somewhat lower than those in the United States when weighted by shares of imports. However, imports are fairly responsive to prices and have elasticities comparable to those of other major industrial nations. Lawrence concludes that most barriers are limitations in the distribution system and differences in buyer preferences. One implication of this finding is that the upward revaluation of the yen since 1985 should lead to a noticeable increase in imports of manufactured goods into Japan.

Lawrence reasons that the low level of imports into Japan helps explain why Japan is often singled out for unfair trade practices by other industrial nations. The large Japanese trade surplus itself, he reasons, might not elicit the same reactions abroad if it were achieved, as it is in Germany, with substantially higher levels of imports as well as correspondingly higher levels of exports. Between most industrial trading nations, there is two-way trade even within the same major industrial category. Japan is the exception, with extremely low imports in many major industries. In Lawrence's view, competing nations would be much less likely to restrain Japanese exports if firms that are currently being harmed by exports from Japan coexisted in the same industry with firms that are successfully exporting to Japan. He believes that economic fundamentals may require Japan to run large current account surpluses for many years and suggests that this political consideration makes it

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essential for Japan to open its domestic markets to imports. He contrasts such a strategy, with its implied growth in both imports and exports, with the recent Japanese expedient of limiting exports in the face of foreign protectionist pressures, a strategy that will not relieve those pressures. In particular, he urges Japan to take active measures to increase the competitiveness of its distribution system, to limit administrative guidance, and to open government procurement to foreign exporters.

IT HAS BEEN five years since the debt crisis broke out in the less developed countries. In that time, most of the LDC debtors have made significant net resource transfers to their creditors, yet the debt-to-export ratio of the major debtor countries has risen, and it is increasingly clear that the crisis will not be resolved without a change in present loan arrangements. In the second report of this issue, Jeffrey Sachs and Harry Huizinga provide an update on the debt crisis and explore the possibility of resolving it by converting bank debt into other financial claims.

Surveying developments of the past several years, Sachs and Huizinga stress that the primary concern of policymakers has been the protection of large commercial banks whose LDC debt exposure has exceeded their total bank capital. Policymakers and regulators apparently had four immediate aims: to maintain interest payments, to head off defaults or forced debt forgiveness, to keep the banks from withdrawing precipitously from LDC lending, and to maintain confidence in the banks and the banking system. That strategy has met with considerable success. U.S. bank exposure as a percentage of bank capital has declined, and panic in the banking system has been avoided. Banks have continued lending to LDCs, albeit at levels that have not even covered interest payments. But some of these gains have been achieved at the cost of regulatory laxness, which has permitted banks to carry LDC debt at face value even though that debt is heavily discounted in secondary markets. The authors see such steps as papering over the crisis rather than solving it.

Sachs and Huizinga observe that the political climate in many major debtor nations is not conducive to further economic sacrifice or to reforms aimed simply at improving debt service. Furthermore, the debt burden, which requires interest payments of around 30 percent of total government expenditures in many of the debtor countries, now stands in the way of prudent fiscal policies and has thus contributed to rampant inflation. This economic disarray has forced a difficult choice between continuing debt payments and directing economic policies toward solving urgent domestic economic problems. Bolivia, Brazil, Costa Rica, the Dominican Republic, Ecuador, Honduras, and Peru have all unilaterally suspended interest servicing on at least part of their foreign debt in recent years. Other countries have come near this brink and been brought back only with the help of new loans to continue interest payments. Only a few of the debtors have continued servicing debts in an orderly manner.

The banks are also having difficulties, although, as Sachs and Huizinga point out, accounting conventions tend to conceal them. Sales of questionable assets or their renegotiation at below-market terms would affect the taxable earnings and capital base of the banks and require them to raise more capital. But only a small portion of LDC loans has been written down even though secondary market values of the debt are far below face values. Thus, neither reported bank earnings nor bank capital has been reduced to reflect the true market value of the LDC debt. Even when Citicorp and other leading banks made additions to loan loss reserves this year, their action did not affect taxable income or primary bank capital because U.S. regulators count loan loss reserves as part of primary capital. This regulatory treatment has encouraged banks to maintain dividends in spite of their real capital needs.

Sachs and Huizinga argue that the stock market has assessed the value of bank portfolios more accurately than the banks' accounting reports. They present a variety of statistical regressions showing that bank stock values reflect the poor quality of LDC loans. And they present event studies that show that stock prices of banks have reacted predictably to several developments that affected the prospects for the LDC debt even though bank accounting would not reflect them.

The market's recognition of the diminished value of LDC debt may open the way to converting existing debt into some new claim reflecting a more realistic estimate of the LDCs' capacity to make repayments. The authors point out that such a conversion would have a number of benefits. It would avoid the costs and uncertainties of continuous negotiations on new lending packages needed to keep old debt issues afloat; it would greatly reduce the chances of outright default, with its trauma for financial markets and destructive effect on LDCs' capacity

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to borrow in the future; and it would allow LDCs to focus on improving their economic performance. However, Sachs and Huizinga also explain why most forms of debt conversion are not easy for the market to accomplish. Most debtor countries do not have the cash with which to repurchase their own debt, even at the substantial discounts now reflected in market prices. Debt or equity swaps raise different issues. Existing debt contracts have a "sharing provision" that requires that all payments by debtors be shared equally by the participating banks. That makes it difficult for debtors and individual banks to strike bilateral deals. In addition, regulators require that banks record capital losses if they sell claims for cash at less than face value, and recording such losses could put banks in jeopardy of falling below regulatory limits on capital adequacy. In addition, if some claims of a debtor are sold at a discount, regulations could force the bank to write down all of its claims on that debtor. As their preferred form of debt conversion, Sachs and Huizinga opt for "exit" bonds: banks would exchange bank debt for a bond of the debtor country with the same face value but with a below-market coupon rate. Such a swap would have the same benefits as other forms of debt swaps but would sidestep the numerous problems associated with recording losses.

The authors emphasize that debt conversion would dramatically improve the incentives among debtor nations for economic reform and for maintaining debt payments. With the present debt level, servicing needs typically exceed foreign exchange earnings. Reforms that force a debtor country to forgo current consumption to enhance its debt servicing capacity benefit foreign banks at the expense of the country's own citizens. Not surprisingly, such reforms are politically unpopular. The authors observe, for example, that in Argentina the reformist government of President Alfonsin lost heavily in recent legislative elections to the Peronists, who have been urging a debt moratorium instead of painful reforms. If debt conversion were achieved, the political climate would be greatly improved because most of the incremental economic benefits arising from reform would accrue to the debtor country, with debt service fixed at a lower level.

Sachs and Huizinga recognize that under some conditions, shifting to exit bonds may result in a fall in the value of receipts that creditors can expect from debtors. If banks see some prospect of getting their existing debt fully serviced, say because economic conditions may improve substantially, conversion to debt with a lower coupon will have a cost in terms of expected return. The authors believe that there is little chance of such improvement. They also believe that benefits from an exit bond plan are potentially important enough that public policy should be directed toward that end. They support proposals to create a facility, perhaps as part of the World Bank, that would accept exit bonds of debtor countries and swap its own bonds to commercial banks in return for the existing bank debt, which would be extinguished. Banks would get a safe claim, and the international lending facility would bear the risk of any failure of debtors to make the contractual payments on the exit bonds.

The money to back this facility would presumably be the responsibility of the governments of the major lending banks. On the assumption that each creditor country participates in proportion to the exposure of its banks, Sachs and Huizinga estimate the capital cost to the United States. U.S. banks hold \$57 billion in claims on governments of the problem debtor countries. The secondary market value of this debt was \$32 billion in July 1987. Suppose U.S. banks received guaranteed bonds of the facility worth \$32 billion in return for these existing claims, while the facility accepted exit bonds from the debtor countries with contractual obligations worth \$32 billion in the absence of default. The United States would be subject to the risk on the exit bonds. If debtors meet their new, lower obligations, there would be no cost to the United States. If instead, to take a worst case, the new bonds sold at the same discount from their contractual value as the original bank debt, the exit bonds would be worth only \$17.6 billion, and the transaction would cost the U.S. government \$14.4 billion, about 30 percent of the cost to all creditor governments if the plan were implemented worldwide. Such a capital loss amortized over many years would cost U.S. taxpayers \$1 billion to \$2 billion each year. Sachs and Huizinga regard this possible cost as well worth the advantages of clearing up the debt problem.

FROM 1950 to 1980 the net national saving rate in the United States averaged more than 7 percent and never fell below 5 percent for two years in a row. Still, 7 percent was low by international standards, and U.S. economic policymakers, recognizing that national saving provides the resources for growth, made higher saving a principal objective of the Economic Recovery Tax Act of 1981. Ironically, the saving rate declined

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precipitously during the 1980s. It averaged less than 3 percent during 1981–86, falling, in 1986, to a record low of 1.7 percent, half the rate in Britain and a fraction of the rates in France, Germany, and Japan. In the final report of this issue, Lawrence Summers and Chris Carroll investigate the low U.S. national saving rate, examining empirical issues that characterize the decline, considering reasons for its cause, and weighing the likelihood that it represents a permanent deterioration in U.S. saving.

Summers and Carroll begin by examining the postwar trend in U.S. net saving, decomposing it into private and government saving. Because inflation has varied substantially over the period, and because the standard National Income and Product Accounts measures ignore the fact that part of nominal interest payments is compensation for the effect of inflation on the value of nominal assets, the authors also present an inflation-adjusted series. The unadjusted series suggests that the 5 percentage point decline in the national saving rate between 1960–81 and 1982–86 came from roughly equal declines in private and government saving. The inflation adjustment, both on average and in the most recent period, increases government saving and decreases private saving by more than a percentage point. But it does not change the conclusion that both sectors contributed to the decline of recent years.

The authors provide two checks on the robustness of these observations. They show that two other national saving rates, one that uses flow-of-funds data and infers saving from increases of asset stocks and one that treats consumer purchases of durables as saving, show a similar decline in the 1980s. They also show that the ratio of private consumption to "private GNP," a measure that is insensitive to errors in measuring depreciation, is at a postwar high in 1986. However, the consumption rate is only 2.3 percent higher during the 1980s than during the rest of the sample period, which is a much less dramatic change than the 5 percent decline in the net saving rate.

In recent years some economists have argued the plausibility of the Ricardian equivalence proposition, which holds that the timing of government tax payments has no effect on the level of national saving. According to this view, households "see through" the government "veil," offsetting decreases in current government saving by increases in their own saving in anticipation of increased future tax obligations. On their face, the authors' data suggest that the increase in government deficits in the 1980s made an important contribution to the decline of

national saving and that, if anything, the increase in government deficits was associated with a decline, rather than an increase, in private saving. To be sure that this positive correlation is not spurious, Summers and Carroll look for other explanations. One candidate is the capital gains on existing assets. The substantial increases in household wealth due to the stock market rise between 1982 and September of 1987 are not counted in official statistics on saving, and it is possible that taking them into account would reverse the appearance of a positive correlation between private and government saving. The authors point out, however, that if the gains are counted in saving, they should also be counted in income. And since there is strong evidence that such gains are unexpected, they should be largely transitory income and almost entirely saved.

To examine more formally the possibility that capital gains or other macroeconomic variables are masking the true effect of government budget deficits on national saving, the authors run a variety of regressions using different measures of saving and including a trend, the GNP gap, inflation rates, and real capital gains on stocks and housing as explanatory variables. The authors estimate the equations for 1950–81 and use them to forecast the national saving rate during 1982–86. In spite of an estimated downward trend, all of the equations significantly overpredict national saving in the 1980s. Hence, they fail to redeem the Ricardian equivalence proposition. The equations also confirm that saving has a smaller response to capital gains and losses than it does to other forms of income.

The lack of evidence for joint determination of private and government saving leads the authors to explore separately and in more detail the behavior of private saving. Summers and Carroll find that no matter how the measurement issues are resolved, private saving has trended downward over the past fifteen or twenty years, with inflation adjustments accentuating the decline. In addition to reporting data on total private saving, they decompose private saving into personal and corporate saving, recognizing that households may not pierce the corporate veil. They also make a pension adjustment related to defined-benefit pension plans, which they believe should be treated in the same way as social security. The authors, like James Poterba in his paper in this volume, argue that employer contributions to these plans and the plans' investment income bear little relation to increases in plan liabilities and should

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therefore be treated as employer saving. They treat benefit payments from such plans as disposable income. The pension adjustments are quantitatively important, actually making the personal saving rate negative during the last decade.

The authors regress the adjusted and unadjusted personal and private saving measures on disposable income, inflation, the capital gains measures used to explain national saving, and time trends entered both linearly and squared. Both time trends are significant in the estimation period. And when the equations are used to predict saving during 1982– 86, the declines in private and personal saving rates are actually underpredicted. However, discussants at the meeting questioned whether projections with the squared time trend, which grows increasingly each year of the projection period, should be taken seriously as "explaining" recent saving. The authors observe that these results are at least consistent with the view that the introduction of Individual Retirement Accounts increased private saving, though they concede that the time series evidence in support of this interpretation is weak and that other influences may have been affecting saving as well.

Given the need to resort to a strong downward trend in explaining recent saving rates, forecasts of the future depend on whether the underlying developments responsible for this trend are likely to continue to be important. The authors doubt that time series regressions can shed much light on this question. Instead, they provide an informal analysis of the primary motivations for saving: the need to provide for old age and the possibility of rainy days, the desire to purchase big-ticket items, and the desire to leave bequests. They show that despite dramatic reductions in the labor-force participation rate of the elderly and the aging of that population, the income of the elderly has increased substantially relative to the rest of the population. They argue that the increased well-being of the elderly is likely to make younger Americans feel less need to save for retirement. The evidence on the need for precautionary saving is less clear. Although there has been a dramatic increase in medical insurance coverage since 1950, the costs of medical care have also risen sharply, and the share of income that consumers devote to uninsured health care has not declined. The authors reason that improved disability and life insurance coverage may have reduced slightly the need for precautionary saving. They show that the need to accumulate savings for mortgage down payments has declined, with down payments as a percentage of either sales price or mean income of first-time buyers falling roughly a third since 1976. This easing of financing terms is consistent with increased consumer debt, in the form both of mortgages and of installment credit. While much of this increased debt is undoubtedly matched by increased holding of assets, some of it probably has increased consumption and reduced saving.

Summers and Carroll believe that the importance of transfers to children, either during their lifetime or at a parent's death, is highly speculative. While reductions in birth rates mean fewer children per parent, more children go on to higher education, with consequent need for parental support. The authors also provide rough estimates of the effect of changing age composition on aggregate saving, combining information on age-specific saving rates and the share of income going to different age groups. Demographic changes do not appear to account for large variations in the saving rate, although the disaggregated saving data are unreliable, leaving the result uncertain. Reviewing all of these developments, the authors judge that the improving economic fortunes of the elderly are probably the single most important cause of reduced saving and hence that low saving rates are likely to continue unless social security benefits are significantly reduced.

Summers and Carroll conclude that inadequate saving will continue to be a pressing problem for public policy. Because they do not believe that the United States can continue to rely on large-scale capital imports, they judge that it will be difficult for the United States to maintain a high investment rate in tandem with a low national saving rate. Therefore, it may not be sufficient just to correct the "fiscal aberration" of the Reagan years. With low U.S. private saving rates likely to continue, they believe it may even be necessary for the federal government to run perpetual budget surpluses.

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