

# The NBER Digest

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## Do Takeovers Destroy Shareholder Value?

These days, corporate takeovers often are lumped with Michael Milken, S&L crooks, and junk bonds as examples of what's wrong with America. One of the critics' complaints is that takeovers destroy shareholder value. But a new NBER study by **Steven Kaplan** and **Michael Weisbach** finds that after adjusting for gains in the S&P 500 index between the time of the original purchase and the resale, sellers realized 90 percent of the purchase price and 143 percent of the market value of the acquisition before the original takeover announcement.

Some analysts point to the trend of acquisition and divestiture as evidence of failure, saying, "Acquisition strategies, particularly diversifying ones, probably destroyed [shareholder] value." But in **The Success of Acquisitions: Evidence from Divestitures** (*NBER Working Paper No. 3484*), Kaplan and Weisbach argue that corporations may have reasons other than poor performance for spinning off acquisitions: a turnaround of the target company; the disappearance of synergies that once existed; or new merger opportunities resulting from less stringent antitrust enforcement and financial innovations.

To determine whether sales truly were motivated by poor performance, Kaplan and Weisbach analyze accounting gains and losses on the sale, the actual sale price, and the reasons given by the *Wall Street Journal* (or, in several instances, another business publication) for the sale. They find that only one-third of the

divestitures—that is, one in six or seven of the original acquisitions—could be classified as failures. In retrospect, the targets appear to be worth less than bidders pay, but more than they were worth prior to the takeover.

Kaplan and Weisbach do not find that diversification is a particularly failure-prone strategy. Buyers were four times as likely to resell acquired companies that were in unrelated businesses. But, in 43 percent of these spin-offs, the divesting company made money on the sale. So, why the large number of unrelated spin-offs? They speculate that greater uncertainty about potential synergies or real, unrecoverable costs for integrating unrelated operations may have been factors.

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Finally, the authors report that the stock market's initial assessment of the takeovers turns out to be fairly accurate. Returns at the time of the acquisition announcement were significantly lower for the divestitures that the authors classify as failures than for the majority of divestitures, or for the acquisitions that weren't divested. Kaplan and Weisbach's findings suggest that "the market evaluates the managerial decisions in a sensible way based on their effect on fundamental value."  
SN

## Higher Income and Tax Rates Lead to Higher Fringe Benefits

Higher income and tax rates lead to higher fringe benefits for U.S. academics, according to a recent NBER study by **Daniel Hamermesh** and **Stephen Woodbury**. A 1 percent increase in real income causes faculty fringe benefits to rise by about 2 percent. Similarly, a 1 percent increase in the value of fringe benefits that results from higher tax rates causes "fringes" to rise by about 2 percent.

In **Taxes, Fringe Benefits, and Faculty** (*NBER Working Paper No. 3455*), Hamermesh and Woodbury show that the growth of academics' fringe benefits has closely paralleled their growth economywide. In 1960-1, for example, fringe benefits were 6.1 percent of compensation for faculty and 7.9 percent of compensation in the economy generally. By 1988-9, benefits had grown to 18.5 percent of compensation for faculty and 16.5 percent economywide. Assuming similar growth, the authors conclude that fringe benefits in the entire economy in 1988 would have been at least \$9 billion higher if the Tax Reform Act of 1986 (TRA) had not reduced marginal tax rates, and wages at least \$9 billion lower.

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The value that individuals attach to fringe benefits rises as their marginal tax rates rise. That is because fringe benefits are not taxed, while payment in dollars is. For example, someone facing a marginal tax rate of 30 percent retains only 70 cents per dollar of salary or wage payments as opposed to the full 100 cents per dollar of (untaxed) fringe benefits. Thus, increases in marginal tax rates will cause employees to demand, and employers to supply, a higher percentage of total compensation as fringe benefits.

The authors also note that the value of fringe benefits decreases as marginal tax rates fall. They estimate that the TRA caused the marginal tax rate (including federal and state income

and payroll taxes) of the median faculty member to fall from 42 to 39.4 percent if single and from 33.6 to 27.8 percent if filing jointly. These reductions in taxes, Hamermesh and Woodbury estimate, should have caused the fringe benefits of U.S. academics, as a share of their total compensation, to fall by 0.3-1.9 percentage points.

The researchers caution, though, that marginal tax rates are not likely to fall further, and that real earnings of academics are likely to rise. Hamermesh and Woodbury predict: "The share of benefits in total compensation will resume its growth during the 1990s."

These estimates are based on data from 1477 U.S. colleges and universities. DRH

## Technological Changes Can Cause or Prevent Retirement

Workers retired later in industries characterized by high rates of technological change than in other industries, according to a new study by NBER Research Associate **Ann Bartel** and **Nachum Sicherman**. In contrast, unexpected *shifts* in an industry's rate of technological change, or "technological shocks," will induce older workers to retire *sooner* than they otherwise would.

In **Technological Change and the Careers of Older Workers** (*NBER Working Paper No. 3433*), Bartel and Sicherman measure technological change as the rate of productivity growth not explained by changes in the quantity or quality of physical and human capital. According to this measure, the communications and machinery industries have experienced rapid technological change.

The authors report that rapid technological change requires longer training periods to prepare workers for their jobs. They suggest that in industries with a great deal of technological change over a long time, workers will stay on the job longer in order to recoup their investments in training. In industries with technological shocks, on the other hand, older workers

retire early because they are not prepared to make unexpected new investments in training so late in their careers.

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Can technological change lead to labor shortages? According to Bartel and Sicherman, predictions of impending labor shortages “may be overly pessimistic,” since workers in industries exposed to higher rates of technological change have longer careers. Still, if employers cannot train young workers to adjust to the new technology, the early retirement of older workers exposed to technological shocks could result in labor shortages.

For this study, the authors matched time-series data on rates of technological change and required amounts of training in 35 industries with data from the National Longitudinal Survey of Older Men for 1966–83. DRF

## Foreign Direct Investment Can Help Debtor Countries

Devastated by the debt crisis of the 1980s, developing countries will have difficulty resuming normal economic growth unless they regain access to world capital markets. With international banks sidelined for the foreseeable future, NBER Research Associate **Sebastian Edwards** evaluates strategies that might stimulate foreign direct investment (FDI), which has yet to play much of a role in the Third World.

In **Capital Flows, Foreign Direct Investment, and Debt-Equity Swaps in Developing Countries** (NBER Working Paper No. 3497), Edwards notes that during 1971–81, FDI exceeded 1 percent of GNP in only a few of the 58 developing countries he studies. Usually there was far less FDI than other types of capital inflow.

Edwards also observes that economic considerations greatly outweighed political factors in the highly uneven distribution of direct investment in the 1970s. Although conventional risk analysis tends to employ sophisticated

indexes of political instability and violence, the relative size of the government sector seems to be more important in determining the cross-country distribution of FDI. In addition to reducing the size of government, Edwards concludes, developing countries could attract more FDI by policies that maintain a competitive exchange rate, move toward openness in foreign trade relations, and increase the rate of domestic investment.

Edwards also discusses the increasingly popular mechanisms for converting foreign debt into equity investments in the LDCs. Chile, for example, mainly has used two schemes to reduce its foreign debt.

The first such scheme allows foreign investors to buy Chilean private debt in dollars at a discount in the secondary market and to convert it into debt in Chilean currency. Edwards finds that the main effect of this program has been to substitute one type of liability for another. It has not significantly increased the flow of new FDI into Chile. However, since the principal cannot be repatriated for ten years, it does improve Chile's liquidity, while in effect giving foreigners a 35 percent discount on the price of Chilean equity.

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The second program allows local companies to redeem their debt in the secondary market with foreign exchange purchased in the “parallel” (or “gray”) market. This repatriation of flight capital clearly benefits Chile; the scheme, Edwards argues, has enabled the Chilean central bank to capture most of the secondary market discount (that is, the difference between face value and discounted price in the secondary market of Chilean debt) on flight capital that Chileans have decided to bring home. Together these two programs resulted in a \$9 billion, or 50 percent, reduction in foreign debt between 1985 and 1990. Edwards stresses that the same economic reforms that stimulate FDI would make these types of swap arrangements more effective. LB

## Recent NBER Books

### NBER Macroeconomics Annual 1990

The *NBER Macroeconomics Annual 1990*, edited by Olivier J. Blanchard and Stanley Fischer, is now available from the MIT Press. The hardcover edition is \$32.50; the paperback costs \$15.95.

This is the fifth volume in a series from the NBER that links theoretical and empirical developments in macroeconomics with specific current issues facing the United States and other economies. This edition contains six articles initially presented at a conference held in Cambridge last March.

In the first article, Robert J. Barro and Xavier Sala-i-Martin investigate world interest rates. Next, Francesco Giavazzi and Marco Pagano ask whether severe fiscal contractions can be expansionary. Steven J. Davis and John C. Haltiwanger, Jr. look at the microeconomic evidence for, and the macroeconomic implications of, gross job creation and destruction. Mark Bils describes wage and employment patterns in long-term contracts. Giuseppe Bertola and Ricardo J. Caballero analyze the effect of investment decisions of individual consumers and firms on economic fluctuations. In the last paper, Gur Ofer discusses the macroeconomic issues surrounding Soviet reforms.

Olivier J. Blanchard and Stanley Fischer are members of the NBER's Programs in Research in Economic Fluctuations and Financial Markets and Monetary Economics. They are professors of economics at MIT.

Order this volume, either hardcover or paperback, directly from The MIT Press, 55 Hayward Street, Cambridge, MA 02142: (617) 253-2884.

### New Book on Aging

*Issues in the Economics of Aging*, edited by David A. Wise, is available from the University of Chicago Press for \$52.00. This NBER project report focuses on living arrangements among the elderly and labor market issues, including the decision to retire.

Wise is director of the NBER's Project on the Economics of Aging and the John M. Stambaugh Professor of Political Economy at the JFK School of Government, Harvard University.

Order this volume directly from the University of Chicago Press, Order Department, 11030 South Langley Avenue, Chicago, IL 60628. Academic discounts of 10 percent for individual volumes and 20 percent for standing orders for all NBER books published by the University of Chicago Press are available to university faculty; orders must be sent on university stationery.

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*Individual copies of the NBER Working Papers summarized here (and others) are available free of charge to Corporate Associates. For all others, there is a charge of \$3.00 (\$4.00 outside of the U.S.) per paper requested. Advance payment is required on orders. Please do not send cash. For further information, please contact: Working Papers, NBER, 1050 Massachusetts Avenue, Cambridge, MA 02138; (617) 868-3900. Abstracts of all current National Bureau Working Papers appear in the NBER Reporter.*