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Financial Education in the Workplace Boosts Saving

For years economists and politicians have lamented the low personal savings rate in the United States and debated potential means for stimulating savings. Now new research implies that a serious national campaign of financial education and information might boost savings.

In 1995, the Department of Labor actually launched "a national pension education program aimed at drawing the attention of American workers to the importance of taking personal responsibility for their retirement security." At that time, though, there was virtually no hard evidence concerning the effects of such education on financial decisions.

Now, two NBER Working Papers help to fill that information gap. In **The Determinants and Consequences of Financial Education in the Workplace: Evidence from a Survey of Households** (NBER Working Paper No. 5667), by **B. Douglas Bernheim** and **Daniel Garrett** and **The Effects of Financial Education in the Workplace: Evidence from a Survey of Employers** (NBER Working Paper No. 5655) by **Patrick Bayer, Bernheim,** and **John Karl Scholz,** the authors take advantage of the rapid growth of financial and retirement education in the workplace to look at the effects of such education on financial decisions. As of 1994, 88 percent of large employers offered some form of financial education. More than two-thirds had added these programs after 1990, often because of the increasing popularity of employee-directed pension plans, such as 401(k) and 403(b) plans. But education programs also are becoming increasingly common among firms that sponsor only defined benefit plans (that is, plans that provide a set pension after retirement and are managed entirely by the companies).

Employer-based financial education takes many forms, including written materials (brochures, plan descriptions, fund prospectuses, newsletters, and memos), one-on-one counseling or financial planning, seminars, workshops, focus groups, interactive voice response systems, 800 numbers, videos, and interactive software. Topics covered often include basic investment terminology, asset allocation principles, the concepts of risk tolerance and risk-return tradeoffs, the effects of inflation, the estimation of retirement income needs and retirement income sources, retirement strategies, and the impact of preretirement withdrawals on retirement income.

In their paper, Bernheim and Garrett make use of a novel 1994 telephone survey of U.S. households, sponsored by Merrill Lynch, Inc. Bayer, Bernheim, and Scholz use data obtained from employers. The employer data is probably more reliable, but it does not contain information on assets held outside of retirement plans. The household data is required to determine the extent to which educationally induced changes in retirement portfolios are offset by other financial changes.

Bernheim and Garrett find that many employees apparently regard

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employer-based financial education as a critical source of information and advice. Some 27 percent of respondents report relying primarily on their employers when such information is made available, compared to 23 percent who rely on financial professionals, 19 percent on parents, friends, and relatives, 15 percent on print media, and 9 percent on their own judgment. Employer-based education apparently displaces less authoritative sources.

The availability of retirement education raises median retirement wealth by nearly $2,500, Bernheim and Garrett find. It increases the overall rate of saving by 1.65 percentage points, and raises the rate of saving for retirement by just under one percentage point. Employees who are offered retirement education are far more likely to participate in 401(k) programs, and to make larger contributions to their plans: a median balance of $8,250 when education is offered, compared with $5,000 when it is not. The effects of financial education are particularly pronounced among those least inclined to save. But there is some indication that education stimulates 401(k) contributions among high savers, too. There is also some indication that when an employer offers retirement education, the spouses of employees are more likely to put money into their own 401(k) plans.

Bayer, Bernheim, and Scholz, using a survey of employers taken from the KPMG Peat Marwick Retirement Benefits Surveys of 1993 and 1994, explore what type of education is effective. They find that when a company institutes financial education seminars on a frequent basis, the proportion of employees participating in 401(k) plans increases by 11.5 percentage points for non-highly compensated employees and 6.4 percent for highly compensated employees. These are large increases, considering that average participation rates run between 60 percent for lower-paid employees and 80 percent for highly-paid employees in the sample of some 500 firms with 200 employees or more. The average contribution rate is around 3.4 percent of salary for all eligible employees, or nearly 20 percent higher than in firms not offering financial education. Participating employees generally contribute between 5 and 7 percent of their salaries. However, aside from seminars, no other medium of providing financial information and education to employees has any significant association with increased participation, the three authors find.

"The availability of retirement education raises median retirement wealth by nearly $2,500."

Finally, when employers match employees' contributions, employees' participation is 15 to 17 percentage points higher than in plans without matches, the study finds. The availability of loans from funds set aside in a 401(k) plan and the number of investment options available do not have a statistically significant impact on participation, though. DRF

Contagious Currency Crises

The question of whether a speculative attack on one country's currency poses a serious threat to other nations has been the topic of heated political debate, most recently in early 1995, when at the behest of the Clinton administration $50 billion was advanced to Mexico to prop up the ailing peso. However, the contagiousness of currency crises has not been the subject of much systematic economic research.

In a recent study titled **Contagious Currency Crises** (NBER Working Paper No. 5681), NBER Research Associates **Barry Eichengreen** and **Andrew Rose,** and coauthor **Charles Wyplosz** attempt to fill this void by examining exchange-rate data from 20 industrial countries for the period 1959–93. They find that currency crises indeed appear to spread across national borders. The data show that a currency crisis elsewhere in the world increases by about 8 percent the probability that a country will be hit at the same time by a speculative currency attack. This is true, even after accounting for a host of domestic political and economic conditions. The authors say this is significant, but not entirely conclusive, evidence of contagion; the simultaneous crises also could be explained by external economic shocks that happen to hit several nations at once.

"...currency crises are contagious and spread through trade channels."

Eichengreen, Rose, and Wyplosz also consider two channels by which currency crises might spread. One is trade ties, assuming that a crisis-induced currency devaluation in one country would put its major trading partners at a competitive disadvantage, thus applying downward pres-

sure on their currencies. Another is investors' potentially self-fulfilling expectation that if one country's currency crashes, then the currencies of other nations with similar economic conditions and policies are likely to come under pressure as well. The authors found the incidence of simultaneous crises highest among trading partners, a finding that lends strong support to the theory that currency crises are contagious and spread through trade channels. Among countries with similar macroeconomic situations the statistical evidence for contagion was less conclusive.

The "Tequila Effect" that weakened the currencies of countries as far away as Thailand and Malaysia in the wake of Mexico's 1994 peso crash does lend at least anecdotal support to the latter theory that crises can spread among similar countries even in the absence of strong trade ties. But a more systematic look at the effects of the 1994 Mexico crash and currency crises in other emerging market nations will be hampered by a lack of the sort of reliable economic data that Eichengreen, Rose, and Wyplosz were able to use in studying crises in developed countries. JF

Cocaine Use is Price Sensitive

Cocaine consumption is quite sensitive to its price, according to a recent study by NBER Research Associates **Michael Grossman** and **Frank Chaloupka.** A permanent 10 percent reduction in the price of cocaine would cause the number of users to grow by more than 8 percent in the long run, and would increase the frequency of use among users by a little more than 3 percent, they estimate.

In **The Demand for Cocaine by Young Adults: A Rational Addiction Approach** (NBER Working Paper No. 5713), Grossman and Chaloupka conclude that a temporary rise in the street price of cocaine may well only have a small effect on drug use, whereas a permanent rise could have much bigger effects. For example, they estimate, a 10 percent price hike for one year would reduce total cocaine consumption by approximately 4 percent, whereas a permanent 10 percent hike would lower consumption by 12 percent. Thus, a permanent reduction in price caused by legalization, for example, is likely to increase use substantially, particularly among young adults.

> "A permanent 10 percent reduction in the price of cocaine would cause the number of users to grow by more than 8 percent in the long run."

The authors' data come from the nationally representative cross-sectional surveys of high school seniors conducted each year since 1975 by the Institute for Social Research of the University of Michigan. The authors' final sample ranges in age from 17 through 29; cocaine consumption is highest in this age range. The prices of cocaine used in this study come from the System to Retrieve Information from Drug Evidence, maintained by the Drug Enforcement Administration of the U.S. Department of Justice.

Mexican Investors Anticipated Peso Crisis

After the Mexican crisis in December 1994, it was suggested that domestic residents of Mexico were "closer to information" and thus had better, or at least different expectations about local economic events prior to the crisis. Now a study by NBER Research Associate **Jeffrey Frankel** and **Sergio Schmukler** confirms that Mexican investors were the "front-runners" in the peso crisis of December 1994, turning pessimistic before international investors.

In **Country Fund Discounts, Asymmetric Information and the Mexican Crisis of 1994: Did Local Residents Turn Pessimistic Before International Investors?** (NBER Working Paper No. 5714), the authors use data from three Mexican country funds to investigate these "divergent expectations." The Mexico Fund was established in 1981; the Mexico Equity and Income Fund and the Emerging Mexico Fund were established in 1990. All three are "closed end funds" traded on the New York Stock Exchange. (A closed-end country fund consists of a fixed number of shares that are invested in a set of stocks from a particular country. Once the fund is established, new shares cannot be issued, and existing shares cannot be redeemed: they must be traded on secondary security markets.)

Country funds are traded in New York at their U.S. dollar price. The funds' Net Asset Values (NAVs) are

the aggregate value of the constituency equities, evaluated at local market prices, translated into U.S. dollars. If markets were efficient and perfectly integrated internationally, the fund's price would equal its NAV. However, this is seldom the case. Frankel and Schmukler argue that the price of the fund, traded on Wall Street, better reflects the information and expectations of international investors, while the NAV, determined in Mexico City, better reflects the information and expectations of local investors. In other words, the country fund discount — that is, the percentage difference between NAV and price — reflects the relative optimism of domestic versus international investors.

"Mexican investors were the 'front-runners' in the peso crisis of December 1994, turning pessimistic before international investors."

Frankel and Schmukler find that in this case, right before the peso devaluation, the Mexican fund NAVs (driven mainly by Mexican investors) dropped faster than the fund prices (driven mainly by foreign investors). The decline began two weeks before the devaluation. Moreover, their analysis suggests that the causality seems to flow from the Mexico City investor community to the Wall Street investor community.

They also show that a change in the NAV is fully transmitted to the country fund's price in the long run, but only partially transmitted in the short run. It appears that about half of the adjustment toward the long-run relationship between NAV and price takes place in about 3 to 5 weeks.

CORRECTION

The description of the Romer and Romer paper, "Federal Reserve Private Information and the Behavior of Interest Rates," stated that "the Fed receives data on unemployment and inflation only a few days before it is released to the public." In fact, the Chairman of the Federal Reserve receives data on key economic statistics only late in the day preceding the public release.

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