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Taxes and Mergers

Most mergers and acquisitions are not motivated by tax savings, according to a recent study by NBER Research Associate **Alan Auerbach** and **David Reishus.** However, one-fifth of the mergers that took place between 1968 and 1983 did involve a potential gain from the transfer of unused tax losses and credits. The average gain from these mergers was about 10 percent of the acquired company's market value, Auerbach and Reishus report in **Taxes and the Merger Decision** (*NBER Working Paper No. 1855*).

Of the 318 mergers studied, the largest reduction in combined federal taxes from tax losses and credits resulted from the takeover of Anaconda by Atlantic Richfield; it was estimated at over $100 million. (A firm's losses in one year can be used to offset its taxable income in other years. If losses persist for several years, an unprofitable firm will not be able to take advantage of these offsets. However, a profitable firm can buy an unprofitable firm, or vice-versa, and use past losses to reduce its own tax liabilities.) Of those firms in the sample, 6.5 percent stood to gain through merger by more than 10 percent of the acquired firm's market value. Gains this large are about the same size as the average premium paid for acquired firms in successful tender offers. Auerbach and Reishus conclude that for a small fraction of the mergers, "the transfer of tax benefits could have played a significant role."

A second potential gain from merger is associated with the ability to step up the basis of depreciable assets without being subject to capital gains taxes. This provision of the tax code allows the acquiring firm to treat the merger as if it were simply buying the property of the acquired firm. Auerbach and Reishus estimate that for the firms in their sample such gains were generally small relative to the acquired firm's market value.

Finally, some observers have worried that many recent mergers have involved large increases in debt that may have weakened the merged firms. However, the authors find that the ratio of combined debt to market value for the parent and target firms in their sample increased only slightly over the period beginning two years before and ending two years after the merger. In other words, increases in leverage were small or absent among those firms, even when the acquired firm was large in relation to the acquirer. Since the sample used in this study ends in 1983, though, it is not possible to draw conclusions about the leverage involved in more recent mergers.

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In sum, Auerbach and Reishus conclude that other tax incentives to merge are quantitatively less important than the potential gain from transfer of unused tax losses and credits.

Of the 318 mergers in this study, two-thirds were between two manufacturing firms. The acquiring firms had an average value of debt plus equity of $2 billion, while the average acquired firm had a value of $204 million. The estimates were based on tax information provided by the companies through their public financial statements.

A Historical View of the Male-Female Earnings Gap

Between 1890 and 1950, women's earnings rose from 46 percent to 60 percent of men's earnings, but they were virtually stable for the next 30 years. Now a new study by NBER Research Associate **Claudia Goldin** concludes that ". . . the increase in the relative earnings of females over the past century was due far more to changes in relative earnings within occupations than it was to changes in the distribution of occupations between men and women."

Furthermore, Goldin finds that the different proportions of men and women in certain occupations do not explain the earnings gap: both in 1890 and in 1970, relative earnings would have been almost unchanged if women had been distributed in occupational groups in the same proportions as men. Goldin also finds that the stability of the earnings ratio between 1950 and 1980 was partly the result of the large influx of women into the labor market.

In **The Earnings Gap between Male and Female Workers: A Historical Perspective** (*NBER Working Paper No. 1888*), Goldin calculates female-to-male earnings in various occupations for the past 170 years. She estimates that ". . . the greatest narrowing within the industrial and agricultural sectors took place during the period of early industrialization," 1820 to 1850, when the ratio rose from about 0.33 to 0.48. Between 1890 and 1970, she finds, the ratio for manual labor was virtually stable between 0.5 and 0.6. Women's relative earnings in clerical positions showed a healthy gain between 1890 and 1930, rising from about 49 percent to 70 percent of men's, but were virtually unchanged from 1930 to 1970. Only among professional women was there a steady gain throughout the period, and the earnings ratio in this sector rose from 0.26 in 1890 to 0.39 in 1930 and to 0.71 in 1970.

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Goldin's calculations enable her to explain about 85 percent of the increase in women's relative earnings since 1890. She finds that greater work experience in the labor market was responsible for about one-quarter of the gain between 1890 and 1940. Increased returns to education, and to a lesser extent the increased amount of education, contributed about 40 percent of the rise in relative earnings from 1890 to 1970. The labor market's decreased emphasis on strength and other physical attributes accounted for another 28 percent of women's relative gains, although increased interruptions in women's work experience lowered the ratio somewhat.

On the other hand, the rise in labor force participation rates since 1940 has tended to stabilize the cumulated work experience of women, and thus their earnings relative to men's. Furthermore, women's increased rates of participation in the labor force during the 1950s and 1960s made the future highly unpredictable for those who were investing in education and training.

Goldin concludes her study with a caution against using earnings ratios to infer social change. "The presence of change during the period from 1815 to 1940 did not indicate social advancement," she writes, and "the absence of change in the period after 1940 does not indicate the opposite."

Dividends and Stock Prices

According to one theory, unpredictable movements in stock prices result solely from unpredictable changes in investors' forecasts of future dividends. However, in **Dividend Innovations and Stock Price Volatility** (*NBER Working Paper No. 1833*), **Kenneth West** estimates that, on average, only 5 to 20 percent of the unpredictable fluctuation in the annual value of stock indexes is caused by news about future dividends. The unpredictable movement in these stock price indexes is simply too large relative to the dividends on the stocks in the indexes for the theory to be correct. Rather, West concludes, the excessive volatility is caused in part by price movements that result simply because they are expected to result, and not because of fundamental factors such as news about dividends. For example, a stock price rises when investors rush in to buy the stock, but the investors buy simply on the expectation that the price will rise.

West considers two alternative explanations of the excess volatility, or unpredictable movement, of stock prices, but finds neither satisfactory. The first is that investors do a poor job of predicting future dividends. To test this explanation, West examines the relationship between his estimates of the unpredictable change in stock prices and movements in dividends and prices in previous years. The two are barely related, he finds. This suggests that the unpredictable component really cannot be anticipated from these prior movements. West concludes that poor forecasts by investors are unlikely to account for much of the excess price volatility.

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A second possible explanation for the excess volatility is changes in the expected (or required) real return on investment. If the expected real return is not constant, changes in it will make stock prices adjust, even if forecasts of future dividends stay constant. While such changes certainly occur, and are likely to account for some of the excessive volatility, West finds little evidence that they explain all the volatility. The long-term, annual, average, real expected return on the indexes, which West estimates at about 5 to 8 percent, does not seem to have shifted much over time. Moreover, the fluctuation in expected returns that would be required to account for the excess volatility is enormous, with expected real returns of, say, zero and 30 percent both being common.

Do Institutional Investors Follow the Herd?

Conventional wisdom on Wall Street has it that the herdlike behavior of institutional investors often sends individual stocks, or the market as a whole, shooting up or down. Such beliefs are based largely on this conjecture, with little concrete evidence about investor behavior. But a recent study by NBER Research Associate **Robert Shiller** and **John Pound** of the Securities and Exchange Commission suggests that a more sophisticated variation of the herd hypothesis may explain the behavior of some professional investors.

In **Survey Evidence on Diffusion of Interest among Institutional Investors** (*NBER Working Paper No. 1851*), Shiller and Pound use a so-called epidemic or contagion model to investigate investor behavior. This is like the models used by social psychologists to study rumors or fads. Psychologists have found that direct communication among peers is of singular importance in the transmission of attitudes.

In a questionnaire, the two researchers asked institutional investors such things as what motivated their interest in specific securities they had purchased, how often they discussed their securities with other institutional investors, and the returns they expected to earn on the stocks. Shiller and Pound used 20 stocks in their survey: a control group of 10 selected randomly and an "experimental" group of 10 stocks with high price-earnings ratios from among the 25 with the highest percentage of price increases in the 12 months ending in June 1985. The experimental group was chosen in response to studies showing that stocks whose prices rise dramatically tend to have abnormally low returns in subsequent years. Those studies imply that such stocks might fall into a fad or herd category. Each of the 71 institutional investors who returned usable responses was queried about just one stock.

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Most of the investors in the experimental stocks said their interest was motivated by such things as mentions by other professional investors or newsletters. Most of the investors in the control group said their interest resulted from a systematic search from a large group of stocks. Investors in the experimental group also said they had told more fellow investors about the stocks.

Another indication of the plausibility of contagion of interest is that investors in the experimental group of stocks expected much higher returns on their investments. On the date that the investors' holdings reached their maximum levels, investors in the experimental group expected returns averaging 54 percent over the succeeding year; investors in the control group expected returns averaging 33 percent.

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Layoffs, Recalls, and the Duration of Unemployment

Most workers who are laid off from their jobs are eventually recalled by their previous employer, according to NBER economist **Lawrence Katz.** In a sample of unemployed heads of households in 1980–81, over 70 percent were eventually rehired, Katz finds.

Also in **Layoffs, Recall, and the Duration of Unemployment** (*NBER Working Paper No. 1825*) Katz estimates that the average length of unemployment among those workers was 22 weeks. Moreover, even though the workers were less likely to be recalled as their time out of work increased, many of them were rehired or found new jobs around the time that their unemployment benefits expired (that is, after 25 weeks or so).

Katz also finds that, after a given length of time out of work, white women and nonwhites of both sexes were less likely to be recalled than were white men. On the other hand, workers in durable goods industries were more likely than workers in other industries to be recalled after a layoff rather than to find a new job. And, Katz reports, workers who lost their jobs because their plant closed found jobs with new employers more quickly than workers who had been laid off. He concludes that workers with good prospects of being rehired are less likely to look for new jobs than workers who do not have that possibility.

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Katz's study is based on a sample of 1055 household heads who were unemployed in 1980 or 1981. Half of the workers in this sample were nonwhite and 17 percent were women. The average age was 33, and the average unemployment rate in their counties of residence was 7.7 percent.

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