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Value Stocks Are a Good Investment

Investors in the stocks of major corporations often choose between two competing strategies. Growth investors tend to favor "glamour" shares that have demonstrated above-average increases in price or earnings in the recent past, in the expectation that those equities are likely to continue to do well. Value investors, on the other hand, buy stocks that have low prices relative to earnings, cash flow, or other measures, on the assumption that shares that have underperformed the market in the past will outperform it in the future. Although a number of studies have demonstrated that value investing offers a superior long-run return, there has been little agreement about the reasons why. Many scholars contend that value stocks outperform "glamour" stocks because they carry higher risk, while others assert that value investors profit by taking a contrarian position against naive investors who wrongly extrapolate past earnings growth far into the future.

In **Contrarian Investment, Extrapolation, and Risk** (*NBER Working Paper No. 4360*), **Josef Lakonishok**, **Andrei Shleifer**, and **Rob Vishny** evaluate both explanations for the success of value investing. After examining the performance of all stocks listed on the New York and American Stock Exchanges from 1968 to 1990, they reject the assertion that value stocks are riskier than more glamorous shares. Value investing's better performance, they report, comes largely at the expense of investors who focus myopically on glamour stocks, as the contrarian model suggests.

For each of the stocks they study, the authors examine several measures of performance, including sales, earnings, dividends, cash flow, and operating income. By any of these measures, they find, stocks that rank highly during any five-year period, on average, will deliver lower stock returns during the succeeding five years. For example, the 10 percent of stocks with the highest sales growth have an annual return 3.9 percent less than the average stock for the subsequent five years. The percentage of stocks with the lowest five-year sales growth have subsequent returns 0.7 percent above the annual average. The cumulative return difference between these value and glamour groups is 22.7 percent over five years.

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The largest differences in returns between value and glamour strategies are achieved when glamour stocks are defined to be those with both good past performance and a high current ratio of price to cash flow (or earnings). Nonetheless, whether investment decisions are based on the ratio of price to earnings, cash flow to price, or

ratio of price to earnings, cash flow to price, or book value to market value, a value strategy consistently outperforms growth strategies. "A variety of value strategies, based on both multiples and past growth rates, produce superior returns," the authors find. The size of the company appears to make no difference; the value approach works for both large- and small-capitalization stocks.

Why is investing in "growth" stocks or "glamour" companies an inferior strategy? Lakonishok, Shleifer, and Vishny find that investors tend to be overoptimistic about the future performance of stocks that have done well in the recent past. Although investors generally don't expect glamour stocks to keep growing at the same rate as in past years, they do expect them to outperform stocks that have done less well in the past. In the 22 years for which they have data, however, glamour stocks did not outpace value stocks significantly, the authors report. While price calculations indicate that investors expected glamour stocks' earnings to grow 6 percent faster than those of value stocks over the succeeding five-year period, they grew only 0.3 percent faster. "Forecasts tend to be tied to past growth rates, and at the same time tend to be far too optimistic for glamour stocks relative to value stocks," the authors write.

Value stocks outperform glamour stocks so regularly that it is incorrect to consider them riskier investments, the authors contend. And while value stocks are about 0.1 units more volatile than glamour stocks as measured by beta, that increased volatility is caused largely by larger jumps in the prices of value stocks, rather than by price declines. The higher return earned by value stock investors is therefore not a reward for accepting higher risk, but is rather a result of the systematic misjudgments of investors who pass them by in favor of stocks that have performed better in the past—but are unlikely to do so in the future. ML

Raising Beer Tax Would Save Lives

Motor vehicle accidents are the leading cause of death for persons under the age of 35, and alcohol is involved in over half of these fatal crashes. Over the years, all 50 states have raised their legal drinking ages to 21 and stiffened drunk driving laws and penalties. The federal government now requires that liquor bottles carry warning labels. But rarely have taxes on alcohol been raised to curb alcohol use.

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Finally, in January 1991, the federal government raised the excise tax on beer and wine for the first time, and the tax on distilled spirits for the second time, in 40 years. The beer tax rose from 16 to 32 cents per six-pack; the tax on wine jumped from 3 to 21 cents per 750 milliliters; and the tax on the same size bottle of 80 proof spirits rose from $1.98 to $2.14. Still, even after modest and infrequent increases in state taxes, the real (inflation-adjusted) prices of alcoholic beverages declined significantly from 1975 to 1990: spirits by 32 percent; wine by 28 percent; and beer by 20 percent.

Now a new study by the NBER confirms that when the cost of alcohol increases, both alcohol use and motor vehicle accident deaths go down, and the rates of college completion among young people go up. In **Effects of Alcohol Price Policy on Youth** (*NBER Working Paper No. 4385*), **Michael Grossman, Frank Chaloupka, Henry Saffer,** and **Adit Laixuthai** estimate the effect of raising the federal tax on beer to offset inflation since 1951 and to tax its alcohol content at the same rate as that of distilled spirits. They find that a tax increase of that magnitude would reduce the number of young people who drink frequently, or fairly frequently, more than raising the drinking age to a uniform 21 did.

Using estimates based on 1982 data, they also find that the inflation indexation alone would reduce the number of high school seniors who drank frequently in the past year (more than 30 times) by 45 percent. The number who drank frequently in the past month (more than nine times) would fall by 43 percent. Those with at least one heavy drinking episode (five or more drinks) in the past two weeks would decrease by 18 percent.

The comparable figures based on 1989 data are 20 percent, 11 percent, and 7 percent. The authors speculate that the declines in the earlier

period are so much larger because the legal age had not been raised to 21 in all states then. Therefore, it was easier for youths to purchase alcohol; that is, their "indirect cost" of buying beer was less. As a result, the price increase represented a larger addition to the true cost of beer in 1982 than in 1989.

The authors also analyze deaths in automobile accidents involving young people and drinking. They find that raising the beer tax to real 1951 levels would have saved 1660 lives among 18-to-20-year-olds between 1982 and 1988. It would have cut nighttime and alcohol-involved driver fatalities by 40 percent among people that age. Raising the drinking age from 18 to 21 in all states saved 664 lives. That's equivalent to doubling the beer tax, but only 40 percent of the number of lives that would have been saved if the beer tax had been indexed to inflation since 1951.

Matching 401(k) Contributions Increase Employee Saving

In a new NBER study, **Leslie Papke** finds that employees can be encouraged to increase their savings in 401(k) plans if employers match their contributions to some degree. For example, if an employer puts in 10 cents for each $1 saved by the employee, employee contributions will increase 39 percent from their level without matching. If the matching rate goes from 30 cents to 40 cents per employee dollar, employee contributions increase by about 7 percent, but total savings go up 16 percent.

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In **Participation in and Contributions to 401(k) Pension Plans: Evidence from Plan Data** (*NBER Working Paper No. 4199*), Papke reports that employee contributions rise as matching rates increase until the matching rate reaches about 40 cents on the dollar. Then contributions level off. At levels above dollar-per-dollar matching, employee contributions fall off. Still, total savings may increase because of the higher employer match. The average employer contribution runs about 50 cents on the employee dollar.

The 401(k) plans differ from traditional employer-sponsored pension and retirement plans in that employees' contributions are not taxed. The employer may or may not contribute to the plan, and employee participation is generally voluntary. Between May 1983 and May 1988, the availability of 401(k) plans more than tripled. The proportion of all civilian workers who were offered such arrangements (either exclusively or in addition to another employer pension plan) increased from 7 percent to 24 percent.

In a 1990 survey by Hewitt Associates, 93 percent of the 944 major U.S. employers sampled offered 401(k) plans. These companies, which made up 89 percent of the *Fortune* 500 and 54 percent of the *Fortune* 100, offered some matching of contributions 79 percent of the time. *Fortune* magazine estimates that $130 billion was invested in 401(k) plans in 1990.

Participation rates also rise at companies with higher employer matching rates, but the effect is small because participation is so high in all plans, Papke writes. In corporations that do not offer any matching, about 74 percent of eligible employees participate. Among plans that have matching, the participation rate is 85 percent.

About 70 percent of employees who participate in 401(k) plans contribute over $2000 on average in each year. However, the maximum amount that an employee can contribute on a tax-free basis in 1993 is $8944. So there is room for most employees to greatly increase their contributions, should they be so inclined and if the plan allows, Papke notes. DRF

Has Inflation Fighting Improved?

Since World War II, the Federal Reserve's periodic attempts to reduce the rate of inflation have been mostly ineffectual, according to a new NBER study by **Matthew Shapiro**.

Researchers in recent years have looked closely at the Fed's decisions to reduce the rate of inflation, measuring their contractionary impact on real output and employment. In **Federal Reserve Policy: Cause and Effect** (*NBER Working Paper No. 4342*), Shapiro instead asks a question that surprisingly has not been ad-

dressed: have the disinflationary episodes had substantial and permanent effects on the subsequent level of inflation itself?

"The Federal Reserve's periodic attempts to reduce the rate of inflation have been mostly ineffectual."

Shapiro challenges the accepted view among economists that the Fed has had great success in reducing the rate of inflation, albeit with a temporary loss of output. It is true that, *on average*, the postwar disinflations (from 1953 to 1992) have reduced the rate of subsequent inflation. But after examining each episode individually, Shapiro concludes that this *average* result is driven almost entirely by a single change in policy: the "Volcker disinflation" of 1979. that episode was an outstanding success: five years later, the rate of inflation was 8.5 percentage points lower than would have been forecast.

Otherwise, none of the Fed's decisions to disinflate had a permanent impact on the level of inflation, he finds. "The average disinflationary episode," Shapiro concludes, "has done little to reduce the rate of inflation despite clear evidence that the changes in policy do cause unemployment to rise substantially."

Shapiro also examines the economic reasons underlying the Fed's decision to disinflate. He finds that the Fed weighs the outlook for unemployment as well as for inflation. Even in periods of high inflation, for example, the Fed will be relatively unwilling to disinflate if the rate of unemployment is otherwise expected to be high. RN

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