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Stock Market Movements and Investor Demand

In **Index Funds and Stock Market Growth** (NBER Working Paper No. 7033) authors **William Goetzmann** and **Massimo Massa** use high-frequency (daily) data on index fund trading, coupled with separate analyses of inflows and outflows, to investigate the relationship between investor demand and the movement of the S&P 500. Their analysis suggests that investor demand influences stock returns, but that the causality goes in the opposite direction only when the market drops. The authors use index fund data in their research because the goal of these mutual funds is to track the S&P 500. As of mid-1998, approximately \$80–100 billion in mutual funds was indexed to the S&P 500.

Until recently, researchers were only able to utilize low-frequency

(quarterly) trading data in their attempts to explain investor motivation. Results from those studies showed that investors tend to chase performance and to have little risk aversion. Goetzmann and Massa find instead that investor behavior is primarily governed by risk aversion, rather than by investors chasing positive returns. Conversely,

some inherent differences between investors in index funds and other mutual funds, or whether the greater precision from using high-frequency data has teased out behavior not apparent when using the low-frequency data available up to now.

The authors also show that investors react to expert recommendations that appear in market

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investors tend to overreact to negative returns, immediately liquidating their positions in these funds.

Since these findings are the opposite of the results of previous research on the mutual fund industry, the authors raise the question of whether they can be attributed to

timing newsletters. When the experts are generally bullish, investors react with greater inflows into these index funds and smaller outflows. However, investors react even more strongly to uncertainty among these experts. As dispersion of opinion about the market wid-

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ens, investors react with reduced inflows and increased outflows.

Finally, Goetzmann and Massa find that investor demand shocks

are permanent, and do not revert over time. This may help to explain the recent higher performance of the S&P 500 index funds

relative to broader stock index funds.

—Lester Picker

Social Security Earnings Test Reduces Work by the Elderly

The Social Security earnings test generates some of the highest marginal tax rates in the economy today, according to an NBER Working Paper by **Leora Friedberg**. Previous research suggested that the earnings test has only a minor impact on behavior; Friedberg's work casts doubt on these earlier studies. In **The Labor Supply Effects of the Social Security Earnings Test** (NBER Working Paper No. 7200), she finds that the "earnings test is an important consideration in understanding the deci-

above \$9,120 for those in the 62–64 age bracket—a 50 percent tax on wages. A beneficiary aged 65–69 with earnings above \$14,500 faced a less restrictive 33 percent earnings test tax rate. (Once a person turns 70 the earnings test no longer applies.) Many beneficiaries appear unaware that their future benefits will be raised if they lose benefits today. However, the delay in benefit payouts results in little or no long-run cost saving to the government.

Friedberg reaches her conclusions by studying several changes to the earnings test rules initiated between 1978 and 1990. These

Using more formal methods, Friedberg predicts that eliminating the earnings test would bolster labor supply, raising average hours worked by 5.3 percent for those currently at or above the exempt amount, and at a small fiscal cost. In contrast, a slight decrease in labor supply among 65–69 year old men is predicted from the recently legislated increase in the exempt amount to \$30,000, which will occur by 2002. The positive effect on hours worked by low earners is offset by a negative effect for high earners, since the exempt amount will bind for a new group of people with higher earnings, who would reduce their labor supply considerably.

These findings reaffirm the deleterious effect of high taxes on older workers, who are more sensitive to tax and transfer rules. According to the author, the results suggest a potentially severe negative effect on labor supply if Social Security benefits are means tested, a proposal that has gained recent attention. Another area of concern is 62–64 year olds, who continue to face a more restrictive earnings test, with a 50 percent tax rate. These tighter rules will be extended to 65 and 66 year olds as the normal retirement age begins to rise from 65 to 67 in 2000. With the median retirement age falling from 65 in the 1970s to 62 today, the earnings test is growing more binding for the younger group.

—Marie A. Bussing-Burks

"...eliminating the earnings test would bolster labor supply... at a small fiscal cost."

sions of the elderly who continue to work."

The Social Security earnings test, introduced in 1939, reduces Social Security benefits after earnings pass a threshold amount. Once the beneficiary earns more than that, his or her benefits are reduced at a rate proportional to additional earnings, until benefits are exhausted. The original intent of the earnings test was to move older workers out of the labor force—beneficiaries lost an entire month's benefits when monthly earnings exceeded \$15.

Since the 1950s the earnings test gradually has been relaxed as the emphasis has shifted toward encouraging work and saving. Still, in 1998 the earnings test slashed \$1 in benefits for every \$2 in earnings

changes applied to beneficiaries of some age groups and not to others. Comparing the reactions of beneficiaries before and after the changes, using the unaffected groups to control for other changes in the labor supply, Friedberg isolates the response to the earnings test using a combination of methods.

Beneficiaries in the Current Population Survey satisfy the strongest prediction: many keep their earnings just below the exempt amount, and this bunching shifts with the changes in the earnings test rules. Furthermore, the clustering disappears when the earnings test is eliminated. The clustering is evidence that the earnings test leads some individuals to limit their labor supply.

Higher Alcohol Prices May Lower Spousal Abuse

Raising the price of alcohol, for example with a tax increase, will reduce the amount of severe violence that men impose on their female partners, according to **Sara Markowitz** writing in **The Price of Alcohol, Wife Abuse, and Husband Abuse** (NBER Working Paper No. 6916). If the weighted average price of pure alcohol contained in beer, wine, and liquor is higher, husbands are less likely to kick, bite, or slug their wives with a fist, and will less often use something to hit, or try to hit, these women. The number of times that men beat up their female partners, choke them, or threaten to use or actually use a gun or knife on them will also shrink.

In this study, Markowitz uses the 1985 National Family Violence Survey and follow-ups done in 1986 and 1987. Her sample consists of 1,541 married or cohabiting individuals. These individuals live in various states where the taxes on alcoholic beverages and their prices can vary considerably. There

were also price changes for alcohol during 1985–7.

Increases in the price of alcohol will decrease the probability of wife abuse, but the exact amount of this effect is difficult to measure. By one measure, a 10 percent increase in the price of an ounce of pure alcohol shrinks the probability of wife abuse by anywhere from 10 percent to 90 percent. In contrast, Markowitz finds only

working part-time are more likely to be violent, and those with more children at home are less violent than other women.

Similar characteristics influence violence among males towards their female partners. Stress, family history of violence, and being black are all associated with an increased probability of wife abuse. In addition, if the husband is not working (including retired, a student, home-

“If the price of beer, wine, and liquor is higher, husbands are less likely to beat up their female partners, choke them, or threaten to use or actually use a gun or knife.”

mixed evidence that a higher price of alcohol will cut down the violent abuse of men by their female partners. Holding the price of alcohol constant, in couples where there is a family history of violence and stress present, the husband is more likely to be abused. The same is true for black and Hispanic men and for those with higher incomes. Older women are less prone to abuse their male partners than younger women. Women

maker, or disabled), the chances of wife abuse increase.

Markowitz finds no relationship between the availability of alcohol and the probability of violence towards women. But if there are more dry counties in a state, women may be less prone to abuse their husbands. The assumption is that it takes more travel time to buy alcoholic beverages, thus decreasing their consumption and its effects.

—David R. Francis

Inequality and Growth

High levels of inequality reduce growth in relatively poor countries but encourage growth in richer countries, according to a recent paper by NBER Research Associate **Robert Barro**. In **Inequality, Growth and Investment** (NBER Working Paper No. 7038), Barro studies a broad panel of

countries between 1960 and 1995 and finds that growth tends to fall with greater inequality when income per capita is less than \$2,000 (in 1985 dollars) and to rise with inequality when income per capita is more than \$2,000.

He therefore concludes that income-equalizing policies might be justified on the grounds of promoting growth in poor countries.

For richer countries, however, active income redistribution appears to involve a trade-off between the benefits of greater inequality and a reduction in overall economic growth. Barro further shows that the overall relationship between income inequality and growth and investment is weak.

Barro also investigates the effect of economic development on in-

equality. The traditional relationship here is the “Kuznets curve,” named after the Nobel laureate and former NBER affiliate Simon Kuznets. The curve describes a U-shaped relationship between inequality

This type of relationship also emerges in Barro’s analysis. However, the curve likely reflects not only the influence of the level of income per capita, but also an effect of the adoption of new tech-

of inequality at first when just a few people initially share in the relatively high incomes of the advanced sector. Eventually, however, as more people take advantage of the new technology, inequality falls.

Overall, for poor countries, the escape from poverty is made more difficult because rising per capita income induces more inequality, which retards growth in this range. For rich countries, rising per capita income tends to reduce inequality, which lowers growth in this range.

—Andrew Balls

“High levels of inequality reduce growth in relatively poor countries but encourage growth in richer countries.”

and growth: inequality first increases and later decreases in the process of economic development. Kuznets explained this in terms of a shift from the rural/agricultural sector of the economy to an urban/industrial sector.

nologies. The poor sector tends to use old technologies, whereas the rich sector uses more advanced techniques. Technological innovations (including the factory system, electric power, computers, and the internet) tend to raise the level

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