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Why Reverse Annuity Mortgages Have Not Caught On

Reverse annuity mortgages allow elderly homeowners to borrow against the value of their houses and receive a lifetime stream of income: an annuity. Yet relatively few of the elderly have taken advantage of this concept. According to NBER Research Associates **Steven Venti** and **David Wise**, that may be in large part because most of the low-income elderly have very little housing wealth to tap. While a small proportion of the elderly could improve their financial status with a reverse annuity mortgage, "the specter of a large number of poor widows with vast amounts of 'locked-in' housing equity does not reflect the reality," they conclude.

In **Aging and the Income Value of Housing Wealth** (*NBER Working Paper No. 3547*), Venti and Wise find that the median income of older couples in 1984 was \$24,625 and the median annual reverse annuity mortgage would be \$1358. "A reverse annuity mortgage would mean only a 4 percent increase in the income of the typical low-income couple aged 55 to 60; it would mean approximately a 10 percent increase for those 65 to 70," they estimate. Only the very old—those who are 85 and over—would stand to gain quite a bit. Their income would increase 35 percent with a reverse annuity mortgage, because of their shorter life expectancy (making their annuity payments higher) and lower incomes.

"Single persons stand to gain the most, in relative terms, from reverse annuity mortgages primarily because they have much lower incomes than married couples," Venti and Wise find. Among the elderly, single men have only 60 percent, and single wom-

en 44 percent, of the income of their married peers. For widows, the median reverse annuity mortgage payment would equal 20 percent of median income, the authors estimate. The typical single woman over age 85 could double her income by taking out a reverse annuity mortgage.

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Taking housing equity as a lump-sum transfer rather than as an annuity would increase the liquid wealth of *most* elderly families substantially, Venti and Wise find. "The median lump-sum payment for married couples would be almost twice as large as median liquid wealth, whereas the annuity payment would be less than 6 percent of income." For low-income single men and women over age 85, the median lump-sum payment would be over 17 times as large as their median liquid wealth!

In general, Venti and Wise conclude, "[T]he relative addition to income from a reverse annuity mortgage increases with age and is largest for low-income single persons." Their data come from the 1984 Survey of Income and Program Participation.

Want to Spur Growth? Keep Machinery Cheap

Historians have long considered machinery—from steam engines to supercomputers—a major source of economic dynamism. Now a new NBER study by **J. Bradford De Long** and **Lawrence Summers** marshals evidence for the “traditional view that the accumulation of machinery is the primary determinant of national rates of productivity growth.”

In **Equipment Investment and Economic Growth** (*NBER Working Paper No. 3515*), DeLong and Summers report that from 1965 to 1980, countries that invested heavily in equipment grew faster. Each percentage point of gross domestic product (GDP) invested in equipment is associated with an increase in GDP growth of 0.3 percent per year. High rates of investment in machinery, 12.2 percent of GDP per year for example, explain nearly all of Japan's extraordinary 5.4 percent per year growth in real productivity. Low rates of investment in machinery and equipment (2.1 percent of GDP per year) largely account for Argentina's substandard performance of only 0.9 percent per year.

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Investment in machinery produced about four times as much bang for the buck as investment in structures, De Long and Summers show. The reason may be spillovers: equipment manufacturers conduct almost half of the private R and D in the United States, for example. Machinery's share of total investment varies widely from country to country, so lumping together the two types of investment may be why earlier studies found a far weaker link between investment and growth: “. . . [M]any studies were carried out at an inappropriate level of aggregation. If machinery and structures contribute differently to growth then analyses of the relationship between capital accumulation and growth that lump the two together are likely to be very misleading.”

De Long and Summers also find that low equipment prices went hand in hand with high rates of

growth, and vice versa. In Japan, the relative price of machinery is 40 percent lower than would be expected given the country's level of development; in Argentina, the price of machinery is 30 percent higher. That's evidence, they argue, that equipment investment was a cause, not an effect, of rapid growth. Otherwise, strong demand would have pushed up equipment prices in fast-growing economies. “In part, low equipment prices operate to promote growth by increasing the quantity of equipment investment,” they comment.

When governments try to promote growth by encouraging investments in equipment, they frequently confuse support for *industrialization* with support for currently influential *industrialists*. Policies that attempt to promote the health of the equipment sector by enriching current manufacturers of capital goods—import protection, for example—end up raising prices and reducing quantities of equipment, and so to reduce growth. On the other hand, policies to increase the quantity of equipment investment by encouraging purchases—such as tax breaks to make buying cheaper—appear to be more successful.

De Long and Summers use data for 61 countries from the United Nations International Comparisons Project and the Penn World Tables. SN

Mandated Health Insurance: Lessons from Workers' Compensation

Over 15 percent of Americans under age 65 (about 33 million people) lack health insurance, even though more than two-thirds of them are in families headed by full-time, year-round workers. Since nearly 80 percent of people *with* health insurance are covered by employer-sponsored plans, several states and the U.S. Congress recently have considered legislation to require all firms to provide health insurance to their employees.

In **The Incidence of Mandated Employer-Provided Insurance: Lessons from Workers' Compensation Insurance** (*NBER Working Paper No. 3557*), **Jonathan Gruber** and **Alan Krueger** analyze how such a requirement might affect employment and wages by

studying workers' compensation programs, which provide medical benefits and cash transfers to workers injured on the job. They note that mandated health insurance plans are similar to existing workers' compensation programs, since both require firms to provide a fringe benefit to employees by purchasing insurance. Further, more than 35 percent of the cost of workers' compensation is for medical benefits.

“Eighty-five percent of the costs of workers' compensation are passed on to employees through lower wages.”

The costs of workers' compensation vary widely across the U.S. states. For instance, 1987 workers' compensation costs were 3 percent of payroll in Indiana, 11 percent in Illinois, 21 percent in Minnesota, and 25 percent in Montana for the trucking industry. The authors note that this variation in cost is driven in large part by differences in benefit levels across the states. For example, in 1990 the benefit paid for permanent impairment of a hand was \$16,000 in Massachusetts, \$73,000 in New York, and \$115,000 in Illinois.

Gruber and Krueger use this large variation in workers' compensation costs to estimate the extent to which costs are shifted to workers in the form of lower wages. For five high-cost industries, they estimate that 85 percent of the costs of workers' compensation are passed on to employees through lower wages. This holds true in two different datasets, one from a survey of workers and another from a survey of establishments. Gruber and Krueger also find that employment falls slightly when workers' compensation costs rise; they estimate that the increases of the 1980s reduced employment by 0.11 percent, or about 100,000 jobs nationwide.

Gruber and Krueger then go on to apply their findings to the question of mandated employer-provided health insurance. They note that most workers already receive this fringe benefit, and thus will not be affected. However, firms may not be able to shift the cost of health insurance to the wages of the remaining workers if they earn approximately the minimum wage. Gruber and Krueger estimate that this effect is likely to be small, though, as less than one-fifth of uninsured workers earn at or near the minimum.

A Free Lunch on Wall Street?

A common Wall Street strategy for boosting returns on money market investments can be surpris-

ingly effective, according to a new NBER study by **Robin Grieves** and **Alan Marcus**. “Riding the yield curve,” as the strategy is known, involves buying 60-day Treasury bills, for example, and routinely selling them after 30 days, instead of simply buying and rolling over 30-day bills. The practice can produce profits well above transaction costs, with little increase in risk, Grieves and Marcus conclude.

The yield curve characterizes the relationship between interest rates and maturities. Normally, rates rise as the term increases, and the yield curve slopes upward.

In **Riding the Yield Curve: Reprise** (*NBER Working Paper No. 3511*), the authors use a new dataset of estimated Treasury security prices to test whether the strategy of riding the yield curve when six-month rates exceed three-month rates would have paid off from 1949 through 1988. They conclude that riding seems surprisingly effective, especially over the past 20 years. The most profitable ride was with six-month Treasury bills, compared to rolling over three-month bills, they find. This strategy provided risk-adjusted abnormal returns of about 10 basis points per year, a large amount in the money market.

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The effectiveness of riding the yield curve is surprising, Grieves and Marcus note, since in principle no investing rule that is costless to compute should enhance performance. If expectations indeed are rational, the difference in yields between Treasury bills of different maturities on average should merely reflect expectations of future rates. That would make riding no more profitable than holding the shorter-term bills. If the interest rate of the longer-maturity bill contains a risk-related term premium, then riding should increase both risk and return, again canceling any profit opportunities.

Grieves and Marcus speculate that investors value maturities of just less than three months more highly than those of just more—possibly because the shorter maturities are viewed as more liquid—and that profitable trading strategies straddling the three-month maturity have gone unexploited. Should this be true, the authors conclude, a larger implication of the study would be that “modelling prices as solely a function of risk and return attributes is too narrow a view of the market.”

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Recent NBER Book

International Policy Coordination

International Policy Coordination and Exchange Rate Fluctuations, edited by William H. Branson, Jacob A. Frenkel, and Morris Goldstein, is available from the University of Chicago Press for \$45.00. In this NBER conference volume, the scope, methods, and effects of coordination are discussed by a group of prominent international economists.

Branson is director of the NBER's Program in International Studies and a professor of economics and international affairs at Princeton University.

Frenkel is economic counselor and director of research at the International Monetary Fund (IMF). Goldstein is deputy director of the research department at the IMF.

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