What makes retirees decide to keep or sell their homes? Why do most retirees claim Social Security benefits early? What do retirees think about the risks of their own cognitive decline? These were a few of the questions discussed at a recent Richmond Fed conference.

Economists met virtually in a Richmond Fed-sponsored conference in May to discuss economic issues of older households. Eight researchers presented on topics that included seniors' decisions about housing, Social Security claiming, savings and labor supply. This Economic Brief summarizes those presentations.

Homeownership Decisions in Older Households

A common dilemma for parents in late old age is whether to remain in their home and receive care from their children (perhaps in combination with part-time professional nursing) or to enter a nursing home. Matthias Kredler of the Universidad Carlos III de Madrid presented research with Daniel Barczyk of McGill University and Sean Fahle of SUNY Buffalo on the economic implications of this dilemma.

In their paper, "Save, Spend or Give? A Model of Housing, Family Insurance and Savings in Old Age (PDF)," they modeled the decision-making of parents and children, incorporating housing, care, savings and intergenerational transfers. A key assumption in their model was that parents and children are unable to make long-term commitments on their own regarding consumption, bequests or long-term care.

The researchers found that remaining in their homes under those circumstances allows parents to commit to conserving their assets for bequests, rather than spending them down. This is because of the relative illiquidity of housing and the fact that homes provide housing services that would otherwise have to be purchased.
Homeownership by parents in old age thus serves a strategic purpose distinct from its housing and investment functions: As a guarantor of bequests, it facilitates informal long-term care arrangements by motivating children to participate in the parents' home care, aid in funding it or both. In this way, it mitigates the parents' long-term care risk.

This finding helps make sense of the fact that most parent-child transfers are delayed until death rather than made during the parents' lifetimes. In addition, it helps account for the difference in savings behavior between homeowners and renters, with homeowners dissaving (that is, liquidating) more slowly than renters. Finally, it provides a partial explanation of seniors' low demand for reverse mortgages, which allow homeowners to borrow against their home equity while remaining in the residence.

**How Marital Status, Income and Policy Influence Decisions about Liquidating Housing**

The standard life-cycle model of saving predicts that households will seek to smooth their standard of living over the long run by building up savings during their prime working years and then spending down those savings during their income-lean retirement years.

In reality, however, U.S. retirees tend to spend down their savings much more slowly than the life-cycle model predicts — and actually build up their net worth during retirement for a while. In addition, retired couples dissave their housing wealth much more slowly than singles with the same level of income. Ami Ko of Georgetown University presented research with Minsu Chang, also of Georgetown, in which they considered how marital status and government policy affect decisions to sell housing and how these effects vary according to a household's income level.

Marital status affects homeownership in retirement in several ways:

- Living in one's home enhances the ability of one spouse to provide long-term care for the other. Lack of spousal care as an option also means singles are more likely to enter a nursing home than use informal care.
- Marital status affects how Medicaid treats housing wealth: State Medicaid programs recover the costs of long-term care from single patients' homes upon permanent nursing home entry or death, but the home is effectively exempt for couples.
- Married couples may have stronger bequest motives than singles with respect to their houses because the houses may be more valuable to surviving spouses than to children.

In their paper, "Marital Transitions, Housing and Long-Term Care in Old Age (PDF)" Ko and Chang evaluated which of these mechanisms explain the gap in homeownership between couples and singles. Their approach was to create a model of retiree saving where homeowners have the option to liquidate their houses. They then modeled shutting down each of the three mechanisms one at a time and compared the outcomes.
They found that the relative importance of the mechanisms varied at different income levels:

- At low incomes, retired couples liquidated their houses more slowly than singles due to the second mechanism: They sought to gain the benefit of Medicaid's favorable treatment of couples' houses, an option not available to singles.
- For middle-income households, the most important mechanism was the first one: the lack of spousal care as an option for singles.
- At high incomes, the third mechanism — the stronger motive among couples to leave a bequest to a surviving spouse than for singles to leave a bequest to children — appears to be most important.

**Does the Marriage Penalty Keep Women Out of the Labor Force?**

For married couples in the U.S., the secondary earner faces disincentives to work compared to a similarly situated single worker. These disincentives include personal income tax, Social Security spousal benefits and Social Security survivor benefits. Commonly in a heterosexual marriage, though not always, the secondary earner is female.

Mariacristina De Nardi of the University of Minnesota presented research with Margherita Borella of the Università di Torino and Fang Yang of Louisiana State University estimating the extent to which these policies are curtailing female labor supply.

*Personal Income Tax*

Income taxes create a well-known marriage penalty because marginal tax rates increase with income. Although married taxpayers filing jointly face more favorable tax rates than singles, a married secondary earner nonetheless faces a higher marginal tax rate than a single earner with the same earnings.

*Social Security Benefits*

Social Security discourages labor supply by secondary earners because they can obtain Social Security spousal benefits (during the primary earner's lifetime) and survivor benefits (after the primary earner dies) on the basis of the primary earner's income:

- The Social Security spousal benefit is the higher of the individual's entitlement based on his or her own lifetime earnings or half of the spouse's entitlement.
- The Social Security survivor benefit is the higher of the individual's entitlement based on lifetime earnings or the entirety of the deceased spouse's entitlement.

Secondary earners are thus rewarded to a lesser extent or not at all for their own earnings.

*Modeling the Effects of the Marriage Penalty*
To assess the effects of these policies on female labor supply, the researchers developed a model of labor supply and savings for couples and singles, incorporating risks such as divorce, wage shocks and lifespan risks. They fit the model to data for two cohorts of workers: those born in 1941-1945 and those born in 1951-1955. They compared the results of the benchmark model with counterfactuals for each cohort in which they eliminated the marriage-related provisions of the federal policies.

Their paper "Are Marriage-Related Taxes and Social Security Benefits Holding Back Female Labor Supply?" found that married women work much less than married men as a result of the marriage-related policies as well as other causes. Those other causes include lower wages (due in part to de-emphasizing their careers to raise children) and less available time on account of home production. The elimination of the marriage-related provisions also leads to higher savings by couples, presumably to make up for the drop in Social Security benefits.

**Why Do Most Workers Claim Social Security Benefits Before Full Retirement Age?**

The full retirement age is currently 67 for those born in 1960 or later. Social Security allows individuals to begin receiving their retirement benefits as early as age 62; the tradeoff is that those who claim before the full retirement age receive permanently lower monthly benefits, and the earlier they claim, the greater the penalty. Conversely, those who wait beyond full retirement age are rewarded with permanently higher benefits.

Despite these incentives to delay receiving benefits, most people claim early. For example, among men born between 1936 and 1938, two-thirds claimed before full retirement age. A plurality of 46 percent claimed at the first possible age, accepting a permanent reduction in their benefits of 20 percent. Only 27 percent claimed at this cohort’s full retirement age of 65, and just 6 percent waited beyond then.

Svetlana Pashchenko of the University of Georgia presented research with Ponpoje Porapakkarm of the National Graduate Institute for Policy Studies investigating this pattern of early claiming. Their paper "Accounting for Social Security Claiming Behavior (PDF)" employs a model of decisions over the life cycle concerning working, savings, retirement and Social Security claiming. The model treats Social Security benefits as an annuity with an implicit price determined by the schedule of penalties and rewards for early and late claiming. Delaying benefits is equivalent to purchasing additional annuity income for the future.

The researchers found that the early claiming can be explained by a combination of three factors:

- The rate at which beneficiaries discount the future exceeds the rate embedded in the Social Security claiming adjustments. In other words, they perceive the price of
increasing their annuity holdings as too expensive.
- Beneficiaries have strong bequest motives and thus prefer current benefits — which can be saved for bequests — over the promise of future benefits.
- Beneficiaries decide within a context of having significant already-annuitized wealth: the Social Security benefits to which they are entitled when claiming at age 62.

The researchers also found that replacing the current rewards for late claiming (higher monthly benefits) with lump-sum payments of equivalent present value would significantly increase the number of late claimants.

**Saving During Retirement**

Past research has found that households in the top fifth of the wealth distribution report rising net worth until about age 85. (Those in the middle three quintiles report that their net worth stays fairly stable during that period.) Who is saving during retirement, and why? Eric French of the University of Cambridge presented research with Mariacristina De Nardi of the University of Minnesota, John Bailey Jones of the Richmond Fed and Rory McGee of the University of Western Ontario addressing these questions.

A starting point for their analysis was their finding that retired singles and couples have different patterns of saving: It is primarily couples who save in retirement. While the assets of retired singles remain roughly constant or fall during retirement, the assets of retired couples increase on average as long as both are alive. Only when the first spouse dies does net worth tend to drop. This drop in wealth can be significant, however, with transfers to nonspousal heirs accounting for much of the fall.

In their paper "Why Do Couples and Singles Save During Retirement?," the researchers modeled the savings decisions of single and married retirees, accounting for variations in life expectancy and medical expenses, including the large medical expenses that commonly occur in the period leading up to death. They then used the model to assess the degree to which retirees' savings are driven by medical expenses, bequest motives and the interaction of the two. For couples, they considered bequest motives held both by intact couples and by the partner who survives the death of the first spouse.

The researchers' estimates indicate that the saving of older couples in the top two-thirds of the permanent income distribution is heavily influenced by bequest motives. For example, at age 84, couples in the top third in income would hold an average of 26 percent less wealth if they did not have bequest motives. Couples in the middle third would hold about 14 percent less.

Medical expenses had a lesser effect for those couples. For example, at age 84, the wealth held by couples in the top third of the permanent income distribution would fall by less than 10 percent if they did not face any medical expenses.
The greatest effects came from the combination of bequest motives and medical expenses. At age 84, median wealth in the top third — in the absence of both bequest motives and anticipated medical expenses — would fall by more than 65 percent. The joint effect of bequests and medical expenses greatly exceeded the sum of the individual effects.

Overall, the results suggested that bequest motives (regarding both the surviving spouse and other heirs) are more important to the savings of couples than of singles and are more important to the savings of high-permanent-income households than of low-permanent-income households.

**Why Americans Spend Down Their Assets in Retirement More Slowly than the Swedish**

As noted previously, the savings behavior of Americans in retirement tends to be different from what the standard life-cycle model predicts. They are slower to liquidate their assets than one would expect if they were trying to smooth their consumption over their lifetimes. According to the U.S. Health and Retirement Study, the median U.S. household in 2006 in terms of net worth at age 90 still had about $75,000 in assets.

This behavior has several possible explanations:

- The individual's uncertainty about how long he or she will live
- A desire to leave a bequest
- An aversion to the long-term care available under Medicaid or Medicare

In contrast, retirees in Sweden liquidate their assets more quickly. Makoto Nakajima of the Minneapolis Fed presented research with Irina Telyukova of Intensity Corp. seeking to account for this difference in behavior and to identify the relative strengths of different saving motives.

In their paper "Medical Expenses and Savings in Retirement: The Case of U.S. and Sweden," Nakajima and Telyukova point out that out-of-pocket medical and long-term care expenses are significantly higher and more uncertain in the U.S. than in Sweden. Heightened concern about medical expenses could lead U.S. retirees to liquidate their assets more slowly as a precautionary measure.

The researchers estimated a life-cycle model of consumption and saving using U.S. data, capturing medical expense risks, health insurance costs, changes in health status, the distribution of pension income and earnings risks. They then introduced the processes for medical spending, health insurance, health status and pensions estimated for Sweden into the model as calibrated to the U.S., while keeping everything else unchanged.
These changes were more than sufficient to generate the differences in asset holdings observed in the two countries. Nakajima and Telyukova found that the lower level of medical expense risk in Sweden would lead to faster asset decumulation upon retirement. They also found that the greater generosity of Sweden's public health insurance (and the higher taxes needed to pay for it) would lower the savings households carry into retirement.

Cognitive Loss in Retirement

Americans are largely responsible for their own financial well-being in late life and are faced with many significant financial decisions during this time. In addition to managing their retirement savings — a task that was once much more the province of pension fund managers than it is today, with the decline of defined-benefit pensions in the private sector — retirees must make decisions about estate planning, medical care and long-term care. They must also safeguard against financial fraud. Concerns about cognitive decline lead some to transfer control to an agent, such as an adult child. Andrew Caplin of New York University presented research with John Ameriks of the Vanguard Group, Minjoon Lee of Carleton University, Matthew Shapiro of the University of Michigan, and Christopher Tonetti of the Stanford Graduate School of Business on retirees' perceptions of agents and their quality.

The researchers conducted two surveys of retirees using a sample from the Vanguard Research Initiative that approximately represented the top half of the wealth distribution among older Americans. In Caplin's presentation — titled "Cognitive Decline, Awareness, Agency and Financial Well-Being" — he reported that most respondents (69.8 percent) anticipated that if they underwent significant cognitive decline, their decisions would most likely be made by one of their children if there was no spouse or partner who could intercede. Other common responses were a sibling (9.7 percent) or a trustee or institution (8.7 percent).

With regard to the quality of their most likely agent, respondents overwhelmingly (80 percent or more) believed their agent would be "very good" or "excellent" along the dimensions of quality that the study considered:

- Understanding your needs and desires
- Understanding your financial situation
- Understanding financial matters in general
- Pursuing your interest

Respondents did, however, perceive a substantial risk that they would transfer control to their agent at a suboptimal time. Some 36 percent were more worried about transferring control too early, and 60.6 percent were more worried about transferring control too late —
in other words, that they would not notice their own decline or would notice it undesirably late.

The researchers also asked survey participants to assess hypothetical scenarios involving cognitive decline. The participants' responses suggested that innovations to improve the timing of transfers would be quite valuable.

**Workplace Disability, Accommodation and Labor Supply**

Injuries and other health shocks that impair an individual's ability to work present significant consequences in terms of medical costs, lost income and longer-run labor market outcomes. Large public programs — including the Social Security Disability Insurance program and state workers' compensation programs — are in place to reduce some of these risks. Alternatively, employers may choose to retain and accommodate workers with health limitations. Naoki Aizawa of the University of Wisconsin at Madison presented research with Corina Mommaerts, also of the University of Wisconsin at Madison, and Stephanie Rennane of RAND Corp. on the effect of firm accommodation decisions on labor market outcomes for individuals with workplace disabilities and the effects of social insurance programs on those decisions.

In their paper "Firm Investment, Labor Supply, and the Design of Social Insurance: Evidence from Accommodations for Workplace Disability," the researchers used detailed administrative data from a unique workers' compensation program in Oregon that subsidized firms for workplace accommodation. Exploiting a policy change to this wage subsidy, they found that the subsidy increases accommodation. Simultaneously, it also increases employment and earnings in the eight quarters following an injury.

The researchers then developed and estimated a dynamic bargaining model between workers and firms. Within the model, labor market frictions, worker turnover and imperfect experience rating in the setting of workers' compensation premiums can lead to under-accommodation and inefficient labor market outcomes after a workplace disability. They used the quasi-experimental estimates from the policy change to help identify key parameters of the model, which they then used to find welfare-enhancing improvements to the wage subsidy policy.

The researchers concluded that worker turnover, the experience rating system for the social insurance program and the disutility of work all play important roles in accounting for firms' accommodation decisions:

- Worker turnover is important because it prevents firms from capturing future surplus (from employing accommodated workers) after incurring the costs of accommodation.
- Weak experience rating in the social insurance program is important because firms that are charged lower than statistically fair rates do not bear the full consequences of
their accommodation decisions.

- The disutility of work is important because it affects the willingness of workers to accept accommodations and return to work. The authors found that low-skilled workers had a higher disutility of work.

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