

Mitchell, Olivia S.

**Article**

## Developments in pensions

NBER Reporter Online

**Provided in Cooperation with:**

National Bureau of Economic Research (NBER), Cambridge, Mass.

*Suggested Citation:* Mitchell, Olivia S. (1998) : Developments in pensions, NBER Reporter Online, National Bureau of Economic Research (NBER), Cambridge, MA, Iss. Spring 1998, pp. 12-14

This Version is available at:

<https://hdl.handle.net/10419/66996>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*

<sup>10</sup> C.M. Hoxby, "Do Private Schools Provide Competition for Public Schools?" NBER Working Paper No. 4978, December 1994. See also C.M. Hoxby, "The Effects of Private School Vouchers on Schools and Students," in *Holding Schools Accountable*, H. Ladd, ed., Washington, DC: The Brookings Institution Press, 1996.

<sup>11</sup> C.M. Hoxby, "Do Private Schools Provide Competition for Public Schools?"

<sup>12</sup> D. Epple and R. Romano, "Public School Choice and Finance Policies, Neighborhood Formation, and the Distribution of Educational Benefits," mimeo, Carnegie-Mellon University and University of Florida, 1995. See also T.J. Nechyba, "Public School Finance in a General Equilibrium Tiebout World: Equalization Programs, Peer Effects, and Vouchers," NBER Working Paper No. 5642, June 1996.

<sup>13</sup> C.M. Hoxby, "Tiebout and a Theory of the Local Public Goods Producer," NBER Working Paper No. 5265, September 1995 (revised 1997).

<sup>14</sup> See the reference to R. Benabou, *American Economic Review*, 1996, in n. 5. See also M. Boldrin, "Public Education and Capital Accumulation," *Economic Theory Workshop Discussion Paper No. 1017*, 1993.

<sup>15</sup> C.M. Hoxby, "How Much Does School Spending Depend on Family Income? The Historical Origins of the Current School Finance Dilemma," *American Economic Review, Papers and Proceedings*, 88(2), May 1998.

<sup>16</sup> See C.M. Hoxby, *Journal of Economic Perspectives*, 1996, and, "Not All School Finance Equalizations Are Created Equal," 1995.

<sup>17</sup> C.M. Hoxby, "Does Competition Among Public Schools Benefit Students and Taxpayers?"

<sup>18</sup> C.M. Hoxby, "How Teachers' Unions Affect Education Production," *Quarterly Journal of Economics*, (August 1996), 111(3), pp. 671-718.

<sup>19</sup> C.M. Hoxby, "Where Should Federal Education Initiatives Be Directed? K-12 Education versus Higher Education," in *Financing College Tuition: Government Priorities and Social Priorities*, M. Koster, ed., Washington, DC: American Enterprise Institute Press, 1998.

<sup>20</sup> D. Breneman, "The Extent and Cost of Remediation in Higher Education," in *Brookings Papers in Education Policy*, D. Ravitch ed., Washington, DC: The Brookings Institution Press, 1997.

## Developments in Pensions

Olivia S. Mitchell\*

The share of the world's population over age 60 will triple between 1990 and 2030, exceeding 30 percent among developed countries by then. This massive demographic shift will force insolvency on many of the large unfunded public social security programs that evolved after World War II.

Are funded pension plans necessary for retirement system reform? This is one subject I explore in my research on pensions in developed and developing countries. In each case, I ask how pensions function, what effects they have on work and saving, and how pensions help public and private stakeholders to share the risks of old age. Ultimately, I am interested in how to design pension plans to increase their efficiency and

insulate them from a range of political and financial challenges.

### Retirement Saving Adequacy in the United States

The U.S. situation brings some of these problems into focus very clearly. Our Old Age, Survivors, and Disability Insurance (OASDI) program under Social Security faces an unfunded obligation of approximately \$9 trillion. Fixing this shortfall would require either benefit cuts of about 25 percent or tax increases of approximately the same magnitude.<sup>1</sup> Such a massive change in the system portends ill for prospective retirees in the baby boom generation as well as current retirees. In a recent study using the Health and Retirement Survey (HRS), James Moore and I found that most Americans have saved too little to preserve their current consumption standards in retirement. This nationally representative and longitudinal study of respondents aged 51 to 61 in 1992 and their spouses describes multiple sources of household wealth and determinants

of old-age poverty for a group who are on the verge of retirement.

The HRS inquires about respondents' net housing and financial wealth describes employer-provided plans enabling us to calculate pension wealth and links data from the survey expected Social Security benefits derived from earnings records gathered from Social Security files.<sup>2</sup> We use the Social Security Administration's "intermediate" economic and demographic assumptions, and conclude that median total household wealth (that is, net financial wealth plus net housing equity, pension wealth, and Social Security wealth) for this group is approximately \$350,000. Pension benefits, net home equity, and net financial wealth each contribute about one fifth of the total, and anticipated Social Security benefits make up the remaining two fifths.

Is this enough money to retire on? Obviously the answer depends on one's benchmark; in our work, we ask how much additional saving would be required in order to retire at a specified age and to smooth consumption in retirement. Our analysis

\*Mitchell is a Research Associate in the NBER's Programs on Labor Studies and Aging. She is also the International Foundation of Employee Benefit Plans Professor of Insurance and Risk Management at the Wharton School, University of Pennsylvania, and is Executive Director of Wharton's Pension Research Council.

has three steps: 1) projecting HRS respondents' current assets to retirement; 2) determining what consumption level would be feasible with those assets; and 3) iteratively solving for the additional saving needed to achieve consumption smoothing after retirement. We find that the median older HRS household faces a saving shortfall of 16 percent per year, if its members continue to opt for early retirement.<sup>3</sup> This represents saving needed in addition to "automatic" asset appreciation, pension growth, and increases in social security benefits. We believe this shortfall is a matter of some concern, and would be twice as high for those with very low assets.

The distributional pattern of results is also of some interest, because we find that the correlation between older workers' income and wealth levels is only 0.4. Thus, many households at the top of the income distribution are falling far below their savings targets and will be required to curtail consumption in retirement. This shortfall is worrisome, although we also show that delaying retirement to age 65 can cut the required additional saving in half. This result might partially explain why labor force attachment rates of older American men have risen slightly in recent years.

## Private and Public Pension Plan Structures

These saving shortfalls are probably underestimates, inasmuch as we assume that Social Security and pension benefits will be paid at their current promised levels. But political and fiscal pressures threaten retirement income promises from a number of different directions. For example, one issue is how pension systems are designed and governed, as we show in a series of papers on public pension plans.<sup>4</sup> These systems

pay retirement benefits to state and local government employees including teachers, uniformed officers, and other civil servants. In many ways, these pension systems represent success stories, because they have more than 16 million participants and more than \$1 trillion in assets. But public pension plans often are criticized because they do not always follow funding rules, and the retirement benefits they pay exceed those in the corporate sector. For instance, low seniority public sector retirees receive benefits about 50 percent higher than their private sector counterparts, and high seniority workers have a replacement rate that is one half to two thirds greater. On the other hand, it must be recalled that many public sector employees (about one quarter) are not covered by Social Security.

We also show that public pension plans are managed differently from private plans, mainly because corporate pensions must meet fiduciary standards codified in the Employee Retirement Income Security Act (ERISA), while public plans are subject to regulations that are less stringent and less uniform. As a result, public plan governance is fraught with political pressures. In practice, funding and actuarial assumptions may be selected in accordance with fiscal stress, and investments are frequently subject to nonfinancial criteria.<sup>5</sup> In general, political appointees and *ex officio* board members dominate decision making, with a sizable minority of directors representing plan participants. Perhaps because of this different governance structure, public pension plans are more likely to direct investments toward in-state projects, a practice associated with diminished rates of investment return. Despite these concerns, we conclude that public plans are relatively well funded, and their asset allocation patterns have changed dramatically over time: currently, more

than 40 percent of public plan assets are held in stock, up from 3 percent in 1960.

Related to pension plan design and performance is the issue of administrative expenses, an important topic that has been studied little. My research shows that public pension plans operate at only 65 percent of potential efficiency, mainly because many small plans fail to take advantage of scale economies. Also, defined benefit plans appear to be more expensive to administer in the United States than defined contribution plans. For all of these reasons, costs associated with alternative pension plan designs should garner more attention, given current interest in building up retirement assets and the worldwide shift from defined benefit to defined contribution pensions.<sup>6</sup>

My work also addresses two other issues in the national and international debate over pension reform, both of which concern proposals to replace Social Security with a national (and usually mandatory) defined contribution pension system. First there is the "money's worth" concept, which we argue should not be used in comparing retirement system net benefit flows under an underfunded defined benefit system with those of a fully funded defined contribution pension system.<sup>7</sup> Specifically, money's worth estimates do not incorporate all the relevant costs of "transition" to an unfunded system; frequently they do not adjust appropriately for either aggregate or idiosyncratic risk (both of which would rise under privatization); and they do not account for changes in household behavior as a result of a large reform of the national system.

Second, there is the issue of the payout or decumulation phase of the pension system. In one project, we explore the market for retirement annuities: insurance products that offer protection against the risk of outliving one's savings.<sup>8</sup> These annu-

ities are of utmost importance when retirees are responsible for deciding how much of their assets to spend versus draw down over the retirement period. Inasmuch as U.S. pension growth is mainly in the defined contribution [and especially the 401(k)] field, more and more retirees can access their total pension amount rather than are required to annuitize their benefits. Of course, some retirees will still purchase annuities, particularly those who anticipate living longer than average. This produces adverse selection, which the data suggest is powerful. On the other hand, we also find that over time the net annuity payout (that is, the expected present discounted value of benefits minus the initial cost of the annuity) has risen, suggesting that adverse selection might be less of a concern than in the past. This result bears on the policy debate regarding the role of individual choice and self-reliance in retirement planning.

## A Shift in Focus?

Several developments will influence future retirement accumulation and decumulation patterns. First, the worldwide interest in defined contribution pensions will continue, because this type of plan facilitates job change and pension portability and allows workers to choose how much to save and how to allocate their retirement portfolios. Second, expenses associated with different plan designs will influence the level of and returns on pension saving. In particular, defined contribution pen-

sions appear relatively less costly to administer than defined benefit pensions, and this makes them more interesting to both corporate and public employers seeking to stretch retirement dollars. Finally, the relative importance of Social Security income in retiree incomes will change as taxes and benefits are altered to bring the insolvent system into balance.

These changes will have substantial spillover effects on workers' saving and retirement asset decumulation patterns. Clearly, workers and their families will have to learn to save more if they are to meet retirement accumulation targets. Along the way they will have to acquire greater financial sophistication in order to better understand the risks they face in their pension portfolios. And although many benefits will flow from increased personal responsibility imposed by these changes, experts acknowledge that defined contribution pensions lack some of the group risk pooling mechanisms that the conventional defined benefit plan offers. For instance, retirees in a defined contribution environment are more exposed to longevity risk when they lack access to (or fail to purchase) annuities. Defined benefit plans traditionally are also more redistributive than defined contribution pensions are.

<sup>1</sup> J. Geanakoplos, O.S. Mitchell, and S. Zeldes, "Social Security Money's Worth" in *Prospects for Social Security Reform*, O.S. Mitchell, R. Myers, and H. Young, eds. Pension Research Council and University of Pennsylvania Press, forthcoming.

<sup>2</sup> For a discussion of retirement assets in the HRS dataset, see O.S. Mitchell, J. Olson, and T.L. Steinmeier, "Construction of the

*Earnings and Benefits File (EBF) for the Health and Retirement Survey*," NBER Working Paper No. 5707, August 1996; see also A.L. Gustman, O.S. Mitchell, A.A. Samwick, and T.L. Steinmeier, "Pension and Social Security Wealth in the Health and Retirement Study," NBER Working Paper No. 5912, February 1997.

<sup>3</sup> See O.S. Mitchell, and J.F. Moore. "Retirement Wealth Accumulation and Decumulation: New Developments and Outstanding Opportunities," NBER Working Paper No. 6178, September 1997; and "Projected Retirement Wealth and Saving Adequacy in the Health and Retirement Study," NBER Working Paper No. 6240, October 1997.

<sup>4</sup> O.S. Mitchell and R. Carr, "State and Local Pension Plans," NBER Working Paper No. 5271, September 1995; O.S. Mitchell, and P-L. Hsin, "Managing Public Sector Pensions" in *Public Policy Toward Pensions*, J.B. Shoven and S. Schieber, eds. Twentieth Century Fund, 1997; P-L. Hsin and O.S. Mitchell, "Are Public Pension Plans Administratively Efficient?" in *Positioning Pensions for the 21st Century*, M. Gordon, O.S. Mitchell, and M. Twinney, eds. Philadelphia, PA: Pension Research Council and University of Pennsylvania Press, 1997; and O.S. Mitchell and P-L. Hsin, "Public Sector Pension Governance and Performance," in *The Economics of Pensions: Principles, Policies, and International Experience*, S. Valdes, ed. Cambridge, England: Cambridge University Press, 1997.

<sup>5</sup> O.S. Mitchell and P-L. Hsin, "Public Sector Pension Governance and Performance," *op. cit.*

<sup>6</sup> O.S. Mitchell, "Administrative Costs in Public and Retirement Systems," NBER Working Paper No. 5734, August 1996.

<sup>7</sup> O.S. Mitchell and S.P. Zeldes, "A Framework for Analyzing Social Security Privatization," NBER Working Paper No. 5512, March 1996.

<sup>8</sup> O.S. Mitchell, J.M. Poterba, and M.J. Warshawsky, "New Evidence on the Money's Worth of Individual Annuities," NBER Working Paper No. 6002, April 1997.

