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**Comment** Steven F. Venti

The demographic transition to an older population has enormous implications for the well-being of future workers and retirees. In this chapter, Sylvester Schieber shows how this transition will affect economic growth, how it will stress pension systems, and how countries with different pension systems will be able to cope with the consequences. He finds that aging economies will be hard pressed to maintain past levels of economic performance, and living standards will likely fall for some segments of the population in some economies, regardless of how the pension system is financed. A move to a funded system can possibly provide limited relief from the harmful effects of population aging. He also shows that if current levels of living standards are unsustainable, then the organization of the pension system will be an important determinant of how “economic disappointment” will be shared by future generations. I broadly agree with Syl Schieber’s assessment of the effect of the demographic transition on economies and pension systems. In the following, I will comment briefly on the key issues raised in the chapter. My focus is on how little we know about behavioral and political responses to the kinds of demographically induced stresses that Schieber identifies. I will also consider, in more detail, the likelihood of one particular consequence of population aging—an “asset meltdown”—that may occur when older households sell assets to finance retirement consumption.

Schieber begins with a review of the conventional literature on the effect of pension systems employing a variety of financing mechanisms—from complete pay-as-you-go to fully funded—on national saving. He argues that the focus on national saving is incomplete and advocates a broader approach that tracks the change over time of the difference between the accruing obligations of a pension system and its assets. Such an approach is currently used in the United States to assess the funding status of defined benefit pension plans. When applied to the entire U.S. pension system (public and private), Schieber shows that the U.S. retirement system is going progressively deeper into debt—increases in Social Security trust fund assets and private-sector pension saving are more than offset by skyrocketing Social Security system liabilities. Thus, the positive spin typically placed on the excess of Social Security tax revenue collected over benefits paid out misdirects attention from the fact that the health of our pension system is rapidly deteriorating. Schieber is correct to try to get analysts, legislators, and the general public to focus more on the increase in unfunded promises in the system.

Schieber next shows that aging stresses economies regardless of how pen-

sions are financed. He presents results based on a simple but powerful model that uses the population structure of three countries at very different stages of the demographic transition (Italy, the United States, and India) to show how each country will fare in the future if each had either a benchmark pay-as-you-go system or a funded system. The results strikingly show how aging places a heavy burden on future workers and retirees that is independent of the funding mechanism. As the population ages, taxes must increase or benefits fall in pay-as-you-go systems or savings rates must fall in funded systems. (These are just two of many outcomes affected by aging.) As Schieber notes, the burdens he projects are so great that they will never occur. Behavioral and political responses will prevent the worst from happening. The likelihood that these responses will be large highlights for the need for models that can account for these responses. Such models, though in the early stages of development, (see, for example, Börsch-Supan and Ludwig in this volume) simulate the effects of aging in an overlapping generations framework, allowing for more than one country, a realistic pension sector, and explicit demographics. Such models are, for example, capable of assessing whether international capital flows can blunt the negative effect of aging on saving in funded systems. The models can also incorporate labor supply and productivity responses to higher taxes in a pay-as-you-go system—behavioral responses that may exacerbate future burdens. These models can also evaluate different political reform scenarios designed to lessen the effects of aging. In sum, Schieber's projections of where we are headed—given current pension systems and current demographic trends—implicitly makes a very strong case for further development of models that incorporate political and behavioral feedback.

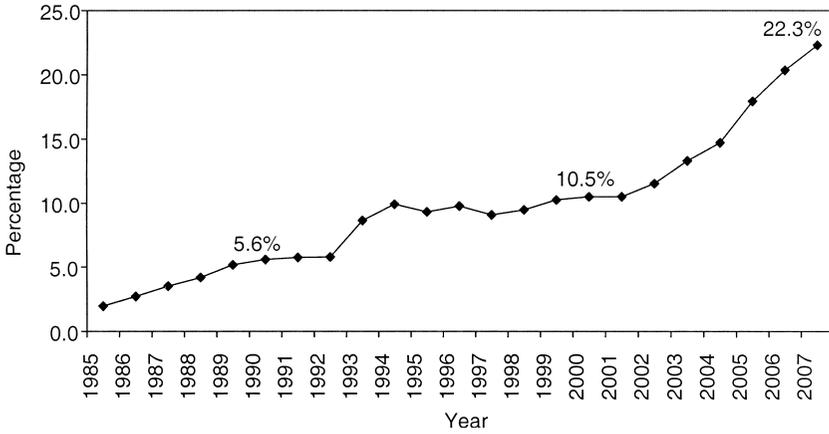
The other key points Schieber makes are well supported by the evidence he presents. He makes the case that population aging will inevitably result in slower growth of living standards. There is really no way out of this without massive increases in labor force participation or productivity increases. It is clear that future retirees will be working longer than current retirees. Even so, future generations will likely face “economic disappointment.” Although how a pension system is financed may have little effect on the level of disappointment we may face, Schieber shows us how the pension system is likely to play a very important role in determining how this disappointment is allocated between the generations.

As noted in the preceding, many of the worst projections will not occur because of political and behavioral responses that are not incorporated into simple models of the effect of demographic change on an economy. One endogenous response—cross-border capital flows—may give funded systems an important advantage over unfunded systems. If assets accumulated in funded plans are invested in other economies at different stages of the demographic transition, then an aging country may be able to diversify away demographic risk. These international capital flows may help a country

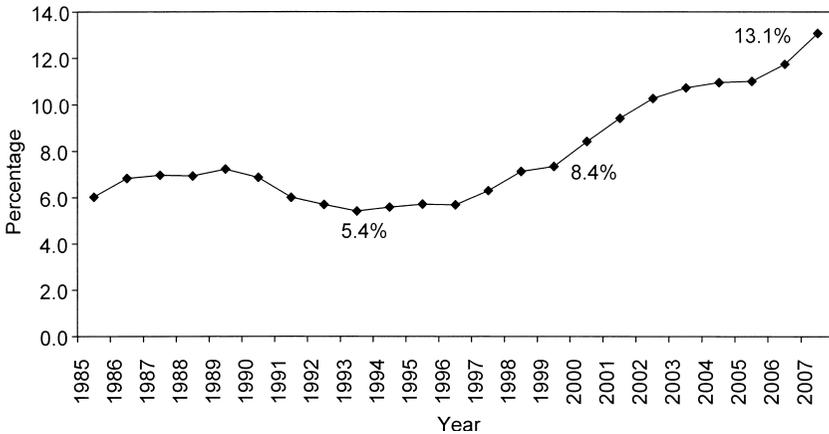
with an aging population avoid an “asset meltdown.” A meltdown—which has received much attention in the popular press—will occur if the older generation sells assets faster than the (smaller) younger generation can buy them, thus depressing asset prices. Support for this effect has been provided by some theoretical models, notably those that consider how the U.S. baby boom affected asset prices (Brooks 2002; Abel 2003; Geanakoplos, Magill, and Quinzii 2004). These models show that in a closed economy, high rates of saving by boomers contributed to rising asset prices in the 1990s. Presumably, the forthcoming baby bust will have the opposite effect on prices. The key feature of these models is the closed economy assumption that may be justified by the well-documented home bias observed in U.S. portfolios. In a closed economy, of course, older retirees have only the younger workers to buy their assets. Several recent models have attempted to relax the closed-economy assumption. Ludwig, Krueger, and Börsch-Supan (2007), for example, allow cross-border capital flows and find only modest effects (less than 100 basis points) of population aging on the return to capital in an open economy. Attanasio, Kitao, and Violante (2006) also find small effects. Clearly, more work needs to be done on the international diversification of demographic risk. Nonetheless, the theoretical models do suggest that “openness” may relieve some of downward pressure on asset prices expected to occur in aging societies.

One way of empirically measuring “openness” is to look at simple measures of “home bias” displayed in portfolios. Figures 8C.1 and 8C.2 present time series evidence on foreign assets held by U.S. investors and on U.S. assets held by foreign investors. The data are from the Federal Reserve Board’s *Flow of Funds Accounts*. Figure 8C.1 shows U.S. holdings of foreign equities as a percent of the market value of all U.S. equities. The results show enormous growth in the “openness” of U.S. portfolios. Holdings of foreign equities increased from a little over 5 percent in 1990, to 10 percent in 2000, to 22 percent by 2007. Presumably, foreign holdings, particularly holdings in “younger” countries, will shield U.S. investors from bearing the full brunt of declines in domestic equity prices. The severity of downward pressure on asset prices will also depend on whether foreigners will buy assets sold off by older households in the United States. Figure 8C.2 shows the percentage of the market value of U.S. equities held by foreigners. Although not as striking as the result in figure 8C.1, the data indicate a steady rise in foreign holdings since the late 1990s. There is no way of knowing how large cross-border holdings have to be to relieve aging-induced downward pressure on prices, but these data do suggest that a meltdown may be less likely than it was a decade ago.

Other research findings also suggest there is little cause for concern that population aging will depress asset prices. Recall that a relatively large older population puts downward pressure on asset prices because older households sell their assets to finance retirement consumption. However, the latter



**Fig. 8C.1** U.S. holdings of foreign equities as percentage of U.S. equities



**Fig. 8C.2** Foreign holdings of U.S. equities as percentage of U.S. equities

part of this statement—that the old want to sell assets—doesn’t square too well with the empirical evidence on age-wealth profiles. In most European and Asian countries, and to a lesser extent the United States, household wealth is not observed to decrease at older ages, thus suggesting that older persons in aging populations may not sell-off assets to the extent predicted by the life-cycle model (see Börsch-Supan 2003). Other empirical work more directly examining the link between population aging and the return to capital has delivered mixed results (Poterba [2004] surveys the literature). Perhaps the most comprehensive analysis in Poterba (2004) looks at the relationship between a variety of demographic indicators and asset returns using U.S. data for the period 1926 to 2003. He concludes that there is little evidence that past changes in the demographic composition of the U.S.

population has had any effect on asset returns, thus casting doubt on the hypothesis that future changes in demographics will impact future returns.

Finally, Schieber and Shoven (1997) and Poterba, Venti, and Wise (2008) construct simulation models of the pension sector in the United States. The models, which are based on Social Security Administration (SSA) demographic forecasts, project balances held in pension plans in future years. The results suggest that the rate of growth and perhaps even the levels of assets will decline in the future as the population ages but that the declines are not projected to be large enough to trigger a meltdown. Thus, overall, the existing theoretical and empirical evidence suggests, at most, only modest effects of population aging on asset prices. The possibility of an “asset meltdown” appears unlikely.

In summary, Schieber concludes that unless drastic changes are made, “economic chaos” will result. Moreover, he cautions that changes will have to be made not only to pension systems, but that “the whole concept of retirement that has persisted over the past century will have to be revisited.” This is pretty strong stuff, yet the case he has made for the consequences of inaction is so convincing that behavioral and political responses are inevitable. Indeed, many of these changes are already underway. Labor force participation among older workers has increased in many of the older European countries. In several countries, participation among persons aged fifty-five to sixty-four is up over 20 percent in the last decade. This trend is, in part, driven by increases in the pension normal retirement age in many countries. Another development is the dramatic growth in projected private-sector saving in some countries. In the United States, Poterba, Venti, and Wise (2008) show that balances in 401(k) plans is expected be four to five times larger, in real dollars, in 2040 than in 2010. This additional saving is driven by three factors: modest growth in participation, the transition from a funded defined benefit system to a defined contribution system (contributions are much higher in the latter), and by an ongoing rise in the percentage of their career for which retirement-age workers have been eligible for a 401(k) retirement plan. There are many other changes underway in various countries that may also blunt demographic effects: policies to encourage the internationalization of portfolios, immigration reform, increased funding of public plans, lowering the indexation of benefits, labor market reforms, and many others. All of these are developments that should help to lessen the stress that aging societies will face in the future. However, there is still much uncertainty about how much “economic disappointment” will remain to be shared.

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