APPENDIX A: VIEWS ON PENSION REFORM—A BRIEF LITERATURE SURVEY

Over the years, a substantial body of literature on pension policy and pension reform has been developed, focusing on two fundamental issues: (1) the appropriate mix of earnings-related pensions and poverty-reduction benefits (the Bismark/Beveridge controversy, see box A.1), and (2) the role of funding. The concept of funding is quite old and has been applied historically in many different ways in various countries.

Most work on social security has been on the earnings-related portion of the old-age provision. The first economic theory of social security probably can be traced back to Samuelson's (1958) article, which states that the equilibrium rate of return to PAYG pension plans equals the rate of population growth, under constant real wages. Aaron (1966) completed this insight by showing that in a mature PAYG plan, the real return equals population growth plus the rate of growth of productivity (real wages). Buchanan (1968), Friedman (1972), and Browning (1973) advocated switching to a funded system (even before the Chilean reform) and maintaining social security commitments by issuing government bonds. Later, Ferrara (1982) and Weaver (1981) advocated a gradual phase-out of the PAYG system in the United States. Other economists—including Pechman, Aaron, and Tausig (1968), and Diamond (1977)— have continued to find sufficient justification for traditional social security old-age benefits.

This debate intensified with the "money's worth" controversy, with Feldstein's (1974) empirical finding that the U.S. Social Security system had a negative impact on saving. Leimer and Lesnoy (1982) contested this conclusion, showing that a programming error influenced Feldstein's outcome. Barro (1974) argued against Feldstein's hypothesis on theoretical grounds, suggesting that savings were not reduced but were shifted to bequests. Feldstein continued to support his research in numerous other papers.

Empirical evidence on the savings controversy has been inconclusive at best, although it has resulted in an intense dialogue about the impact of substituting funded systems for PAYG plans, relying on the positive effect of such a substitution on economic growth. Other economists have had a narrower focus, estimating the impact of different pension provisions on labor supply and the capital market, including the impact of parametric changes in the retirement age and the tax rate. Studies of the impact of voluntary employer-sponsored pensions on wage/pension tradeoffs and labor force participation were also pursued, although the empirical findings were ambiguous (Fields and Mitchell 1984; Gustman and Steimeier 1986). Kotlikoff's (1988) work on intergenerational equity also influenced the debate about the proper structure of a pension system. With the implementation of the Chilean funded reform, U.S., European, and Latin American economists began to assess its success, and, later, that of other Latin American reforms (Bosworth, Dornbusch, and Laban 1994).

Averting provided an international perspective to this body of research with its conclusion that under the right conditions, a three-pillar system was optimal. Upon publication of *Averting*, reviews in economics journals commented on the volume. Turner (1995) said, "Of the many recommendations in the book, the two most controversial are its advocacy of a mandatory Chilean-style funded individual account system (the proposed second pillar) and its rejection of the traditional PAYG defined benefit social security system that has been the bulwark of retirement income systems in most OECD countries." Disney (1995) indicated that *Averting* "never clearly states why high savings rates are

Box A.1: A Four-Country Briefing on Developments Influencing Pension Policy Worldwide

Modern pension policy began with the plan instituted by the government of German Chancellor Otto von Bismarck to help workers and forestall the program of the socialist movement. The 1889 law established a pension for all workers in trade, industry, and agriculture from the age of 70 years. In 1913 the pension age was reduced to 65 years.

The Bismarckian scheme was based on employer and employee contributions as well as on capitalization. A state subsidy was added to provide low-paid employees a higher pension than their contributions warranted.

After World War II, PAYG financing replaced the German-style capitalization in many social security schemes. Some modern derivations of the German programs include occupational funds supported through book reserves on employer balance sheets, rather than being directly invested in financial assets.

In the United States, the Social Security program enacted in 1935 is earnings-related, in the Bismarckian tradition. Originally, the scheme was to be based on capitalization. However, amendments in 1939 added a number of benefits and changed the scheme to a PAYG system with only a minimum reserve. Insurance company executives had expressed concern that the accumulation of a large reserve could adversely affect the capital market, encourage demands for increased benefits, and necessitate the reduction of other federal taxes.

After World War II, voluntary employer-sponsored plans flourished, eventually supplemented by individual retirement savings options. In 1981, the President's Commission on Pension Policy recommended a 3 percent contribution to mandatory universal pension accounts based on financial assets invested in individual accounts. The 2001 Commission to Strengthen Social Security also supported a number of options, including mandatory individual retirement accounts.

In Great Britain, Sir William Henry Beveridge produced a report in 1942 proposing a program for social insurance that would provide universal pensions based on flat contributions and provide flat benefits as a minimum standard of living, replacing the former means-tested system for the elderly age 70 and over. The pension system was made part of the National Insurance Scheme in 1948, with a non-means-tested, basic state pension paid out of current revenues.

Subsequently, national earnings-related programs were implemented for higher-wage workers, because the flat rate pension was regarded as too low a percentage of earnings. From this, Great Britain instituted an earnings-related contributory State Earnings Related Pension Scheme (SERPS) in 1970, from which employers could contract out if they had a plan providing minimum benefits. Finally, reforms in 1986 allowed individuals to contract out from SERPS and establish individual accounts (personal pensions). Initially a 2 percent government match was used to encourage participation in the new system. In addition, there is a highly developed system of occupational funds.

In 1924, Chile became the first Latin American country to adopt a social security program. By the time of the Pinochet government, the PAYG system was in shambles. The 1980 reform, known as the AFP System, was one of the many changes in Chile, in a process initiated in the mid 1970s. Chile's pension reform completely replaced the social security system with personal pension accounts that require pre-funded, mandatory contributions and private fund management. The new pension system gave covered workers the right to choose between different pension providers and between different forms of payout after their retirement.

important" and suggests a reduction in capital stock may be called for in aging populations. Nonetheless, he accepts the broad thrust of the Bank's policy agenda. Beattie and McGillivray (1995) took issue with the report's assertion that public pension systems failed socially and economically, identifying shortcomings that can apply to both public and privatized systems.

Between 1994 and 2001, a wealth of articles appeared on all aspects of pension reform. Implicit and explicit criticisms of the World Bank approaches have come from researchers such as Bosworth and Burtless (1998) and Arnold, Graetz, and Munnell (1998). Feldstein's (1998) edited volume on privatization was generally supportive, while Bodie, Mitchell, and Turner (1995) present a cross-section of views. Gillion, Turner, Bailey, and Latulippe (2000) cover many of the topics included in *Averting* for the International Labor Organization, but suggest that more options for reform are available than the ones included in *Averting*.

Through numerous articles and books, many experts have entered into the pension debate, both influencing the Bank's work and being influenced by it. Most observers agree that multi-

pillar reforms are appropriate in some instances, but quite a few disagree with the Bank's prescription in specific situations at particular times. Critics of the Bank's approach, which regards multi-pillar systems as best practice, include Diamond and Orszag (2002) and Barr (2000). By contrast, Feldstein (1998) and Schieber and Shoven (1999) tend to support the Bank's stratetgy. Kotlikoff (1994) believes that pension plans should invest in a fully diversified international portfolio, and for that reason is critical of the Bank. In sum, there is no unanimity on when multi-pillar systems should be implemented, what multi-pillar systems should look like, or when parametric reforms are sufficient to maintain a sustainable pension system.