Endnotes

1. A demogrant is the same as a universal flat benefit, where individuals receive an amount of money based solely on age and residency. A glossary at the end of the report defines this and other terms.

2. The need for reform of pension systems in developed countries, in particular to address their fiscal unsustainability, has been documented for at least two decades in early publications by international organizations, including the International Monetary Fund (Heller, Hemming, and Kohnert 1986) and the Organisation for Economic Co-operation and Development (OECD 1988). A research publication by the World Bank (1994) was one of the first to look in a comprehensive manner at the situation in developing countries, and by now the need for reform and approaches adopted by Latin American countries and the transition economies in Central and Eastern Europe have been well covered in many publications. For the regions of the Middle East and North Africa, South and East Asia, and Sub-Saharan Africa, our knowledge is much more limited but has improved in recent years (for the main references pertaining to all regions, see the notes in chapter 7). Cross-country papers and books on pension issues in developing countries are still an exception (such as that by Charlton and McKinnon 2001).

3. A full country-by-country assessment of existing pension schemes among World Bank clients in the low- and middle-income countries is beyond the scope of this report. For detailed assessments, see the regional reviews, individual country reports, and case studies that form part of our policy dialogue and reform support (http://www.worldbank.org/pensions).

4. For the beginnings of the concept, see Holzmann and Jorgensen (2000, 2001); for the application, see World Bank (2000b); and for the use of

the Bank's Social Protection Sector Strategy Paper as a conceptual envelope, see World Bank (2001f). For further developments and more recent use in the developing-country context, including in risk and vulnerability assessments, see the social risk management Web site (www1.worldbank.org/sp/risk_management).

5. The multipillar reform proposal gained prominence with publication of the Bank's research report *Averting the Old-Age Crisis* (World Bank 1994), which proposed a specific three-pillar system. Other Bank proposals have also focused on the basic elements of a multipillar system. See Vittas (1993).

6. See the glossary at the end of this report for a definition of demogrant and other terms.

7. On interest rate volatility, see Alier and Vittas (2001); Burtless (2000). On the capacity to manage mortality risk, see James and others (1999); James, Smalhout, and Vittas (2001); James, Martínez, and Iglesias (2003); Mitchell, Myers, and Young (2000).

8. The role of financial systems in economic growth is an area where Nobel Prize laureates and other influential economists disagree sharply (Levine 2003). One can add the academic dispute about the role of funded pension systems in the development of financial markets. As a development institution, the Bank has always focused on the nexus between financial sector development and economic growth and, more recently, on the nexus between contractual saving and financial sector development. The main Bank contributions to the latter research are quoted throughout the report. Other important references include the reader by Bodie and Davis (2000); Corbo and Schmidt-Hebbel (2003); Davis and Steil (2003); Reisen (2000).

9. The literature on the first question is reviewed and summarized in Congressional Budget Office (1998); for the second question, see Bosworth and Burtless (2003).

10. If more productive projects are less liquid, an increase in the availability of long-term capital should, on average, increase the return of projects.

11. The replacement rate of 40 percent is in line with International Labour Office (ILO) Convention 102 of 1952—the basic convention for social security benefits—which suggests that the periodic payments to standard beneficiaries in old age for a man of pensionable age with a wife should be at this level. The convention allows a lot of leeway with regard to the definition of replacement rate, such as gross or net of tax and social security or last income versus lifetime income. The more ambitious ILO Convention 128 of 1967 raises this rate to 45 percent, and ILO Recommendation 131 raises it even higher to 55 percent, but these higher rates should be applied only by more developed economies (which are not defined). For a presentation of the ILO's standards, see ILO (2002b) and

the ILO Web site: http://www.ilo.org/. The Bank believes that prescribing these higher standards of mandated minimum benefits for more developed economies makes little sense. With a higher level of income and financial sector development, individuals have more opportunities, not fewer, to adjust their retirement savings to their individual replacement rate goal.

12. A special view of robust pension design emerges when one takes into account the vulnerability of benefit and revenue design to political changes and anticipates this in how programs are developed and implemented. In other words, one moves immediately to a second- or third-best world to ensure the survival of the program design in the face of a variety of political and other shocks. Such an approach opens the traditional bilateral tradeoff between equity and efficiency to include robustness in design and implementation.

13. Because the identification of pension reform components in Bank lending is not as straightforward as one may think, the data presented may change slightly over time as new projects are identified in Bank documents and included. Yet the overall picture and message are unlikely to change. These figures include only loans approved through the end of fiscal 2004, which ended on July 1, 2004. Subsequent analysis may indicate slightly higher numbers if they include loans that were approved after this date. Small differences in the period of analysis, however, will not have any material effect on the general pattern of lending.

14. A billion is 1,000 million. All dollars are U.S. dollars.

15. Options for the reform of pension systems and their assessment are greatly influenced by the international academic and political discussion in OECD countries. The discussion in the United States about the reform of social security (the public pension system) attracts considerable attention internationally but has little practical relevance for typical Bank clients because the conditions for reform are so different elsewhere. The European reform experience is more relevant, as those systems exhibit more need for reform and are more diverse in structure and reform experience. Similarly, the most recent reforms in other high-income economies, such as Australia and Hong Kong, China, provide interesting lessons for reform options and implementation. Still, the underlying conceptual discussion in these high-income countries makes their experience relevant for other parts of the world. A selective list of recent publications includes Bateman, Kingston, and Piggott (2001); Diamond (2004); Feldstein and Siebert (2002); Feldstein 2005; Mitchell 1999; Takayama (2003); Thompson (1998); and Valdés-Prieto (1998, 2002).

16. What constitutes an ideal notional defined-contribution system and how it fares compared with other benefit options (such as nonfinancial defined-benefit or financial defined-contribution schemes) or how it performs

in reality and under political stress are still very much open to discussion (see, for example, Disney 1999; Valdés-Prieto 2000; Williamson and Williams 2003). For this reason, the World Bank and the Swedish Social Insurance Board organized a defined-contribution conference that took place in Sandhamn, Sweden, on September 28–30, 2003. For the agenda and the revised papers, see http://www.rfv.se/konferens/index.htm. The conference volume will be published in early 2005 as Holzmann and Palmer (2005). The papers in the conference volume cover conceptual and analytical issues and the experience of countries that have introduced notional defined-contribution systems and those that are thinking about introducing them. It also provides papers and written-up thoughts of a high-powered ad hoc panel comprising Nick Barr, Axel Boersch-Supan, Peter Diamond, Assar Lindbeck, and Salvador Valdés-Prieto (all 2005).

17. Funded schemes, even when they are fully invested in government bonds, will have positive market effects relative to purely unfunded schemes. They will stimulate the debt market because the development of contractual savings creates a demand for long-term public debt—which is matched by the issuance of bonds—instead of short-term instruments, and this eventually helps to build the yield curve. If government debt is issued, the debt market will develop even more, particularly in response to an extended yield curve. Of course, this may come at the expense of the equity and corporate bond markets (Musalem and Tressel 2003).

18. The enhanced focus on basic pension provisions in the Bank's client countries was launched with preparation of a Social Protection Strategy Paper (see World Bank 2001b) and received major emphasis during the United Nations "World Conference on Ageing" in 2002. Various international organizations and nongovernmental organizations have taken on the issue of income support for the elderly in advocacy and increasingly also in analytical and empirical work. For a first empirical analysis of the relative policy status of the elderly in 15 African countries, see Kakwani and Subbarao (2005); for a first outline of analytical and empirical issues, see Schwarz (2004). The experience with basic pension schemes in (joint) client countries is now documented on the Web sites of the International Labour Office and the World Bank. A United Nations conference in autumn 2003 was devoted to a discussion of poverty among the elderly, and a joint workshop of HelpAge and the World Bank held in New Delhi in early 2004 was devoted to taking stock of basic pension provisions in India. Visit http://www.worldbank.org/pensions for cross-links to all of these Web sites.

19. While there are still different views among the ILO, IMF, and World Bank about the importance of implicit pension debt (compare Gillion and others 2000; Holzmann 1999; Mackenzie and others 2001), or at least the best way to measure it, there is strong agreement about the need to

improve financial governance of pension institutions, including improved actuarial capacity and oversight of social insurance bodies. To this end, in early 2004 the ILO, IMF, and World Bank together with the International Association of Actuaries created an informal working group to strengthen and sponsor better actuarial training and financial management of social security institutions (covering pensions, health, unemployment benefits, and beyond).

20. A limited but growing literature underlines the importance of governance for the performance of public pension funds, including Carmichael and Palacios (2004); Iglesias and Palacios (2001); Impavido (2002); Mitchell and Hsin (1997); Useem and Mitchell (2000). The empirical literature on the relationship of governance and public pension fund performance is based largely on U.S. data, and its findings clearly indicate that the governance structure determines the investment strategy, which in turn affects investment performance. Hess and Impavido (2004) provide a survey of the governance practices of public pension funds in 26 developing countries. Their results indicate a very heterogeneous governance practice, which is consistent with the diversity of investment outcomes. Palacios (2002) reviews five recent initiatives by OECD countries aimed at improving the governance of public pension funds. Since 2002 an annual international conference on public pension funds at the World Bank has served to discuss country experiences as well as conceptual and empirical work on this issue. The most recent conference took place in September 20–25, 2004; for papers presented at the conference, see http://www1.worldbank.org/finance/html/ppfm2004.html.

21. For detailed discussion, see Carmichael and Palacios (2004); Hess and Impavido (2004); Impavido (2004).

22. However, record keeping is subsidized to some extent through the administrative structures of government agencies that separate and forward payroll deductions.

23. See, for example, Blake (1999); Davidoff, Brown, and Diamond (2003); Davis (2002); Impavido, Thorburn, and Wadsworth (2004); James, Martínez, and Iglesias (2003); James, Vittas, and Song (2001); Walliser (2001).

24. The literature consists of three main areas. The first provides the conceptual underpinnings of the political economy of policy reform coming from political science or economics. Main references include Rodrik (1996) and Williamson (1994) for policy reforms in general and Pierson (1994, 1996) for pension reform in particular. The second provides insights into policy reform through cross-regional comparison, such as the reform processes in Latin America and Central and Eastern Europe. Main references in this area include Gillion and others (2000), James and Brooks (2001), and Müller (2000, 2001, 2003a, 2003b). Finally, country case studies

of pension reform try to distill lessons or apply a conceptual framework to countries for verification. Examples of the latter include Mesa-Lago (2002), Müller (2000, 2001), Piñera (1991), and Queisser (1998a 1998b) on Latin America; Müller (1999, 2003a, 2003b), Nelson (2001), Orenstein (2000), and Orenstein and Haas (2000) on Central and Eastern Europe; Bonoli (2000), Hinrichs (2001), and Reynaud (2000) on Western Europe; and the contributions and papers quoted in Holzmann, Orenstein, and Rutkowski (2003).

25. A more formal and comprehensive evaluation of the Bank's pension work and advice is currently being undertaken by OED, the Bank's independent evaluation unit, which reports only to the Bank's Board of Directors rather than to Bank management. The evaluation involves two main and closely interrelated components. The first major component consists of assessing the effectiveness of the Bank's direct assistance to member countries in the pension area, involving policy dialogue, country-specific studies, and projects, and focuses on Latin America and the Caribbean and Europe and Central Asia. The second component consists of an assessment of the Bank's three-pillar paradigm and its evolution over time. The review is expected to be delivered to the board in the first half of 2005. A first assessment of pension reform issues five years after publication of *Averting the Old-Age Crisis* (World Bank 1994) was undertaken as an international Bank conference in autumn 1999, and the revised papers are published in Holzmann and Stiglitz (2001). Broad assessments of worldwide trends in pension reform by Bank staff include Fox and Palmer (2001) and Schwarz and Demirgüç-Kunt (1999).

26. This section was prepared by Anita Schwarz, Indermit Gill, Truman Packard, and Todd Pugatch, drawing from several recent assessments of pension reforms in Latin America. Guillermo Perry and Helena Ribe provided helpful feedback and guidance. At the time of preparing this report, the implementation of structural reforms had stalled in Ecuador and Nicaragua.

27. In view of the Chilean pension reform more than 23 years ago and the many reforms in Latin America since the early 1990s, there is an extensive literature describing and assessing the reforms. A small subset of recent references includes De Ferranti, Leipziger, and Srinivas (2002); Gill, Packard, and Yermo (2004); Hujo, Mesa-Lago, and Nitsch (2004); IFPFA (2003); Mesa-Lago (2002); Palacios (2003); Queisser (1998a, 1998b); and Valdés-Prieto (2002). Case studies of individual countries can be found in the Bank's Pension Reform Primer series, including case studies of Argentina, Dominican Republic, El Salvador, Mexico, and Peru.

28. Mexico has drafted legislation that brings federal civil servants into the national system, and Colombia has integrated some, but not all, of its pension plans. Separate pension plans remain for provincial or state pub-

lic sector workers. Argentina integrated about half of its provincial civil servant pension regimes and all of its federal civil servants into the national system, but some of the largest provincial plans—the provinces of Buenos Aires and Córdoba, for example—remain separate from the reformed national system.

29. The Office of the Chief Economist for the World Bank's Latin America Regional Department recently completed a critical assessment of structural reforms to retirement security systems (Gill, Packard, and Yermo 2004). Background papers are available on the chief economist's Web page: http://www.worldbank.org/lcrce.

30. This has led to important distributional benefits. Besides allowing countries to spend more on public education, health, and social assistance, in all the reforming countries the regressivity of public pension expenditures has been markedly reduced for those who participate in the programs, when measured using (gross of commission and fee) rates of return obtained by wealthier and poorer workers (Zviniene and Packard 2003).

31. A notable exception is the reformed pension system in Peru. The majority of affiliates to the new funded pillar of individual retirement accounts do not enjoy the protection of a minimum pension guarantee. The vulnerability of affiliates to Peru's AFP (Administradora de Fondos de Pensiones) system, and indeed of the wider population, to old-age poverty is compounded by the lack of any noncontributory pension arrangements.

32. Corbo and Schmidt-Hebbel (2003), Edwards and Cox-Edwards (2002), and Packard (2002) find some positive impact on the share of workers contributing to formal pension systems with reforms, while Mesa-Lago (2002) claims that worker participation has fallen due to reforms.

33. This translates into 400 percent of their earnings before retirement in many cases. Strictly speaking, rural pensions in Brazil are "contributory," but eligibility requirements are generous and hardly enforced. A truly noncontributory program does exist, but only for elderly individuals in urban households. The urban noncontributory pension is targeted to the poor; however, the amount of the benefit is the same as the seemingly noncontributory rural pension and the same as the minimum contributory pension. For a review of noncontributory schemes in four Latin American countries, see Bertranou, van Ginneken, and Solorio (2004). For a comparison of the arrangements in Brazil and South Africa, see HelpAge International (2003).

34. See Bucheli (1998) for a thorough analysis of intergenerational and intragenerational effects of the reforms in Uruguay.

35. The unification of systems has also led to substantial fiscal savings, above those estimated in Zviniene and Packard (2003), who assume that all currently covered individuals were covered in the less generous

national system prior to reforms. As a result, many of their numbers on pension debt before reform underestimate the true extent of fiscal problems at that time.

36. To the extent that debt financing is used to cover the transition, estimates become extremely sensitive to interest rate assumptions.

37. Just between 1998 and 2002, the ratio of pension fund assets to GDP rose from 3.3 to 11.3 percent in Argentina, from 3.9 to 15.5 percent in Bolivia, from 40 to 56 percent in Chile, from 2.7 to 7.7 percent in Colombia, from 0.4 to 7.4 percent in El Salvador, from 2.7 to 5.3 percent in Mexico, from 2.5 to 8.1 percent in Peru, and from 1.3 to 5.7 percent in Uruguay. Further, reforms created a new financial industry in which regulatory oversight has been a role model for other industries in the region. The funded systems have achieved high standards in asset valuation, risk rating, and disclosure. Furthermore, insurance companies have flourished in their auxiliary role as providers of disability, survivor, and longevity insurance in the new systems. So whereas the direct role of pension reform in increasing national saving is still being debated, improved financial sector functioning is likely to have had an indirect positive effect on saving (Gill, Packard, and Yermo 2004).

38. In Costa Rica and Uruguay the pay-as-you-go plan is mandatory, while in Argentina, Colombia, and Peru workers can choose between defined-benefit, pay-as-you-go plans and individual accounts.

39. With eight countries in (Central and Eastern) Europe and Central Asia having so far moved toward a multipillar structure and with many other countries in the region considering or even implementing reforms, the number of studies describing or evaluating pension reforms in the regions has become quite sizable. The Bank's Pension Reform Primer series includes country case studies on Hungary (Palacios and Rocha 1998), Kazakhstan (Andrews 2001), Latvia (Fox and Palmer 1999), and Poland (Chlon, Góra, and Rutkowski 1999). More recent cross-country assessments of reform include Barr and Rutkowski (2004); Chlon (2003); Fultz and Ruck (2000); Lindeman, Rutkowski, and Sluchynskyy (2001); Müller (1999, 2003a, 2003b, 2004); OECD (2004a); Schmähl and Horstmann (2002); and von Gersdorff and Rutkowski (2004). This section draws on the last three publications and was prepared by Hermann von Gersdorff, Michal Rutkowski, and Anita Schwarz.

40. A review of the pension reform needs of and options for the region is currently being prepared by World Bank staff and should be finished by summer 2005. A comprehensive review of India's pension scheme is found in World Bank (2001c). A study of the Nepalese demogrant scheme is found in Palacios (2004) and Palacios and Rajan (2004). A review of civil service schemes in the region is found in Palacios (2004). This section was prepared by Robert Palacios.

41. The World Bank is providing technical assistance to the task forces in the Maldives, Nepal, and Pakistan, and an Investment Development Fund grant is supporting pension reform in Nepal.

42. An attempt to take stock of existing programs in Africa can be found in Barbone and Sánchez (1999) and Bonnerjee, Pallares-Miralles, and Schwarz (2002). Relevant country case studies include World Bank (2002a) for Senegal and Devereaux (2001) for Namibia. Several published studies have examined South Africa's social pension scheme, including Case and Deaton (1998). This section was prepared by Robert Palacios.

43. For further information, see their Web site: http://www.izf.net/izf/Institutions/Integration/Zone/CIPRES.htm.

44. For a recent overview of pension systems in the Middle East and North Africa region, see Robalino (2005). Other relevant documents are the various country reports on pensions, in particular, World Bank (2002b) for Algeria; World Bank (2001e) for Djibouti; World Bank (2003c) for Iran; World Bank (2003b) for Jordan; World Bank (2004d) for Lebanon; World Bank (2001d, 2004c) for Morocco; World Bank (2003e) for Tunisia; World Bank (2002c) for West Bank and Gaza. Lebanon is a special case. There is no public pension system for private sector workers. The country only has access to an end-of-service indemnity scheme. This section was prepared by David Robolins.

45. Among non-gulf countries, these reserves range between 4.2 percent of GDP in Djibouti to 47 percent of GDP in Egypt. The average for the region is close to 14 percent of GDP.

46. The Bank currently has technical assistance programs in Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Jordan, Lebanon, Libya, Morocco, West Bank Gaza, and Yemen.

47. Reviews of pension systems and reforms of the region include studies by the World Bank (Holzmann, MacArthur, and Sin 2000; World Bank 2004b) and Asian Development Bank (2000). Other relevant documents are the various country case studies, including World Bank (2000a, 2001a, 2004a) for China; World Bank (2003d) for Mongolia; World Bank (1999) for the Philippines; and World Bank (1998) for Thailand. This section was prepared by Yvonne Sin.