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## Long-Term Fiscal Challenges

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### 19.1 Introduction

Reforming age-related spending, including both pension and health care spending, will be a key policy challenge in both advanced and emerging economies over coming decades. A large share of government budgets is devoted to public pension and health care systems. Spending in these two areas has been growing rapidly, driven by population aging and excess cost growth<sup>1</sup> in health care spending, and is projected to increase by 3.5 percentage points of GDP in advanced economies and by 2 percentage points of GDP in emerging economies over the next two decades, with a greater contribution coming from projected increases in health care spending.<sup>2</sup>

Many countries already face a need for large fiscal adjustment because of high deficits and debt-to-GDP ratios, and the continued rise in age-related spending will make this adjustment even more challenging over the long run. This long-term fiscal challenge requires structural reforms of both public pension and health care systems.

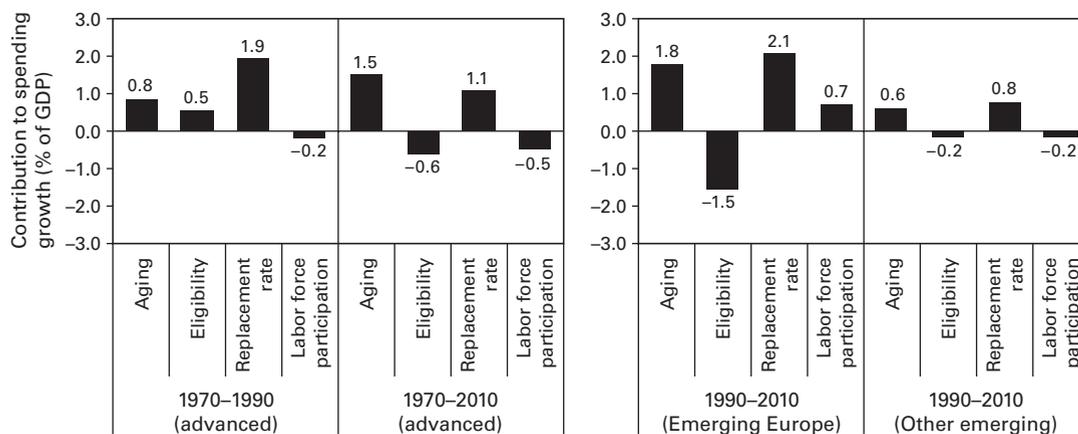
This chapter first presents projections for spending in both public pensions and health care for 28 advanced and 22 emerging economies,<sup>3</sup> and then discusses reform options to improve the long-term sustainability and performance of public pension and health care systems while safeguarding the most vulnerable. Pension and health care systems differ greatly across countries. For example, some pension systems include mandatory, privately funded individual retirement account schemes while others rely solely on public pensions financed on a pay-as-you-go basis; some health systems are financed by payroll contributions while others are financed by general tax revenues. The projections and reform options in this chapter are based on the existing pension and health care systems, assuming these systems would remain in place in the foreseeable future. In addition there is evidence that while the types of systems may matter for spending efficiency, the details in the design of each individual system appear to be more important (IMF 2011b; Joumard, Andre, and Nicq 2010).

## 19.2 The Evolution of Public Pensions and Health Care Spending

Public pension and health care systems have gone through substantial expansion in the last several decades and are currently two of the most important items in government budgets, accounting for, on average, 40 percent of primary spending in advanced economies and 30 percent in emerging economies in 2010. For example, more than 80 percent of the increase in primary spending to GDP ratio in G7 countries between 1960 and 2007 is due to the increase in public pension and health spending (Cottarelli and Schaechter 2010).

### 19.2.1 Public Pensions

In advanced economies, public pension spending on average increased from 5 percent of GDP in 1970 to 9.5 percent in 2010. The four drivers behind the change in public pension spending as a share of GDP are aging, eligibility rates (the number of pensioners as a proportion of the population 65 and older), replacement rates (the ratio of average pension to average wages), and labor force participation rates (figure 19.1). During 1970 to 1990, increases in spending reflected a combination of higher replacement rates, aging, and increased eligibility—the average statutory retirement age declined by one year over this period. Increasing female labor force participation offset some of the increase in spending by raising output and thus reducing pension spending as a share of GDP. Pension spending growth was more contained over the past two decades. The impact of aging and benefit increases was partly offset by both tighter pension eligibility rules (including increasing statutory



**Figure 19.1**

Evolution of public pension expenditures in advanced and emerging economies, 1970 to 2010  
Sources: OECD; Eurostat; International Labor Organisation (ILO); UN; IMF staff estimates

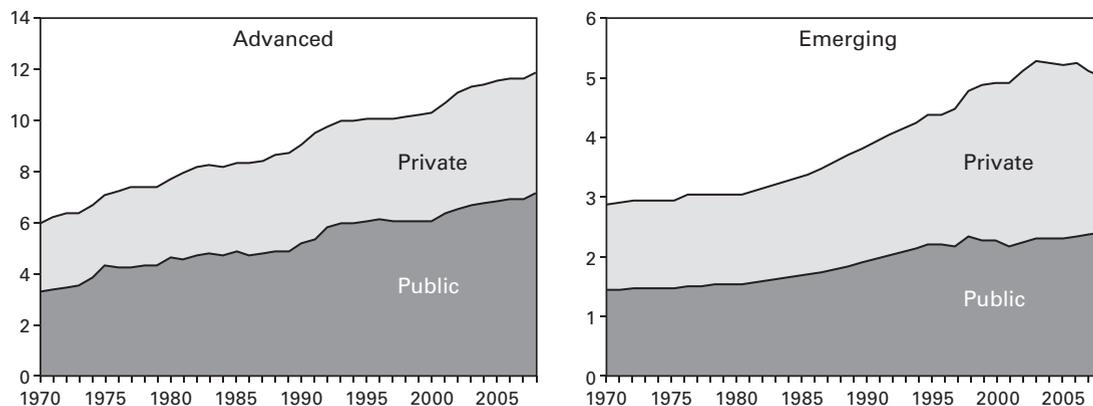
retirement ages and restricting early retirement) and further increases in labor force participation rates.

Over the past two decades, increases in public pension spending in emerging economies have been larger than those in advanced economies, but from a much lower level in emerging economies outside Europe. Between 1990 and 2010, spending in all emerging economies increased on average by 2 percentage points of GDP. In emerging Europe, spending increased from about 7.5 percent of GDP in 1990 to 10 percent in 2010, with rapid increases in the 1990s in Poland, Romania, Turkey, and Ukraine. This increase was due mainly to higher replacement rates (average pensions increased relative to wages during the 1990s) and population aging. Declining labor force participation rates also played a role. In other emerging economies, spending increased from 2 to 3 percentage points of GDP over the same period, owing to increases in replacement rates, albeit from relatively low initial levels.

Today the variation in current public pension spending across countries and regions reflects mainly differences in old-age dependency ratios, generosity of benefits, and coverage rates. On average, spending is very similar in advanced economies and emerging Europe—at 9.5 and 10 percent of GDP, respectively—but is substantially lower in other emerging economies at 3 percent. However, there is substantial variation in spending among advanced economies, with spending ranging from less than 5 percent of GDP in countries with relatively younger populations and low replacement rates (Australia, Canada, Iceland, and Korea), to more than 12 percent in countries with relatively high replacement rates and older populations (Austria, France, Greece, Italy, and Portugal). In contrast, no emerging European economy has spending below 6 percent of GDP. Most advanced and emerging European economies have replacement rates of between 40 and 60 percent, old-age dependency ratios above 20 percent, and nearly universal coverage. The relatively low spending in emerging economies outside Europe reflects a combination of relatively low coverage (generally only those in the formal sector are eligible and receive pensions that are high relative to the average wage) and younger populations.

### 19.2.2 Public Health Care

Total health expenditures have risen sharply in recent decades, particularly in advanced economies (figure 19.2). Since 1970, real per capita total health spending has increased fourfold in advanced economies, while spending as a share of GDP has increased from 6 to almost 12 percent. Two-thirds of this increase has been due to greater public health spending, with its share of total health spending rising from 55 to 60 percent. In emerging economies, the increase in total health spending has been more moderate over the same period—from below 3 percent of GDP to about 5 percent—and public spending on health has increased from around 1.5 to 2.5 percent of GDP, about the same as the increase in private spending.



**Figure 19.2**

Evolution of public health care expenditures in advanced and emerging economies, 1970 to 2012. Average spending is weighted on the basis of GDP at purchasing power parity. For advanced economies without 2008 data (five countries), 2006 or 2007 data were used. The final year for spending data for the emerging economies is 2007.

Sources: OECD Health Database; WHO; Sivard (1974–96); IMF staff estimates

Public health spending in advanced countries has been characterized by short periods of accelerated growth followed by periods of cost containment.<sup>4</sup> The rapid increase in spending during 1971 to 1975 (1 percentage point of GDP) reflected the expansion of health insurance coverage in most countries. This was followed by a longer period of relative cost control as many countries introduced health reforms as part of broader fiscal consolidation efforts. Public health spending increased by less than 1 percentage point of GDP over the fifteen-year period from 1975 to 1990. Expenditures again began to accelerate in the early 1990s, before another period of containment in the second half of the decade. The slowdown in spending growth reflected reforms in both the United States and Europe as part of a broader restraint of total government spending. The growth of public health spending picked up after 2000, with outlays rising one percentage point (to 7 percent of GDP) by 2010.

Public health care spending levels and increases have been relatively low in the emerging economies. During 1971 to 1995, public health spending increased by 0.5 percentage point of GDP, to 2 percent. Spending accelerated after that with an additional 0.5 percentage point of GDP in the following decade. Public spending ratios are substantially higher in emerging Europe and Latin America than emerging Asia with no evidence of convergence in ratios across emerging economies over time. Since 1995, the largest increases in spending have been in Romania, Saudi Arabia, Thailand, and Turkey (1 to 1.5 percentage points of GDP), while spending ratios have fallen in Estonia, Hungary, India, Latvia, Russia, and Ukraine. Since 2000—when average public health spending to GDP ratios started to rise—only six coun-

tries have had increases of more than 0.5 percentage point (Brazil, Bulgaria, Chile, Poland, Thailand, and Ukraine).

The literature has identified income, aging, technology, and health policies as the key factors behind rising public spending-to-GDP ratios. On the demand side, health care spending tends to rise as a share of GDP as countries develop. In addition elderly people consume, on average, more health services than their younger counterparts. On the supply side, technological change has expanded the scope of what is medically possible by improving treatments and diagnostics. This has increased the cost of medical services, reflecting improvements in quality (e.g., the diffusion of angioplasty or the use of MRIs instead of X rays). Additionally health costs have been driven upward by the relatively low productivity growth of services relative to other sectors of the economy (the so-called Baumol effect). Among these drivers, non-demographic factors dominate. On average, approximately one-fourth of the increase in public spending-to-GDP ratios between 1980 and 2008 is explained by changes in the age distribution of the population (“aging”). The rest—known as excess cost growth (ECG)—is attributable to the combined effect of nondemographic factors, including rising incomes, technological advances, the Baumol effect,<sup>5</sup> and health policies and institutions. Of course, positive ECG should not be interpreted to mean that the costs of public spending have exceeded its benefits, because technological advancements—the main driver of higher health care costs—have yielded enormous improvements in health status and well-being (Cutler and McClellan 2001). This said, the benefits of higher health spending would also need to be weighed against their costs.

Inefficiencies in public health spending are believed to be large. While higher spending can help, improving the efficiency of these outlays while maintaining the same level of spending is even more critical for improving health outcomes. This can be illustrated by examining the gains from reducing the “efficiency gap” for countries, which provides an estimate of the difference between the life expectancy they achieve—taking account also of the effects of socioeconomic and lifestyle factors—and that of the best-performing country at similar levels of spending.<sup>6</sup> Cutting the efficiency gap of OECD countries in half, for example, would increase life expectancy by over one year. Achieving this same gain in life expectancy through higher spending, by contrast, would require a spending increase of over 30 percent. Countries where spending has been identified as the most efficient include Australia, Korea, and Switzerland, while Hungary, the Slovak Republic, and the United States are among the least efficient. In developing and emerging countries, health spending is also an important determinant of health outcomes (Baldacci et al. 2008). As in the advanced economies, the efficiency of their outlays varies widely (Gupta and Verhoeven 2001; Gupta et al. 2008), again suggesting ample room to improve health outcomes without raising spending.

**Table 19.1**  
Public pension and health spending in advanced and emerging economics, 1970 to 2010

| Country                   | Public pension expenditure<br>(percent of GDP) |      |      | Public health expenditure<br>(percent of GDP) |      |      |
|---------------------------|--|------|------|---|------|------|
|                           | 1970   | 1990 | 2010 | 1970  | 1990 | 2010 |
| <i>Advanced economies</i> |  |      |      |   |      |      |
| Australia                 | 2.6  | 4.1  | 4.7  | 3.0   | 4.4  | 6.2  |
| Austria                   | 10.0   | 12.8 | 14.5 | 3.9   | 6.1  | 8.4  |
| Belgium                   | 6.5  | 9.9  | 10.9 | —   | 6.2  | 7.9  |
| Canada                    | 2.4  | 4.7  | 4.9  | 4.9   | 6.3  | 8.1  |
| Czech Republic            | —  | 7.3  | 9.8  | —   | 3.9  | 6.3  |
| Denmark                   | 5.1  | 6.7  | 8.1  | 6.9   | 7.2  | 9.4  |
| Estonia                   | —  | —    | 14.5 | —   | —    | 5.0  |
| Finland                   | 6.1  | 9.4  | 12.0 | 3.3   | 5.1  | 6.6  |
| France                    | 6.7  | 11.1 | 14.3 | 4.7   | 7.4  | 8.9  |
| Germany                   | 8.8  | 9.5  | 10.9 | 4.4   | 6.3  | 8.9  |
| Greece                    | 5.4  | 10.5 | 13.9 | 2.3   | 3.5  | 6.1  |
| Iceland                   | 2.6  | 2.9  | 3.3  | 2.8   | 6.2  | 7.5  |
| Ireland                   | 4.0  | 4.3  | 8.1  | 4.5   | 4.4  | 6.4  |
| Italy                     | 6.7  | 10.9 | 15.6 | —   | 6.1  | 7.4  |
| Japan                     | 1.1  | 5.2  | 10.0 | 3.3   | 4.7  | 7.6  |
| Korea                     | —  | 0.8  | 1.7  | —   | 1.5  | 4.1  |
| Luxembourg                | 4.9  | 9.9  | 7.9  | 2.6   | 4.7  | 6.6  |
| Netherlands               | 6.2  | 10.9 | 6.8  | 4.2   | 5.5  | 10.3 |
| New Zealand               | 4.0  | 8.0  | 5.5  | 4.2   | 5.7  | 8.4  |
| Norway                    | 5.6  | 7.9  | 7.3  | 4.3   | 6.7  | 8.0  |
| Portugal                  | 1.4  | 6.5  | 13.4 | 1.6   | 4.1  | 7.0  |
| Slovakia                  | —  | —    | 7.7  | —   | —    | 5.8  |
| Slovenia                  | —  | —    | 11.1 | —   | —    | 6.6  |
| Spain                     | 3.1  | 8.9  | 10.8 | 2.6   | 5.9  | 6.8  |
| Sweden                    | 4.9  | 9.6  | 9.2  | 5.9   | 7.5  | 7.8  |
| Switzerland               | 3.6  | 6.4  | 8.2  | —   | 4.0  | 7.4  |
| United Kingdom            | 4.9  | 5.9  | 7.2  | 3.6   | 4.6  | 8.0  |
| United States             | 4.9  | 6.3  | 6.8  | 2.6   | 4.8  | 8.5  |
| <i>Emerging economies</i> |  |      |      |   |      |      |
| Argentina                 | —  | 5.2  | 7.4  | —   | —    | 4.4  |
| Brazil                    | —  | 5.1  | 9.1  | —   | —    | 4.2  |
| Bulgaria                  | 7.0  | 8.6  | 8.2  | —   | —    | 3.7  |
| Chile                     | 2.7  | 8.5  | 5.5  | —   | —    | 3.9  |
| China                     | —  | 1.0  | 3.4  | —   | —    | 2.7  |
| Hungary                   | 4.6  | 8.5  | 11.4 | —   | —    | 5.1  |
| India                     | —  | 0.2  | 1.0  | —   | —    | 1.2  |

**Table 19.1**  
(continued)

| Country      | Public pension expenditure<br>(percent of GDP) |      |      | Public health expenditure<br>(percent of GDP) |      |      |
|--------------|--|------|------|---|------|------|
|              | 1970   | 1990 | 2010 | 1970  | 1990 | 2010 |
| Indonesia    | —  | 0.5  | 0.7  | —   | —    | 1.3  |
| Latvia       | —  | —    | 9.4  | —   | —    | 4.1  |
| Lithuania    | —  | —    | 8.4  | —   | —    | 5.2  |
| Malaysia     | 0.7  | 1.6  | 3.0  | —   | —    | 2.4  |
| Mexico       | —  | 0.5  | 1.5  | —   | 1.8  | 2.9  |
| Pakistan     | —  | 0.0  | 0.6  | —   | —    | 0.8  |
| Philippines  | —  | 0.5  | 1.7  | —   | —    | 1.3  |
| Poland       | 4.9  | 7.1  | 11.5 | —   | 4.4  | 5.0  |
| Romania      | —  | 4.9  | 9.5  | —   | —    | 4.4  |
| Russia       | —  | —    | 8.9  | —   | —    | 3.2  |
| Saudi Arabia | —  | 1.4  | 2.2  | —   | —    | 2.7  |
| South Africa | —  | —    | 1.9  | —   | —    | 3.9  |
| Thailand     | —  | —    | 1.0  | —   | —    | 2.9  |
| Turkey       | 0.4  | 2.4  | 6.3  | —   | 1.6  | 5.1  |
| Ukraine      | 7.4  | 14.2 | 17.7 | —   | —    | 4.4  |

Sources: OECD; WHO; IMF staff estimates

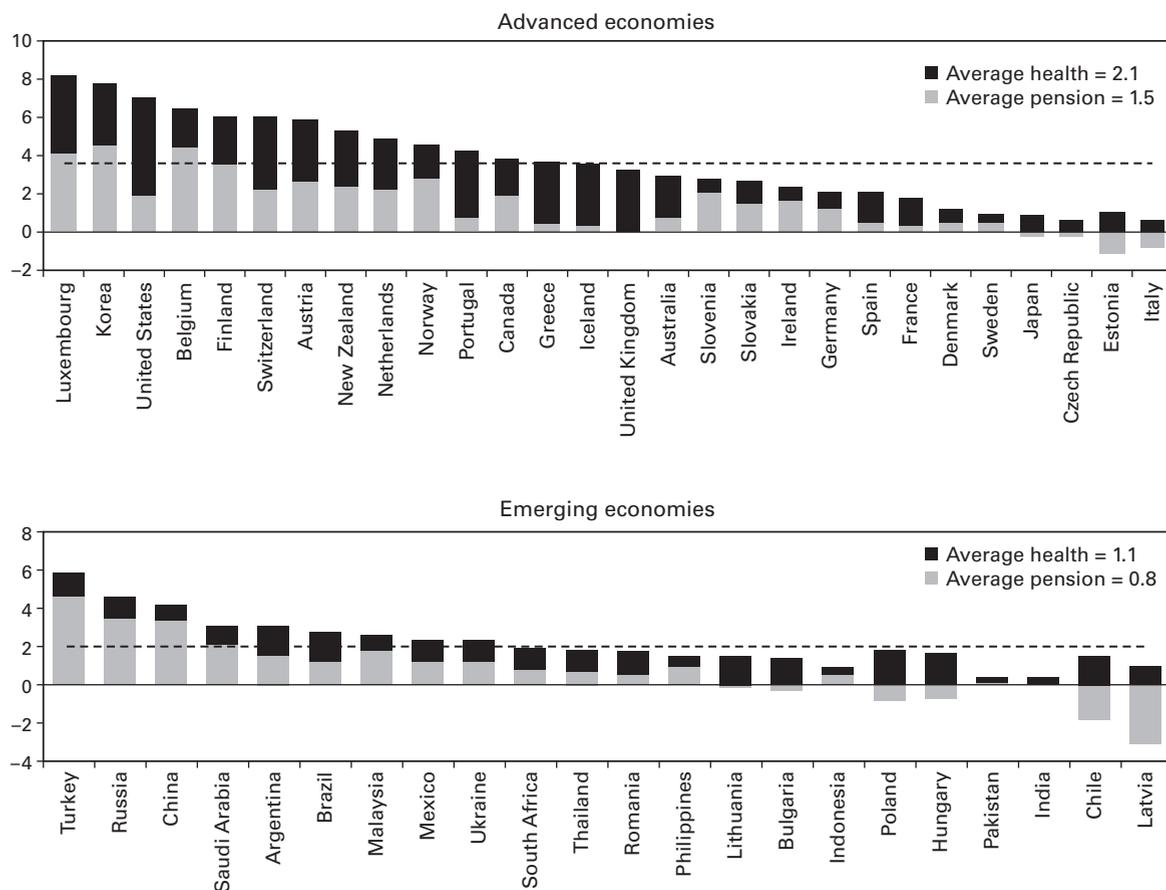
### 19.3 Outlook for Public Pensions and Health Care Spending

Projected increases in age-related spending are substantial in many advanced and emerging economies. Spending in public pensions and health care is projected to increase by 3.5 percentage points of GDP in the advanced economies and by 2 percentage points of GDP in the emerging over the next two decades, in large part owing to projected increases in health care spending.<sup>7</sup>

The cumulative fiscal cost of these projected spending increases is large. The average present discounted value (PDV) of age-related spending increases over 2010 to 2050 is 142 percent of 2010 GDP in advanced (44 percent from pensions and 98 percent from health) and 61 percent for emerging economies (29 percent from pensions and 32 percent from health).<sup>8</sup>

#### 19.3.1 Public Pensions

Pension spending is projected to increase by 1.5 percentage points of GDP over the next two decades in advanced economies and less than 1 percentage point in emerging economies, but substantial variation exists across countries. Among advanced

**Figure 19.3**

Increase in public health and pension spending, 2011 to 2030

Sources: OECD; ILO; WHO; UN; IMF staff estimates

economies, increases in spending in excess of 2 percentage points of GDP are projected in Austria, Belgium, Finland, Korea, Luxembourg, the Netherlands, New Zealand, Norway, Slovenia, and Switzerland, while spending is projected to decrease in the Czech Republic, Estonia, Italy, and Japan. Among emerging countries, spending increases are projected to exceed 3 percentage points of GDP in China, Russia, and Turkey; and to decrease in Bulgaria, Chile, Hungary, Latvia, Lithuania, and Poland.

Pension reforms enacted over the past two decades have been crucial in containing the impact of population aging on spending. In the absence of reforms, these demographic changes would increase public pension spending by 4.5 percentage points of GDP in the advanced economies, 4 percentage points in emerging Europe,

and 2 percentage points in other emerging economies. If implemented as planned, as assumed by the above projections, enacted reforms will lower average pension spending in 2030 by 3 percentage points in the advanced economies, 3 1/2 percentage points in emerging Europe, and 1 percentage point in other emerging economies.

There is considerable uncertainty with respect to these pension spending projections, but risks are on the upside for a number of countries. First, the impact of aging is directly related to demographic assumptions—fertility rates and longevity—for which past projections have proven relatively optimistic. Second, projected spending in a number of countries is based on relatively optimistic macroeconomic assumptions, involving, for example, high productivity growth. Third, official projections are also subject to risks of reform reversal. In response to substantial aging challenges, legislated reforms often imply ambitious reductions in pension spending. As these reforms take effect, political pressure to reverse them could mount. To reduce the risk of reform reversal, replacement rate reductions should not undermine the ability of public pension systems to alleviate poverty among the elderly. For example, in Greece and Italy, recent reforms have reduced benefits while protecting low-income pensioners.

### 19.3.2 Public Health Care

Public health spending in advanced economies is projected to rise, on average, by 2 percentage points of GDP over the next twenty years. Spending is projected to increase by over 2 percentage points of GDP in 14 of the 27 advanced economies. Around one-third of the increase would be due to the effects of population aging, a slightly higher share than in the past. The remaining two-thirds would be due to excess cost growth, reflecting technological change, income growth, the Baumol effect, and health policies.

The projections suggest that the outlook is grim in the United States, but also in Europe, where the fiscal challenge posed by health spending is sometimes underestimated. In the United States, public health spending is projected to rise by about 5 percentage points of GDP over the next twenty years, the highest of the advanced economies. Spending increases are expected to be driven by continued high rates of excess cost growth. In Europe, public health spending is also expected to rise substantially, by 2 percentage points of GDP, with spending expected to rise by over 3 percentage points of GDP in seven countries.

Recent health care reforms in most advanced countries are unlikely to alter long-term public health spending trends. In the United States, a sweeping reform expanding coverage was introduced and is expected to reduce the budget deficit primarily because of higher payroll and excise taxes on health. The envisaged expenditure savings, however, are small and remain highly uncertain because the revenue and spending measures would largely offset each other, and because past efforts to curtail

health spending increases had been overridden by Congress before taking effect. In Europe, fiscal adjustment plans affecting general government employment and compensation could have an effect on health spending in the near term, but their long-term effect on excess cost growth is uncertain. Recent reforms have also addressed spending on pharmaceuticals, which constitutes about 15 percent of public health spending. In the United Kingdom, a broader effort to contain spending increases is envisaged, with real health spending budgeted to rise by less than 0.5 percentage point over the next four years as part of the government's fiscal adjustment efforts. In Germany, health reforms include the reversal of the reduced health care contribution which was approved in November 2010, but spending reductions are expected to be small (0.1 percentage point of GDP). In any case, these reforms in advanced economies, including those being undertaken in Greece as part of its fiscal adjustment program, have not been incorporated into the projections because these reforms are still evolving. The impacts of these reforms on the growth of public health spending, however, are expected to be limited.

Public health spending in emerging economies is projected to rise by 1 percentage point of GDP over the next twenty years, a third of the increase projected for the advanced economies. This is consistent with the assumption that excess cost growth in these countries will follow the average level observed in advanced countries over 1980 to 2008, and is also consistent with the lower initial health expenditure ratios in emerging economies. In most countries, the increase would range between 0.5 to 1.5 percentage points of GDP. Aging would account for about 0.5 percentage point of GDP increase in this spending and would have the largest effect on spending in Brazil, Chile, and Poland.

Spending pressures in emerging Europe and Latin America are expected to be higher than in emerging Asia. On average, spending would rise by 1.5 percentage point of GDP in both emerging Europe and Latin America, with all countries projected to raise spending by at least 1 percentage point of GDP. In emerging Asia, spending increases would be about half this amount, reflecting the low initial spending levels in these countries. The modest increases projected across all regions suggest that rising health spending is unlikely to pose a heavy fiscal burden in emerging economies over the next twenty years, which is consistent with the view that the primary challenge for these countries is to improve the efficiency of this spending and quality of services.

Health spending projections are also subject to considerable uncertainties. Similar to pension spending projections, demographic assumptions, including fertility and longevity, could be overly optimistic. There are large uncertainties regarding the advances of medical technologies in the future. Moreover demographic and technological assumptions could interact with each other and manifest the uncertainties even further. For example, breakthroughs in medical technologies could save lives

and extend life expectancy, and at the same time the types of medical advances could also be related to the demographic profiles of the populations.

## 19.4 Reform Options

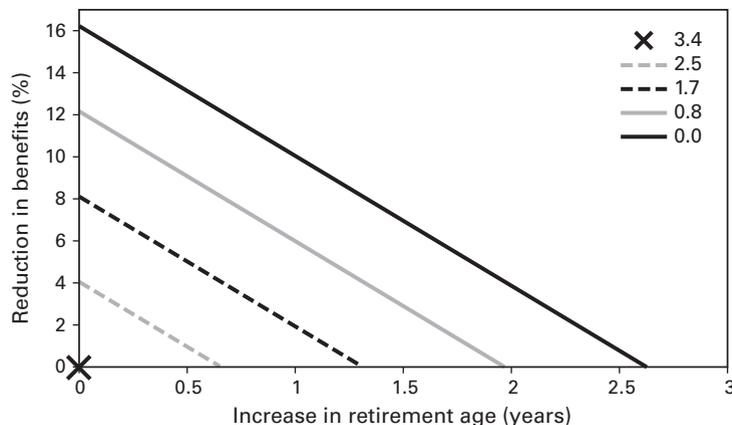
Reforms are necessary for the long-term sustainability and performance of the public pension and health care systems in many countries. For countries with large projected spending increases and limited fiscal space, the challenge is to contain the growth of public pension and health spending without adversely affecting the social objectives of these programs; for countries where coverage is still limited and with available fiscal space to increase spending, the challenge is to expand coverage while keeping the systems in a fiscally sustainable path.

### 19.4.1 Public Pensions

There are a number of considerations that should guide pension reform. First, the basic objective of public pensions is to provide retirement income security within the context of a sustainable fiscal framework. Many economies will need to achieve significant fiscal consolidation to lower their debt-to-GDP ratios over the next two decades (IMF 2010a, 2011a). Related, countries could consider strengthening their overall fiscal positions and reducing public debt in anticipation of age-related spending pressures. Pension reform could potentially play an important role in this. Second, the importance of providing income security, especially for low-income groups, suggests that equity should be a key concern of pension reforms. Third, the design of public pensions could potentially have an impact on economic growth through its effect on the functioning of labor markets and national savings.

Pension reforms that curtail eligibility (e.g., by increasing the retirement age), reduce benefits, or increase contributions can help countries address fiscal challenges. The trade-offs across these choices are illustrated in figure 19.4. Beyond what is already legislated, with no increases in payroll taxes and no cuts in benefits, average statutory ages would have to increase by about another 2.5 years on top of what is included in the baseline to keep spending constant in relation to GDP over the next twenty years in advanced economies. Relying only on benefit reductions would require an average 16 percent across-the-board cut in pensions. Relying only on contributions would require an average payroll rate hike of 3.5 percentage points. To keep pension spending as a share of GDP from rising after 2030, additional reforms would be needed: for each decade, retirement ages would have to increase by about one year and three months, benefits cut by about 8 percent, or contribution rates increased by about 1.5 percentage points.

The appropriate combination of reforms depends on each country's circumstances. Nevertheless, raising statutory retirement ages has clear advantages. First, it



**Figure 19.4**

Trade-offs across reform options to stabilize spending, 2010 to 2030  
 Sources: OECD; EC; ILO; UN; IMF staff estimates

would promote higher employment levels and economic growth, while increases in social security contribution rates could decrease labor supply. By increasing lifetime working periods and earnings, raising the retirement age can also boost the growth of real consumption, even in the short run (Karam et al. 2010). Second, raising retirement ages would help avoid even larger cuts in replacement rates than those already legislated, thus reducing the impact of reforms on elderly poverty. Third, increases in retirement ages could also be easier for the public to understand in light of increasing life expectancies. Increases in the statutory retirement age would need to be accompanied by steps to limit early retirement, for example by decreasing (financial) incentives to do so (Queisser and Whitehouse 2006) and by controlling alternative pathways to retirement such as disability pensions (OECD 2006). Furthermore, they should also be accompanied by measures that protect the incomes of those that cannot continue to work. In the United States, for example, about a quarter of all workers in their sixties may find continued work difficult on account of disabilities or reduced health status (Munnell, Soto, and Golub-Sass 2008). Older workers should be protected fully by disability pensions where appropriate and social assistance programs to ensure that increases in retirement ages do not raise poverty rates. To ensure that higher life expectancies do not erode the progressivity of pension systems, consideration could be given to offsetting measures, such as reducing replacement rates for upper income households.

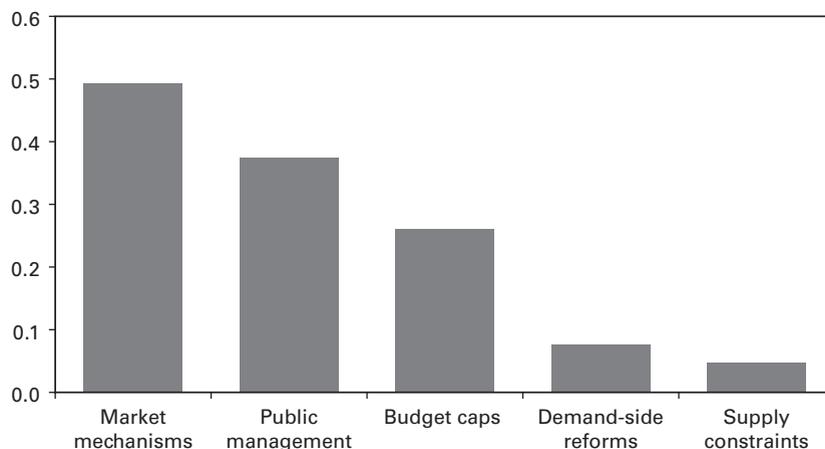
In emerging Europe, priority should be given to putting public pensions on a sound financial footing. Countries in emerging Europe look closer to the advanced economies than to other emerging economies in terms of public pension spending

and the importance of aging. Although fiscal adjustment needs are not as large as in advanced economies (IMF 2011a), fiscal conditions are weaker than in other emerging economies and gross financing needs remain above 10 percent of GDP in several economies. In this light, pension reforms could help support fiscal adjustment over the medium to long term. Public pension spending is projected to rise sharply in some countries that have not reformed their systems, including Lithuania, Russia, and Ukraine. In these countries parametric reforms are needed to contain the growth in pension spending. For countries that have introduced mandatory private pensions, the priority should be to stabilize spending in the pay-as-you-go component before further expanding their mandatory private pension systems.

In other emerging economies, increasing pension coverage in an affordable way remains a key challenge. On average, coverage rates are particularly low in emerging Asia, somewhat higher in Latin America, and still higher in Middle Eastern and African countries. This partly reflects the high degree of economic informality in these countries. Assuming the same replacement rates and eligibility rules of current systems, relatively modest expansion in pension coverage would raise pension spending substantially. Over the next two decades, increasing coverage from 26 to 32 percent—the projected increase in coverage taking into account the projected growth in GDP per capita—would increase spending by 0.5 percentage points of GDP in emerging Asia. Similarly, in other emerging economies outside Europe, increasing coverage from 69 to 78 percent would increase spending by 1 percentage point of GDP. Parametric reforms to existing public pension schemes, including raising retirement ages and lowering replacement rates, will be required to contain these costs. In addition, for countries with very low coverage rates, “social pensions” that provide a flat pension aimed at poverty reduction could be considered. However, the cost of social pensions can be substantial (around 0.5 percent of GDP) (Holzmann, Robalino, and Takayama 2009). To contain fiscal costs, these schemes should be means-tested to target only the needy. In addition the design of such programs should aim for benefits that are sufficient to alleviate poverty but low enough to minimize incentives to remain outside of the formal pension system.

#### 19.4.2 Public Health Care

Past reform experiences in advanced economies show that health care reforms could help slow the growth of public health spending. Econometric analysis of the relationship between key indicators of health care systems (Joumard, Andre, and Nicq 2010) and the growth of public health spending identifies health reform measures that can be effective in containing public health spending. These reform measures are also supported by country case studies and event analysis of reform episodes. The impact of particular reforms on the growth of public health spending is then simulated by changing a country’s score on these indicators.



**Figure 19.5**

Average impact of reform components on health spending, 2030 (decrease relative to the baseline; percent of GDP)

Sources: OECD Health Database; IMF staff estimates

Figure 19.5 shows the average impact of raising countries to the mean score in these indicators on public health spending-to-GDP ratios in 2030, grouped in five categories: budget caps (including budget constraints and central government oversight), public management and coordination (including “gatekeeping” processes that require referrals for accessing specialized care and subnational government involvement), market mechanisms (including choice of insurers and providers, private provision, and the ability of insurers to compete), demand-side reforms (including expansion of private insurance and cost-sharing), and supply controls (including regulation of the health care workforce). Reforms of market mechanisms can be powerful, yielding a reduction in spending of about 0.5 percentage point of GDP. The exercise also underscores the importance of budget caps, which can reduce spending by 0.25 percentage point of GDP. The simulated impacts of demand-side reforms and supply constraints are small, but not negligible.

It is important to note that the possible savings under reforms is subject to uncertainty. Simultaneous reforms across different aspects of the health system may be undesirable or counterproductive. Thus, the effect of the reforms across categories may not necessarily be aggregated. Some reforms, however, could be complementary, implying that the savings under any particular reform may be understated.

The impact of the simulated reforms might still fall short of what would be needed in some countries to stabilize public health care spending-to-GDP ratios at current levels. Thus additional efforts would be needed to achieve this target, or fiscal adjustment might need to rely more on cuts in other areas or additional revenue increases.

This is especially important in some advanced European economies with relatively high projected growth in public health spending, such as Austria, Portugal, Switzerland, and the United Kingdom. In the United States the challenge would be even larger. The illustrative savings from an assumed increase to the mean in the category of budget caps would yield savings of about 1 percentage point of GDP. Other options to reduce spending in the United States, beyond those captured in the econometric analysis, include the extension of health information technology, which would yield savings of 0.25 percent of GDP.<sup>9</sup> Curtailing the favorable tax treatment of health insurance contributions (which involves tax expenditures amounting to about 2 percent of GDP) could potentially yield large savings, and recent proposals in this area would yield savings of an additional 0.5 percentage point of GDP on an annual basis.<sup>10</sup> All told, these reforms, including those simulated in the econometric analysis, would reduce spending (including tax expenditures) by about 2 percentage points of GDP. Even with the reforms, however, health spending would still be rising by 3 percentage points of GDP.

Reform options and the appropriate mix of reforms will depend on country characteristics and the projected outlook for the growth of public health spending. The reform impacts simulated above focus on strengthening cost-containing characteristics of health systems on which countries score below the OECD mean. Of course, all the identified reforms using this methodology may not necessarily apply to every country. Box 19.1 provides an assessment of options using this approach.

For emerging economies, the challenge is to improve health outcomes in a fiscally sustainable matter, as average life expectancy is about nine years lower than in advanced economies and infant mortality rates are significantly higher.

In emerging Europe, health spending is relatively high by emerging economy standards, as coverage of the population is nearly universal and disease patterns mirror those of advanced economies. Given limited fiscal space,<sup>11</sup> most of emerging Europe will need to rely on additional micro-level reforms to improve health outcomes, rather than on increasing spending. Most of these countries (including Estonia, Hungary, Latvia, Russia, and Ukraine) have successfully contained spending, in some cases implementing reforms similar to those of the advanced economies. Estonia and Hungary, for example, implemented a single insurance fund and a global budget, which helped contain spending growth and reduced transaction costs.

In most emerging economies of Asia and Latin America, the main challenge remains to expand basic coverage to a larger share of the population without generating undue fiscal pressures over the medium term as incomes rise and these systems expand. In these economies, increased public spending could not only improve health indicators but also catalyze economic growth (Baldacci et al. 2008). These economies should aim to expand their systems in a way that avoids the inefficiencies and resulting high costs of health systems in the advanced economies.

**Box 19.1**

Potential reform strategies to contain the growth of public health spending

**Countries Relying on Market Mechanisms**

In Canada, the Czech Republic, France, Germany, Japan, and the Slovak Republic, staying the course with marginal reforms would be enough to contain excess cost growth, although bolder reforms could still be needed to offset the effects of demographics on health spending.

In Australia, Austria, Belgium, and the Netherlands, possible strategies include tightening budget constraints, strengthening gatekeeping (such as by requiring referrals to access secondary care), and increasing cost-sharing.

Greece, Korea, Luxembourg, Switzerland, and the United States are projected to have relatively high spending growth, indicating the need for future reforms, especially for Greece and Luxembourg, which score low on efficiency measures.<sup>a</sup> These countries tend to have less stringent budget constraints, minimal central oversight (Korea and Luxembourg), lax regulations of the workforce and equipment, and little gatekeeping. Future efforts to contain spending growth in these countries should address these weaknesses.

**Countries That Rely More Heavily on Public Insurance and Provision**

Denmark and Ireland could focus on efficiency-enhancing reforms to reduce spending growth. Italy and Sweden, both of which score high in efficiency, could improve priority setting in the area of health (for example, by better monitoring public health objectives and the composition of the public health package).

In Norway and Spain, containing the growth of spending could require tightening macro controls (including central oversight), broadening private insurance for care beyond the basic health package (Norway), and improving priority setting (Spain).

Finland, Iceland, New Zealand, Portugal, and the United Kingdom have relatively high projected spending growth. Countries in this group could strengthen supply constraints on the workforce and equipment (e.g., by rationing high-technology equipment). In addition these countries could benefit from extending the role of private health insurance for over-the-basic care and increasing choice among providers (especially in Finland, New Zealand, and the United Kingdom).

a. The assessment does not take into account reforms in Greece since 2010.

Emerging economies in Latin America and Asia have more scope to increase spending but will need to avoid putting health systems on a fiscally unsustainable path as they expand coverage. In many of these economies, the public system provides coverage for only a small share of the population, and in some cases the benefit package, even for those covered, is insufficient to protect against all key health risks. Thailand and Chile have successfully expanded basic coverage at a low fiscal cost and provide valuable lessons for other countries. By extending benefits to a wide share of the population, health risks can be pooled for much of the population. This can lead to a substantial improvement in aggregate social welfare and equity, as it helps reduce the burden of catastrophic health events on low-income groups.

## 19.5 Conclusion

Age-related spending is projected to increase by 3.5 percent of GDP over the next two decades in advanced economies. These increases will occur at a time when countries need to undertake large fiscal adjustments to reduce public debt ratios in the wake of the global financial crisis. Lowering the general government debt-to-GDP ratio will require both revenue increases and expenditure reductions in many countries. On the expenditure side, stabilizing age-related spending to GDP ratios, including on both pensions and health by containing its growth, could constitute an important pillar of this strategy in advanced economies. Pension reforms that curtail eligibility (e.g., by increasing the retirement age), reduce benefits, or increase contributions can help countries address fiscal challenges while involving apparent trade-offs. Nonetheless, raising the retirement age is the preferred option. Containing public health spending requires a mix of macro-level controls, such as imposing budget caps, and micro-level efficiency enhancing reforms, such as strengthening market mechanisms.

In emerging economies, the projected increase is smaller than in advanced economies, with an average of 2 percent of GDP. In some emerging economies, the challenge ahead is to expand basic coverage for pensions and health to a larger share of the population in a fiscally sustainable manner while avoiding the inefficiencies and resulting high costs of the pension and health systems of advanced economies; in others, where coverage is already extensive, the challenge is to enhance the efficiency of public spending and limit its increase as a share of GDP. In these countries the needed reforms are broadly similar to those for advanced economies.

## Notes

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1. Excess cost growth is defined as the excess of growth in real per capita health expenditures over the growth in real per capita GDP after controlling for the effect of demographic change.

2. All country group averages are unweighted unless otherwise noted.
3. The advanced economies in this study comprise some 28 countries: Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, the United Kingdom, and the United States. The 22 emerging economies are Argentina, Brazil, Bulgaria, Chile, China, Hungary, India, Indonesia, Latvia, Lithuania, Malaysia, Mexico, Pakistan, Philippines, Poland, Romania, Russia, Saudi Arabia, South Africa, Thailand, Turkey, and Ukraine.
4. The public health spending data have been adjusted for statistical breaks to ensure comparability over time.
5. The Baumol effect refers to the rising unit labor costs in sectors where it is difficult to achieve productivity gains, usually in services. Because salaries tend to rise in these sectors in line with economywide averages, while productivity does not, unit labor costs rise in relative terms. For evidence of the Baumol effect in health spending, see Pomp and Vujic (2008).
6. The efficiency results cited here from Joumard, Andre, and Nicq (2010) control for the effects of these nonspending inputs on life expectancy. Although life expectancy is only one dimension of health status, it is highly correlated with other widely used health status indicators.
7. See IMF (2010c) and IMF (2011b) for details of the projection methodologies.
8. The estimates assume a growth-adjusted discount rate of 1 percent.
9. See Hillestad et al. (2005) and US Congressional Budget Office (2008).
10. See US Senate Joint Committee on Taxation (2008). A proposal to replace the employer-sponsored health insurance tax exclusion in the United States with a credit indexed to the consumer price index would save a little over 5 percent of GDP cumulatively over a ten-year period (Committee for a Responsible Federal Budget 2010).
11. This can be assessed with reference to the adjustment required for them to reduce debt to an illustrative target of 40 percent of GDP over the next twenty years.

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