This Survey is published on the responsibility of the Economic and Development Review Committee of the OECD, which is charged with the examination of the economic situation of Member countries.

The economic situation and policies of the United States were reviewed by the Committee on 11 September 2002. The draft report was then revised in the light of the discussions and given final approval as the agreed report of the whole Committee on 11 October 2002.

The Secretariat’s draft report was prepared for the Committee by Hannes Suppanz, Michael Kiley and Jaejoon Woo under the supervision of Peter Jarrett.

The previous Survey of the United States was issued in November 2001.
TABLE OF CONTENTS

Assessment and recommendations ................................................................. 7

I. Recent trends and prospects ........................................................................... 19
   A recovery from last year’s recession began early this year ......................... 19
   Near-term outlook and risks ........................................................................... 38

II. Macroeconomic policy .................................................................................... 43
   Monetary policy ................................................................................................. 43
   Fiscal policy ........................................................................................................ 54

III. Health system reform .................................................................................... 65
   Overview of the system and recent trends ....................................................... 65
   Assessment of the system’s performance ......................................................... 76
   The agenda and prospective directions for reform ........................................... 89

IV. Structural policy developments .................................................................... 97
   Problems in corporate governance and accounting practices have emerged ...... 100
   Progress in education reform .......................................................................... 103
   Social aspects of wellbeing have improved, in part because of policy actions .... 108
   Stepping back in trade and agriculture ............................................................. 126
   Some aspects of sustainable development ....................................................... 130

Notes .................................................................................................................... 144

Bibliography ........................................................................................................ 151

Annexes
I. The 11 September terrorist attacks, monetary policy and lessons for financial markets ...... 175
II. Budget enforcement procedures ...................................................................... 177
III. Public and private sector roles in the US health system .................................... 178
IV. Regulation of health insurance and provision ................................................ 179
V. Population health determinants in a panel of OECD countries ......................... 181
VI. Competition in health care markets ............................................................... 186
VII. The Bush Administration’s framework for Medicare reform ......................... 189
VIII. The Earned Income Tax Credit ..................................................................... 190
IX. Selected provisions of the 2002 Sarbanes-Oxley Corporate Reform Act .......... 191
X. Calendar of main economic events ................................................................. 193
Boxes

1. The 2001 recession ......................................................................................................................... 21
2. The recent evolution of profits ......................................................................................................... 29
3. The current account and the dollar .................................................................................................. 32
4. Potential output and the NAIRU ...................................................................................................... 34
5. Managed care .................................................................................................................................. 72
6. The patients’ rights debate .............................................................................................................. 73
7. Prescription drug coverage for Medicare beneficiaries .............................................................. 92
8. Recommendations concerning the health care system .............................................................. 96
9. Policy integration across sustainable development areas ......................................................... 130

Tables

1. Contributions to GDP growth ....................................................................................................... 21
2. Characteristics of recent recessions ............................................................................................... 22
3. Contributions to real GDP growth during recessions ................................................................. 23
4. Manufacturing output and utilisation ........................................................................................... 24
5. Personal income ............................................................................................................................. 27
6. Household net worth ..................................................................................................................... 28
7. Real non-residential fixed investment ........................................................................................... 29
8. Current account ............................................................................................................................. 32
9. Decomposition of potential output growth .................................................................................. 35
10. Labour market and compensation outcomes .............................................................................. 37
11. Near-term outlook ......................................................................................................................... 40
12. Capital flows into and out of the United States and the US net debtor position ....................... 50
13. Growth in monetary aggregates ................................................................................................. 51
14. Credit market debt outstanding by sector .................................................................................. 52
15. Federal revenue and expenditure ............................................................................................... 55
16. Effects of major legislation on revenue and expenditure .......................................................... 55
17. General government net lending ................................................................................................. 63
18. Health insurance coverage status and type by selected characteristics, 2000 ....................... 66
19. Personal health-care spending by source of funds ................................................................... 67
20. Health expenditure by type of service .......................................................................................... 74
21. International comparison of health expenditure-related indicators ........................................ 81
22. National health expenditure projections, 2001-11 ................................................................ 82
23. Characteristics of the uninsured, 2000 ....................................................................................... 84
24. Tobacco consumption and nutrition among OECD countries ................................................. 87
25. Summary of structural recommendations ................................................................................. 98
26. The largest corporate bankruptcies: 1980 to present .............................................................. 100
27. Sources of funds for educational institutions ........................................................................... 106
28. Household income by level of educational attainment ............................................................ 109
29. Important aspects of state TANF programmes .......................................................................... 112
30. Major research on caseload changes using data prior to 1996 welfare reform ....................... 114
31. Major research on caseload changes using data after 1996 welfare reform ............................ 115
32. Rates of crime victimisation in 1993 and 2000 .......................................................................... 120
33. Indicators of greenhouse gas (GHG) emission intensity ............................................................ 132
34. GHG emissions and sectoral indicators ...................................................................................... 133
35. State programmes for reducing carbon dioxide emissions from electricity generation .......... 136
36. Performance indicators: water pollution ................................................................................. 139
37. The impact of the Clean Water Act on river quality..........................................................140
38. Water level changes in the High Plains aquifer................................................................140
39. International water supply and use comparison.................................................................142

Annexes
A1. Fixed effects model of population health .........................................................................183
A2. Population health accounting .........................................................................................184

Figures
1. Aggregate economic indicators ..........................................................................................20
2. Increase in unemployment during recessions .....................................................................22
3. The shift towards permanent job losses ............................................................................23
4. Inventory-sales ratios across sectors ..................................................................................24
5. Household spending remained strong ...............................................................................26
6. Corporate profits and costs ...............................................................................................30
7. S&P 500 operating earnings and profits from the national accounts .................................31
8. The current account deficit and the real exchange rate ....................................................33
9. Labour productivity in the non-farm business sector .........................................................35
10. Inflation performance ....................................................................................................39
11. Total and core inflation ..................................................................................................44
12. Nominal and real federal funds rate ................................................................................45
13. Rates on selected Treasury securities ............................................................................46
14. Nominal and real long-term interest rates ......................................................................48
15. Exchange rates for the dollar ..........................................................................................49
16. Equity markets ................................................................................................................51
17. Corporate borrowing .......................................................................................................53
18. Comparisons of 2002-11 projected surplus and cumulative cost of alternative policies ....58
19. Projected Social Security and Medicare expenditures relative to GDP, 2002-75 ............59
20. Current receipts of state and local governments .............................................................60
21. Composition of state and local receipts ..........................................................................60
22. State and local current surpluses and purchases of goods and services ...........................61
23. State year-end balances as a per cent of expenditures ....................................................62
24. Tax expenditures from exclusion of employer contributions for health insurance premiums and medical care ...........................................................................................................68
25. Medicaid enrolment ........................................................................................................70
26. OECD health-care expenditures, 1999 .........................................................................76
27. Health expenditure and GDP per capita, 1999 ...............................................................77
28. Evolution of health expenditures as a percentage of GDP .............................................78
29. Comparative price levels for final health expenditure, 1999 ...........................................80
30. Life expectancy and GDP per capita, 1999 ...................................................................86
31. US student performance and educational expenditure relative to OECD averages, 1998 ..102
32. Per pupil spending and student performance ................................................................104
33. Trends in income inequality ............................................................................................108
34. Trends in poverty ............................................................................................................110
35. Selected unemployment rates ........................................................................................110
36. Welfare caseloads ..........................................................................................................113
37. The labour market for women who maintain families .......................................................116
38. Rates of crime victimisation across countries, 1995 .......................................................120
39. Trends in incarceration ...................................................................................................122
40. Share of GDP spent on criminal justice, 1998 ................................................................. 123
41. The effect of incarceration on the employment-to-population ratio of young black men .... 124
42. Household ownership of guns ......................................................................................... 125
43. Steel imports and employment losses ................................................................................ 126
44. Agricultural Producer Support Estimates, 2001 .............................................................. 129
45. Ambient water quality in US rivers and streams: violation rates........................................ 138

Annexes
A1. Discount window borrowing and the federal funds rate around 11 September ................. 176
ASSESSMENT AND RECOMMENDATIONS

After a short and shallow recession…

The US economy entered recession in the first half of 2001, with employment falling and industrial production continuing the slide it had begun in mid-2000. The downturn was relatively short and mild. Real GDP increased by ¼ per cent in 2001 as a whole. It declined in the first three quarters of the year, as firms cut stocks and capital spending while household spending slowed. Demand recovered surprisingly quickly after the 11 September terrorist attacks, but the contraction in payrolls persisted until early this year, and the labour market has yet to turn around. Nevertheless, the low unemployment rate prior to the slowdown has meant that, so far, it has not exceeded 6 per cent — well below earlier cyclical peaks and close to what would have been considered full employment just a few years ago. Inflation has receded markedly. Meanwhile the current account deficit has resumed its trend increase. The weak economy has been accompanied by a significant profits drop and a series of revelations regarding misleading accounts and deficiencies in corporate governance, weighing heavily on equity markets and, to a lesser extent, on the value of the dollar.

… a recovery is proceeding…

The economy began expanding again late in 2001 as the previous massive inventory reduction abated and manufacturing production rose in response. As a result, job losses diminished and even showed a modest reversal this spring. Household spending, which had remained relatively healthy throughout the recession, has continued to be the key contributor to final demand. Real disposable income has grown steadily, as the slowdown in compensation growth has been offset by lower inflation, last year’s tax rebates and this year’s tax-rate reductions, and yet another surge in refinancing resulting from lower mortgage rates. These factors have fuelled gains in residential investment and private consumption.

… in part due to substantial monetary and fiscal easing

The early turnaround in activity owes importantly to fiscal and monetary policy actions. In addition to the tax cuts, government spending accelerated after 11 September, mostly as a result of the war on terrorism and homeland defence. In addition, this March’s stimulus package gave a small lift to household incomes through extended unemployment benefits and should provide some impetus to business spending through its investment incentives. Monetary policy has also been very accommodative. The federal funds rate has been reduced sharply and held at a 40-year low since last winter. Other financial conditions have been less supportive: the dollar was very strong until the spring, and stock-market weakness has led to persistent declines in household net worth.

High productivity growth and low inflation bode

A welcome and important surprise during this recession and since has been consistently robust productivity growth, which points to a durable
improvement in the rate at which the economy can expand without rising inflation, to around 3 per cent per year. Along with some easing in compensation increases, this has generated a deceleration and most recently an absolute decline in unit labour costs. With excess supply putting downward pressure on prices, inflation has fallen significantly. This has given monetary policymakers the flexibility to retain an accommodative stance.

The turnaround in production last winter stemmed primarily from reduced de-stocking, and a sustained recovery will require a broadening in final demand strength beyond household and government purchases, which have begun to moderate. The timing of a recovery in business investment, which contracted rapidly during the recession, is uncertain, although equipment spending has already shown signs of recovery. The OECD’s central projection is for real GDP to increase by nearly 2½ per cent this year and 2¾ per cent in 2003. However, downside risks remain. Concerns over corporate profits may make managers more tentative when deciding on capital spending and employment. A slow improvement in the labour market and continued equity-market turbulence could further crimp confidence. On top of these uncertainties, the widening in the current account deficit has helped bring the dollar under pressure. Additional declines in stock markets and a rise in long-term interest rates could accompany a more severe depreciation, although a weaker dollar would eventually have some positive effect on exports. Oil prices, which have risen recently and could jump further, may also place a drag on activity. Finally, the question of how and when the large external deficit and associated weakness of domestic saving will be unwound remains a risk factor, even if some “corrective” scenarios—especially those associated with stronger domestic demand growth abroad—are not particularly disruptive. At the same time, positive factors should not be overlooked. Equipment orders have strengthened, and, as corporate profits recover with ongoing growth and tax breaks, a quicker-than-expected resurgence in business investment could emerge. And monetary and fiscal policies together continue to provide an unusually strong impetus to demand.

The amount of monetary stimulus is manifest in real short-term interest rates near zero. This is as low as early in the last recovery and compares with a long-term average of just below 3 per cent. However, current OECD projections of GDP growth imply that economic slack will only gradually dissipate. Given the marked deceleration in inflation and the tepid recent pace of final demand growth, the authorities would seem to have room to wait until the recovery is more clearly established before shifting to a more neutral stance. Moreover, in light of the moderate pace of the projected upturn, the considerable output gap and the continued equity-market weakness, policy tightening should probably proceed quite gradually. Indeed, the authorities could conceivably even need to ease policy further in the short run, should the recovery falter or financial markets not find their footing. On the other hand, given the extent of the current monetary stimulus to the economy, policymakers should also stand ready to
place more substantial restraint on activity if demand accelerates unexpectedly, especially if the dollar continues to give up earlier gains.

The Federal Reserve has already taken a number of measures to increase the transparency and accountability of monetary policy. But further steps in this direction could be considered — in particular, the introduction of an inflation-targeting framework as it exists in many other Member countries. In essence, informal inflation-targeting has been pursued in the United States in recent years. Thus, such a move would serve to a large degree to formalise some of the positive features of current practice. In effect, it could help institutionalise recent good monetary policy and provide some greater assurance of its continuity. Reduced uncertainty for investors, consumers and companies would better anchor inflation expectations and, ultimately, might lead to even better outcomes.

The fiscal position has deteriorated much more than earlier expected...

The federal budget deficit was close to 1½ per cent of GDP in the fiscal year just ended, a sharp reversal from the surplus of 2½ per cent recorded two years earlier. The deterioration reflects faster growth in discretionary spending, last year’s large tax cut, cyclical revenue weakness and new expenditure requirements after 11 September. Increases in defence and homeland security outlays have been highest on the list of new priorities. But the stimulus measures enacted in March are also expected to increase the deficit by roughly $50 billion in both FY 2002 and FY 2003. A return to federal budget surpluses is very unlikely over the next few years. Spending pressures remain strong, and the framework that has disciplined budget decisions since the early 1990s has just expired and needs renewal or replacement. In addition, federal tax receipts have been surprisingly weak this year, reflecting a shortfall in capital gains and stock-option-related revenue that will not reverse until after equity markets recover. The situation among the states is similar, although their revenue shortfalls have led to more rapid tax and spending adjustments since they are typically required to run balanced budgets on current outlays. Nonetheless, the general government deficit is expected to reach 3 per cent of GDP in 2002 before edging down to 2½ per cent in 2004.

Beyond the next couple of years, the federal budget will begin to encounter some structural challenges that are likely to worsen the fiscal position considerably, including currently slated changes in the tax law. The Alternative Minimum Tax (AMT) is expected to apply to a rapidly growing number of taxpayers over time, both because it is not indexed and because current law extends the tax to more households after 2004. The AMT contributes significantly to tax complexity and blunts a number of policy initiatives embedded in the tax code. Hence, the tax code will probably be amended to eliminate the AMT’s rising importance, which could lower revenues by $60 billion a year in a decade. In addition, the entire package of last year’s tax cuts expires in 2010 (a provision that lowered the legislation’s revenue cost and boosted projected surpluses), and efforts have already begun to make these permanent. These potential tax-law changes, together with a likely faster rate of discretionary spending growth than assumed in official forecasts, would imply that the return to substantial surpluses in current government projections is unlikely. Nonetheless, even moderate
deficits would lead to a continued decline in the debt-to-GDP ratio. But this does not preclude the existence of long-run imbalances in Social Security and Medicare. The evaporation of projected substantial surpluses over the next decade implies that any move towards effectively pre-funding these liabilities will require new revenues or cuts in other spending. Absent such pre-funding, reforms to Social Security and Medicare to reduce future benefit promises would seem essential to manage the transition to a sustainable long-run budget situation.

The US health-care system is unique in the OECD area. It is responsive, adapting quickly to changes in consumer preferences. Moreover, most Americans are highly satisfied with the care they receive. However, despite spending vastly more than other Member countries, both per capita and in relation to GDP, its relative performance on various measures of health status is only about average among OECD countries, and there is evidence to suggest that the same clinical outcomes could be achieved using fewer resources. Furthermore, the US system is the only one among the wealthier OECD countries that does not provide universal insurance coverage. After broad stability relative to national income over most of the 1990s, health spending has re-accelerated and is projected to rise from 14 per cent of GDP today to 17 per cent in 2011, just as the ageing of the baby-boom generation gets underway. The expansion of managed care succeeded temporarily in limiting cost increases, both by curbing prices paid to providers and reducing use of inpatient hospital care. With providers now exploiting more effectively their bargaining power with health plans and patients pressing for greater choice of providers and treatments, the managed-care approach seems to have largely exhausted its cost savings potential. As a result, premiums for private health insurance are again rising at double-digit rates. Public programmes are also facing unsustainable cost increases.

The share of the population covered by insurance has generally fallen over the past decade, despite some temporary improvement during the economic boom of the late 1990s. Given the absence of universal coverage and the high cost of care, many Americans are at risk of being uninsured at some point in their lives, and some of the insured are also at financial risk due to under-insurance. Some assurance of access to care for emergency services for the uninsured is required by law, and some other care is provided for free. This is, however, an inefficient and expensive way to provide care. It results in unnecessary spending on complications from conditions that could have been prevented and in population health that is inferior to what could be expected, given relative levels of per-capita income and health expenditure. This is also due to the prevalence of some risk factors, such as obesity — of which the United States suffers the highest rate among OECD countries — drug consumption and crime. Furthermore, service use and health outcomes vary widely across the population on a number of dimensions such as income, ethnicity and geographic location, raising equity concerns. The rise in the number of uninsured has occurred despite eligibility expansions for public programmes (in particular the introduction of the State Children’s Health Insurance Program). In addition, competitive pressures are reducing the ability of providers to serve as a

... while the number of uninsured remains excessive
safety net and provide free care for the uninsured and under-insured. In the absence of new policy directions, a further increase in the number of Americans without health insurance would seem likely, given both cyclical and renewed sectoral cost pressures.

Given the complex structure of the US health care system…

Incomplete insurance coverage, escalating costs and seemingly inefficient spending remain fundamental challenges to policymakers. Relatively few policy levers exist at the national level to address these problems, however, given the system’s diversity and decentralisation. In fact, the US health sector consists of a number of systems of financing and delivery. Private employers, public programmes and individuals buy insurance from more than a thousand companies offering thousands of products. Although the public sector plays a significant role in financing and is the main purchaser in some markets, the private sector is dominant in providing insurance coverage for most Americans. It is, therefore, a critical force driving change and serving as a testing ground for potential reforms, more so than in any other OECD country. Of course, reliance on multiple sources of health care financing in a system of voluntary coverage has some drawbacks, notably high administrative costs, more difficult cost control and incomplete access to care.

… reforms will have to involve both expanded private spending…

With managed care’s reduced leverage over health spending, there is a need to strengthen economic incentives for patients, providers and insurers to make more cost-effective decisions. Public policy can support this by providing tax incentives for the use of health insurance products that combine preventive care and coverage for catastrophic care with defined contribution components that reward value-based purchasing for other care (such as Medical Savings Accounts and Health Reimbursement Arrangements) and, thus, reduce over-consumption. At the same time, insurance product regulation might have to be strengthened in order to try to limit cream-skimming behaviour and its undesirable effects on risk pooling. To foster cost-conscious decision making, further efforts are also required to develop the information base on the relative performance of health plans and providers, and the relative value of different treatments and technology use. The most important source of health spending growth has been technological advancements, such as new surgical techniques, drug therapies and diagnostic and treatment devices. Strong cost pressures reflect minimal controls on either supply or demand, resulting in earlier and more widespread adoption of such approaches than elsewhere. Public programmes and agencies can encourage efficient application of health technologies through systematic, evidence-based assessment of the costs and benefits of new technologies, which should be made publicly available. Third-party payers, both public and private, should use such information in their coverage decisions and should promote its consideration by providers and patients alike in making their treatment choices through economic incentives (such as co-payments, selective contracting with agreed providers, and reformed providers’ reimbursement schemes). More vigorous enforcement of anti-trust policies could also contribute to cost-effective use of new technologies and pharmaceuticals and possibly mitigate drug price inflation. Another desirable initiative would be reforming the framework for litigation.
with respect to medical malpractice, a contributor to both higher prices (through costly insurance premiums) and to increased volume of services (due to “defensive” medical practices).

There is widespread agreement that Medicare needs to be reformed to ensure efficient spending and to contain projected rapid cost growth and financing shortfalls associated with the retirement of the baby boom generation that threaten the programme’s long-term sustainability. At the same time, it is recognised that there are serious gaps in benefit coverage, with potentially adverse health consequences. Most notably, Medicare does not provide coverage for outpatient drugs. The Administration’s reform proposal addresses these issues, calling for regulatory and administrative changes, better health insurance options and an expansion of benefits to cover prescription drugs and preventive care. While it can be argued that Medicare should provide the most effective treatments and services, it has to be ensured that it has adequate levers to control the significant costs associated with enhanced benefits (up to 2 per cent of GDP by 2030). Harnessing the positive effects of competition among health plans and providers could produce efficiency gains through reducing unnecessary care while providing better preventive care, although adequate protection for the elderly and disabled populations served by the programme must be maintained. Medicaid is also being challenged to retain its expanded coverage in the face of strongly rising costs, particularly for prescription drugs. The programme is the main payer for services not covered by Medicare and private insurance, such as long-term care. Thus, other payers’ efforts to curb spending may just shift costs to Medicaid. This highlights the need for a comprehensive approach to cost containment.

In the absence of a universal coverage system, the basic options for addressing the problem of the uninsured are to build on existing public programmes or to facilitate additional private coverage. Recent experience suggests that broadening eligibility for public programmes to include more of the poor or near-poor can have some impact on the number of uninsured. However, budgetary constraints limit the scope for further expansion. Indeed, many states have recently had to reduce Medicaid funding and eligibility. The Administration has proposed the introduction of a modest refundable tax credit in order to assist uninsured individuals in purchasing private health coverage. The effectiveness of such a device will depend on critical design issues, notably the amount of the tax credit relative to premium levels. In this context, current tax concessions should be reconsidered. The unlimited tax exclusion of employer-furnished health benefits (amounting to about 1 per cent of GDP) encourages the purchase of costly insurance packages. Capping this subsidy could reduce this and, at the same time, partly offset the budgetary cost of any new tax credit. However, care would need to be taken to ensure that tax policy changes result in net increases in insurance coverage and minimal shifting of covered populations to less efficient forms of coverage. Finally, the problem of cost-induced shrinkage in insurance coverage by firms using the small-group market should be addressed by promoting larger risk pools at the state and local
Good structural policies and the long expansion have enhanced economic and social conditions. The better growth outcomes since the mid-1990s have complemented an improved set of structural policies, leading to gains in wellbeing that are likely to endure. In particular, the resurgence of healthy productivity growth and the tight labour market over the late 1990s combined to boost real incomes and to yield the lowest unemployment rates in a generation across all social/demographic groups. The rapid increase in income inequality witnessed throughout the 1980s and early 1990s moderated, and poverty declined markedly. Welfare dependency fell dramatically. And crime receded significantly as a result of tougher policing and sanctions, demographic changes, reduced drug use and reinforced work prospects for the less skilled. The recession will have dented these gains somewhat, but better economic conditions — especially for low-income working parents — should continue. To an important extent this stems from the expansion of social programmes targeted at increasing the returns to work and requiring work for social assistance. Perhaps the most important factor was the expansion in the Earned Income Tax Credit (EITC), especially in 1993, but the 1996 welfare reform also focussed squarely on work. The Temporary Assistance to Needy Families (TANF) programme eliminated the entitlement to government assistance, required work for welfare recipients and introduced a lifetime five-year time limit for welfare receipt. With the new emphasis on jobs, caseloads plummeted and work by single mothers rose. However, a significant and still unclear portion of these gains — particularly in employment — was due to the strong economy. The TANF programme is subject to re-authorisation over the coming year, and the debate has focused on what policy changes could solidify or even build on recent achievements. One contentious issue has been whether funding levels (which have not changed since 1996) should be increased in order to improve the provision of childcare or other supplementary assistance. Another has been whether work requirements should be tightened. The current programme places the onus on states to ensure that single- and two-parent families receiving assistance work 30 and 35 hours a week, respectively; but states receive credit against this requirement when caseloads decline, and hence the existing work requirements have not been binding. Raising the stringency of work requirements by lowering the credit for reduced caseloads would be an appropriate first step. Increases in the workweek, which would tighten work requirements further, could follow once the impact of binding work requirements is clear. Longer workweeks may complicate issues regarding childcare and transportation needs. In this regard, state-level experimentation on how best to encourage work by combining the programmes for cash assistance, childcare, food stamps and perhaps even medical care should be allowed. This would provide valuable information on the best combination of programmes to facilitate work and wellbeing. Such experimentation would also improve the functioning of the safety net by clarifying the reasons for the marked drop in the number of eligible children receiving assistance (e.g. through food stamps). Greater co-ordination between welfare and these other forms of assistance may reverse this trend. Another concern is that the increased work incentives provided by welfare reform and the...
EITC have been much less effective for less-skilled men. Even so, their unemployment rate has also fallen, but that is primarily attributable to their departure from the labour force and increased use of disability insurance (a factor that has depressed measured unemployment by perhaps two-thirds of a percentage point). Raising their returns to work by increasing their EITC credit and lowering their disincentives to work created by the disability programme would enhance the utilisation of available labour resources. While these in-work benefits have helped bring many people back to the labour market, they have been less successful in building good careers. This would point to a need for other policies that upgrade skills, though such policies in the United States have had a mixed record.

This year’s package of education-policy changes (the No Child Left Behind Act) focused appropriately on raising the quality of education received by students in poorly-performing schools (which are often those serving low-income areas). Funding at the federal government level for low-income school districts was increased, and the recent movement towards greater accountability in public schooling was strengthened. While the states will have a great deal of freedom in creating new required annual tests for those in Grades 3 to 8 and defining satisfactory progress and standards, biannual national exams will be a mandatory component of assessment. Results will be presented to parents with a detailed demographic breakdown to facilitate identification of pockets of weakness. Students in schools that have been identified as failing will be eligible for supplementary assistance, such as tutoring, and may even transfer to another school within their public-school district, although this may not inject a sufficient degree of competition into schooling, particularly at the secondary level where many districts contain few schools. There is a case for going further, perhaps by providing vouchers that could be used in any school. In addition, efforts to measure and increase the quality of teachers will be stepped up. Recent state efforts have shown that testing and accountability can improve results when properly implemented. State and local policies are decisive as federal funding is a tiny proportion of overall education expenditures. Even so, direct federal support for education is targeted almost exclusively on low-income areas and hence could have important effects. However, it is also worth noting that indirect federal support for education through the tax system disproportionately serves middle- and high-income areas, as property taxes are a primary source of school funding and are deductible from federal income tax liability. The overriding problem of unequal real funding across localities remains.

The collapse of Enron last year has been followed by a series of revelations regarding poor and misleading financial information from US corporations, and a number of large corporate bankruptcies. While market-based mechanisms have exerted pressure for auditors, analysts, rating agencies and investors themselves to be more vigilant, a strong policy response was also required, and the reforms contained in the summer’s Sarbanes-Oxley Act have moved in the right direction. Penalties for fraud and provision of misleading financial information — including prison sentences for criminal actions — have been stiffened, a new oversight body policing auditors has been created, accounting firms have been forbidden
from providing certain consulting services to firms they audit, and corporate officers have been required to certify the accuracy of financial statements. In addition, funding for the Securities and Exchange Commission has been increased significantly, which will aid enforcement and facilitate the groundwork necessary to effectively implement recent reforms and study areas for future improvement. The Financial Accounting Standards Board has been directed to consider moving from the rules-based format of current Generally Accepted Accounting Principles (GAAP) to a principles-based approach. Indeed, the rules-based approach to accounting standards fostered by GAAP has created an environment in which the search for loopholes has become a preoccupation of corporate financial officers. The resulting earnings game has damaged investor confidence. A shift to a principles-based approach, such as that favoured by the International Accounting Standards Board, might ameliorate this problem. Moreover, the widespread use of stock options has not systematically aligned the interests of managers and shareholders (perhaps because managers have been encouraged to focus on boosting earnings in the short term at the expense of long-term performance). It also has distorted reported earnings (because options are not treated as an expense). Firms should consider — and perhaps, after further study, be required to implement — greater and more transparent disclosure of the structure of options granted to executives and their impact on earnings under a variety of possible outcomes, with particular attention to the incentives given to management.

The Administration helped launch the new round of global trade talks at Doha, and the Congress has followed through by providing it with Trade Promotion Authority (TPA). TPA will allow any new trade agreement to proceed through the Congress without modification and is hence one important prerequisite for a successful round. But the prospects for such a success have been weakened by a number of contentious measures. One is in agriculture, whose liberalisation is a central focus of the Doha round. While the Administration has tabled an ambitious proposal for agricultural liberalisation with the WTO, this welcome step forward comes on the heels of a step back from liberalisation in farm trade earlier this year. The farm bill approved this spring reverses the intended US move towards liberalisation in 1996 by both increasing total support to farmers and doing so in a manner that is likely to further distort the role of market forces in farmers’ production decisions. In fact, the increase in support is a continuation of the trend in recent years, when emergency appropriations were repeatedly used to underpin farm incomes. However, the level of support (relative to revenue in the agricultural sector) in coming years might not greatly exceed that observed recently and will probably remain below that in some other OECD regions (notably the EU and Japan). Nonetheless, the implied signal has been ill timed, coming on the heels of the safeguard action earlier this year to impose temporary tariffs of up to 30 per cent on most steel imports and the anti-dumping and countervailing duties on imports of softwood lumber from Canada. In recent years, the domestic steel industry has been contracting sharply and shedding jobs, and these losses contributed to the pressure to impose tariffs. The import restrictions may help the steel industry, but the fundamental sources of the industry’s problems have been the weakness in domestic demand, the strong dollar, a need for restructuring to address a lack
of competitiveness and heavy costs associated with previously accrued pension and health-care liabilities. The losses to domestic steel-using industries and to consumers resulting from the subsequent price increases and the global outcry that has ensued suggest that the imposition of tariffs has come at a high cost. Notwithstanding the US proposals in agriculture (at the WTO) and in steel (at the OECD), the moves away from market-based outcomes in trade and agriculture should be reconsidered.

Another area where international frictions have been aggravated is climate change. The United States decided, along with Australia, not to ratify the Kyoto Protocol because it exempts developing countries and, moreover, was not felt to be in its best economic interests, as there were expectations that the costs involved would be disproportionate to the benefits. This decision will have significant repercussions. The absence of the United States from the global market for carbon emission permits will imply much lower demand on world markets for emission permits, reflecting the outsized US contribution to the share of total emissions. The Administration has offered an alternative three-pronged plan based on the development of new abatement technologies, building on experience with the use of market mechanisms to lay the groundwork for current and future action and improving understanding of the mechanisms of global warming. The Administration’s plan would introduce or prolong a number of tax credits, provide a framework more favourable to nuclear energy, boost spending on a number of research projects and turn the existing voluntary register of greenhouse gas emission reductions into a system that will generate property rights, thus allowing a hedge against possible future emissions limits. However, the price of these rights is likely to be low and volatile, reflecting changing expectations of the likelihood of limits being introduced. The strategy would have the nation proceed gradually, in order to avoid abrupt shocks to the economy. Its objective would be to reduce the greenhouse gas intensity of output by 18 per cent over the next decade, 4 percentage points more than what would otherwise occur. As a result, the level of US emissions may be nearly 30 per cent higher than in 1990, compared to a reduction of 7 per cent that would have been required to reach its target under the Kyoto Protocol. It should be noted, however, that the targeted abatement within the United States is not significantly different from that implied by the plans developed by the previous Administration, which foresaw its achievement largely via substantial purchases of emission rights through the carbon-trading mechanisms planned for in the Kyoto Protocol. Nonetheless, without US purchases, the price of such permits on the world market will be much reduced (near zero, according to some estimates), and the global amount of such emissions cutbacks will be lower. The piecemeal nature of the Administration’s initiatives, together with the variety of recent, more ambitious state-level projects to reduce carbon emissions, suggests that the costs of achieving the Administration’s target could have been reduced. A cap and trade system, with a low ceiling price, would have achieved a unified market in carbon within the United States and therefore reached the target more efficiently.

Another area with serious sustainability concerns is groundwater supply, with water tables continuing to be depleted at overly rapid rates.
Municipalities are selling water at prices that do not take into account the costs that are imposed on future users by the decision to pump today, while other public-sector bodies place barriers in the way of creating free markets for the irrigation water they supply. The principal beneficiaries of these policies are farmers who use irrigation water to produce crops that are often, in any case, heavily subsidised in other ways. Government control over the water supply has led to significant distortions. Policy needs to be re-orientated to ensure that water is correctly priced and that market mechanisms are not obstructed.

Yet there are some areas where notable improvements have been made in environmental outcomes. Water quality has been raised and soil erosion reduced. However, the pursuit of better water quality has suffered from excessive reliance on command and control methods when economic instruments could have achieved the same results at a lower cost. Moreover, the relevant legislation largely ignores emissions of nitrogen and phosphorus that degrade the quality of water in estuaries and has not controlled agricultural non-point emissions of these pollutants. Given the difficulty of applying command and control techniques to such diffuse emissions, it is likely that the trading of individual rights to a proportion of an overall cap on the discharges allowed in a given watershed would be the best way to achieve further improvements in surface water quality.

Further progress is needed to ensure that economic concerns are properly taken into account where environmental decisions are made. While the executive has been required to assess environmental impacts for more than 30 years when proposing major projects, the legislature has not always allowed the executive to weigh economic benefits against costs, especially in the area of clean air and water. This has led to unjustified differences in procedures according to the environmental legislation in question. For example, policies governing discharges to river water are determined without regard to benefits, whereas a benefit test is required under the legislation applying to drinking water. This lack of harmonisation is inefficient and unjustified on environmental grounds. However, it is clear that more generalised use of cost-benefit analysis would be no panacea, as environmental benefits are often difficult to measure. Careful independent audits of such analyses would be required if large amounts of public money are not to be wasted. Given the importance of regulations, such audits need to be undertaken by a unit responsible to Congress and provided with an adequate level of funding.

The recession that followed the longest expansion on record was surprisingly mild, despite the disruptive effects of the terrorist attacks in September 2001. This owed a great deal to monetary and fiscal stimulus. But it also reflected firms’ ability to maintain productivity gains. While this bodes well for a renewed period of economic expansion, the recovery that began early this year is still fragile, given the substantial role played by inventories, the weak labour market and the further decline in the stock market. Against this backdrop, the Federal Reserve will face a delicate balancing act in the period ahead. It will have to stand ready to ease monetary policy, should the economy falter in the coming months. But
eventually it will have to raise short-term interest rates. That should come early enough to ensure that price stability is maintained, but not so fast as to jeopardise the recovery. Looking ahead, there also remains the question of how the external deficit will be unwound. On the fiscal side, recent tax cuts and spending increases have moved the federal budget into deficit, perhaps durably. The onus is on Congress to ensure that adequate mechanisms are in place that discipline perennial spending incentives. In addition, given the ageing of the population and the long-run imbalances in the present public pension and health-care programmes, early action to reduce future benefit promises, increase dedicated revenues or trim other government programmes is needed to smooth the transition to a sustainable longer-term budget situation. Current health-care reform initiatives are geared more toward expanding benefits — in particular for prescription drugs — than ensuring the system’s long-term viability. There is certainly a need to improve coverage, both in terms of services provided by public programmes and reducing the large number of uninsured. But whether this is done by extending such programmes or providing tax incentives for the purchase of private insurance, the effect on the budget will have to be compensated by measures to contain surging health-care costs, which are likely to persist without major reform. Restructuring and capping the generous tax exemption for employer-sponsored health benefits could provide part of the answer. Good policies and a strong economy have contributed to a marked improvement in social conditions, as manifest in declining poverty, welfare dependency and crime. It will be important to sustain these gains in a less favourable economic environment. Another challenge is to ensure that recent legislation regarding corporate governance and financial reporting is implemented in a way that enhances market discipline without unduly adding to the regulatory burden. Moreover, additional changes in this area, including a move towards principles-based accounting standards, should be considered after careful study. Recent distortionary moves in the agricultural and trade areas should be reconsidered. Finally, environmental policies could be designed and implemented in a manner that more thoroughly and consistently takes into account their economic costs and benefits. Such structural reforms would safeguard the impressive economic performance recorded over the past decade.
A recovery from last year’s recession began early this year

Economic activity reached its trough in the second half of 2001, as the economic fallout from 11 September accelerated the deterioration that had begun earlier. Real GDP fell in the first half and was steady in the second half of 2001, and year-average over year-average growth measured only ¼ per cent (Figure 1, Panel A). The slowdown in growth was modest, both in comparison to the declines in GDP witnessed in earlier recessions (such as in the early 1990s) and in view of the deterioration in equity prices since early 2000 and the shock of the terrorist attacks. Final domestic demand slowed considerably, and de-stocking subtracted substantially from output, although net exports placed a smaller drag on activity than in recent years (Table 1). Despite the short-lived decline in GDP, resource utilisation dropped notably: the unemployment rate rose a bit in 2001 from the low of 4 per cent in 2000 and moved significantly higher in early 2002, and output fell somewhat below potential last year (Panel B). Inflation decelerated with the fall in energy prices and an easing in core inflation (Panel C). The mild downturn barely dented the economy’s reliance on inflows of foreign capital to finance domestic demand, however, and the current account deficit remained near 4 per cent of GDP.

The depth of the recession was limited by a continuation of strong productivity gains and rapid responses by fiscal and monetary policymakers to emerging signs of weakness. The strength of productivity bodes well for the recovery. The rapid pace of its growth in the years up to 2000 had suggested an improvement in potential GDP trends, but the decomposition of output gains into cyclical and trend components has always been difficult and controversial, and there remained considerable uncertainty about this heading into the recession. More confidence can now be placed in some continuation of robust increases in the near term. However, it is also clear that some of the optimism regarding profits that buoyed business investment through 2000 was overdone. As much of the rise in output per hour has fed through to healthy real wage gains, profitability slumped as production slowed. The weaker labour market has generated some real wage deceleration, and this, combined with improved efficiency, has begun to lift corporate profits, but they remain below earlier peaks. Much of this year’s turnaround in GDP stemmed from the end of last year’s massive de-stocking, although business investment in equipment and software has shown signs of stabilising or even edging up. Household spending, which was supported by monetary and fiscal policy stimulus (see Chapter II), remained relatively strong last year and has continued to rise over the first half of this year. The shallow trough in activity compared to previous recessions (see Box 1) and further recent declines in equity prices—in part because of serious concern regarding corporate governance (see Chapter IV)—suggest that the snapback may prove gradual.
Figure 1. Aggregate economic indicators

A. Real GDP growth

B. Measures of resource utilisation

C. Inflation

D. Current account

1. Per cent difference between actual and estimated potential output.
Source: OECD.
### Table 1. Contributions to GDP growth

Percentage points, volume terms, chain-weighted indexes

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Private consumption</td>
<td>2.4</td>
<td>3.2</td>
<td>3.3</td>
<td>2.9</td>
<td>1.7</td>
<td>2.4</td>
</tr>
<tr>
<td>Private residential investment</td>
<td>0.1</td>
<td>0.3</td>
<td>0.3</td>
<td>0.1</td>
<td>0.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Private non-residential investment</td>
<td>1.4</td>
<td>1.5</td>
<td>1.0</td>
<td>1.0</td>
<td>-0.7</td>
<td>-0.9</td>
</tr>
<tr>
<td>Government consumption and investment</td>
<td>0.4</td>
<td>0.3</td>
<td>0.7</td>
<td>0.5</td>
<td>0.7</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Final domestic demand</strong></td>
<td><strong>4.3</strong></td>
<td><strong>5.3</strong></td>
<td><strong>5.3</strong></td>
<td><strong>4.5</strong></td>
<td><strong>1.7</strong></td>
<td><strong>2.8</strong></td>
</tr>
<tr>
<td>Stockbuilding</td>
<td>0.4</td>
<td>0.2</td>
<td>-0.2</td>
<td>0.1</td>
<td>-1.2</td>
<td>1.5</td>
</tr>
<tr>
<td><strong>Total domestic demand</strong></td>
<td><strong>4.7</strong></td>
<td><strong>5.5</strong></td>
<td><strong>5.1</strong></td>
<td><strong>4.5</strong></td>
<td><strong>0.4</strong></td>
<td><strong>4.3</strong></td>
</tr>
<tr>
<td>Net exports</td>
<td>-0.3</td>
<td>-1.2</td>
<td>-1.0</td>
<td>-0.8</td>
<td>-0.2</td>
<td>-1.0</td>
</tr>
<tr>
<td><strong>GDP</strong></td>
<td><strong>4.4</strong></td>
<td><strong>4.3</strong></td>
<td><strong>4.1</strong></td>
<td><strong>3.8</strong></td>
<td><strong>0.3</strong></td>
<td><strong>3.5</strong></td>
</tr>
</tbody>
</table>

**Memorandum:**

Growth rate of:

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Private consumption</td>
<td>3.6</td>
<td>4.8</td>
<td>4.9</td>
<td>4.3</td>
<td>2.5</td>
<td>3.5</td>
</tr>
<tr>
<td>Private non-residential investment</td>
<td>12.2</td>
<td>12.5</td>
<td>8.1</td>
<td>7.8</td>
<td>-5.2</td>
<td>-6.3</td>
</tr>
</tbody>
</table>

1. First-half change at an annual rate.

*Source:* Bureau of Economic Analysis.

---

**Box 1. The 2001 recession**

The recession that began in March 2001 was among the mildest on record. Real GDP increased marginally between the first quarter of 2001 and the end of the year, and the OECD’s estimate of the output gap at the trough of the recession barely exceeded 1 per cent of potential GDP (Table 2). In contrast, industrial production and payroll employment fell by more than 4 per cent and 1 per cent, respectively, from March to December 2001, similar to the declines experienced over the 1990-91 recession. And the unemployment rate rose by about 2 percentage points from its low-point of 3.9 per cent in late 2000 (Figure 2) — again roughly matching the increase a decade earlier.

Three factors help explain why the downturn was so mild. The greater stability of the macroeconomy (McConnell and Perez-Quiros, 2000; OECD, 2002) — itself a by-product of technological and sectoral shifts in the economy and changes in aggregate demand management by policymakers — undoubtedly played a role (and was also a factor in the moderate early-1990s recession). The structural acceleration in potential GDP growth (to above 3½ per cent in 2001) was another factor: at a higher level of potential growth, a given increase in GDP is accompanied by slower employment growth and a greater increase in unemployment, and hence the movements in labour-market conditions last year were more similar to those a decade earlier than were the GDP fluctuations. Finally, the rapid reaction of fiscal and monetary policymakers to the deterioration in economic conditions in 2001 limited the recession’s depth. The 475 basis point cut in the federal funds rate over the course of the year boosted household demand. Fiscal policy also turned expansionary, as spending accelerated — particularly at the federal level — and legislation sent tax rebates to most households in the third quarter while cutting marginal tax rates permanently. This potent policy mix contributed to the resilience of GDP (Table 3). During the four quarters of the recession, the direct contribution of government spending to GDP growth averaged nearly 1 percentage point (annual rate), the largest average contribution during a recession period in over 40 years. Household consumption growth contributed nearly 2 percentage points to growth during the recession. In contrast, investment (both fixed and in inventories) subtracted substantially from GDP last year, similar to earlier occasions. The lack of any positive contribution to growth during the recession from net exports is also noteworthy. Because the downturn was synchronised globally, the contraction in imports that accompanied the recession was roughly matched by the decline in exports (in terms of growth contributions), eliminating the buffer typically provided by the external sector.
The nature of job losses last year was also different from that of earlier recessions. In recessions prior to 1990, the proportion of the rise in job losers who had lost their jobs permanently was typically only slightly larger than that attributed to those on short-term layoffs. Since the 1990-91 recession, this pattern has been reversed, and the increase in unemployment has consisted almost entirely of permanent job losses (see Figure 3). In addition, layoffs of temporary help workers were massive last year, exceeding \( \frac{1}{2} \) million workers. The flexibility that has accompanied the growth of the temporary help industry has probably lowered frictional and structural unemployment.

### Table 2. Characteristics of recent recessions

<table>
<thead>
<tr>
<th>Recessions ²</th>
<th>Recession depth (Per cent changes from peak to trough ¹)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Duration ³</td>
</tr>
<tr>
<td>1960(II)/1961(I)</td>
<td>10</td>
</tr>
<tr>
<td>1969(IV)/1970(IV)</td>
<td>11</td>
</tr>
<tr>
<td>1973(IV)/1975(I)</td>
<td>16</td>
</tr>
<tr>
<td>1980(I)/1980(III)</td>
<td>6</td>
</tr>
<tr>
<td>1981(III)/1982(IV)</td>
<td>16</td>
</tr>
<tr>
<td>1990(III)/1991(I)</td>
<td>8</td>
</tr>
<tr>
<td>Average</td>
<td>11</td>
</tr>
<tr>
<td>2001(I)-(IV)</td>
<td>9</td>
</tr>
</tbody>
</table>

1. Except output gap, which was measured at the trough of recession as the ratio of (potential real GDP-real GDP)/potential real GDP (and then multiplied by 100). The estimates of potential real GDP are the OECD’s.


3. Number of months from peak to trough, as declared by the NBER Business Cycle Committee.

*Source: Bureau of Economic Analysis; OECD; and National Bureau of Economic Research.*

**Figure 2. Increase in unemployment during recessions ¹**

Four-quarter changes

1. Line measures the four-quarter change in the unemployment rate when this change is positive and equals zero otherwise. Shaded regions are NBER recessions.

*Source: Bureau of Labor Statistics.*
Table 3. Contributions to real GDP growth during recessions\(^1\)
Percentage points, volume terms, chain-weighted indexes

<table>
<thead>
<tr>
<th>Recessions</th>
<th>GDP</th>
<th>Private consumption</th>
<th>Private fixed investment</th>
<th>Changes in inventories</th>
<th>Net exports</th>
<th>Government(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960(II)/1961(I)</td>
<td>-1.00</td>
<td>0.61</td>
<td>-0.89</td>
<td>-2.40</td>
<td>0.67</td>
<td>1.03</td>
</tr>
<tr>
<td>1969(IV)/1970(IV)</td>
<td>-0.46</td>
<td>1.23</td>
<td>-0.40</td>
<td>-1.11</td>
<td>0.29</td>
<td>-0.47</td>
</tr>
<tr>
<td>1973(IV)/1975(I)</td>
<td>-1.68</td>
<td>-0.41</td>
<td>-1.92</td>
<td>-1.04</td>
<td>1.00</td>
<td>0.68</td>
</tr>
<tr>
<td>1980(I)/1980(III)</td>
<td>-2.40</td>
<td>-1.16</td>
<td>-2.22</td>
<td>-1.89</td>
<td>2.75</td>
<td>0.13</td>
</tr>
<tr>
<td>1981(III)/1982(IV)</td>
<td>-1.02</td>
<td>1.23</td>
<td>-1.04</td>
<td>-1.00</td>
<td>-0.68</td>
<td>0.46</td>
</tr>
<tr>
<td>1990(III)/1991(f)</td>
<td>-1.97</td>
<td>-0.84</td>
<td>-1.47</td>
<td>-1.09</td>
<td>1.03</td>
<td>0.40</td>
</tr>
<tr>
<td>Average</td>
<td>-1.42</td>
<td>0.11</td>
<td>-1.32</td>
<td>-1.42</td>
<td>0.84</td>
<td>0.37</td>
</tr>
<tr>
<td>2001(I)-(IV)</td>
<td>0.05</td>
<td>1.87</td>
<td>-1.14</td>
<td>-1.47</td>
<td>-0.10</td>
<td>0.91</td>
</tr>
</tbody>
</table>

1. Averages of quarterly contributions to real GDP growth at annual rates over the recession period.
2. Includes government fixed capital formation and government final consumption.

Source: Bureau of Economic Analysis.

Figure 3. The shift towards permanent job losses
Quarterly data, seasonally adjusted

<table>
<thead>
<tr>
<th>Four previous downturns (1)</th>
<th>Early 1990s (1)</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not on temporary lay off</td>
<td>On temporary lay off</td>
<td></td>
</tr>
<tr>
<td>51%</td>
<td>49%</td>
<td></td>
</tr>
<tr>
<td>70%</td>
<td>30%</td>
<td></td>
</tr>
<tr>
<td>67%</td>
<td>13%</td>
<td></td>
</tr>
</tbody>
</table>

1. Initial three quarters of previous recessions.
Source: Langdon et al. (2002).

The turnaround was led by a slowdown in inventory decumulation

After essentially coming to a halt in the second half of last year, real GDP jumped 3½ per cent (annual rate) in the first half of 2002. The increase was powered by a substantial curtailment of the pace of de-stocking by businesses: after falling rapidly at the end of last year, stocks edged down only modestly in the first half, and stockbuilding appears set to resume over the second half. Inventories had risen relative to
sales over the course of 2000 as firms were surprised by the slowing in demand, but the modest growth of final sales last year combined with the significant reduction in stocks, especially following the surprisingly strong sales of last year’s fourth quarter, brought stocks back to more comfortable levels (Figure 4). The decline in the ratio of inventories to sales has been widespread. The reductions in stocks of motor vehicles and of computers at wholesalers have been particularly sharp.

**Figure 4. Inventory-sales ratios across sectors**

![Inventory-sales ratios across sectors](image)

*Source: US Census Bureau.*

**Table 4. Manufacturing output and utilisation**

Per cent changes through the period at annual rates

<table>
<thead>
<tr>
<th></th>
<th>1999</th>
<th>2000</th>
<th>2001 H1</th>
<th>2001 H2</th>
<th>2002 H1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing production</td>
<td>5.4</td>
<td>1.1</td>
<td>-6.7</td>
<td>-4.7</td>
<td>5.0</td>
</tr>
<tr>
<td>High-tech industries</td>
<td>35.9</td>
<td>34.7</td>
<td>-24.6</td>
<td>-5.8</td>
<td>23.4</td>
</tr>
<tr>
<td>Manufacturing excluding high-tech</td>
<td>2.4</td>
<td>-2.3</td>
<td>-4.7</td>
<td>-4.5</td>
<td>3.6</td>
</tr>
<tr>
<td>of which: Motor vehicles</td>
<td>6.1</td>
<td>-11.3</td>
<td>11.8</td>
<td>5.3</td>
<td>16.4</td>
</tr>
</tbody>
</table>

*Memorandum:* Manufacturing capacity utilisation\(^1\) 81.1 78.4 75.0 72.9 74.3  
High-tech capacity utilisation\(^1\) 84.1 79.7 64.2 60.6 64.4

1. End-of-period levels.

*Source: Board of Governors of the Federal Reserve System.*

The passing of large inventory liquidations has led to some turnaround in the manufacturing sector. Industrial production began falling steadily in the middle of 2000 as stockbuilding and fixed investment weakened and the strong dollar pinched exports. By early this year, manufacturing orders began to stabilise and production to increase. Output troughed in December 2001 and rose 5 per cent (annual rate) over the first half of this year (Table 4). The factory operating rate edged up during the first half of this year and has approached its level of a year earlier. The increase in motor vehicle assemblies
and associated parts following the strength of light vehicle sales and the turnaround in the output of high-technology goods accounted for most of the increase. Within high-technology industries, computer and semiconductor production have risen strongly, while communications equipment has remained on a downturn. The turnaround in computers may signal a resumption of solid increases in such business spending over the remainder of the year, perhaps reflecting the early stages of the replacement cycle following the Y2K-related bulge of late 1999 and early 2000.

**Household demand never faltered**

While the stabilisation in inventories led to the sharp jump in GDP in the first quarter, the continued strength of household spending has been a steady contributor to final demand. Personal consumption expenditures increased 2½ per cent in 2001, down 1¾ percentage points from the pace over the preceding three years. Moreover, the slowing in consumption through 2001 was also modest (Figure 5, Panel A), and consumption in 2002 is off to a good start. Expenditures rose 3½ per cent (annual rate) in the first half. The resilience of consumption expenditures in the face of the labour market deterioration was an important factor limiting the extent of the downturn (see Box 1). The gains stemmed from several factors. Last autumn, the dramatically weakening outlook and the drop in short-term interest rates led automakers to offer very generous incentives (primarily in the form of low-interest loans but also more generally with price discounts) on new vehicle purchases, which soared as a result. Such incentives were again applied this summer and once again spurred strong vehicle sales. In addition, the decline in mortgage rates in late 2001, resulting from the monetary easing and the poorer growth outlook, led to surprising strength in home purchases and refinancing activity — and this factor has also boosted expenditures recently with the sharp drop in mortgage rates in the third quarter. The buoyancy of the housing market has probably boosted associated consumption expenditures (on furniture and appliances, for example), and the refinancing activity has improved household cash flow and generated cash for new purchases through equity extraction. The relatively rapid recovery in consumer confidence (Panel B) after September also played a role in maintaining household demand.

More generally, disposable income developments in 2001 and early 2002 have proven favourable for consumption and for the outlook. In 2001, real disposable income increased more than 3½ per cent (Table 5). While wages and salaries decelerated sharply last year, transfer payments picked up and personal tax and non-tax payments slowed markedly. The latter stemmed in part from the tax package implemented last summer, which provided rebates of up to $600 per household. Real disposable income continued to rise smartly in the first half of this year (increasing by 7½ per cent at an annual rate from the 2001 average), primarily because of the legislated marginal tax rate reductions. Labour compensation grew modestly in the first quarter, and employment trends since then do not suggest any sharp turnaround. However, transfer payments have jumped, and the extension of unemployment benefits in March has provided another temporary lift. The combination of tax cuts and the March stimulus bill have given households a considerable income boost and represents one of the more timely applications of discretionary fiscal impetus, undoubtedly lifting household expenditures. Some early research had suggested that the tax rebates would have little short-run effect on spending (Shapiro and Slemrod, 2001), but the resilience of consumption points towards some stimulative impact.
The strength in household spending has also been apparent in the housing market. Rates on conventional mortgages fell from over 8 per cent in the first three quarters of 2000 to about 7 per cent over the first eight months of 2001, and plunged to 6.6 per cent in October 2001 (according to the Federal Home Loan Mortgage Corporation). Since then, mortgage rates have fluctuated but for the most part have been below 7 per cent, moving sharply down towards 6 per cent by September. These historically low rates have spurred home purchases: in 2001, new and existing home sales increased, despite the deteriorating economy, and they have been even more robust thus far in 2002, with new home sales reaching record levels (Figure 5, Panel C). As a consequence, residential investment rose nearly 6\(\frac{3}{4}\) per cent (annual rate).
in the first half of this year. Housing starts have remained at high levels through August, albeit down from the earlier pace. Given this strength, it seems unlikely that the housing market will provide a substantial lift to activity going forward.

Table 5. Personal income
Per cent changes, except personal saving rate

<table>
<thead>
<tr>
<th></th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002:H1^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal income</td>
<td>4.9</td>
<td>8.0</td>
<td>3.3</td>
<td>4.0</td>
</tr>
<tr>
<td>Wage and salary disbursements</td>
<td>6.6</td>
<td>8.2</td>
<td>2.4</td>
<td>1.1</td>
</tr>
<tr>
<td>Other labor income</td>
<td>4.0</td>
<td>6.7</td>
<td>4.8</td>
<td>9.7</td>
</tr>
<tr>
<td>Other income excluding transfer payments</td>
<td>2.4</td>
<td>8.9</td>
<td>2.2</td>
<td>2.7</td>
</tr>
<tr>
<td>Transfer payments to persons</td>
<td>3.5</td>
<td>5.1</td>
<td>9.4</td>
<td>17.2</td>
</tr>
<tr>
<td>Less: Personal contributions for social insurance</td>
<td>6.7</td>
<td>6.2</td>
<td>3.9</td>
<td>5.3</td>
</tr>
<tr>
<td>Less: Personal tax and non-tax payments</td>
<td>8.3</td>
<td>11.0</td>
<td>0.4</td>
<td>-23.3</td>
</tr>
<tr>
<td>Equals: Disposable personal income</td>
<td>4.3</td>
<td>7.4</td>
<td>3.8</td>
<td>9.2</td>
</tr>
</tbody>
</table>

Memorandum:
Real disposable personal income^1 2.6 4.8 1.8 7.3
Personal saving as a percentage of disposable personal income 2.6 2.8 2.3 3.8

1. Equals disposable personal income deflated by the implicit price deflator for personal consumption expenditures.
2. Per cent change of first half 2002 over 2001 at an annual rate.
Source: Bureau of Economic Analysis.

The strength of the housing market has been accompanied by a continuation of house price appreciation. Over the year to the first quarter of 2002, the repeat-sales index from the Office of Federal Housing Enterprise Oversight increased 6½ per cent. This pace was down from nearly 9 per cent a year earlier but continued to signal a rapid escalation in real estate values. As a result (and in combination with other factors), owners’ equity in household real estate increased 9¼ per cent over 2001 (Table 6). But the overall net worth of households fell a sharp 2¾ per cent over the year, as the persistent weakness in equity markets and the shock of 11 September placed a drag on portfolios. The movements in net worth have been even more dramatic relative to disposable income: the ratio of net worth to disposable income fell from 6.4 in 1999 to 5.1 in the second quarter of this year, still above the long-run average of 4¾. The recent plunge in equity markets has undoubtedly pulled net worth down further. The large unpredicted swing in households’ financial position over the past two years will be one drag on household spending going forward, as the passing of sharp asset appreciation implies that households will be increasingly reliant on saving to improve their financial condition. Recently, consumer confidence has also weakened somewhat again, reflecting the slow improvement in the labour market and stock market developments. The combination of diminished net worth, slow recovery in the labour market and tepid confidence suggests that desired saving rates may rise in the near term.

The pick-up in government purchases moderated the downturn and has continued to boost activity

In addition to the impetus to household income from tax cuts and the stimulus bill, government spending has directly boosted demand over the past year and a half. Real purchases of goods and services increased 3¾ per cent in 2001, up a percentage point from 2000. As noted in Box 1, the direct effect of government spending on GDP during the recession was the largest in any recession since the early 1960s. Moreover, strong growth continued early this year. The increase in federal expenditures has been
broad-based: while defence and homeland security outlays associated with the war on terrorism have risen rapidly, the trend towards faster increases in spending had begun prior to 11 September. At the state and local levels, purchases have continued to contribute to growth, but some slowing is likely with the deterioration in state finances (see Chapter II).

Table 6. Household net worth
Per cent changes, end of period

<table>
<thead>
<tr>
<th></th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002 Q2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net worth</td>
<td>10.3</td>
<td>13.5</td>
<td>-0.9</td>
<td>-2.2</td>
<td>-2.5</td>
</tr>
<tr>
<td>Equals</td>
<td>10.0</td>
<td>12.9</td>
<td>0.4</td>
<td>-0.7</td>
<td>-1.5</td>
</tr>
<tr>
<td>of which:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Households’ real estate</td>
<td>8.5</td>
<td>9.3</td>
<td>10.4</td>
<td>9.4</td>
<td>4.5</td>
</tr>
<tr>
<td>Minus</td>
<td>8.3</td>
<td>9.2</td>
<td>8.4</td>
<td>7.7</td>
<td>3.5</td>
</tr>
<tr>
<td>Liabilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>of which:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home mortgages</td>
<td>8.9</td>
<td>9.0</td>
<td>8.2</td>
<td>9.7</td>
<td>5.3</td>
</tr>
<tr>
<td>Memorandum:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Owners’ equity in household real estate</td>
<td>8.2</td>
<td>9.5</td>
<td>12.1</td>
<td>9.2</td>
<td>3.9</td>
</tr>
<tr>
<td>Ratio of household net worth to disposable income, level</td>
<td>5.9</td>
<td>6.4</td>
<td>5.9</td>
<td>5.6</td>
<td>5.1</td>
</tr>
</tbody>
</table>

1. Households and non-profit organisations.
Source: Board of Governors of the Federal Reserve System.

Business investment is beginning to turn the corner

In contrast to the solid advances in household and government expenditures, non-residential fixed investment has been declining since the end of 2000, with real purchases falling 5¼ per cent in 2001 and 6¼ per cent in the first half of 2002 (Table 7). While the declines were broad-based, the most noteworthy reversal occurred in information processing equipment and software. After increases averaging nearly 19 per cent per year in real terms over 1998-2000, these outlays dropped 6 per cent in 2001. The weakening was driven by several factors. The rapid increase in spending through 2000 on computers and software reflected some Y2K-related spending, which ended with the passing of the millennium. Price declines for information processing equipment also slowed in 2000, before accelerating somewhat last year. In addition, some of the euphoria associated with new technology spending wore off over the course of 2000, as a re-evaluation of the profitability of such investments slowed expenditures and pricked the NASDAQ stock bubble. These new expectations drove expenditures down most dramatically for communications equipment but also squeezed computer and software investment. Recently, investment in non-residential structures has collapsed; these purchases fell 9 per cent in the second half of 2001 and more than 19 per cent in the first half of this year. Vacancy rates for commercial and industrial buildings have risen sharply, suggesting that this sector may not turn the corner in the near term.

While it is not easy to judge whether the investment correction has eliminated any capital overhang that developed by the cyclical peak, the lower level of investment has slowed capital stock growth and the recovery in production and profits should provide some momentum to investment going forward. Moreover, the March stimulus bill included a provision that allows businesses to take an additional first-year depreciation deduction of 30 per cent of the adjusted basis of qualified property (primarily business equipment) purchased between 11 September 2001 and 11 September 2004. In
Table 7. **Real non-residential fixed investment**  
Per cent changes, annual rate

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-residential fixed investment</td>
<td>12.5</td>
<td>8.1</td>
<td>7.8</td>
<td>-5.2</td>
<td>-7.2</td>
<td>-9.4</td>
<td>-6.3</td>
</tr>
<tr>
<td>Equipment and software</td>
<td>14.6</td>
<td>11.5</td>
<td>8.2</td>
<td>-6.4</td>
<td>-8.7</td>
<td>-9.6</td>
<td>-1.2</td>
</tr>
<tr>
<td>Information processing equipment and software</td>
<td>22.7</td>
<td>18.4</td>
<td>14.8</td>
<td>-6.0</td>
<td>-9.5</td>
<td>-10.9</td>
<td>6.1</td>
</tr>
<tr>
<td>Industrial equipment</td>
<td>4.0</td>
<td>1.3</td>
<td>9.0</td>
<td>-4.4</td>
<td>-4.0</td>
<td>-16.3</td>
<td>0.0</td>
</tr>
<tr>
<td>Transportation equipment</td>
<td>11.8</td>
<td>14.9</td>
<td>-3.4</td>
<td>-12.3</td>
<td>-16.3</td>
<td>-2.3</td>
<td>-17.9</td>
</tr>
<tr>
<td>Other equipment</td>
<td>9.5</td>
<td>0.9</td>
<td>4.9</td>
<td>-2.6</td>
<td>-2.3</td>
<td>-5.9</td>
<td>-1.8</td>
</tr>
<tr>
<td>Structures</td>
<td>6.8</td>
<td>-1.4</td>
<td>6.5</td>
<td>-1.7</td>
<td>-2.9</td>
<td>-9.1</td>
<td>-19.4</td>
</tr>
</tbody>
</table>

**Memorandum:**

<p>| | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Prices of equipment and software</td>
<td>-3.9</td>
<td>-2.5</td>
<td>-1.2</td>
<td>-1.5</td>
<td>-2.1</td>
<td>-1.5</td>
<td>-1.7</td>
</tr>
<tr>
<td>Prices of information processing equipment and software</td>
<td>-9.0</td>
<td>-6.5</td>
<td>-3.2</td>
<td>-3.8</td>
<td>-4.6</td>
<td>-4.3</td>
<td>-3.5</td>
</tr>
</tbody>
</table>

*Source:* Bureau of Economic Analysis.

In addition, the stimulus bill allows firms to carry back losses arising in tax years 2001 and 2002 for five years (instead of two years). These provisions will lower the cost of capital for new investment and boost cash flow and hence should spur investment. As a result and combined with the recent gains in productivity that slashed unit labour costs, profits and cash flow have turned the corner (though they remain significantly below the previous peak) (Figure 6 and Box 2). In particular, after-tax profits from current production in the second quarter of this year were 16½ per cent above the trough in the third quarter of last year, and net cash flow had risen to record levels. Consequently, tentative signs of some pick-up in investment have emerged. For example, equipment and software spending stabilised and investment in information processing equipment rose more than 6 per cent (annual rate) in the first half. New orders for non-defence capital goods excluding aircraft in July and August were 2½ per cent above their second quarter average.

### Box 2. The recent evolution of profits

Concerns over the decline in corporate profits during the recession have been exacerbated by the disturbing revelations of misleading financial accounts at some major corporations that have burst into the public’s eye since last year’s collapse of Enron (see Chapter IV). The situation has been further clouded by the divergence between movements in profits reported in the national accounts — economic profits after tax — and the measure on which financial markets and press reports most often focus — S&P 500 operating profits (Figure 7). This divergence reflects differences in the principles upon which the measures are based and the universe of firms covered.

The S&P measure tracks the aggregate earnings of the 500 corporations included in the S&P 500 stock index. They are measured on a financial-accounting basis — *i.e.* according to Generally Accepted Accounting Principles — and exclude the impact of cumulative accounting changes, discontinued operations and extraordinary and special items. Because the composition of the S&P 500 shifts over time, changes in operating earnings reflect both changes in the set of firms covered and in actual earnings. Economic profits in the national accounts cover the profits of all incorporated businesses and are measured on a tax accounting basis. Both of these differences can create
significant divergences. The profits of small and mid-sized corporations can move quite differently from those of large corporations. Financial accounting principles differ from those of tax accounting: for example, stock options are not typically recorded as an expense under financial accounting rules, but are (when exercised) under tax accounting.

Both S&P 500 operating earnings and economic profits have begun to increase, reflecting the recent gains in productivity and the effects of March’s stimulus bill on corporate tax liabilities (Figure 7). The turnaround occurred earlier and has so far been somewhat greater for the national accounts measure. In addition to the differences due to the universe of firms covered and the treatment of stock options, the treatment of depreciation has also created some divergence between the series. In particular, the strength of business investment over the late 1990s has led to an increase in depreciation charges, but these charges exceed economic depreciation because of the generosity of tax

provisions — and this generosity has been increased further with the current investment incentives added in March. Because economic profits remove the charge against earnings allowed by accelerated depreciation provisions, they have performed better than the S&P measure, which does not make this adjustment. Given the improvement in economic profits and its superiority in concept and breadth of coverage, business conditions have recovered by more than S&P 500 operating earnings would suggest. However, the Bureau of Economic Analysis must rely on financial information reported by firms and profit measures are subject to significant revisions (in part because the tax return data that are the primary source of information are available with a lag of two or more years), and hence some revisions to economic profits should be expected.

1. For a more comprehensive discussion, see Petrick (2001).

Figure 7. S&P 500 operating earnings and profits from the national accounts
Percentage change from one year earlier

Source: Bureau of Economic Analysis and Standard and Poors.

The turnaround has boosted imports, while the recovery in exports has begun…

The slowing in the economy in 2001 led to a sharp fall in trade volumes. Real imports fell about 3 per cent and real exports 5½ per cent. These declines reflected both the normal effect of a slowing in growth and the greater concentration of the 2001 recession in high-tech production and capital goods production more generally. The path of imports across expenditure categories reflects this pattern. Imports of capital goods excluding autos fell more than 11 per cent in real terms during 2001, with computers, peripherals and parts dropping significantly. In contrast, imports of consumer goods excluding autos actually rose last year. Similarly, the decline in exports was concentrated in exports of capital goods excluding autos, with exports of computers, peripherals and parts falling more than 11 per cent last year.

Recently, there has been some improvement in trade volumes. Immediately following 11 September, trade slowed dramatically. For example, real exports and imports of travel services each dropped about 23 per cent between the second and fourth quarter of 2001. In the first half of 2002, real imports bounced back. Gains were particularly rapid within capital goods excluding autos and within services, including travel. Real exports also rebounded somewhat, largely from some recovery in travel and
related exports. The trade balance will likely remain a drag on activity, even if exports accelerate, given the large gap between imports and exports. Moreover, the recent depreciation of the dollar may do little to improve net exports. The nominal depreciation through September has brought the dollar back only to the levels that prevailed in early 2001, measured against a broad set of trading partners.

... and the current account deficit is set to widen further

The decline in trade in 2001 led to only a modest narrowing in the current account deficit to $393 billion or 3.9 per cent of GDP (Table 8). This is only a bit short of the record 2000 imbalance. The improvement stemmed from a sharper decline in nominal merchandise imports than in exports, while the balance on invisibles actually shrank. The current account deficit will increase further if US growth continues to outstrip that of major trading partners in the near term and the exchange value of the dollar does not fall further. The sharp jump in the deficit in the second quarter, to a quarterly record high of $520 billion (annual rate) or about 5 per cent of GDP, indicates that this movement is already underway. The increased reliance on inflows of foreign capital has raised some concerns regarding the financing of domestic demand, especially as the dollar has been weakening (see Box 3).

Table 8. Current account
$ billion, seasonally adjusted, annual rate

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Current account balance</td>
<td>-293</td>
<td>-410</td>
<td>-393</td>
<td>-397</td>
<td>-365</td>
<td>-380</td>
<td>-450</td>
<td>-520</td>
</tr>
<tr>
<td>of which:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exports of goods, services and income</td>
<td>1 248</td>
<td>1 417</td>
<td>1 282</td>
<td>1 326</td>
<td>1 238</td>
<td>1 167</td>
<td>1 165</td>
<td>1 217</td>
</tr>
<tr>
<td>Imports of goods, services and income</td>
<td>1 492</td>
<td>1 774</td>
<td>1 626</td>
<td>1 676</td>
<td>1 554</td>
<td>1 493</td>
<td>1 551</td>
<td>1 685</td>
</tr>
<tr>
<td>Net unilateral transfers abroad</td>
<td>-49</td>
<td>-53</td>
<td>-49</td>
<td>-48</td>
<td>-49</td>
<td>-54</td>
<td>-64</td>
<td>-52</td>
</tr>
<tr>
<td>Balances:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goods</td>
<td>-346</td>
<td>-452</td>
<td>-427</td>
<td>-431</td>
<td>-423</td>
<td>-403</td>
<td>-426</td>
<td>-491</td>
</tr>
<tr>
<td>Non-factor services</td>
<td>84</td>
<td>74</td>
<td>69</td>
<td>58</td>
<td>104</td>
<td>51</td>
<td>44</td>
<td>48</td>
</tr>
<tr>
<td>Investment income</td>
<td>18</td>
<td>22</td>
<td>14</td>
<td>24</td>
<td>3</td>
<td>26</td>
<td>-4</td>
<td>-25</td>
</tr>
<tr>
<td>Private transfers</td>
<td>-31</td>
<td>-32</td>
<td>-32</td>
<td>-32</td>
<td>-33</td>
<td>-32</td>
<td>-34</td>
<td>-34</td>
</tr>
<tr>
<td>Official transfers</td>
<td>-18</td>
<td>-22</td>
<td>-17</td>
<td>-15</td>
<td>-17</td>
<td>-23</td>
<td>-30</td>
<td>-18</td>
</tr>
<tr>
<td>Memorandum:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current account as share of GDP</td>
<td>-3.2</td>
<td>-4.2</td>
<td>-3.9</td>
<td>-3.9</td>
<td>-3.6</td>
<td>-3.7</td>
<td>-4.4</td>
<td>-5.0</td>
</tr>
</tbody>
</table>

Source: Bureau of Economic Analysis.

Box 3. The current account and the dollar

The dollar appreciated 26 per cent (in real terms) between 1995 and 2001. This helped push the US current account deficit in 2001 to $393 billion or 3.9 per cent of GDP. This exceeded the previous peak of 3.4 per cent of GDP in 1987 and has generated increasing concern regarding the sustainability of the strong dollar and the capital flows necessary to finance domestic demand. These concerns have only grown with the deterioration in the fiscal position, which has swung from a substantial surplus in 2000 to a large deficit this year (see Chapter II).

In some ways, recent experience has been similar to the widening in the current account deficit that followed the 1981-82 recession. The United States rebounded in the early 1980s much more quickly than its trading partners. The associated expansion of the current account deficit was accompanied by a sharp real appreciation of the
dollar (by 34 per cent between 1980 and 1985) (Figure 8). However, the strength of domestic demand in the early 1980s reflected fiscal easing to a much greater extent than the post-1995 acceleration, with a widening in the federal budget deficit from 2½ per cent of GDP in 1980 to 5 per cent in 1985 (leading to the “twin deficits” moniker for the mid-to-late 1980s period). Business investment as a share of GDP fell steadily over the 1980s, from near 13 per cent early in the decade to 11 per cent by the latter half of the decade. In contrast, the fiscal position improved steadily over the latter half of the 1990s, and business investment rose to 13 per cent of GDP by 2000. This turnaround stemmed in part from the rise in national savings but more importantly from the strength of productivity growth, which itself was a key factor attracting foreign capital.

Whether the dollar’s recent strength will unwind in the near term as much or as smoothly as over the second half of the 1980s (it depreciated 32 per cent between 1985 and 1992 in real terms) is very difficult to gauge. Recent trends suggest that US productivity growth may remain robust for some time, increasing the attractiveness of US assets. However, ongoing weakness in equity markets has dented foreigners’ appetite for US equities — at least temporarily — and the dollar weakened in the first half of 2002. At some point, the share of US assets in foreign portfolios will reach desired levels, and the accumulating stock of net foreign liabilities will begin to be repaid. Depending on how fast the return to external balance takes place, the required (real) exchange rate depreciation could be as high as 40 per cent (Obstfeld and Rogoff, 2000). The transition to a sustainable current account position would be facilitated by some improvement in growth prospects outside the United States. Faster growth abroad would spur exports and mitigate the necessary adjustment in the exchange value of the dollar.

Figure 8. The current account deficit and the real exchange rate

The recent strength of productivity gains demonstrates the durability of faster potential growth

The evolution of productivity growth over the past year has been remarkable. Output per hour in the non-farm business sector rose 4¼ per cent in the year to the second quarter of 2002. In contrast, in the year following the 1990 peak in activity, productivity advanced only 1 per cent. In part, the strong increase in productivity over the past year has reflected the rapid downward adjustment in the labour market and the early turnaround in activity this year. During the previous recession, the labour market remained weak for several years after GDP began to grow, and there was a delayed cyclical acceleration in productivity growth — to above 4 per cent in the year to the first quarter of 1992. However, the recent episode has probably stemmed from more than purely cyclical factors. In particular, the steady (and rapid) growth in

1. Forty-two countries are included in the calculation and forty-five export markets are considered. Source: Bureau of Economic Analysis and OECD, Main Economic Indicators.
productivity since 1996 combined with recent experience suggests that trend productivity growth has picked up, an impression confirmed by analyses based on production-function-based accounting (see Box 4). Over the most recent four quarters, the advance in productivity trimmed unit labour costs by 2½ per cent despite continued advances in nominal and real compensation, contributing to the improvement in profits and cash flow discussed earlier.

Box 4. Potential output and the NAIRU

The robust pace of productivity growth through the recent recession provides strong support for the medium-term persistence of the acceleration in productivity and potential output growth seen in the latter half of the 1990s. Two exercises can help illuminate the underlying pace of structural or trend productivity and GDP growth. The first involves a statistical analysis of the data with only a minimum of economic theory. In particular, a statistical model of productivity and hours growth can be used to decompose fluctuations in output and hours into transitory, business cycle components and permanent changes in the trend level and growth rates of these variables. One such model is presented in Roberts (2001), building on earlier work by Clark (1987) and Kuttner (1994). In this statistical model, productivity and hours in the non-farm business sector are subject to transitory and permanent fluctuations. The model also contains some economic content, in that transitory fluctuations in output lead to lagged responses of hours — reflecting the tendency of businesses to adjust employment and the workweek slowly to shifts in economic conditions — and the output gap spurs inflation in a Phillips curve relationship. Using a statistical technique known as the Kalman filter, the model provides estimates of trend productivity growth for the non-farm business sector. Figure 9 presents these estimates since 1989. Structural productivity growth accelerated in the mid-1990s and remained strong through the recession; the most recent estimate, through the second quarter of this year, suggests that trend productivity growth exceeds 2¼ per cent per year. Combining this estimate with reasonable figures for growth in hours and outside the business sector suggests trend GDP growth somewhat in excess of 3 per cent per year. Such an assessment is consistent with expectations regarding the growth in potential output provided in the Administration’s forecast in the latest Economic Report of the President or in academic studies (Kiley, 2001).

An alternative approach comes from simple growth accounting exercises, which construct potential GDP growth from estimates of the growth rates of labour and capital inputs and trends in multi-factor productivity; such a technique is used by the OECD. The OECD’s views on the evolution of potential output are summarised in Table 9. The recent 1990s potential output acceleration is largely attributed to pick-up in the growth rate of productivity. This pick-up was itself driven by the surge in investment — particularly in information and communication technologies (ICT) — and by the shift in the composition of the capital stock towards ICT. An important supportive policy factor was the fiscal restraint of the late 1990s, which freed up loanable funds for private investment. However, looking back, it now appears that the pace of investment was unsustainable. Its weakening has led to a marked deceleration in capital stock growth, which has led to a deceleration in the likely path of potential output growth this year and next. A slow recovery in capital spending through 2003 would maintain potential output growth near 3 per cent per year until then.

The costs of increased security will lower the level of potential output, but only modestly. The private sector spends a little more than $50 billion per year, or ½ per cent of GDP, on security. While it seems likely that there will be an increase in resources devoted to security in response to last year’s terrorist attacks, its size remains highly speculative. As an illustrative calculation, this year’s Economic Report of the President examined the consequences of a doubling in private expenditures on security. The resulting diversion of labour and capital input from productive uses would lower the level of potential output by about 0.6 per cent after five years — a small effect. In addition, government outlays for defence and homeland security are slated to increase substantially in 2002 and 2003, and perhaps beyond. For example, the Administration’s budget for fiscal year 2003 envisaged an increase in such spending of a little more than $40 billion, or 0.4 per cent of GDP, each year over 2003-07. These expenditures, which are recorded as increased output, unlike those of the private sector which are accounted as intermediate consumption, will divert resources from other productive uses and could lower national savings. If savings and investment were to fall, a modest negative effect on the capital stock and potential output would follow. As these effects will be spread out over the next five years or more, they will only modestly affect the growth of aggregate supply in each year. (Lenain et al., 2002 contains some further discussion reaching similar conclusions).
Figure 9. Labour productivity in the non-farm business sector
Change from a year earlier


Table 9. Decomposition of potential output growth
Average annual per cent change

<table>
<thead>
<tr>
<th></th>
<th>1973-95</th>
<th>1996-2000</th>
<th>2001-03</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential output (whole economy)</td>
<td>3.0</td>
<td>3.4</td>
<td>3.1</td>
</tr>
<tr>
<td>Business sector</td>
<td>3.2</td>
<td>3.7</td>
<td>3.2</td>
</tr>
<tr>
<td>Contribution (to potential output) of:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total factor productivity (TFP)</td>
<td>1.0</td>
<td>1.4</td>
<td>1.6</td>
</tr>
<tr>
<td>Capital stock</td>
<td>1.0</td>
<td>1.2</td>
<td>0.6</td>
</tr>
<tr>
<td>Labour input</td>
<td>1.2</td>
<td>1.1</td>
<td>1.1</td>
</tr>
<tr>
<td>of which:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labour force participation</td>
<td>0.4</td>
<td>0.3</td>
<td>0.2</td>
</tr>
<tr>
<td>NAIRU</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Population and other factors</td>
<td>0.9</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>Wedge between business sector and GDP</td>
<td>-0.3</td>
<td>-0.3</td>
<td>-0.1</td>
</tr>
<tr>
<td>Memorandum:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Composition of capital (in TFP above)</td>
<td>0.2</td>
<td>0.5</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

Source: OECD calculations; Bureau of Labor Statistics.
Finally, another small factor behind the strength in potential output, though less important than the resurgence in productivity growth, has been the growth in trend labour input. In the late 1990s, there was a modest pick-up in the contribution from labour force participation. The rise in participation is a continuation of a long-running trend, but the experience of the late 1990s reflected some different forces. In particular, an important part of the increase occurred among unmarried women with children. This increase was spurred by the expansion of the Earned Income Tax Credit and welfare reform (see Chapter IV). In addition to labour force participation, labour input has been boosted (marginally) by the decline in the non-accelerating inflation rate of unemployment (NAIRU), which the OECD estimates has fallen from 5.4 per cent in the mid-1990s to 5.1 per cent recently. This decline is important in explaining the quiescence of inflation over the late 1990s, and its cause is unclear. Increased flexibility in the labour market (e.g. the increased role of temporary help agencies and improved matching, perhaps stemming from use of the Internet for job search) may have played some role (Katz and Krueger, 1999; Congressional Budget Office, 2002a). Less positive developments — including the high rate of incarceration (discussed in Chapter IV) and the sharp increase in those receiving disability benefits — have also played a role in lowering the NAIRU, but with adverse effects on potential output. The combination of lower wages for less-skilled men and increased disability benefits has swollen disability rolls, perhaps lowering measured unemployment by 2/3 percentage point (Autor and Duggan, 2001; Juhn, Murphy and Topel, 2002). As emphasised in previous Surveys, efforts to improve work incentives for the disabled should be a priority. Finally, others have cited the slow response of wage demands following the acceleration in labour productivity as a factor temporarily lowering the NAIRU (Ball and Moffitt, 2001). The source and persistence of the lower NAIRU will remain a topic of study for years to come.

The recovery in the labour market has lagged the turnaround in production…

The flip side of the pause in output growth in the second half of 2001 combined with strong productivity growth has been the deterioration in the labour market. Private non-farm employment was essentially flat in 2001 (Table 10) but deteriorated through the year — with December 2001 payrolls 1¾ per cent below their year-earlier level. The decline in payrolls over the course of 2001 was more than accounted for by the drop in manufacturing. Steady job losses had begun in this sector during the summer of 2000, and the number of manufacturing jobs had fallen 10 per cent from their July 2000 peak by this August. In contrast, construction payrolls — normally a cyclically sensitive sector — actually rose modestly in 2001 but have slackened since last winter. Outside of manufacturing, job losses were concentrated in related industries, especially wholesale trade (although other smaller sectors also lost jobs). The drop-off in help supply services, again partially related to manufacturing, was particularly rapid: employment in this industry fell 650 000 or 19 per cent in the 12 months ending in December 2001. Since then, it has added 140 000 jobs (through August), leading the turnaround. Aggregate private non-farm employment has risen marginally since April.

Job losses generated a sharp increase in unemployment. The unemployment rate rose ¾ percentage point on average in 2001 — to 4.8 per cent — but the deterioration over the course of the year was much greater. From its low-point of 3.9 per cent in October 2000, the unemployment rate reached 6.0 per cent in April 2002 (and has bounced around 5¼ per cent since late last year). While the jump since its trough has been as large as that in the early 1990s (see Figure 2 earlier), the peak thus far has been significantly below the 7.8 per cent recorded in June 1992. Recently, the number of long-term unemployed has also jumped, illustrating the difficulty some job-seekers have had finding jobs. The number of persons unemployed for more than 26 weeks has increased nearly 2½ times since the recession began in March 2001, and the median duration of unemployment rose sharply in the first half of this year. In part, the increase in unemployment duration has probably been driven by the diminished search efforts of potential workers following the extension of unemployment benefits for 13 weeks nationally in March. Previous research has suggested that a 13-week extension of benefits would increase average duration by a minimum of 1.3 weeks (O’Leary and Wandner, 1997), about half the recent run-up.
**Table 10. Labour market and compensation outcomes**

<table>
<thead>
<tr>
<th></th>
<th>1991-97 average</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002(^1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population growth (16 years and older)</td>
<td>1.0</td>
<td>1.0</td>
<td>1.2</td>
<td>0.9</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Labour force participation rate</td>
<td>66.6</td>
<td>67.1</td>
<td>67.1</td>
<td>67.2</td>
<td>66.9</td>
<td>66.6</td>
</tr>
<tr>
<td>Employment-population ratio</td>
<td>62.5</td>
<td>64.1</td>
<td>64.3</td>
<td>64.5</td>
<td>63.7</td>
<td>62.8</td>
</tr>
<tr>
<td>Private non-farm employment growth(^2)</td>
<td>2.3</td>
<td>2.8</td>
<td>2.5</td>
<td>2.1</td>
<td>0.0</td>
<td>-1.6</td>
</tr>
<tr>
<td>Average weekly hours(^3) (level)</td>
<td>34.5</td>
<td>34.6</td>
<td>34.5</td>
<td>34.5</td>
<td>34.2</td>
<td>34.2</td>
</tr>
<tr>
<td>Share of employed part-time for economic reasons</td>
<td>4.3</td>
<td>2.8</td>
<td>2.5</td>
<td>2.4</td>
<td>2.7</td>
<td>3.1</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>6.2</td>
<td>4.5</td>
<td>4.2</td>
<td>4.0</td>
<td>4.8</td>
<td>5.8</td>
</tr>
<tr>
<td>Share of potential workers(^4)</td>
<td>6.6</td>
<td>5.4</td>
<td>5.0</td>
<td>4.8</td>
<td>5.6</td>
<td>6.8</td>
</tr>
<tr>
<td>Share of unemployed over 26 weeks</td>
<td>17.7</td>
<td>14.1</td>
<td>12.3</td>
<td>11.4</td>
<td>11.7</td>
<td>17.6</td>
</tr>
<tr>
<td>Share of unemployed who quit</td>
<td>10.9</td>
<td>11.8</td>
<td>13.4</td>
<td>13.7</td>
<td>12.3</td>
<td>10.5</td>
</tr>
<tr>
<td>Median duration of unemployment (weeks)</td>
<td>8.2</td>
<td>6.7</td>
<td>6.4</td>
<td>5.9</td>
<td>6.7</td>
<td>9.1</td>
</tr>
<tr>
<td>ECI(^5) for private industry (December/December)</td>
<td>3.4</td>
<td>3.5</td>
<td>3.4</td>
<td>4.4</td>
<td>4.2</td>
<td>4.0</td>
</tr>
<tr>
<td>ECI wages (December/December)</td>
<td>3.1</td>
<td>3.9</td>
<td>3.5</td>
<td>3.9</td>
<td>3.8</td>
<td>3.6</td>
</tr>
<tr>
<td>ECI benefits (December/December)</td>
<td>3.8</td>
<td>2.4</td>
<td>3.4</td>
<td>5.6</td>
<td>5.1</td>
<td>5.1</td>
</tr>
<tr>
<td>Non-farm compensation per hour (Q4/Q4)</td>
<td>2.9</td>
<td>5.3</td>
<td>4.3</td>
<td>7.1</td>
<td>1.4</td>
<td>2.5</td>
</tr>
<tr>
<td>Real non-farm compensation per hour (Q4/Q4)(^6)</td>
<td>1.0</td>
<td>4.6</td>
<td>2.9</td>
<td>5.1</td>
<td>-0.1</td>
<td>2.1</td>
</tr>
</tbody>
</table>

1. 2002 growth rates are average of January to September over same period a year earlier, where possible. For the ECI, they are twelve-month changes to June, and for non-farm compensation per hour, they are the changes from the second quarter of 2001 to the second quarter of 2002.
2. Establishment survey.
3. For production or non-supervisory workers.
4. Unemployed plus marginally attached workers as a per cent of the civilian labour force plus all marginally attached workers. Marginally attached workers want and are available for employment and have looked for work sometime in the recent past.
5. Employment Cost Index.
6. Deflated by non-farm business output deflator.


---

**... and increases in compensation have slowed**

Compensation continued to advance at a good pace in 2001 but decelerated over the course of the year. A broad measure — compensation per hour in the non-farm business sector — slowed sharply, rising 1.4 per cent over the year to the end of 2001 and 2.5 per cent in the year ending in the second quarter of this year, down sharply from 7.1 per cent through the end of 2000. This measure includes wages and salaries, benefit costs and bonus payments and other incentive-related pay, such as stock options (at exercise, rather than when granted). This latter component has probably been important in the slowing witnessed last year, as the poor performance of equity markets both lowered the value of existing options and probably lessened the attractiveness of option grants to some employees. (The weakness in individual non-withheld tax payments in the first half of this year, discussed in Chapter II, also hints at a marked downshift in the importance of options in compensation). Despite this deceleration, the downshift in inflation (discussed below) has meant that real compensation has continued to advance at a healthy clip over the past year. Other measures of labour costs point to a similar pattern. The Employment Cost Index
(ECI) for private-industry workers rose 4.0 per cent in the year ending in June 2002, down 0.2 percentage point from a year earlier. Both wages and salaries and benefit costs decelerated, although the latter have continued to rise rapidly, in part reflecting increases in the price of health insurance (see Chapter III).

**Inflation has decelerated markedly**

Price increases slowed considerably over the course of 2001, primarily reflecting a sharp drop in energy prices. The Consumer Price Index (CPI) rose 2.8 per cent in 2001 (on a year-average over year-average basis), down from 3.4 per cent in 2000. The slowing over the course of the year was much sharper: the CPI rose 1.6 per cent from December 2000 to December 2001, a 1¾ percentage point deceleration from a year earlier. Energy prices dropped 13 per cent through 2001, reversing the 2000 surge. In contrast, core inflation — the CPI excluding food and energy — ticked up marginally to 2.7 per cent over 2001. The trends in inflation across commodities and services were also strikingly different. Price increases for commodities decelerated broadly (with one notable exception: medical care commodities), while inflation for most services picked up (except energy-related services). Some of these differences stem from the differential movements in input prices. With the global recession, both producer prices across finished, intermediate and crude goods and import prices slowed considerably in 2001, contributing to the declines in consumer commodity prices last year. In 2002, the CPI has picked up with a rapid run-up in petroleum-based prices: consumer inflation was running at a 2.7 per cent annualised rate through August (over the December level), with petroleum-based prices up nearly 33 per cent (annual rate). Nonetheless, core inflation has decelerated to a 2.2 per cent annualised rate.

The increase in the GDP deflator in 2001 was up a bit from the 2000 pace (Figure 10). Like the CPI, price increases for total domestic demand (i.e. gross domestic purchases) slowed considerably, increasing by 1.9 per cent in 2001 versus the 2.5 per cent rise in the previous year. This deceleration was broad-based, with notably slower price increases for consumption, and government purchases. Despite this easing, overall inflation increased because of the sharp drop in import prices. While much of this decline stemmed from oil, import prices more generally slowed or fell last year. More recently, the inflation trends have been much more favourable. Over the first half of 2002, the GDP deflator increased only 0.8 per cent, down a percentage point from a year earlier. Overall and core consumer prices (as measured by the relevant personal consumption deflator) increased 1.4 per cent and 1.9 per cent over the same period. While the increase in oil prices has already resulted in some pick-up in consumer inflation this year, the low level of inflation and the moderation induced by product- and labour-market slack suggest that inflationary pressures are not a short-run problem. But in this regard, a very sharp weakening of the dollar or a further jump in oil prices remain important risks.

**Near-term outlook and risks**

Growth is expected to slow from the 3½ per cent first-half pace in the near term. The spike in the contribution from stockbuilding should lessen, although inventory accumulation is expected to contribute to growth over the projection period (Table 11). The uptrend in inventories owes to the steady increase in final demand projected and the current lean level of stocks. In addition, final demand will probably grow over the remainder of 2002 at a more muted pace than in the first half. Private consumption is expected to advance more moderately, as some of the strength in durables’ purchases abates (especially on motor vehicles) and the gains in other expenditures slow in response to more tepid increases in disposable income. The drag from weak equity markets, lukewarm household confidence and an expected drop-back in refinancing activity should also contribute to a weakening in consumption growth by next year. Demand for housing is set to slacken somewhat for these reasons, in addition to a likely rise in mortgage rates next year, and residential investment should slow by then. Government purchases should also contribute less to
growth going forward, as states and localities adjust to the weakened fiscal outlook. However, more robust growth in government spending, particularly at the federal level, is possible, as the Congress has not agreed on spending levels for FY 2003, and the pattern over recent years has been one of rapid expansion.

**Figure 10. Inflation performance**

*Year-on-year per cent change*

---

2. Excludes all domestic expenditures on food and energy.

*Source: Bureau of Economic Analysis.*
Table 11. Near-term outlook
Percentage change over previous period, volume terms (chain 1996 prices, s.a.a.r.)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Private consumption</td>
<td>3.1</td>
<td>2.4</td>
<td>3.5</td>
<td>2.8</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>Government consumption</td>
<td>4.4</td>
<td>3.0</td>
<td>4.7</td>
<td>3.4</td>
<td>2.9</td>
<td>2.9</td>
</tr>
<tr>
<td>Gross fixed investment</td>
<td>-2.0</td>
<td>2.1</td>
<td>-0.5</td>
<td>-0.3</td>
<td>1.6</td>
<td>5.5</td>
</tr>
<tr>
<td>Private residential</td>
<td>2.3</td>
<td>0.7</td>
<td>6.7</td>
<td>-2.8</td>
<td>1.3</td>
<td>3.0</td>
</tr>
<tr>
<td>Private non-residential</td>
<td>-5.4</td>
<td>2.7</td>
<td>-6.3</td>
<td>0.8</td>
<td>1.3</td>
<td>7.3</td>
</tr>
<tr>
<td>Government</td>
<td>4.4</td>
<td>2.0</td>
<td>10.3</td>
<td>-0.4</td>
<td>2.7</td>
<td>2.9</td>
</tr>
<tr>
<td><strong>Final domestic demand</strong></td>
<td><strong>2.3</strong></td>
<td><strong>2.5</strong></td>
<td><strong>2.9</strong></td>
<td><strong>2.4</strong></td>
<td><strong>2.0</strong></td>
<td><strong>3.4</strong></td>
</tr>
<tr>
<td>Stockbuilding&lt;sup&gt;1&lt;/sup&gt;</td>
<td>0.7</td>
<td>0.3</td>
<td>1.5</td>
<td>0.5</td>
<td>0.2</td>
<td>0.4</td>
</tr>
<tr>
<td><strong>Total domestic demand</strong></td>
<td><strong>2.9</strong></td>
<td><strong>2.8</strong></td>
<td><strong>4.2</strong></td>
<td><strong>2.8</strong></td>
<td><strong>2.2</strong></td>
<td><strong>3.8</strong></td>
</tr>
<tr>
<td>Exports of goods and services</td>
<td>-0.9</td>
<td>7.7</td>
<td>2.6</td>
<td>7.3</td>
<td>7.6</td>
<td>8.4</td>
</tr>
<tr>
<td>Imports of goods and services</td>
<td>3.5</td>
<td>6.7</td>
<td>8.1</td>
<td>7.7</td>
<td>5.5</td>
<td>8.1</td>
</tr>
<tr>
<td><strong>Foreign balance&lt;sup&gt;1&lt;/sup&gt;</strong></td>
<td><strong>-0.7</strong></td>
<td><strong>-0.2</strong></td>
<td><strong>-1.0</strong></td>
<td><strong>-0.4</strong></td>
<td><strong>-0.0</strong></td>
<td><strong>-0.4</strong></td>
</tr>
<tr>
<td>GDP at market prices</td>
<td>2.4</td>
<td>2.7</td>
<td>3.5</td>
<td>2.6</td>
<td>2.3</td>
<td>3.7</td>
</tr>
<tr>
<td>GDP price deflator</td>
<td>1.1</td>
<td>1.4</td>
<td>0.9</td>
<td>1.3</td>
<td>1.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Private consumption deflator</td>
<td>1.4</td>
<td>1.6</td>
<td>1.4</td>
<td>2.0</td>
<td>1.5</td>
<td>1.4</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>5.8</td>
<td>6.0</td>
<td>5.8</td>
<td>5.8</td>
<td>6.0</td>
<td>6.0</td>
</tr>
<tr>
<td>Three-month Treasury bill rate</td>
<td>1.8</td>
<td>1.9</td>
<td>1.9</td>
<td>1.6</td>
<td>1.5</td>
<td>2.3</td>
</tr>
<tr>
<td>Ten-year Treasury note rate</td>
<td>4.5</td>
<td>4.2</td>
<td>5.1</td>
<td>4.0</td>
<td>4.0</td>
<td>4.4</td>
</tr>
<tr>
<td><strong>Net lending of general government</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$ billion</td>
<td>-323.9</td>
<td>-326.3</td>
<td>-320.8</td>
<td>-327.1</td>
<td>-321.0</td>
<td>-331.7</td>
</tr>
<tr>
<td>Per cent of GDP</td>
<td>-3.1</td>
<td>-3.0</td>
<td>-3.1</td>
<td>-3.1</td>
<td>-3.0</td>
<td>-3.0</td>
</tr>
<tr>
<td><strong>Current account balance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$ billion</td>
<td>-509.1</td>
<td>-567.5</td>
<td>-484.8</td>
<td>-533.4</td>
<td>-556.1</td>
<td>-579.0</td>
</tr>
<tr>
<td>Per cent of GDP</td>
<td>-4.9</td>
<td>-5.2</td>
<td>-4.7</td>
<td>-5.1</td>
<td>-5.2</td>
<td>-5.3</td>
</tr>
<tr>
<td>Personal saving rate&lt;sup&gt;2&lt;/sup&gt;</td>
<td>3.7</td>
<td>4.3</td>
<td>3.7</td>
<td>3.6</td>
<td>4.1</td>
<td>4.4</td>
</tr>
</tbody>
</table>

2. OECD definition.

Source: OECD.

In contrast to the slowing in final purchases by households and the government, both imports and exports are expected to advance strongly going forward. The recovery in imports began in the first quarter and is expected to continue at a more moderate pace over coming quarters. While exports have shown strength recently and should continue to increase, trade will be a net drag on growth over the forecast horizon. Consequently, the current account deficit is expected to widen and will probably exceed 5¼ per cent of GDP by the end of 2003 (if not before), despite the recent depreciation of the dollar. Finally, business spending on fixed investment is expected to recover slowly. The eventual pick-up should be driven by several factors. The normal accelerator effects through the desired capital stock on investment and higher profits point towards a rebound by next year. The investment provisions in the March stimulus package that lower the cost of capital and boost corporate cash flow will complement these positive factors. And debt-financing costs should remain supportive: long-term interest rates have fluctuated but have remained at low levels and should stay relatively low for the remainder of the year, as inflation has
been well contained. Any efforts to boost short-run cash flow as a result of the still growing concerns over corporate finances could be a drag.

Once growth in fixed investment takes root, a more robust expansion in jobs should follow. Hence, the unemployment rate is expected to drift up to 6 per cent next year and then gradually decline. Labour market slack will probably linger, with the unemployment rate notably above the near 5 per cent NAIRU through 2004. Consequently, real wage gains may continue at a more muted pace than that of recent years, and core inflation (as measured by the personal consumption deflator excluding food and energy) is expected to drift down but remain near 1½ per cent over 2002-04. Overall consumption prices will probably advance more modestly than that this year and more rapidly next, primarily reflecting gyrations in petroleum-based prices. Against this backdrop of moderate growth and low inflation, a cut in the federal funds rate late this year, to 1½ per cent, would be appropriate and is assumed in this projection. Once the recovery has broadened to include business investment and the job market has begun to improve steadily, a shift to a more neutral stance is projected to begin.

While moderate growth is the most likely near-term outcome, several significant risks could derail the recovery. Most prominent among these is a more abrupt weakening in household demand. As has been emphasised, the strength of household spending during the downturn has been remarkable for a recession period (although there have been a number of special factors). With unemployment remaining high and equity markets swooning again this year, consumer confidence could falter, leading to a marked slowing in consumption expenditures and another desired downward adjustment in inventories. This possibility may be heightened by the high level of debt households have accumulated over recent years — although past experience has not suggested that debt accumulation has held back consumption. Business spending also may not accelerate to the degree expected as equity markets have been weak and excess capacity remains substantial. On top of these concerns, uncertainty about the situation in the Middle East may be hurting confidence and boosting oil prices. On the flip side, the considerable impetus put in place by monetary and fiscal policy could lead to a more robust pace of household and business demand later this year — not to mention the possibility that government spending advances more quickly than anticipated. While the widening in the current account has led to a shift in sentiment against the dollar, this shift has been moderate to date and has not put upward pressure on interest rates. A more dramatic decline in the dollar might boost inflation moderately and would crimp demand if accompanied by a run-up in long-term interest rates. However, the low level of inflation means this may be of great concern — as some up-tick in inflation may be desirable with short-term nominal interest rates currently below 2 per cent. Absent a marked effect on inflation, equity prices or long-term interest rates, a dollar adjustment would not lower domestic demand significantly and would provide a modest lift to net exports and thus the current account.
II. MACROECONOMIC POLICY

Skilful policy actions limited the extent and duration of last year’s economic downturn. A rapid monetary easing — both before and after the events of 11 September — combined with a substantial fiscal expansion to underpin household demand and boost activity. Monetary policy has remained very accommodative this year. Yet, core inflation has been moderate and edging lower, while inflation expectations have been well contained. Even though the recovery is still fragile, the focus will eventually turn to the timing and speed of a return to a more neutral monetary stance. On the fiscal side, renewed restraint will be needed, following the plethora of recent measures to cut taxes and boost spending. The large swing to deficits at the federal level and the deterioration in state finances imply that, in the absence of policy changes, a restoration of fiscal surpluses is unlikely over at least the next couple of years. Surpluses would be desirable both to contain longer-term macroeconomic imbalances and to prepare to address the population-ageing problem that will emerge more strongly at the end of the decade. The remainder of this chapter discusses, in turn, recent monetary and fiscal policy developments and the challenges in these areas in the period ahead.

Monetary policy

The Federal Reserve lowered its target for the federal funds rate by 475 basis points over the course of 2001, the sharpest reduction since the early 1980s. The substantial easing was necessary to offset the powerful crosscurrents buffeting domestic financial conditions, in particular the dollar’s continued appreciation and the decline in equity prices, as well as the potentially large increase in risk aversion that could have stemmed from the events of 11 September. While the stance of monetary policy has remained accommodative, financial conditions have fluctuated significantly since the last cut in the federal funds rate in December. Increases in long-term interest rates and the exchange rate earlier in the year have been more than reversed recently, but this has been accompanied by pronounced stock-market weakness. The accommodative monetary policy stance has been reflected in robust money growth. Credit flows to households and businesses have slowed less than in the recession of the early 1990s, and there are few complaints about credit availability. Although financial markets have pushed back their expectations of interest rate hikes and have even placed substantial odds on some cut in the near term, a move toward a neutral policy stance involving higher interest rates will eventually be required to maintain price stability and ensure sustained growth. Some adjustments to the current informal inflation-targeting framework may be helpful in this context, as discussed below.

Unchanged official interest rates following the aggressive monetary easing through 2001

More than half of last year’s funds rate cuts took place before the terrorist attacks in September. The most pressing concern of the Federal Reserve in the immediate aftermath of the attacks was to help shore up the infrastructure of financial markets and to provide sufficient liquidity to limit potential disruptions to their functioning. Although the financial system showed remarkable resilience, the episode did reveal vulnerabilities that will need to be addressed (Annex I). In addition to providing a huge volume of reserves through open market operations, the discount window and other means, the authorities reduced the federal funds rate twice more, by 50 basis points each time, in the weeks following the attacks. With
equity prices falling sharply and credit risk spreads widening appreciably, the Federal Reserve considered that potential effects on activity warranted further policy easing.

Figure 11. Total and core inflation¹
Year-on-year per cent change

![Graph showing total and core inflation](image)

1. Core inflation is the rate of increase over one year of the consumption deflator and CPI, respectively, excluding food and energy products and services.

Source: Bureau of Economic Analysis.

Information available at the November Federal Open Market Committee (FOMC) meeting tended to confirm that the decline in production, employment and final demand had accelerated after the terrorist attacks. Accordingly, it lowered the federal funds rate target by another 50 basis points. The rapid and sizeable adjustments in the stance of monetary policy in part reflected concerns that insufficient stimulus posed an unacceptably high risk of a more extended cyclical retrenchment that could prove progressively more difficult to counter, given that the federal funds rate was already at such a low level. By
the time of the December FOMC meeting, there were indications that the rate of economic decline might be moderating. However, the evidence of emerging stabilisation was tentative and limited. Hence, considering that a modest easing could be reversed in a timely manner if it turned out not to be needed, the FOMC cut the federal funds rate by 25 basis points, to 1¾ per cent. As had been the case throughout the year, the reduction in the discount rate matched that in the target funds rate, bringing it to 1¼ per cent, its lowest level since 1948.

Since then, the target federal funds rate has remained unchanged, although output rose solidly in the first half of this year. This reflects a number of considerations. First, the decrease in energy prices from mid-2001 induced a marked decline in overall price inflation, and core inflation has also eased, especially if measured by the personal consumption deflator (Figure 11). Second, a moderate output gap emerged over the course of 2001, which is likely to put further downward pressure on inflation at least over the next year or so. Third, the recovery so far has relied mainly on a swing in inventory investment, and there is considerable uncertainty about the degree near-term strengthening in final demand, an essential element in sustained economic expansion. At its March meeting, the FOMC altered its assessment of the risks to the outlook, stating that they were no longer tilted toward economic weakness but balanced with respect to the prospects for price stability and sustainable growth. But the strength of the recovery seemed to wane over the summer, and the FOMC viewed the balance of risks once again as mainly tilted toward economic weakness in August. The accommodative policy stance can be gauged by estimates of real short-term interest rates. Using the core private consumption deflator as a measure of inflation, these are barely positive and only slightly above the levels reached following the recession of the early 1990s (Figure 12). Financial markets now expect a modest policy loosening by year-end.

**Figure 12. Nominal and real federal funds rate**

![Figure 12: Nominal and real federal funds rate](image)

1. Based on the deflator for personal consumption expenditures, excluding food and energy. 
   *Source: Board of Governors of the Federal Reserve System and Bureau of Economic Analysis.*

In addition to indicating the Committee’s views about economic risks over the foreseeable future, the statement issued at the conclusion of the March FOMC meeting for the first time also reported the roll call vote on the funds rate target. It remains to be seen whether such information adds to the predictability of policy changes. Moreover, the Federal Reserve has recently proposed changes to its discount-lending framework. Under the new arrangement, the discount window would be more tightly linked to credit markets, reducing potential volatility in the federal funds rate and thereby enhancing its effectiveness as a monetary policy tool. Two above-market-rate borrowing options would replace existing types of discount
credit, which are extended at a below-market rate. By eliminating the incentive for institutions to borrow to exploit the positive spread of money market rates over the discount rate, the new framework would reduce the need for the Federal Reserve to review the funding situation of borrowers. It is hoped that this would increase institutions’ willingness to use the window when money markets tighten and hence result in greater control over the daily federal funds rate. However, resistance to window borrowing could persist if its use causes market participants to suspect funding or credit problems.

Figure 13. Rates on selected Treasury securities

Source: Board of Governors of the Federal Reserve System.
Long-term interest rates have fallen markedly

Despite the Federal Reserve’s aggressive easing of the stance of monetary policy in 2001, longer-term bond yields ended the year broadly unchanged (Figure 13). Yields declined noticeably in the middle of 2001 as the extent of the weakening in economic activity became evident and reached a low in the aftermath of the terrorist attacks. But they then picked up sharply in November, perhaps because there were signs that the economic fallout from the attacks would be more limited than originally feared. Subsequent fluctuations in longer-term interest rates have been large, in part reflecting market participants’ changing expectations for the strength of the rebound and shifts in risk premia, possibly stemming from concerns over the credit worthiness quality of corporate borrowers and shifting demand for private and government bonds. In particular, surprisingly strong macroeconomic data released in late February and March led to a burst of optimism, but this has ebbed as ensuing indicators failed to support buoyed growth expectations. Bond yields have fallen dramatically since the spring, with the yield on the ten-year Treasury dropping to 3 3/4 per cent by September, the lowest levels in 40 years. Nonetheless, shifts in the slope of the yield curve in recent years can be largely traced to movements in short-term rates, with greater stability in long-term rates. This may be in part the result of well-anchored inflation expectations, which have remained in the neighbourhood of 2 per cent, based both on survey evidence and the differential between Treasury nominal and index-linked yields (Figure 14).

Recent dollar weakness interrupts the upward trend in the exchange rate

Despite the marked weakening in US economic activity and the significant easing of monetary policy, the rise in the dollar’s average foreign exchange value continued in 2001 and the early part of 2002 (Figure 15). Even with its subsequent decline, in real effective terms the dollar has appreciated by about one quarter since the mid-1990s and may still be overvalued. It remains to be seen whether recent developments represent a reversal in the US currency’s upward trend or a short-term phenomenon as observed repeatedly in the past. While the current account deficit is large and likely to widen further, as discussed in Chapter I, the US economy retains a productivity advantage and remains an attractive place to invest. One source of continued dollar weakness could be a loss of appetite by foreign investors for US assets, brought about by a reassessment of the outlook for US profits (and/or returns elsewhere). Also, US investors, who have not had much of an incentive to hold foreign assets in their portfolios in recent years, may again seek greater diversification. The latest data show that, while capital inflows to the United States have indeed slowed, so have US investments abroad (Table 12), but lapses in corporate governance have made investments in the United States less attractive of late.

Equity markets have remained volatile and depressed

The correction in equity markets that began in early 2000 has continued through the third quarter of this year (Figure 16). The initial stage consisted primarily of a correction in the valuation of technology and internet-related companies, reflecting a reassessment of the likely path of earnings. The downtrend continued, with some short-lived reversals, until September 2001 — in part due to the sharp drop in profits that accompanied the recession. After the terrorist attacks, equity prices plunged sharply, but the unexpectedly rapid improvement in economic prospects led to some appreciation in shares through early this year. However, the series of revelations regarding misleading accounting practices and possible fraud at numerous public companies that followed the collapse of Enron in late 2001 (see Chapter IV) increasingly weighed on investors confidence through this summer, bringing major market indexes back to 1997 levels by July. More recent data have suggested a weaker economic outlook, some disappointment on corporate earnings and equity prices have correspondingly remain depressed. From its peak in early 2000
to late September, the Wilshire 5000 index has fallen more than 40 per cent. Various valuation
benchmarks, such as price-earnings ratios or dividend yields, remain out of line with historical averages.

Figure 14. Nominal and real long-term interest rates

1. Difference between the 10-year constant-maturity Treasury bond and Merrill Lynch Treasury index-linked bond.
   The indexed bond used in the calculation changes in January each year to maintain a constant maturity.
   Source: Board of Governors of the Federal Reserve System and Datastream.
Robust expansion in money and credit

Money growth accelerated sharply in 2001, with broad aggregates expanding at double-digit rates through the year (Table 13). The swift decline in short-term market interest rates lowered the opportunity cost of holding M2 assets significantly (especially the more liquid types) because the rates of return provided by many components of the aggregate move sluggishly. In addition, negative returns and high volatility in equity markets raised household demand for M2 assets. An unprecedented level of mortgage refinancing activity (which temporarily buoys deposit accounts), as well as rising demand for US currency.
also bolstered the aggregate’s growth. Involuntary accumulation of liquid deposits resulting from payment system disruptions after the terrorist attacks caused M2 to surge temporarily, but this was largely unwound by October. The strong advance in M2 outpaced the slowing expansion of nominal income by a large margin so that M2 velocity posted a record decline. The broadest monetary aggregate M3 was additionally boosted by huge inflows into institutional money funds offering attractive returns, which outweighed the effect of a slowdown in bank credit. M3 velocity dropped for the seventh year in a row, to a record low. A net shift toward longer-term assets has contributed to a deceleration in broad money growth this year, along with a levelling out of opportunity costs.

Table 12. Capital flows into and out of the United States and the US net debtor position
Per cent of GDP, annual rates

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Q3</td>
<td>Q4</td>
<td>Q1</td>
<td>Q2</td>
<td>Q2</td>
</tr>
<tr>
<td>Foreign assets in the United States</td>
<td></td>
<td>9.5</td>
<td>6.3</td>
<td>3.4</td>
<td>5.7</td>
<td>3.8</td>
</tr>
<tr>
<td>Bank deposits</td>
<td></td>
<td>0.2</td>
<td>-0.4</td>
<td>0.1</td>
<td>0.6</td>
<td>0.2</td>
</tr>
<tr>
<td>Bonds</td>
<td></td>
<td>2.2</td>
<td>3.1</td>
<td>2.1</td>
<td>4.7</td>
<td>1.8</td>
</tr>
<tr>
<td>Treasury</td>
<td></td>
<td>-0.9</td>
<td>0.0</td>
<td>0.0</td>
<td>1.7</td>
<td>-0.3</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>3.1</td>
<td>3.1</td>
<td>2.1</td>
<td>3.0</td>
<td>2.1</td>
</tr>
<tr>
<td>Real assets</td>
<td></td>
<td>5.1</td>
<td>2.5</td>
<td>1.1</td>
<td>2.2</td>
<td>1.5</td>
</tr>
<tr>
<td>Equities</td>
<td></td>
<td>2.0</td>
<td>1.2</td>
<td>0.5</td>
<td>1.3</td>
<td>0.9</td>
</tr>
<tr>
<td>Direct investment</td>
<td></td>
<td>3.1</td>
<td>1.3</td>
<td>0.6</td>
<td>0.9</td>
<td>0.6</td>
</tr>
<tr>
<td>Other assets</td>
<td></td>
<td>2.0</td>
<td>1.0</td>
<td>0.1</td>
<td>-1.8</td>
<td>0.6</td>
</tr>
<tr>
<td>US assets abroad</td>
<td></td>
<td>5.3</td>
<td>2.5</td>
<td>1.7</td>
<td>-0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>Bank deposits</td>
<td></td>
<td>1.4</td>
<td>0.3</td>
<td>0.4</td>
<td>0.2</td>
<td>-0.6</td>
</tr>
<tr>
<td>Bonds</td>
<td></td>
<td>0.2</td>
<td>-0.1</td>
<td>-0.8</td>
<td>0.3</td>
<td>0.0</td>
</tr>
<tr>
<td>Real assets</td>
<td></td>
<td>2.9</td>
<td>2.3</td>
<td>2.1</td>
<td>1.8</td>
<td>1.1</td>
</tr>
<tr>
<td>Equities</td>
<td></td>
<td>1.1</td>
<td>1.1</td>
<td>0.4</td>
<td>0.7</td>
<td>-0.1</td>
</tr>
<tr>
<td>Direct investment</td>
<td></td>
<td>1.8</td>
<td>1.3</td>
<td>1.7</td>
<td>1.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>0.8</td>
<td>0.0</td>
<td>0.1</td>
<td>-2.7</td>
<td>-0.1</td>
</tr>
<tr>
<td>Net position</td>
<td></td>
<td>4.2</td>
<td>3.8</td>
<td>1.6</td>
<td>6.1</td>
<td>3.4</td>
</tr>
<tr>
<td>Bank deposits</td>
<td></td>
<td>-1.2</td>
<td>-0.7</td>
<td>-0.3</td>
<td>0.5</td>
<td>0.4</td>
</tr>
<tr>
<td>Bonds</td>
<td></td>
<td>2.0</td>
<td>3.3</td>
<td>2.9</td>
<td>4.4</td>
<td>1.9</td>
</tr>
<tr>
<td>Real assets</td>
<td></td>
<td>2.2</td>
<td>0.2</td>
<td>-1.0</td>
<td>0.4</td>
<td>0.5</td>
</tr>
<tr>
<td>Equities</td>
<td></td>
<td>0.9</td>
<td>0.1</td>
<td>0.1</td>
<td>0.6</td>
<td>1.0</td>
</tr>
<tr>
<td>Direct investment</td>
<td></td>
<td>1.3</td>
<td>0.0</td>
<td>-1.1</td>
<td>-0.2</td>
<td>-0.5</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>1.2</td>
<td>1.0</td>
<td>0.0</td>
<td>0.9</td>
<td>0.7</td>
</tr>
<tr>
<td>Current account deficit</td>
<td></td>
<td>4.2</td>
<td>3.9</td>
<td>3.6</td>
<td>3.7</td>
<td>4.4</td>
</tr>
<tr>
<td>Discrepancy</td>
<td></td>
<td>0.0</td>
<td>0.1</td>
<td>2.0</td>
<td>-2.4</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Source: Board of Governors of the Federal Reserve System.
Figure 16. Equity markets
3 January 2000 = 100

Source: Datastream.

Table 13. Growth in monetary aggregates
Per cent change from previous period at an annual rate

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>M1</td>
<td>2.3</td>
<td>2.5</td>
<td>-3.2</td>
<td>8.3</td>
<td>29.1</td>
<td>-6.7</td>
<td>2.8</td>
<td>0.8</td>
</tr>
<tr>
<td>M2</td>
<td>8.8</td>
<td>6.2</td>
<td>6.1</td>
<td>10.5</td>
<td>15.2</td>
<td>6.4</td>
<td>3.1</td>
<td>6.1</td>
</tr>
<tr>
<td>M3</td>
<td>10.8</td>
<td>8.3</td>
<td>8.7</td>
<td>12.9</td>
<td>11.4</td>
<td>11.1</td>
<td>1.8</td>
<td>5.7</td>
</tr>
<tr>
<td>Bank loans</td>
<td>9.9</td>
<td>5.9</td>
<td>10.9</td>
<td>1.8</td>
<td>4.8</td>
<td>-3.2</td>
<td>-0.9</td>
<td>4.3</td>
</tr>
<tr>
<td>Total debt</td>
<td>6.8</td>
<td>6.8</td>
<td>5.0</td>
<td>6.1</td>
<td>7.0</td>
<td>6.5</td>
<td>4.9</td>
<td>8.0</td>
</tr>
<tr>
<td>GDP</td>
<td>5.6</td>
<td>5.6</td>
<td>5.9</td>
<td>2.6</td>
<td>1.9</td>
<td>2.2</td>
<td>6.5</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Source: Board of Governors of the Federal Reserve System and Bureau of Economic Analysis.

Private borrowing has remained robust, especially when compared with the growth of nominal spending. Households, in particular, have continued to borrow at a brisk pace (Table 14). Lower mortgage interest rates have encouraged them to take on large amounts of mortgage debt, both by encouraging home ownership and by making it attractive to refinance existing mortgages and extract some of the accumulated equity. Indeed, in September 2002, the Mortgage Bankers Association refinancing index reached its highest level since its inception in January 1980. The rate of consumer credit growth has also remained high. In contrast, corporate borrowing has slackened noticeably. Bank lending to the commercial and industrial sector has fallen by 7½ per cent since early 2001 (Figure 17, Panel A). Even more impressively, commercial paper outstanding has fallen by over 40 per cent since late 2000 (Figure 17, Panel B). This has raised some concerns about a “credit crunch”. Indeed, yield spreads on corporate bonds over Treasury securities have regained the unusually high level of late 2001, especially since the summer when profit disappointment and corporate governance concerns began to weigh more heavily on equity markets.
Nonetheless, the level of yields on corporate securities has fallen markedly, with the drop in Treasury yields, and so far, there is little indication that creditworthy borrowers cannot obtain funding. The declines in commercial paper and bank lending have been offset by robust credit extension by other lenders, such as finance companies, and a high volume of bond issues (Figure 17, Panel C). This was not the case in the early-1990s recession, when banks restrained lending due to low capital. In fact, credit flows to businesses have fallen much more modestly in this cycle, even as firms slashed their investment in fixed capital and inventories. Moreover, financial institutions have maintained their capital and liquidity as delinquency rates of business and real estate loans have not reached the highs witnessed in the earlier period.

<table>
<thead>
<tr>
<th>Table 14. Credit market debt outstanding by sector</th>
<th>Per cent change from previous period at an annual rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Q3 Q4 Q1 Q2</td>
</tr>
<tr>
<td>All borrowers</td>
<td>10.2 9.4 6.9 7.3 8.3 7.9 6.6 8.5</td>
</tr>
<tr>
<td>Domestic non-financial</td>
<td>6.8 6.8 5.1 6.1 7.0 6.5 4.9 8.0</td>
</tr>
<tr>
<td>Federal</td>
<td>-1.4 -1.9 -8.0 -0.2 6.5 1.3 1.2 14.0</td>
</tr>
<tr>
<td>State and local</td>
<td>7.2 4.4 2.2 8.1 4.3 12.3 4.6 13.0</td>
</tr>
<tr>
<td>Private non-financial</td>
<td>7.5 9.8 9.9 9.2 7.4 7.3 5.8 6.3</td>
</tr>
<tr>
<td>Households</td>
<td>8.2 8.3 8.6 8.6 9.3 8.5 9.5 9.3</td>
</tr>
<tr>
<td>Corporations</td>
<td>11.6 11.6 9.7 5.1 4.1 5.2 0.4 1.6</td>
</tr>
<tr>
<td>Non-corporate</td>
<td>12.2 12.1 10.5 8.6 8.1 7.5 5.7 5.9</td>
</tr>
</tbody>
</table>

Source: Board of Governors of the Federal Reserve System.

Some challenges ahead

The Federal Reserve will face a delicate balancing act in the period ahead. It will have to start tightening monetary policy early enough to make sure that price stability is maintained, but not so fast as to jeopardise the recovery. As discussed, stimulus is currently substantial, as manifest in real short-term interest rates near zero and a rapid expansion of the money supply. On current OECD projections, the economy’s output gap is unlikely to close by 2004. Given the uncertainties concerning the recovery the authorities should stand ready to adjust policy in response to any significant changes in the outlook. A persistent decline in the value of the dollar would add both to inflation and economic growth. On the other hand, a further runoff in equity markets would have a dampening effect on activity and inflation. Moreover, recent data have suggested some renewed weakness in the labour market. Indeed, the authorities could conceivably even need to ease policy again in the short run, should the recovery falter and financial markets not find their footing. More generally, as discussed in Chapter I, there are some characteristics of the present cycle that point to a modest recovery, and, indeed, final domestic demand has still to replace re-stocking as the major source of the upswing. Against this backdrop, the eventual move to a more neutral policy should proceed gradually, but policymakers should stand ready to place a more substantial drag on activity if demand accelerates unexpectedly.
Although monetary policy has been very successful, some adjustments to the framework and operating procedures may further enhance its effectiveness and help maintain its good performance. As noted, the Federal Reserve has already taken a number of measures to make the implementation of policy more transparent, but further steps in this direction should be considered. In particular, some members of the Congress (Joint Economic Committee, 2002), former Federal Reserve officials (Meyer, 2001) and academics (Bernanke et al., 1999) have suggested that an explicit inflation target should be introduced. Opponents of such an approach argue that countries that have adopted that strategy do not show much better performance than countries with other monetary regimes. Moreover, they consider that it would limit
the ability to pursue the dual mandate of price stability and full employment. Against this, the supporters of an explicit inflation-targeting framework point out that it would serve to a large degree to formalise, and thus perpetuate, some of the positive features of current practice, building on recent steps to increase transparency. Reduced uncertainty for all economic agents would better anchor inflation expectations and, ultimately, lead to improved policy outcomes. Of course, there are a number of design issues that would need to be resolved when setting up an inflation-targeting framework appropriate for the United States. These concern the definition of the target variable, the targeted level of inflation, whether it should be a point target or a range, and the horizon for achieving the target. There is no agreement on these issues in the light of international experience (Mishkin and Schmidt-Hebbel, 2001) nor as yet among the proponents of such an approach in the United States. However, a move in this direction could help institutionalise recent good monetary policy and thus provide some greater assurance of its continuity. In addition, it would have the virtue of enhancing transparency and accountability.

Fiscal policy

The federal budget returned to a large deficit position in FY 2002. The combination of recession-induced weakness in revenues and increases in spending, strong expenditure growth overall including new priorities from the war on terrorism, and the tax cut of the previous year reversed the improvement in federal finances witnessed over the late 1990s. The tax cut was meant to reverse the upward trend in revenue as a share of GDP that accompanied the expansion and yielded growing surpluses. The unexpected softness in economic activity in FY 2001-02 led to a further worsening in the fiscal position, but this will improve as the economy recovers. Nevertheless, the spending priorities associated with domestic security concerns and the war on terrorism as well as continued pressure for new spending — particularly on health as costs rise and support for a prescription drug benefit for Medicare mounts — may result in a large and potentially sustained erosion in the fiscal outlook. It could also increase the difficulty of resolving medium-run tensions in the federal budget. In this regard, the growing importance of the individual Alternative Minimum Tax (AMT) projected over the next ten years and the expiration of most of the provisions of last year’s tax cut after 2010 loom particularly large.

Revenues weaken as spending accelerates

Federal revenues declined in FY 2001 and are expected to have fallen again in FY 2002 (Table 15). Such back-to-back declines are unprecedented in the last 40 years and reflect the overlapping effects of economic weakness and tax cuts. Individual income and corporate income taxes fell in both years. A significant portion of the drop in individual tax collections was caused by last year’s tax cut legislation — the Economic Growth and Tax Relief Reconciliation Act (EGTRRA), which is estimated to have lowered individual tax receipts by about $40 billion in FY 2001 and $60 billion in FY 2002 (Table 16). The weak economy helps explain why the normal pace of revenue growth associated with rising incomes did not offset these cuts to a greater extent. In addition, individual non-withheld income tax receipts fell dramatically short of expectations during this spring’s tax collection season. This shortfall and other information led to a downward revision in estimated FY 2002 revenues (due to “technical factors”) of $100 billion. While detailed data within the individual non-withheld category will not be available for some time, the decline almost surely reflected reduced capital gains tax receipts and lower revenue from the taxation of stock options. A recovery in this category will depend on an improvement in equity markets, which have plunged again despite the emerging recovery. With regard to other receipts, the drop-off in corporate tax revenue in FY 2001 also reflected EGTRRA to a small extent (as some revenues were moved from FY 2001 to FY 2002), but the weakness in corporate profits was more important. The expensing provisions and other aspects of the stimulus package passed in March (the Job Creation and Worker Assistance Act of 2002) are expected to depress corporate tax receipts in FY 2002 (and FY 2003)
by about $40 billion per year. The decrease in the cost of capital resulting from the investment incentives — and the associated boost to corporate cash flow — will likely be one important factor lifting equipment spending in late 2002.

Table 15. Federal revenue and expenditure

<table>
<thead>
<tr>
<th></th>
<th>FY 2000</th>
<th>FY 2001</th>
<th>FY 2002 (projected)</th>
<th>FY 2003 (projected)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$ billion</td>
<td>Per cent of GDP</td>
<td>$ billion</td>
<td>Per cent of GDP</td>
</tr>
<tr>
<td>Receipts</td>
<td>2 025</td>
<td>20.8</td>
<td>1 991</td>
<td>19.8</td>
</tr>
<tr>
<td>Income tax</td>
<td>1 004</td>
<td>10.3</td>
<td>994</td>
<td>9.9</td>
</tr>
<tr>
<td>Corporate tax</td>
<td>207</td>
<td>2.1</td>
<td>151</td>
<td>1.5</td>
</tr>
<tr>
<td>Social insurance taxes</td>
<td>653</td>
<td>6.7</td>
<td>694</td>
<td>6.9</td>
</tr>
<tr>
<td>Other</td>
<td>161</td>
<td>1.6</td>
<td>152</td>
<td>1.5</td>
</tr>
<tr>
<td>Expenditure</td>
<td>1 789</td>
<td>18.4</td>
<td>1 864</td>
<td>18.6</td>
</tr>
<tr>
<td>Discretionary</td>
<td>615</td>
<td>6.3</td>
<td>649</td>
<td>6.5</td>
</tr>
<tr>
<td>Mandatory</td>
<td>951</td>
<td>9.8</td>
<td>1 008</td>
<td>10.1</td>
</tr>
<tr>
<td>Net interest</td>
<td>223</td>
<td>2.3</td>
<td>206</td>
<td>2.1</td>
</tr>
<tr>
<td>Surplus</td>
<td>237</td>
<td>2.4</td>
<td>127</td>
<td>1.3</td>
</tr>
<tr>
<td>On budget</td>
<td>87</td>
<td>0.9</td>
<td>-34</td>
<td>-0.3</td>
</tr>
<tr>
<td>Off budget</td>
<td>150</td>
<td>1.5</td>
<td>161</td>
<td>1.6</td>
</tr>
</tbody>
</table>

Source: Congressional Budget Office.

Table 16. Effects of major legislation on revenue and expenditure

<table>
<thead>
<tr>
<th></th>
<th>FY 2001</th>
<th>FY 2002</th>
<th>FY 2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receipts</td>
<td>-61</td>
<td>-83</td>
<td>-118</td>
</tr>
<tr>
<td>EGTRRA¹ (2001)</td>
<td>-61</td>
<td>-40</td>
<td>-79</td>
</tr>
<tr>
<td>Individual²</td>
<td>-38</td>
<td>-62</td>
<td>-79</td>
</tr>
<tr>
<td>Corporate</td>
<td>-23</td>
<td>23</td>
<td>0</td>
</tr>
<tr>
<td>Stimulus Bill (2002)</td>
<td>-</td>
<td>-43</td>
<td>-39</td>
</tr>
<tr>
<td>Expenditure</td>
<td>-</td>
<td>42</td>
<td>20</td>
</tr>
<tr>
<td>Emergency Bills³</td>
<td>-</td>
<td>21</td>
<td>9</td>
</tr>
<tr>
<td>Stimulus Bill (2002)</td>
<td>-</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Supplemental (2002)</td>
<td>-</td>
<td>13</td>
<td>7</td>
</tr>
</tbody>
</table>

Note: Estimates from Congressional Budget Office (January and March 2002) and Office of Management and Budget (2002).
2. Includes estate and gift tax changes.
Source: Congressional Budget Office and Office of Management and Budget.
Spending accelerated in FY 2001 and FY 2002 (Table 15). The rapid increases in recent years have been widespread. Within the non-defence discretionary category, increases in the last two years have been particularly significant for education, transportation and the administration of justice. Defence expenditures in FY 2002 surged with the war on terrorism and a renewed focus on military preparedness. In addition, spending on Medicare and Medicaid (health care programmes for the aged and those with low incomes, respectively) has risen rapidly, reflecting both the intense pressures on health costs and increased participation in Medicaid with the weakening in the labour market. “Emergency” outlays associated with homeland defence and the war on terrorism plus other discretionary changes designed to provide added stimulus (most notably the extension of unemployment insurance benefits) also boosted spending significantly in FY 2002. The combination of rapid spending and revenue weakness is expected to yield a federal budget deficit of $157 billion in FY 2002. Given the crosscurrents buffeting the economy and the needed increase in defence expenditure, such a deficit — about 1½ per cent of GDP — is not large and certainly falls far short of those incurred in the early 1990s. The deficit will likely reach similar levels in FY 2003 according to the Congressional Budget Office (CBO). However, the shift to a deficit implies an even larger imbalance excluding the current surplus on Social Security and Medicare (and other off-budget programmes), which face serious long-run funding problems. A return to a more favourable fiscal position in several years, as under Administration or CBO projections, will require significant restraint, as discussed further below. The end-September expiration of the past decade’s budget enforcement procedures may exacerbate this problem (see Annex II).

The deterioration in near-term finances implies markedly lower projected surpluses in the medium term

While near-term budget pressures have led to a sharp swing into deficit at the federal level, the outlook over the medium run has worsened even more substantially. From 2002 to 2011, the most recent federal surplus forecast from the CBO cumulates to only $336 billion, down from $5.6 trillion in early 2001. Two-fifths of this fall reflects the economic downturn and other technical changes such as the weak stock market. About one-third of the change owes to the effects of last year’s decision to cut taxes substantially, with the remainder reflecting increased spending. As discussed in last year’s Survey, the package of tax cuts had some favourable features. One was its fortuitous timing: the decision to send tax rebates to the majority of households in the summer of 2001 put cash in the consumer’s pocket only a few months after the recession began, undoubtedly providing some impetus to spending. More importantly over the medium run, the cuts in marginal tax rates for high-income households may have positive effects on labour supply and savings that can be expected to boost aggregate income. However, the shift in the medium-run fiscal outlook is now much greater than expected when the package was passed, and the size of the tax cut makes it more difficult to manage future priorities, such as a prescription drug benefit for Medicare (see Chapter III) and likely tax changes.

Among such looming tax changes, the two most important are the expected changes in the number of households subject to the AMT and the slated expiration of the provisions of EGTRRA after 2010. The AMT was instituted to limit the degree to which income could be sheltered from taxation by tax planning that manipulates taxable income through certain exemptions. Individuals are subject to the AMT when their tentative minimum tax exceeds the amount they would pay under the regular tax schedule. The tentative minimum tax is 26 per cent of the first $175 000 in taxable income (modified to take into account a number of adjustments) above $49 000 and 28 per cent of the remainder of income. (It is interesting to note that the marginal tax rates associated with the AMT are lower than those facing high-income taxpayers not subject to the AMT; this can occur while still increasing tax liability because a number of exemptions or special tax credits are not permitted under the AMT.) Because the income and exemption levels are not indexed to inflation and the exemption level falls to $45 000 after 2004 under current law (a feature of EGTRRA that was intended to limit its cost and perhaps reflected expectations that more fundamental reforms would occur by that year), an increasing number of households will be subject to the
AMT over time: under current law, 35 million households are predicted to pay $100 billion in extra taxes in 2010, up from an estimated 1.4 million households in 2001. Amending the AMT to limit the share of households subject to it to current levels would lower revenues by about $100 billion in that year (Gale and Orszag, 2002). Eliminating or changing the AMT is very costly, but amendment is likely, as the increased complexity may prove politically infeasible and such widespread application of the AMT would blunt some policy initiatives embedded in the tax code (by eliminating eligibility for many exemptions and credits that lawmakers have found worthwhile). The latter effect highlights the growing pressure for fundamental efforts to simplify the tax code: the Administration has begun to make small proposals — for example, proposing a uniform definition of a child for tax purposes — but has not addressed complexities that would potentially result in significant revenue changes.

The tax law changes put in place by EGTRRA expire after 2010, returning the tax code to its prior form. Debate on whether the tax cuts should be made permanent has already begun. The events of the past year have vividly illustrated the fragility of the long-run fiscal outlook upon which EGTRRA was built, and the deterioration in the fiscal situation implies that some reconsideration of priorities may be in order. For example, Gale and Potter (2002) estimate that the new provisions embedded in EGTRRA lower expected revenues in 2010-11 by an average of $275 billion (or 1.7 per cent of GDP), assuming that EGTRRA is permanently extended (and the eventual budget cost would be even higher, reflecting accumulated interest costs). In the years after 2011, a permanent extension of the estate tax repeal alone would reduce revenues by more than $60 billion per year. With uncertain spending trends, the risks to the fiscal balance resulting from such reductions in revenues should be a focus of policy debate.

Such a revisiting is particularly important because another important factor in the medium-run outlook is the pace of growth in expenditure anticipated over the next decade. The projections presented by the CBO or the Administration present very optimistic assessments of the degree to which spending will slow in coming years. For example, the CBO’s projections assume (by law) that spending on most discretionary programmes (i.e. most spending excluding Social Security, Medicare and Medicaid) grows at the rate of inflation, while recent growth rates have been far higher than this pace (an average of 7.6 per cent per year in the last four years). Assuming instead that discretionary spending grows in line with nominal GDP after 2002 would result in a series of large deficits in the medium term (Figure 18) and would raise estimated expenditures in 2010-11 by an average of about $200 billion, or more than 1 per cent of GDP (Congressional Budget Office, 2002b). This alone is only a bit less than the total projected surplus in those years according to the CBO’s latest forecast. Together with the likely changes to the AMT, permanent extension of last year’s tax cuts and a prescription drug benefit for Medicare, which themselves could consume more than all of the projected surplus through 2011, a moderate federal deficit could become chronic. Thus, the risks to fiscal balance from future policy actions should be considered carefully.

**And long-run imbalances in public pensions and health care for the elderly have not been addressed**

Beyond 2010, imbalances in the current structure of Social Security and Medicare are expected to become increasingly apparent. Relative to the situation in other OECD countries, US imbalances are relatively small, reflecting the transition to an older pension eligibility age, immigration and above-average fertility, and the boost to solvency from the acceleration in productivity growth (OECD, 2001a). Social Security benefits are now officially expected to exceed associated revenues by 2017, and the implicit trust fund associated with it will be exhausted by 2041. These estimates are slight improvements from last year, but they continue to suggest a severe imbalance in the programme. The actuarial deficit over the 75-year projection period equals about 1.9 per cent of expected taxable payroll. Social Security expenditures are projected to rise from 4½ per cent of GDP in 2002 to 7 per cent by 2075 (Figure 19, upper panel). To balance the programme, the payroll tax rate would need to rise from 12.4 per cent to 14.3 per cent
immediately; alternatively, benefit levels could be cut by 13 per cent. Of course, a range of other benefit cuts or dedicated revenue increases could also address the current imbalances.

Figure 18. Comparison of 2002-11 projected surplus and cumulative cost of alternative policies
Billions of dollars

- Current CBO forecast
- minus permanent extension of tax cuts (1)
- minus AMT adjustment (2)
- minus Medicare prescription drug benefit (3)
- minus Discretionary spending grows with nominal GDP (4)

1. Excludes AMT provisions.
2. Limits growth in households subject to AMT.

Source: Gale and Potter (2002) and Congressional Budget Office.

The difficulty likely to be encountered in making such decisions was again highlighted over the past year by the sharp differences in strategy presented in the alternative plans developed by the President’s Commission to Strengthen Social Security (2001). It presented three options, each of which included voluntary personal accounts. It argued that current indexation of benefits to wage growth is not sustainable, but that indexation for increases in the cost of living is possible under current tax rates. The Commission also emphasised that, while a move to advance funding of benefits may be desirable in that it would lower the prospective burden on future generations and possibly boost national savings, such a move would require additional financing during a transition period. Moreover, the level of benefits received by low-income workers was viewed as inadequate, and hence two of the plans presented proposed increases in benefit levels for such workers, paid for by reductions in benefits (again, relative to current law) for high-income workers or additional revenues.

The long-run imbalance in Medicare is significantly worse than that of Social Security because the rapid rate of increase in the cost of medical care experienced historically is expected to continue. The expenses of the Hospital Insurance programme, or Medicare part A — which covers hospital, home health, skilled nursing facility and hospice care and is financed through payroll taxes — are expected to exceed available revenues by 2016 and the implicit trust fund to be exhausted by 2030. To achieve balance over the 75-year projection period, benefit levels would need to be cut by 38 per cent or revenues would need to be increased by 60 per cent throughout the period. To place these figures in perspective, expenditures on Medicare part A equalled 1.4 per cent of GDP in 2002 and are projected to rise to 4.8 per cent of GDP by 2075 under current policies and under rapid yet reasonable assumptions for cost increases (Figure 19, lower panel). Moreover, expenditures on the Supplementary Medical Insurance programme, or Medicare part B, are expected to rise from 1 per cent of GDP in 2002 to 3.7 per cent in 2075 (although the programme technically faces no funding problem, as beneficiary premiums and general revenues cover each year’s expenditures under current law). This disturbing long-run outlook, combined with the near-term pressures created by rapid increases in medical costs for the private sector, has generated renewed interest in policy changes in the health care system, which are discussed in detail in Chapter III.
Figure 19. Projected Social Security and Medicare expenditures relative to GDP 2002-75

Source: The Board of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust funds; The Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust funds.

The recession has pinched state budgets, and recovery will lag activity

The weakening in economic activity has also led to slower growth in state tax revenues, with little sign of recovery thus far. Current receipts of state and local governments increased 3 ¼ per cent over the year to the second quarter of 2002 — a deceleration of 3 percentage points relative to two years earlier (Figure 20). The deceleration was primarily due to the decline in personal income tax collections. Given the movements in wage and salary income, the weakness probably reflects shrinking income related to the stock market, especially capital gains and stock options, much like the drop-off in non-withheld receipts at the federal level. Elsewhere, corporate profits tax accruals had fallen sharply starting in late 2000, but there
has been a modest turnaround this year. Indirect business tax, property taxes and federal grants-in-aid have continued to grow at a solid pace. The buoyancy of property tax revenues is unsurprising in light of the strong housing market through the recession.

**Figure 20. Current receipts of state and local governments**  
Percentage change from one year earlier

![Graph showing percentage change in current receipts of state and local governments from one year earlier, with data points from 1989 to 2002.](image)

Source: Bureau of Economic Analysis.

**Figure 21. Composition of state and local receipts**

![Pie charts showing the composition of state and local receipts in 1996 and 2001.](image)

Source: Bureau of Economic Analysis.

State and local revenues in recent years have consisted of income taxes to a much greater degree than previously, increasing the susceptibility of overall collections to weakness in income (relative to the more stable stream of indirect business and property taxes). For example, income taxes accounted for 22 per cent of state and local receipts (excluding federal grants-in-aid) in 2001, up from 20 per cent in 1996 (Figure 21). However, the increased share of income tax primarily reflects the very rapid growth in
taxable income during this period, not legislative action. In fact, the surge in income tax collections led to a large number of legislated income tax reductions, with 32 states cutting personal tax rates over 1994-2001 (Johnson and Tenny, 2002); these changes simply failed to keep pace with income growth. At the same time, more states raised sales, cigarette or motor fuel taxes than cut them. This year, for example, 11 states raised tobacco taxes, some substantially. The combination of lower income and higher sales taxes has tended to lower the progressivity of taxation at the state and local level over this period (while income inequality remained at elevated levels — see Chapter IV).

**Figure 22. State and local current surpluses and purchases of goods and services**

![Graph showing state and local current surpluses and purchases of goods and services from 1988 to 2000. The graph displays the percentage of GDP for current surpluses and real consumption expenditures and real gross investment. Source: Bureau of Economic Analysis.]

As most states have limited ability to run budget deficits and had been increasing expenditure in response to the strong economy prior to 2001, the weakening in revenues has created pressure to slow expenditure growth and cut some programmes. Through the first quarter of this year, growth of current expenditure decelerated considerably (to 4¼ per cent relative to a year earlier). Nonetheless, the current balance of state and local governments has fallen markedly to a deficit near ½ per cent of GDP recently, a more pronounced worsening than that seen as the economy emerged from the early 1990s recession. The deterioration in their finances will likely lead to some combination of further slowing in expenditure growth or increases in taxes. Regarding the former, the economic weakness of the early 1990s induced a slowing in consumption expenditures and a brief period of declines in investment expenditures (Figure 22). A similar period of weakness, perhaps over late 2002 and 2003, appears to lie ahead. In FY 2002, 39 states cut their FY 2002 general fund expenses during the year in response to weak revenue (states’ fiscal years generally run from July to June), yielding an estimated increase in overall nominal spending of only 2 per cent. Expenditures are expected to rise 1.4 per cent in FY 2003; after adjusting for inflation, this pace is very similar to that following the last recession (National Governors Association and National Association of State Budget Officers, 2002). However, the earlier build-up in state general fund balances, which rose to over 10 per cent of expenditures in 2000, has provided some cushion (Figure 23).

An area of increasing budget pressures for states has been Medicaid spending, which increased by more than 11 per cent in each of the fiscal years 2001 and 2002 (according to preliminary estimates from the National Association of State Budget Officers, 2002). The increase in costs has been driven in part by a rise in caseloads related to the economic weakness last year and in part by the rapid escalation in spending on prescription drugs. Drug spending has risen more than 15 per cent per year over the past two years; double-digit increases in this category are anticipated each year over the next decade. The
increases have boosted Medicaid spending to over 20 per cent of total state spending. In response to the near-term budget pressure created by the expansion in Medicaid, states have implemented a number of cuts in eligibility and benefits, lower payments for drugs and medical practitioners, and higher cigarette taxes. Another area where spending has trended up sharply has been criminal justice. Expenditures related to public order and safety have risen rapidly over the past decade, climbing to about 14 per cent of states’ current expenditures on average in 1996-2000, an increase of 4 percentage points from 20 years earlier, driven by the rapid increase in the incarcerated population (see Chapter IV). The slowing in revenue growth has led 25 states to propose cuts in spending related to prisons (Rosenbaum, 2002). The budgetary impact of the high rate of incarceration has even pressured California to reconsider its tough sentencing rules (Butterfield, 2002).

**Figure 23. State year-end balances as a per cent of expenditures**

![Graph showing state year-end balances as a per cent of expenditures from 1980 to 2002.](image)

*Source:* National Association of State Budget Officers.

**Overall, the general government is likely to remain in deficit, at least over the near term**

The rapid shift to deficit spending at the federal level and the deterioration in state and local finances implies that the general government will remain in deficit at least over the next couple of years, absent some unexpected improvement in revenues or large policy changes. Net borrowing of the general government is likely to reach 3 per cent of GDP in 2002 — down from a net lending position of 1½ per cent just two years earlier (Table 17). Removing the cyclical portion, the structural pace of net borrowing will probably exceed 2 per cent of GDP in 2002. This reversal is significant and the evaporation of surpluses has eliminated the possibility of pre-funding the liabilities associated with population ageing without some policy changes. Moreover, uncertainty around the fiscal outlook for the next couple of years is particularly high right now. The size and duration of increased spending on homeland security and defence remains unclear, and the room for offsetting cuts elsewhere has not yet been found. As well, the persistence of weakness in income tax receipts will be tightly linked to equity market developments.
Table 17. General government net lending

<table>
<thead>
<tr>
<th>Calendar years</th>
<th>2000</th>
<th>2001</th>
<th>2002H1</th>
<th>2000</th>
<th>2001</th>
<th>2002H1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$ billion</td>
<td>Per cent of actual/potential GDP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net lending</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal</td>
<td>199</td>
<td>59</td>
<td>-190</td>
<td>2.0</td>
<td>0.6</td>
<td>-1.9</td>
</tr>
<tr>
<td>State and local</td>
<td>-57</td>
<td>-106</td>
<td>-124</td>
<td>-0.6</td>
<td>-1.0</td>
<td>-1.1</td>
</tr>
<tr>
<td>General government</td>
<td>142</td>
<td>-47</td>
<td>-314</td>
<td>1.4</td>
<td>-0.5</td>
<td>-3.0</td>
</tr>
<tr>
<td>Cyclically adjusted:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net lending</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1.5</td>
<td>1.2</td>
<td>-0.9</td>
</tr>
<tr>
<td>State and local</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-0.8</td>
<td>-1.0</td>
<td>-1.0</td>
</tr>
<tr>
<td>General government</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.7</td>
<td>0.2</td>
<td>-1.9</td>
</tr>
</tbody>
</table>

Source: Bureau of Economic Analysis and OECD.

**Summing up**

The fiscal landscape has shifted significantly since last year’s tax cuts. New priorities associated with the war on terrorism have generated an acceleration in spending. The discipline associated with the appropriation caps and pay-as-you-go rules that had been in place for more than a decade has weakened substantially and could vanish completely without a renewal of budget enforcement procedures. The surprisingly sharp decline in revenue associated with the weakness in equity markets has also led to more difficult fiscal conditions at the federal and state government levels in the near term. Against this backdrop, a renewed focus on the balance between spending priorities and desired tax plans will be needed to maintain fiscal discipline, as the projected return to modest surpluses assumes a sharp slowing in spending growth and significant tax law changes. Two other challenges will be addressing the growing share of households subject to the complicated AMT under baseline projections and the planned additional cuts — and then repeal after 2010 — of provisions from last year’s tax legislation. While the medium-run outlook remains one of improving fiscal conditions, no progress has been made in addressing the long-term imbalances associated with Social Security and Medicare. Although the day of reckoning associated with these programmes remains a long way off, the costs of transitioning to a more sustainable set of policies would be minimised by early corrective action. In this regard, it is important to emphasise that including private accounts within Social Security will not solve its long-run funding imbalance — although other beneficial side-effects such as a sense of ownership and greater financial literacy may make such accounts attractive. Rather, policy changes that lower benefits relative to those scheduled under current law (such as further increases in the retirement age and indexing initial benefits to price rather than wage inflation) or increase revenues and current savings need to be on the agenda soon.
III. HEALTH SYSTEM REFORM

The US health care system is unique in the OECD area. It does not have a national insurance programme and 14 per cent of the population has no insurance coverage, although charity and subsidised programmes facilitate access to the medical system for the 40 million uninsured. It spends vastly more than other Member countries (14 per cent of GDP as compared with an OECD average of 8 per cent). It does relatively well in terms of clinical outcomes achieved. It is also responsive, adapting quickly to changes in consumer preferences, and the majority of Americans is highly satisfied with the care they receive. But, the costs of health care are high, and many Americans are at risk of being uninsured at some point in their lives. Also, like in other OECD countries, service use and health outcomes vary widely across the population. Neither public nor private payers have achieved much in the way of curbing expenditure growth over the long term, despite short-lived successes on the public side in containing prices through prospective payment systems and on the private side in controlling volume and costs through managed care. In addition, the system’s performance on various measures of health status, in comparison with those of other OECD countries, calls into question the value of the high level of spending in terms of marginal improvements in population health, although arguably worse societal risk factors also play a role. Still, despite the remaining potential to achieve better value for money, improvements in population health seem to have yielded substantial increases in national income (Nordhaus, 2002).

The crosscutting issues of incomplete insurance coverage, escalating costs and seemingly inefficient spending were highlighted in an earlier Committee review of the US health care system (OECD, 1992). But they continue to present fundamental challenges to US policymakers. And with a surge in health spending not seen since the 1980s and a recent economic downturn that is expected to have left an increasing number of people uninsured, health care reform has remained high on the policy agenda. Because of the system’s diversity, decentralisation and private nature, fewer policy levers exist at the national level to address these problems than in many other OECD countries. Therefore, reforms have tended to proceed incrementally and on a piecemeal basis, state by state and programme by programme. The private sector is a critical force driving change in both delivery and funding of health care.

The purpose of this chapter is to reassess the opportunities and challenges in the US health system. It begins by providing an overview of its characteristics, focussing on recent trends. It continues with an assessment of its performance, first by analysing expenditures, use of resources and services, and health outcomes, and then evaluating how their determinants represent strengths and weaknesses. Finally, the chapter reviews prospective directions for reforming components of the health system to address underlying problems and provides some recommendations for change.

Overview of the system and recent trends

Both the public and the private sectors play critical roles in the US health system (Annex III). The private sector is dominant in terms of providing insurance coverage for most Americans, but the public sector plays a significant role in financing. The largest federal programme, Medicare, is the dominant purchaser in many markets and serves as a model for other payers in terms of payment formulas. Most delivery is privately administered. Regulation of the sector is a shared responsibility between the state and federal governments, the boundaries of which are not always clear (Annex IV).
### Table 18. Health insurance coverage status and type by selected characteristics, 2000

**Per cent**

<table>
<thead>
<tr>
<th></th>
<th>Covered by private or government insurance</th>
<th>Not covered</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Private insurance</td>
<td>Government health insurance</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>Employment based</td>
</tr>
<tr>
<td><strong>People</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>86.0</td>
<td>72.4</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>85.1</td>
<td>72.8</td>
</tr>
<tr>
<td>Female</td>
<td>86.9</td>
<td>72.0</td>
</tr>
<tr>
<td><strong>Race and ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>87.1</td>
<td>75.0</td>
</tr>
<tr>
<td>Non-Hispanic</td>
<td>90.3</td>
<td>79.4</td>
</tr>
<tr>
<td>Black</td>
<td>81.5</td>
<td>58.9</td>
</tr>
<tr>
<td>Asian and Pacific Islander</td>
<td>82.0</td>
<td>69.9</td>
</tr>
<tr>
<td>Hispanic (Hispanics can be of any race)</td>
<td>68.0</td>
<td>47.9</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 18 years</td>
<td>88.4</td>
<td>70.5</td>
</tr>
<tr>
<td>18 to 24 years</td>
<td>72.7</td>
<td>64.8</td>
</tr>
<tr>
<td>25 to 34 years</td>
<td>78.8</td>
<td>72.1</td>
</tr>
<tr>
<td>35 to 44 years</td>
<td>84.5</td>
<td>78.6</td>
</tr>
<tr>
<td>45 to 64 years</td>
<td>87.4</td>
<td>79.4</td>
</tr>
<tr>
<td>65 years and over</td>
<td>99.3</td>
<td>61.5</td>
</tr>
<tr>
<td><strong>Nativity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native</td>
<td>88.1</td>
<td>74.5</td>
</tr>
<tr>
<td>Foreign born</td>
<td>68.4</td>
<td>54.9</td>
</tr>
<tr>
<td>Naturalized citizen</td>
<td>84.1</td>
<td>66.8</td>
</tr>
<tr>
<td>Not a citizen</td>
<td>58.7</td>
<td>47.6</td>
</tr>
<tr>
<td><strong>Region</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northeast</td>
<td>88.6</td>
<td>75.1</td>
</tr>
<tr>
<td>Midwest</td>
<td>89.2</td>
<td>78.7</td>
</tr>
<tr>
<td>South</td>
<td>84.2</td>
<td>69.6</td>
</tr>
<tr>
<td>West</td>
<td>83.3</td>
<td>68.2</td>
</tr>
<tr>
<td><strong>Household income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than $25 000</td>
<td>77.3</td>
<td>41.2</td>
</tr>
<tr>
<td>$25 000 to $49 999</td>
<td>83.0</td>
<td>70.2</td>
</tr>
<tr>
<td>$50 000 to $74 999</td>
<td>89.0</td>
<td>83.3</td>
</tr>
<tr>
<td>$75 000 or more</td>
<td>93.1</td>
<td>90.1</td>
</tr>
<tr>
<td><strong>Education (18 years and older)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>85.2</td>
<td>73.1</td>
</tr>
<tr>
<td>No high school diploma</td>
<td>73.4</td>
<td>45.8</td>
</tr>
<tr>
<td>High school graduate only</td>
<td>83.6</td>
<td>71.0</td>
</tr>
<tr>
<td>Some college no degree</td>
<td>86.6</td>
<td>77.6</td>
</tr>
<tr>
<td>Associate degree</td>
<td>89.7</td>
<td>82.5</td>
</tr>
<tr>
<td>Bachelor’s degree or higher</td>
<td>92.9</td>
<td>88.1</td>
</tr>
<tr>
<td><strong>Work experience (18 to 64 years old)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>82.4</td>
<td>75.3</td>
</tr>
<tr>
<td>Worked during year</td>
<td>83.8</td>
<td>80.3</td>
</tr>
<tr>
<td>Worked full-time</td>
<td>84.6</td>
<td>82.0</td>
</tr>
<tr>
<td>Worked part-time</td>
<td>79.3</td>
<td>71.6</td>
</tr>
<tr>
<td>Did not work</td>
<td>76.4</td>
<td>52.4</td>
</tr>
</tbody>
</table>

1. Percentages may not add up to totals because some people hold multiple forms of coverage.


### Financing and insurance coverage

Health care financing and insurance coverage is atypical of OECD countries in that it reflects multiple payers and sources of coverage that vary depending on population characteristics such as employment, income and age (Table 18). Most of the working-age population and their dependants are...
covered by employer-provided insurance plans. Medicare covers virtually all senior citizens and some of the disabled. Medicaid and the State Children’s Health Insurance Program (SCHIP) serve as a social assistance safety net, covering the poorest and those whose medical expenses consume a large portion of their income, along with near-poor children (up to a family income level set by the state). However, gaps in eligibility for public programmes, inability or unwillingness to purchase private insurance (in part because of the availability of public programmes and free care) and other barriers to enrolment leave a significant and increasing percentage of the population without any form of health insurance coverage (14 per cent in 2000). In addition, some people are underinsured, leaving their health and finances at risk (Short and Banthin, 1995).

**Purchasers/payers**

**Private insurance**

Nearly three-quarters of the US population are covered by private health insurance, which accounts for a still rising share of total spending on health (over a third by 2000, Table 19). Most private insurance policies are purchased by employers in either the small-group or the large-group market, which provides the greatest pooling of risk. Many large employers are self-insured. Employers are not required by law to offer coverage to their employees, but tax considerations encourage them to do so. The value of the premium is excluded from the calculation of employees’ taxable earnings, nor do they or their employers pay payroll taxes on such compensation. Currently amounting to about 1 per cent of GDP, these tax exclusions represent a significant source of foregone federal revenue (Figure 24).

Table 19. **Personal health-care spending by source of funds**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Private funds</td>
<td>78.6</td>
<td>64.8</td>
<td>59.7</td>
<td>61.0</td>
<td>55.4</td>
<td>56.7</td>
</tr>
<tr>
<td>Out-of-pocket payments</td>
<td>55.2</td>
<td>39.7</td>
<td>27.1</td>
<td>22.5</td>
<td>16.9</td>
<td>17.2</td>
</tr>
<tr>
<td>Private insurance</td>
<td>21.4</td>
<td>22.3</td>
<td>28.3</td>
<td>33.4</td>
<td>33.4</td>
<td>34.6</td>
</tr>
<tr>
<td>Other</td>
<td>2.0</td>
<td>2.8</td>
<td>4.3</td>
<td>5.0</td>
<td>5.1</td>
<td>5.0</td>
</tr>
<tr>
<td>Public funds</td>
<td>21.4</td>
<td>35.2</td>
<td>40.3</td>
<td>39.0</td>
<td>44.6</td>
<td>43.3</td>
</tr>
<tr>
<td>Federal funds</td>
<td>8.7</td>
<td>22.9</td>
<td>29.3</td>
<td>28.6</td>
<td>34.1</td>
<td>32.8</td>
</tr>
<tr>
<td>Medicare</td>
<td>0.0</td>
<td>11.5</td>
<td>16.9</td>
<td>17.6</td>
<td>20.6</td>
<td>19.2</td>
</tr>
<tr>
<td>Medicaid¹</td>
<td>0.0</td>
<td>4.3</td>
<td>6.4</td>
<td>6.6</td>
<td>9.5</td>
<td>9.8</td>
</tr>
<tr>
<td>Other</td>
<td>8.7</td>
<td>7.1</td>
<td>6.0</td>
<td>4.4</td>
<td>4.0</td>
<td>3.8</td>
</tr>
<tr>
<td>State and local funds</td>
<td>12.6</td>
<td>12.3</td>
<td>11.1</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
</tr>
<tr>
<td>Medicaid¹</td>
<td>0.0</td>
<td>3.7</td>
<td>5.1</td>
<td>4.8</td>
<td>6.2</td>
<td>6.9</td>
</tr>
<tr>
<td>Other</td>
<td>12.6</td>
<td>8.6</td>
<td>5.9</td>
<td>5.6</td>
<td>4.3</td>
<td>3.6</td>
</tr>
</tbody>
</table>

¹ Including SCHIP.

Source: Centers for Medicare and Medicaid Services (CMS).

Following a period of relatively slow growth, premiums for employer-sponsored insurance rose by 11 per cent in 2001. Since then their growth has accelerated further, approaching the increases of 15 to 20 per cent common in the 1980s. Such growth is partly a predictable consequence of the health insurance underwriting cycle and partly a reflection of growth in underlying costs, such as prescription drugs (Gabel et al., 2001). Nonetheless, both the share of employers offering coverage and the share of the premium borne by employees has remained relatively stable, reflecting the tight employment market at the onset of the economic downturn and the size of the tax incentive. Last year, employees contributed an average of 15 per cent of the cost of a policy covering an individual and 27 per cent of the cost of family
coverage (Gabel et al., 2001). The $30 employees paid on average per month for single coverage in 2001 was less in nominal dollars than in 1993, near the bottom of the previous business cycle. However, during the past two years, employers have reduced prescription drug benefits and increased co-payments and deductibles more generally in order to shift costs to users (Trude et al., 2002). Many employers have also reduced the benefits in the insurance policies that they offer to their retirees.6

Figure 24. Tax expenditures from exclusion of employer contributions for health insurance premiums and medical care

$ billions

![Graph showing tax expenditures from exclusion of employer contributions for health insurance premiums and medical care from 1993 to 2006.]


As compared with the share covered by employer-sponsored health insurance, a relatively small percentage of the population is covered by insurance purchased directly in the commercial non-group market.7 This market is characterised by higher administrative overhead associated with writing policies on an individual basis. From the perspective of those who are sick, uninsured, and seeking to buy coverage, individually purchased insurance tends to be neither attractive nor accessible in that premiums can be risk-adjusted for individual characteristics in most states, and the policies often exclude coverage for pre-existing conditions and carry high deductibles. As a result, coverage for those with health problems is considerably more costly than in the group market (Gabel, 2002), although some suggest there is not a large difference (Pauly and Herring, 2001 and Council of Economic Advisors, 2002b). Some states and communities administer programmes designed to make coverage more affordable for individuals and employers in the small-group market. Some offer community-rated pricing, under which premiums are not subject to medical underwriting. This is an approach that seeks to minimise the extent to which premiums vary according to current and prospective health status and related factors (such as age) and that is likely to result in higher costs for the younger and healthier in the near term. Others have publicly subsidised premiums. Still others have established high-risk pools for the otherwise hard-to-insure.8 These have been, at best, a mixed success, because the cost of even subsidised premiums still puts insurance out of the reach of many would-be purchasers. In addition to these programmes, a federal income tax deduction for the cost of health insurance premiums paid by the self-employed is being phased in (in 2003, 100 per cent of the premium cost will be deductible, up from 25 per cent in 1986 when the deduction was established).
Public programmes

Virtually all Americans aged 65 or older are covered by Medicare, as are qualified disabled persons (after a two-year waiting period). It accounts for one-fifth of total health spending and is financed through a combination of a payroll tax levied on workers and their employers, and premium payments by beneficiaries. Under the traditional programme, which covered 86 per cent of Medicare beneficiaries in 2001, payments to hospitals, physicians and other providers are determined by complex prospective payment systems. These systems provide the programme with a high level of control over the price component of total spending, but not much leverage over the volume of services. The remaining beneficiaries are enrolled in the Medicare+Choice programme, under which private health plans are paid a monthly capitation payment for each enrollee that is based on the amount Medicare spends per beneficiary in the geographic area served by the plan. Under this system, the total payment by Medicare to plans is fixed, and each health plan establishes its own methods for administering benefits and paying providers within parameters established by federal regulation. Medicare’s traditional programme does not cover outpatient prescription drugs and many preventive services (such as routine physical examinations), and its cost-sharing arrangements include annual deductibles, co-payments and a cap on benefits that puts beneficiaries at risk for the costs of long hospital stays. Medicare+Choice plans are required to offer a benefits package that is at least as generous from an actuarial standpoint as the traditional programme’s; in practice, most participating health plans offer a more generous package as a means of attracting enrollees. Most of those enrolled in the traditional programme have some form of supplemental insurance that covers some or all of the cost-sharing and that fills in gaps in the benefits package (Medicare Payment Advisory Commission, 2000). The prevalence of such coverage limits beneficiary cost sensitivity and tends to increase use of services through moral hazard effects (Christensen and Shinogle, 1997).

The Medicare+Choice programme was created as part of the Balanced Budget Act (BBA) of 1997, building on the foundation of an existing programme under which some private health plans participated in Medicare under either a risk or cost-reimbursement basis. A new programme to educate beneficiaries about their enrolment choices and to disseminate comparative information on health care quality and other dimensions of health plan performance was also implemented in an effort to help beneficiaries make value-based decisions. In practice, however, Medicare+Choice has failed to attract significant new participation by private health plans in Medicare (Gold, 2001). In fact, many plans have withdrawn from the programme or restricted their service areas since the programme began. Participating plans have also reduced benefits (including prescription drug coverage) or increased cost sharing. In a period when private health plans are again experiencing rapidly rising costs, Medicare payment rates may be too low in many localities to allow plans to offer benefits packages that will attract and retain enrollees. Also, new regulatory requirements, including ones that require plans to furnish information on quality of care and other dimensions of performance, have added to plans’ costs of participating in Medicare.

In addition to creating Medicare+Choice, the BBA of 1997 made other significant changes to Medicare that have had ongoing effects on both the programme and the health system as a whole. Notably, the legislation made significant reductions in the annual payment increases to hospitals that had larger fiscal effects than initially projected, slowing the rate of growth in hospital spending until subsequent legislation increased payment levels. Furthermore, the legislation established prospective payment systems for post-acute care, including home health care and skilled nursing facility care, components of Medicare spending that had grown rapidly since the introduction of prospective payment for hospitals established incentives for early discharge of patients. A result of the significant changes in Medicare and the rapidity with which they were implemented was an outcry on the part of providers and health plans objecting to the burden of complying with Medicare’s increasingly numerous, changeable and complicated regulatory requirements.
Medicaid and the State Children’s Health Insurance Program (SCHIP) cover essentially poor families with children, low-income elderly and the disabled. The total cost of these schemes has approached that of Medicare. The federal government and individual states jointly fund Medicaid under a system whereby state outlays are matched at a rate determined by the income levels of each state’s residents. Each state designs and administers its own programme, within federal parameters, resulting in significant variation in coverage, benefits and payments. This variation has also permitted states to develop and test a variety of approaches to coverage. As a result, Medicaid and especially SCHIP have evolved to use modern coverage tools like management care and even private plan delivery. Although children and adults in low-income families constitute three-quarters of Medicaid’s enrolment, spending is heavily concentrated on the programme’s elderly and disabled enrollees. In addition to its coverage of acute care and preventive services, Medicaid is the single largest payer for long-term care, which is not covered by Medicare and most private health insurance plans. Over the course of the past decade, most states have contracted with private managed care plans to serve beneficiaries formerly covered under traditional fee-for-service arrangements. More than half of programme beneficiaries, predominantly poor children and their parents, obtained care through such plans as of 1999 (Kaiser Commission on Medicaid and the Uninsured, 2001a). Subsequent to federal authorisation in the BBA of 1997, states began to enrol their disabled beneficiaries in managed care plans as well. Employing such arrangements for elderly Medicaid beneficiaries, most of whom are dually enrolled in Medicare and Medicaid, has not yet been undertaken in many states, however.

SCHIP was also created as part of the 1997 BBA in an effort to expand coverage of uninsured children. Under this programme, states obtain federal funding at a higher matching rate than is provided under Medicaid for children in families with incomes up to (and in some cases above) 200 per cent of the federal poverty level. Although more than three-quarters of all uninsured children are eligible for public insurance coverage under Medicaid or SCHIP, many eligible children have yet to be enrolled (Kenney and Haley, 2001), despite considerable progress recently. As discussed in Chapter IV, a relatively low rate of participation is characteristic of other social assistance programmes as well.

Figure 25. Medicaid enrolment

Medicaid enrolment grew by almost half in the first half of the 1990s (Figure 25), reflecting the sluggish economy and increased coverage. It then declined somewhat as the economy surged,
unemployment fell and significant changes in welfare policy at the federal level affected eligibility.\textsuperscript{22} State budget surpluses encouraged renewed programme expansion beginning in 1999, but this is now posing problems as the less robust economy and escalating health care costs once again challenge state budgets, most of which — unlike the federal budget — must be balanced annually. In response, states have undertaken a number of strategies to address shortfalls (e.g. cutting provider payments and enrolment eligibility). Enrolment is estimated to have exceeded mid-1990s levels last year, and experts expect significant further stress on state Medicaid programmes concentrated in long-term care for the elderly and disabled (Kaiser Commission on Medicaid and the Uninsured, 2001\textit{b}).

Out-of-pocket spending by individuals

After trending downwards until the mid-1990s, the share of individual out-of-pocket spending has stabilised at about one-sixth of total health expenditure, which is close to the OECD average. Such spending includes costs associated with the use of health care services, including deductibles, co-payments (cost sharing that represents a fixed amount per service), coinsurance (cost sharing that represents a fixed percentage of payment) and payments for services not covered by insurance. Across the population, there is wide variation in the amount of out-of-pocket spending, depending on the source of coverage, type of insurance and amount of service use. For example, while average out-of-pocket spending among Medicare beneficiaries averaged one-fifth of income in 1997, for those below the poverty level without assistance from Medicaid it reached, on average, about half of income (Gross \textit{et al.}, 1999). Those who spend a relatively high proportion (at least 7.5 per cent) of their income on out-of-pocket costs for health care may deduct the excess from their federal income tax base, at a cost of $5\frac{1}{2}$ billion per year to the federal budget. Also, many employers offer flexible spending accounts that allow for pre-tax payment of out-of-pocket spending.\textsuperscript{23}

Means of financing care for the uninsured

Those who lack insurance nonetheless do obtain care, the costs of which must be borne by the health system. The burden of financing care for the uninsured differs significantly across geographic areas and presents variable amounts of stress on public and private sources of funding. Some of the costs of care for the uninsured are covered by patients and their families. Absent the discounted rates often negotiated by third-party payers, the uninsured may be charged higher prices for services, although some providers are willing to accept lower fees from those with low incomes. One recent study found that the chronically ill uninsured had higher out-of-pocket spending than their insured counterparts, on average, despite being five times less likely to see a physician (Hwang \textit{et al.}, 2001). The American Hospital Association and the American Medical Association estimate that charity care provided by hospitals and physicians is approximately $56$ billion per year, or more than $\frac{1}{2}$ per cent of GDP. Public hospitals and health clinics receive special funding to support care for those who lack insurance and cannot afford to pay for care out of pocket. Teaching and community hospitals and individual physicians in private practice also provide safety-net services. Billions in such care is reimbursed by public programmes, which, for example, make payment adjustments to those hospitals that serve a disproportionate share of indigent patients. Uncompensated care is also indirectly supported by public programmes designed to promote provision of care in under-served areas, including assistance to providers with loan repayment, payment bonuses for physicians and programmes that facilitate care by non-physician practitioners. Other such care effectively represents charitable provision and seems to have been adversely affected by increased price competition associated with the spread of managed care (Cunningham \textit{et al.}, 1999).
Health insurance and health plans

Some payers, such as Medicare under its traditional programme, directly purchase health care from providers who deliver it to programme enrollees. Others, such as most employers and the Medicare+Choice programme, buy insurance, passing to private health plans the financial risk of furnishing covered benefits to enrollees. Large private employers often self-fund to save on the costs of insurance and administration and gain more freedom in benefits management (as they can exempt themselves from state mandates that affect only insured plans). Whether self-funded or insured, most buyers contract with health plans to administer enrollee benefits and payments to providers. Most, but not all, types of health plans also undertake some degree of management of health care delivery.

Evolution of insurance arrangements

The past decade has seen very great changes in the nature of US health insurance arrangements. Up until the early 1990s, traditional indemnity, fee-for-service insurance coverage was predominant. The shift is still ongoing with only 7 per cent of workers having such coverage in 2001, down from 27 per cent in 1996 (Gabel et al., 2001). Such coverage is characterised by the ability of enrollees to see any provider willing to accept the service-specific rates offered by the insurer. The fee-for-service plan may undertake utilisation review to determine whether a service is part of a covered benefit but does not take other steps to manage or co-ordinate care. This type of coverage has all but disappeared everywhere except in Medicare, although some forms of managed care (Box 5) tend to be discounted fee-for-service with large networks and limited health care management, blurring the line between types of coverage.

Box 5. Managed care

Managed (or co-ordinated) care is a generic term for health plans that take active steps to affect the type or amount of care their enrollees receive. Managed care plans differ from traditional indemnity plans primarily in that they have detailed contractual or employment relationships with health care providers. On one end of the spectrum, plans require enrollees to choose a primary care physician who, in exchange for a fixed monthly payment, furnishes primary care and directs the referral of patients to specialists. The physician or a group of physicians may share with the health plan the resulting financial risk. On the less managed end of the spectrum, some plans allow beneficiaries to use services from any provider within the network and pay providers on a discounted fee-for-service basis.

Approaches for controlling costs used by managed care plans include requiring pre-authorisation for services, particularly specialist visits and hospitalisations, and selective contracting with providers who are willing to accept the plan’s payment arrangements. Managed care plans have a designated network of participating providers, although some cover care by non-network providers at a higher cost under what is known as a point-of-service (POS) option. Plan networks may be relatively small, as in the case of health maintenance organisations (HMOs) known as staff-model HMOs, in which physicians are employed by the plan. In the case of many preferred provider organisations (PPOs), in which the plan contracts with providers who generally participate in more than one plan, networks tend to be larger and patients are frequently not required to obtain authorisation from a gatekeeper prior to obtaining services. Under PPO arrangements, physicians are also often paid on a discounted fee-for-service basis.
Most recent studies have found evidence that managed care arrangements — particularly HMOs — can result in reduced health care costs, at least in the short term, owing to “payer-driven” competition resulting from the shift of purchasing power toward well-informed and price-sensitive insurers and employers. Their premium growth has been significantly slower than in traditional insurance (Luft and Miller, 1997). Also, their presence is associated with reduced cost growth in the area in most recent studies (Glied, 2000). For example, one study of California hospitals found that, between 1983 and 1993, hospital expenditures grew 44 per cent less rapidly in markets with high HMO penetration than in those with low penetration (Robinson, 1996). Another (Baker et al., 2000) found that total costs for employer health plans are about 10 per cent lower in markets that have HMO market share above 45 per cent than they are in markets with HMO enrolments of below 25 per cent. Some studies have also documented a spillover effect in which markets with high managed care penetration rates have lower rates of cost growth even under indemnity coverage. This flies in the face of fears that traditional plans would suffer from adverse selection in the face of “cream skimming” by managed care plans.

Most of the 1990s represented a period of rapid expansion in managed care. This was particularly true in the private sector, where employers embraced it as an opportunity to gain control over the sharply increasing costs of furnishing health benefits. The same strategies (i.e. limits on patient choice of provider and treatment, intervention in physician practice decisions and selective contracting with alternative providers and suppliers) that led to dramatic cost savings for payers tended to alienate both health care providers and patients, however, resulting in a backlash against managed care’s most restrictive characteristics. The ensuing political pressure led to a wave of state legislation in the mid-1990s to require coverage of particular services, establish minimum hospital stays for certain conditions, set forth practitioner rights and address other concerns. Discomfort at the political level with the nature and scope of health plan involvement in what were essentially medical decisions led to efforts to develop a framework for patient-plan relations that was embodied in various proposals, known as a patients’ bill of rights (see, for example, President’s Advisory Commission on Consumer Protection and Quality in the Health Care Industry, 1997; Box 6). Various versions of these protections have since been adopted in requirements established by public programmes, employers, individual health plans and states via legislation.

Box 6. The patients’ rights debate

The expansion of managed care and its administrative restrictions on patients and providers resulted in great dissatisfaction and a backlash, as well as a concern about the effect on quality of care. This has now largely been dispelled by a move away from such tight plan management. However, the notion of patients’ rights persists as a politically popular cause. Congress has debated national legislation to establish certain patients’ rights. Because numerous states have passed patients’ rights laws and many purchasers, including the federal government, have imposed them on the health plans with which they do business, some provisions of the Congressional proposals currently being considered are effectively in place for many individuals with insurance coverage. However, the outstanding issue that has deadlocked Congress is disagreement about the extent of damages the patient can receive if a plan wrongfully denies coverage. The debate centres on the impact of such expansion on healthcare costs, including the costs associated with new liabilities for employers, and the potential for related insurance coverage losses.

Insurance companies responded to consumer demand and new requirements by creating products characterised by fewer administrative controls, larger networks and more out-of-network coverage (Draper et al., 2002). Preferred provider organisations (PPOs) now enrol 48 per cent of workers, up from 28 per cent in 1996, and point-of-service plans, which allow out-of-network care under different cost-sharing arrangements, increased their share from 14 to 22 per cent over the same period (Gabel et al., 2001). Such plans have replaced HMOs as the predominant form of coverage. In addition, plans known as provider service organisations (PSOs), essentially provider coalitions that take on health plan functions, emerged as part of a physician-led effort to regain control over health care practices. These changes in managed care have significant implications, both in terms of the projected rate of private health spending growth and of the potential for health plans to play the lead role in a system of value-based competition as envisaged by some proponents of systemic reform.
Delivery

Hospital care, physician services and prescription drugs together constitute the bulk of spending on health care (Table 20). The major development over the 1990s has been the shift from hospital to drug expenditure, with the shares of physician services and other components remaining relatively stable. It is noteworthy, however, that, despite the strong rise in prescription drug spending, its share is still relatively low by international comparison (see below).

Table 20. **Health expenditure by type of service**  
Percentage of total health care spending

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal health care</td>
<td>87.6</td>
<td>86.5</td>
<td>87.3</td>
<td>87.6</td>
<td>87.4</td>
<td>87.0</td>
</tr>
<tr>
<td>Hospital care</td>
<td>34.4</td>
<td>37.8</td>
<td>41.3</td>
<td>36.5</td>
<td>34.7</td>
<td>31.7</td>
</tr>
<tr>
<td>Physician and clinical services</td>
<td>20.1</td>
<td>19.1</td>
<td>19.2</td>
<td>22.6</td>
<td>22.3</td>
<td>22.0</td>
</tr>
<tr>
<td>Dental services</td>
<td>7.4</td>
<td>6.4</td>
<td>5.4</td>
<td>4.5</td>
<td>4.5</td>
<td>4.6</td>
</tr>
<tr>
<td>Other professional services</td>
<td>1.5</td>
<td>1.0</td>
<td>1.5</td>
<td>2.6</td>
<td>2.9</td>
<td>3.0</td>
</tr>
<tr>
<td>Home health care</td>
<td>0.2</td>
<td>0.3</td>
<td>1.0</td>
<td>1.8</td>
<td>3.1</td>
<td>2.5</td>
</tr>
<tr>
<td>Other non-durable medical products</td>
<td>6.1</td>
<td>4.6</td>
<td>4.0</td>
<td>3.2</td>
<td>2.6</td>
<td>2.4</td>
</tr>
<tr>
<td>Prescription drugs</td>
<td>10.0</td>
<td>7.5</td>
<td>4.9</td>
<td>5.8</td>
<td>6.1</td>
<td>9.4</td>
</tr>
<tr>
<td>Durable medical equipment</td>
<td>2.4</td>
<td>2.3</td>
<td>1.6</td>
<td>1.5</td>
<td>1.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Nursing home care</td>
<td>3.2</td>
<td>5.8</td>
<td>7.2</td>
<td>7.6</td>
<td>7.5</td>
<td>7.1</td>
</tr>
<tr>
<td>Other personal care</td>
<td>2.4</td>
<td>1.7</td>
<td>1.3</td>
<td>1.4</td>
<td>2.3</td>
<td>2.8</td>
</tr>
<tr>
<td>Non-personal health care</td>
<td>12.4</td>
<td>13.5</td>
<td>12.7</td>
<td>12.4</td>
<td>12.6</td>
<td>13.0</td>
</tr>
<tr>
<td>Administration and net cost of private health insurance</td>
<td>4.5</td>
<td>3.8</td>
<td>4.9</td>
<td>5.7</td>
<td>6.1</td>
<td>6.2</td>
</tr>
<tr>
<td>Public health activity</td>
<td>1.5</td>
<td>1.9</td>
<td>2.7</td>
<td>2.9</td>
<td>3.2</td>
<td>3.4</td>
</tr>
<tr>
<td>Research</td>
<td>2.6</td>
<td>2.7</td>
<td>2.2</td>
<td>1.8</td>
<td>1.7</td>
<td>2.0</td>
</tr>
<tr>
<td>Construction</td>
<td>3.8</td>
<td>5.2</td>
<td>2.8</td>
<td>2.0</td>
<td>1.6</td>
<td>1.4</td>
</tr>
</tbody>
</table>

Source: Centers for Medicare and Medicaid Services (CMS).

Providers and suppliers

The health care delivery system has been in a period of considerable flux. The key players have had to adapt to the evolving landscape presented by changes in financing, service organisation and delivery and medical practice as reflected in the rise, and more recent fall, of managed care. One important result has been the development of more formal and informal relationships across providers of one type and among providers of different types. Mergers, vertical integration, network development and moves to unionise hospital-based physicians are all aspects of this trend.

Hospitals

The number of hospitals has fallen by 14 per cent over the past decade. Most are community hospitals, two-thirds of which are private, not-for-profit institutions, while the remainder are investor-owned or public establishments. In addition, some hospitals are run by the federal government for the benefit of military personnel, veterans, native Americans or others. The decline in the number of hospitals has been accompanied by a significant reduction in the number of inpatient beds per capita. The ratio of inpatient beds per 1 000 persons fell from 4.9 in 1990 to 3.6 in 2000, one of the lowest among OECD countries.
These changes reflect a number of factors. First, both the spread of managed care in the private sector and Medicare’s prospective payment system have created incentives to reduce the length of hospital stays. Second, cost containment efforts by managed care plans have resulted in mergers designed to increase hospitals’ market power and reduce overhead expenses. Reinforced by developments in the science of medicine and patient preferences, these factors have combined to move more care that would formerly have been provided in hospitals on an inpatient basis into less intensive institutional settings and ambulatory care environments. It is unclear whether this trend will be cost saving. Hospitals have not been passive bystanders to these events. Rather, they have been active players in the ongoing move toward integration, in which health care providers of various types develop business relationships with others designed to assist them in competing with other networks for business contracts. Such relationships include hospitals purchasing physician practices and home health agencies, as well as merging with competitors. Hospitals have done so under antitrust, anti-kickback and other regulatory constraints.

Physicians

The United States has about three physicians for every 1 000 residents, a rate comparable to that found in the median OECD country. About one-third of US doctors are primary care physicians, and the remainder are specialists. Physician payment methods vary widely by payer and type of practice from fee for service to capitation. Payment arrangements of all types sometimes include special incentive payments designed to reward cost-conscious referral patterns or, still more rarely, superior performance on measures of health care quality or patient satisfaction. Some hospital-based physicians, such as radiologists, may be salaried employees of the hospital, who may also receive a share of fee-for-service billing revenues. Both the Medicare and Medicaid programmes, which provide more than a quarter of physician payments, have schedules of fixed reimbursement prices.

The patient/physician relationship is in a period of change at present, reflecting both a broad movement toward active consumerism and the rapid decline in information asymmetry in health care, through the Internet, in particular. Physicians increasingly experience patients who expect to be active decision makers in their care. In the same vein, work has been undertaken to develop and test interactive tools to assist patients in assessing alternative treatment options for some conditions. Early evaluations of these tools suggest that fully informed patients are inclined to choose less invasive or aggressive procedures, on average, than less informed patients acting on their physician’s advice.

Post-acute/sub-acute care providers and long-term care

Health care needs that do not require the level of medical intensity provided in an inpatient hospital stay are met through the post-acute and sub-acute care sectors, while related needs that are not strictly medical in nature are furnished through the long-term care sector. The overlap between these kinds of care presents a number of challenges for health policy, particularly in the Medicare programme, which provides coverage for post-acute care, but not for long-term care (which is covered by Medicaid). Other countries face similar challenges in meeting the health care and other needs of their elderly and disabled populations; however, co-ordinating two separate public programmes designed to meet a closely related group of needs for vulnerable populations is a characteristic unique to the US system. The post-acute care sector has grown rapidly since incentives to release inpatient hospital patients as soon as feasible took effect in the mid-1980s. Home health care tripled its share of personal health expenditures between 1980 and 1995, as hospital lengths of stay fell. The BBA of 1997 authorised the establishment of new prospective payment systems in Medicare; these have subsequently been implemented for home health agencies and skilled nursing facilities (hospital-based and free-standing). As a result, costs in this sector first declined and have now resumed relatively slow growth (Levitt et al., 2002).
Prescription drugs

Although prescription drugs are a smaller component of spending than elsewhere, pharmaceuticals have represented the most rapidly growing cost component of the health care delivery system since 1980 (Table 20). Price developments are only partly responsible for these increases. A high proportion is the result of new drugs and increased utilisation, as illustrated by an increase in the annual number of retail prescriptions per person from 8.3 in 1995 to 10.5 in 2000 (Levitt et al., 2002). This growth reflects the development of new medications to address health problems, the preference for treating problems using drugs versus other methods of treatment, and newly permissible direct advertising to consumers that spurs demand. Better coverage and therefore less price sensitivity also plays a role: most private health plans and Medicaid (but not Medicare) provide coverage. In 2000, 68 per cent of the costs of prescription drugs were met by insurance, as opposed to only 41 per cent in 1990 (Levitt et al., 2002).

Assessment of the system’s performance

A striking feature of the US health system is high spending in comparison with that of other OECD countries, even taking account of relative income levels. On other dimensions of performance, outcomes reflect the substantial amount of diversity within the system. There are substantial gaps in access to care and wide variation in resource and service use that is not necessarily correlated with differences in medical needs. In some areas, the quality-adjusted price of care has probably fallen, but the country’s relative performance in others suggests that the marginal increase in health status, if any, is very costly.

Figure 26. OECD health-care expenditures, 1999

As per cent of GDP

1. 1998 for Australia, Germany, Sweden and Turkey.
Source: OECD Health Data, 2002.
High expenditures

Salient features

In 2000, OECD figures showed total spending on health represented about 13 per cent of gross domestic product, as compared to an estimated average for all OECD countries of about 8 per cent. The next highest spending nations, Switzerland and Germany, just exceeded the mark of 10 per cent of GDP (Figure 26). In terms of per capita spending (based on purchasing power parities), the United States leads by a large margin. With an average of $4,631 per person spent on health in 2000, the nation spent more than two and one-half times the OECD average (Figure 27). Furthermore, there is a noticeable relationship between income levels in a country and health expenditure per capita, but the United States is a significant outlier — spending far more on health than this relationship would indicate. US health spending has been consistently higher than that of other countries since tracking began in 1960, predating the creation of Medicare and Medicaid, but the gap to the OECD average widened markedly during the 1980s and early 1990s (Figure 28). Thereafter, as generally abroad, spending stabilised relative to GDP so that the gap remained broadly unchanged. However, at the end of the decade, growth in health expenditure began to outpace income again, reaching 14 per cent of GDP in 2001, according to official estimates.

Figure 27. Health expenditure and GDP per capita, 1999

Note: The regression line is: Health expenditure per capita = -615 + 0.1128 * GDP per capita

\[ R^2 = 0.86 \]

1. 1998 for Sweden and Turkey.

Source: OECD.
Figure 28. Evolution of health expenditures as a percentage of GDP

Because public spending constitutes less than half of total expenditure on health care in the United States and because it is spread across a range of programmes, the federal government has less direct control over total health spending than governments in other OECD countries. On average in the OECD countries, public spending comprises three-quarters of the total, and only one other country, Korea, funds less than half of its health expenditures through the public sector. It is worth noting, however, that direct public spending as a share of GDP in the United States (at just below 6 per cent) is close to the OECD average (Figure 26), and tax exclusions in the United States provide substantial additional support to private health insurance (Figure 24). Altogether, public support in relation to GDP is thus probably at least as high as anywhere in the OECD (Woolhandler and Himmelstein, 2002). It should also be borne in mind that compulsory social insurance contributions paid by employers in other countries are counted as public expenditure, while premiums paid voluntarily by employers for health insurance coverage in the United States are classified as private spending.

Components and determinants of spending

A relatively simple explanation for the high level of spending on health care in the United States is that the nation has a high level of total resources. OECD data show a close relationship between per capita GDP and per capita health expenditure in member countries: as a rule, countries with higher GDP per capita spend more on health care, which is, after all, a “normal good”. Although this relationship is weaker for the most wealthy countries, US expenditure is abnormally high (Figure 27). Analysts endeavour, therefore, to obtain a more detailed understanding of the factors influencing the total amount and growth in US health spending over time. Such factors include those that affect both the volume of health care and the prices paid for it.

Volume of medical services

Simple data on service volume do not support the hypothesis that the quantity of services is the key factor explaining comparatively high US health spending. In fact, according to many available
measures, US residents use a volume of medical services that is roughly comparable to those of other OECD countries, or even lower. For instance, US patients had an average of six annual physician visits in 1995, comparable with the range in most other OECD countries of five to seven visits, according to the OECD Health Database. Moreover, in 1996, 12 per cent of the US population was hospitalised, compared with 16 per cent in the median OECD country. US patients also had shorter hospital stays, and the average number of hospital days per capita of 1.1 in the United States was only half the OECD median of 2.2 days. Although these measures point to lower use of hospital care, they give an incomplete and potentially misleading picture because they do not take account of service intensity. Indeed, using the proxy measure of full-time-equivalent hospital employees per bed, the United States appeared highest among OECD countries in 1995 with a rate of just under 4 (with most others below 3).

Findings from various studies confirm the notion that US health care makes relatively intensive use of technology, e.g. the United States had the second highest number of MRI units and CT scanners per person in 1996, exceeded only by Japan. Furthermore, a study comparing care for heart attack patients in 17 countries over the past decade (TECH Research Network, 2001) showed that, while treatment in all countries has become more intensive in the use of medications and cardiac procedures, the United States had a pattern of early adoption of new technologies and fast diffusion. Based on more limited evidence, Japan and possibly France also shared this pattern of technology use for heart attack care. By contrast, other countries showed either a late start/fast growth pattern of technological diffusion (Australia, Belgium and most Canadian provinces) or a late start/slow growth pattern (the United Kingdom, Scandinavian countries and Ontario). The patterns of diffusion for new, very high cost drugs were similar to those for intensive procedures, but no such patterns were observed for low-cost, easy-to-use medications.

Health care prices

While evidence regarding volumes is not very clear cut, there is no doubt that US prices for medical care commodities and services are significantly higher than in other countries and serve as a key determinant of higher overall spending. However, data problems abound in this area, and international comparisons are nearly always extremely fragile, especially when they encompass bread groups of commodities and services with substantially different quality across countries. Thus, the fact that US health-care prices appear to exceed the OECD average level by a large margin (Figure 29) should be interpreted with caution. Nevertheless, the specific case of prescription drug prices may be illustrative. Although the US population obtained 27 per cent fewer prescriptions, on average, than patients in the OECD median country in 1996, expenditure per person on pharmaceuticals was 41 per cent higher than in the OECD median country. Some of this cost difference may be explained by differences across countries in drug research spending and in the types of drugs commonly prescribed.

What set apart the United States from other large OECD countries up to the early 1990s was the sharp increase in health-care prices compared with overall prices (Table 21). Given the different methodology and quality of such indicators, divergences between the United States and other OECD countries may be overstated, however. Relative healthcare deflators in the United States increased more slowly in the second half of the 1990s, perhaps reflecting the one-time effects of the expansion of managed care and the 1997 Balanced Budget Act. The medical care component of the Consumer Price Index (CPI) serves as another indicator of health price developments. Although it has been criticised for failing to take quality improvements and shifts in demand over time into account, which is a crucial issue, it provides timely information on recent trends. It grew by 4⅓ per cent in 2001, with hospital and related services showing the greatest price increase (6½ per cent). Compared with the overall CPI, relative price increases of medical care slowed to ½ per cent per year in the mid-1990s but have re-accelerated to almost 2 per cent since then.
Factors affecting volume and price of US health care

Analysts have long believed that the single greatest explanation for high US spending levels is the nation’s investment in medical technology. Economists conjecture that technological progress has been responsible for as much as 75 per cent of the increase in health care expenditure over time (Newhouse, 1992 and 1993). Adoption of new technology results in more intensive service volume and increased use. It also contributes to price inflation, to the extent that early adoption is associated with paying higher introductory prices and to the extent that costlier new technologies replace, or are used in addition to, older, less expensive ones. However, these cost-increasing factors may be more than offset by improvements in health outcomes that new technologies can provide, and some experts maintain that appropriate adjustment for quality would show that some new technologies lead to lower prices (Cutler and McClellan, 1998 and 2001).

Numerous other factors have been cited as determinants of the volume and price of US health care. Fee-for-service payments to physicians, common in Medicare and PPOs that serve a high share of the working population, provide incentives for increased service use. High levels of insurance coverage with low patient cost-sharing, have the same effect. Need for services, as indicated by the overall level of illness and disability (in part related to obesity), also play a key role in determining demand. Recent evidence suggests, however, that the overall health and disability status of older persons may be improving, which may offset some of the effects of population ageing (Cutler, 2001). Although disputed in the literature, some analysts speculate that an oversupply of physicians, particularly in urban areas, results in a
Table 21. International comparison of health expenditure-related indicators

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Real expenditure</strong>¹</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>5.7</td>
<td>4.6</td>
<td>3.4</td>
<td>2.9</td>
<td>5.2</td>
<td>3.1</td>
</tr>
<tr>
<td>France</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>2.5</td>
<td>2.3</td>
<td>7.3</td>
<td>2.8</td>
<td>2.6</td>
<td>5.3</td>
</tr>
<tr>
<td>Italy</td>
<td>2.9</td>
<td>1.5</td>
<td>1.9</td>
<td>4.5</td>
<td>2.1</td>
<td>2.0</td>
</tr>
<tr>
<td>Japan</td>
<td>4.7</td>
<td>3.2</td>
<td>4.2</td>
<td>3.3</td>
<td>3.8</td>
<td>3.8</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>3.4</td>
<td>3.8</td>
<td>4.7</td>
<td>3.2</td>
<td>3.5</td>
<td>4.0</td>
</tr>
<tr>
<td>United States</td>
<td>6.0</td>
<td>6.5</td>
<td>5.5</td>
<td>3.5</td>
<td>6.4</td>
<td>4.5</td>
</tr>
<tr>
<td><strong>Relative prices</strong>²</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>1.1</td>
<td>0.5</td>
<td>1.2</td>
<td>-0.1</td>
<td>0.9</td>
<td>0.4</td>
</tr>
<tr>
<td>France</td>
<td>-0.3</td>
<td>0.1</td>
<td>0.4</td>
<td>0.3</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>1.6</td>
<td>-0.1</td>
<td>0.3</td>
<td>0.4</td>
<td>0.8</td>
<td>0.3</td>
</tr>
<tr>
<td>Italy</td>
<td>3.1</td>
<td>0.7</td>
<td>-0.4</td>
<td>3.1</td>
<td>0.4</td>
<td>0.3</td>
</tr>
<tr>
<td>Japan</td>
<td>-0.4</td>
<td>1.2</td>
<td>0.4</td>
<td>1.5</td>
<td>0.4</td>
<td>0.8</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>2.1</td>
<td>1.3</td>
<td>2.1</td>
<td>-0.6</td>
<td>1.6</td>
<td>1.3</td>
</tr>
<tr>
<td>United States</td>
<td>3.2</td>
<td>2.8</td>
<td>2.3</td>
<td>1.0</td>
<td>3.0</td>
<td>1.6</td>
</tr>
<tr>
<td><strong>Volume</strong>³</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>4.5</td>
<td>4.1</td>
<td>2.2</td>
<td>2.9</td>
<td>4.2</td>
<td>2.7</td>
</tr>
<tr>
<td>France</td>
<td></td>
<td></td>
<td>3.6</td>
<td>2.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>1.0</td>
<td>2.4</td>
<td>7.0</td>
<td>4.9</td>
<td>1.8</td>
<td>6.4</td>
</tr>
<tr>
<td>Italy</td>
<td></td>
<td>-0.3</td>
<td>0.7</td>
<td>2.3</td>
<td>1.3</td>
<td>1.7</td>
</tr>
<tr>
<td>Japan</td>
<td>3.9</td>
<td>2.0</td>
<td>4.2</td>
<td>3.3</td>
<td>2.9</td>
<td>3.9</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1.4</td>
<td>2.5</td>
<td>2.6</td>
<td>3.6</td>
<td>1.9</td>
<td>2.9</td>
</tr>
<tr>
<td>United States</td>
<td>2.7</td>
<td>3.6</td>
<td>3.2</td>
<td>2.5</td>
<td>3.3</td>
<td>2.9</td>
</tr>
<tr>
<td><strong>Real GDP</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>2.1</td>
<td>3.8</td>
<td>1.2</td>
<td>3.5</td>
<td>2.7</td>
<td>2.6</td>
</tr>
<tr>
<td>France</td>
<td>1.7</td>
<td>3.0</td>
<td>1.3</td>
<td>2.2</td>
<td>2.4</td>
<td>1.9</td>
</tr>
<tr>
<td>Germany</td>
<td>1.2</td>
<td>2.9</td>
<td>4.9</td>
<td>1.5</td>
<td>2.3</td>
<td>3.2</td>
</tr>
<tr>
<td>Italy</td>
<td>1.8</td>
<td>3.1</td>
<td>1.1</td>
<td>1.9</td>
<td>2.4</td>
<td>1.6</td>
</tr>
<tr>
<td>Japan</td>
<td>3.0</td>
<td>4.7</td>
<td>2.2</td>
<td>1.3</td>
<td>4.0</td>
<td>1.8</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>0.9</td>
<td>3.9</td>
<td>1.4</td>
<td>2.8</td>
<td>2.3</td>
<td>2.2</td>
</tr>
<tr>
<td>United States</td>
<td>2.4</td>
<td>3.6</td>
<td>2.2</td>
<td>3.8</td>
<td>2.9</td>
<td>3.1</td>
</tr>
</tbody>
</table>

1. Nominal health care expenditure divided by the GDP deflator.
2. Price deflators for personal health care divided by the GDP deflator.
3. Nominal health expenditure divided by personal health care deflators.

Source: OECD Health Data, 2002 and OECD Economic Outlook.

phenomenon known as induced demand, in which health care practitioners provide services that exceed their marginal benefits. The tort system, under which providers can be sued for malpractice and found civilly liable for damages resulting from negligence or error, is believed to induce physicians to err on the side of doing tests to rule out even health problems with only a remote probability. That same system of compensating victims of malpractice results in premiums for professional liability that have driven up health care prices by affecting providers’ costs of doing business. Kessler and McClellan (1996) found that malpractice reforms that directly reduce liability pressure on physicians lead to reductions of between
5 and 9 per cent in medical expenditures without substantial effects on mortality or medical complications. Finally, administrative costs account for a rising share of health expenditure (Table 20).

**Future expenditure trends**

Analysts generally agree that the outlook is for accelerating growth in private and public health spending. Actuaries from the US Department of Health and Human Services cite several factors portending an increase in health spending trends: rising health sector wages, legislation in 1999 that increased Medicare spending, reports of increasing insurance premiums, technology and consumer demand for less restrictive insurance plans (Centers for Medicare and Medicaid Services, 2002). Health expenditure is projected to grow from 14 per cent of GDP in 2001 to 17 per cent in 2011 (Table 22). The public share of overall health expenditures would continue to rise gradually, with public spending reaching 8 per cent of GDP at the beginning of the next decade.

**Table 22. National health expenditure projections, 2001-11**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>National health expenditures</td>
<td>8.8</td>
<td>12.0</td>
<td>13.2</td>
<td>14.0</td>
<td>17.0</td>
</tr>
<tr>
<td>As a per cent of GDP</td>
<td>1.067</td>
<td>2.738</td>
<td>4.637</td>
<td>5.039</td>
<td>9.216</td>
</tr>
<tr>
<td>Per capita (dollars)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per cent distribution</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Out of pocket</td>
<td>23.7</td>
<td>19.7</td>
<td>15.0</td>
<td>14.8</td>
<td>14.1</td>
</tr>
<tr>
<td>Private insurance</td>
<td>27.8</td>
<td>33.5</td>
<td>34.2</td>
<td>34.2</td>
<td>34.3</td>
</tr>
<tr>
<td>Public</td>
<td>42.7</td>
<td>40.6</td>
<td>45.2</td>
<td>45.5</td>
<td>46.7</td>
</tr>
<tr>
<td>Federal</td>
<td>29.0</td>
<td>27.7</td>
<td>31.7</td>
<td>31.8</td>
<td>31.6</td>
</tr>
<tr>
<td>State and local</td>
<td>13.6</td>
<td>12.9</td>
<td>13.5</td>
<td>13.7</td>
<td>15.1</td>
</tr>
<tr>
<td>Memorandum items:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative medical price deflator (1996 = 100)</td>
<td>66.1</td>
<td>89.6</td>
<td>103.5</td>
<td>105.2</td>
<td>115.7</td>
</tr>
<tr>
<td>Population 65 years and older (per cent of total)</td>
<td>11.2</td>
<td>12.3</td>
<td>12.5</td>
<td>12.5</td>
<td>13.0</td>
</tr>
</tbody>
</table>

*Source: Centers for Medicare and Medicaid Services, Office of the Actuary.*

Although Medicaid spending has grown more strongly recently and is likely to continue to do so in the next few years (with pressures felt at the state and local level, see Chapter II), the Medicare programme’s financial condition has been the major source of concern among US policymakers. Such concern led to the establishment, in 1997 (as part of the BBA), of a bipartisan commission charged with studying long-term reform options for Medicare against the backdrop of the impending retirement of the baby boom generation. The Commission failed to reach the required super-majority regarding the changes needed, however, and the adoption of reforms, including a prescription drug benefit, remains an unresolved political issue. This may in part reflect the fact that recent reports of the public trustees have a more optimistic outlook for Medicare’s Hospital Insurance trust fund than in previous years. Since 1999, the trust fund’s income has exceeded programme expenditures. Income increased significantly as a result of robust economic growth in the late 1990s and — due to the implementation of the BBA in 1997, efforts to combat fraud and abuse in the Medicare programme and a substantial decline in the utilisation of home health care services — trust fund expenditures actually slowed for a while. Despite the weaker economy and renewed rapid growth in expenditures due to subsequent legislation that increased provider payments, the trust fund again met the trustees’ test of short-range financial adequacy in 2002. According to the trustees’ estimates, the depletion date for the trust fund is now 2030, substantially further off than previous estimates. However, although the projected long-term (75 years) actuarial balance has also improved, the
Hospital Insurance trust fund still fails by a wide margin to meet the trustees’ test of long-range solvency. In addition, because it is a pay-as-you-go system, the balance of the trust fund has little relevance. The trustees also urge policy makers to consider effective means of controlling rapidly rising costs for Medicare’s Supplementary Medical Insurance (i.e. non-hospital costs). Moreover, because the Medicare benefits package is out of date (in particular with respect to drug coverage), there is considerable interest in finding ways to expand it without substantially worsening the programme’s outlook.

**Unequal resource and service use**

The US health system aims to establish minimal access for the population as a whole that can be supplemented at the individual level. Use of services and allocation of resources range widely across the population on a number of dimensions other than health status and medical needs. Notable among these are insurance coverage, income, geographic location, race and sex.

**Access to care**

Although the rate of insurance coverage increased during the economic upswing in the late 1990s, it ended the decade below its 1990 level, continuing the downturn observed in the 1980s. Characteristics of the uninsured population (Table 23) provide clues to assess ways to raise coverage. The uninsured population is disproportionately poor and near-poor. The vast majority of uninsured persons is employed or belongs to a working family (Fronstin, 2001c), but many of those who work are not offered insurance. Low-wage workers are at greater risk of being uninsured, as are unskilled labourers, service workers and those employed in small businesses. Children under 18 are more likely than adults to be insured, and their coverage actually improved over the 1990s (Mills, 2001). But the rate of coverage rate also varies significantly by age group. More than one quarter of 18 to 24 year-olds lack insurance coverage. Immigrants and persons of Hispanic ethnicity are also heavily over-represented among the uninsured. Those without insurance coverage have access to care, particularly emergency care, but they obtain less primary and preventive care.

**Access to emergency care and basic services**

Some assurance of access to care for emergency services is provided under US law. Hospital emergency departments are required to assess and stabilise any patient presented, irrespective of the person’s insurance coverage or ability to pay. They serve as the treatment centre of last resort for those patients who do not have another source of care available. This is, however, an inefficient and expensive way of providing care that results in unnecessary spending on conditions that could have been prevented. Moreover, studies have shown that uninsured adults are much less likely to obtain health care. For example, Baker et al. (2000) found, after adjusting for differences in age, sex, health status and income, that uninsured persons are half as likely as those with insurance to receive care for a condition deemed by a physician to be highly serious and requiring attention. Those who lack insurance coverage are also at greater risk of not receiving preventive care and routine care for chronic conditions. Ayanian et al. (2000) found that adults who lacked insurance for a year or more were significantly less likely than their insured counterparts to obtain cancer screening, cardiovascular risk reduction and diabetes care.
Table 23. Characteristics of the uninsured, 2000

<table>
<thead>
<tr>
<th></th>
<th>Number (millions)</th>
<th>As a percentage of category</th>
<th>As a percentage of all uninsured</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total uninsured</strong></td>
<td>38.7</td>
<td>14.0</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>20.2</td>
<td>14.9</td>
<td>52.1</td>
</tr>
<tr>
<td>Female</td>
<td>18.6</td>
<td>13.1</td>
<td>47.9</td>
</tr>
<tr>
<td><strong>Race and ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>29.3</td>
<td>12.9</td>
<td>75.6</td>
</tr>
<tr>
<td>Black</td>
<td>6.6</td>
<td>18.5</td>
<td>17.1</td>
</tr>
<tr>
<td>Asian and Pacific Islander</td>
<td>2.1</td>
<td>18.0</td>
<td>5.3</td>
</tr>
<tr>
<td>Hispanic (Hispanics can be of any race)</td>
<td>10.8</td>
<td>32.0</td>
<td>28.0</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 18 years</td>
<td>8.5</td>
<td>11.6</td>
<td>21.8</td>
</tr>
<tr>
<td>18 to 24 years</td>
<td>7.3</td>
<td>27.3</td>
<td>19.0</td>
</tr>
<tr>
<td>25 to 34 years</td>
<td>7.9</td>
<td>21.2</td>
<td>20.5</td>
</tr>
<tr>
<td>35 to 44 years</td>
<td>6.9</td>
<td>15.5</td>
<td>17.9</td>
</tr>
<tr>
<td>45 to 64 years</td>
<td>7.8</td>
<td>12.6</td>
<td>20.2</td>
</tr>
<tr>
<td>65 years and over</td>
<td>0.2</td>
<td>0.7</td>
<td>0.6</td>
</tr>
<tr>
<td><strong>Region</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northeast</td>
<td>6.0</td>
<td>11.4</td>
<td>15.5</td>
</tr>
<tr>
<td>Midwest</td>
<td>6.8</td>
<td>10.8</td>
<td>17.5</td>
</tr>
<tr>
<td>South</td>
<td>15.4</td>
<td>15.8</td>
<td>39.7</td>
</tr>
<tr>
<td>West</td>
<td>10.6</td>
<td>16.7</td>
<td>27.3</td>
</tr>
<tr>
<td><strong>Household income</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than $25 000</td>
<td>13.9</td>
<td>22.7</td>
<td>35.9</td>
</tr>
<tr>
<td>$25 000 to $49 999</td>
<td>12.8</td>
<td>17.0</td>
<td>33.0</td>
</tr>
<tr>
<td>$50 000 to $74 999</td>
<td>6.5</td>
<td>11.0</td>
<td>16.8</td>
</tr>
<tr>
<td>$75 000 or more</td>
<td>5.6</td>
<td>6.9</td>
<td>14.3</td>
</tr>
<tr>
<td><strong>Education (18 years and older)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>30.3</td>
<td>14.8</td>
<td>78.2</td>
</tr>
<tr>
<td>No high school diploma</td>
<td>9.0</td>
<td>26.6</td>
<td>23.3</td>
</tr>
<tr>
<td>High school graduate only</td>
<td>10.8</td>
<td>16.4</td>
<td>27.9</td>
</tr>
<tr>
<td>Bachelor’s degree or higher</td>
<td>3.4</td>
<td>7.1</td>
<td>8.9</td>
</tr>
<tr>
<td><strong>Work experience (18 to 64 years old)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>30.0</td>
<td>17.6</td>
<td>77.5</td>
</tr>
<tr>
<td>Worked during year</td>
<td>22.8</td>
<td>16.2</td>
<td>58.9</td>
</tr>
<tr>
<td>Did not work</td>
<td>7.2</td>
<td>23.6</td>
<td>18.7</td>
</tr>
</tbody>
</table>


Access to new technology

The US health system provides ready access to the latest clinically effective technologies and treatments for those with adequate insurance or ability to pay. Depending on the type of health insurance arrangements, patients may be required to obtain prior authorisation, based on an assessment of medical
necessity, from a gatekeeper physician or health plan employee. However, unlike many other OECD countries, the United States has virtually no waiting times for elective procedures, with the exception of organ transplants (due to donor shortages).42

Debates regarding coverage of new services in US health insurance plans and public programmes tend to focus on clinical effectiveness and on medical necessity in the case of individual patients. By contrast, few insurers or public programmes explicitly take evaluations of cost-effectiveness or cost-benefit ratios into account in making decisions about coverage of health services. The state of Oregon was the focus of considerable attention among analysts, economists, lawyers and ethicists in the early 1990s, when it implemented a programme to ration care for its Medicaid patients using a combination of information on clinical benefits and public opinion to assign relative rankings to services. Coverage of specific services is determined based on the total programme budget available.

Variation and equity issues

Significant geographic variation in the use of services and related expenditures has been well documented in the US health services research literature.43 Wennberg et al. (2002) highlighted examples of such variation in a recent report.44 The scope of the differences results in significant regional discrepancies in the levels of Medicare expenditures,45 and there is no evidence of any relationship between available measures of health status and these variations. Even after correcting for differences in age, sex and racial composition, per capita spending in some areas is more than double that in others. These spending discrepancies, in turn, have been subject to much recent attention in light of their translation into differences in the availability of managed care plans and the benefits and cost-sharing relief they provide. Policymakers’ response has been investment in both health services research geared toward a better understanding of the underlying reasons for variance in care and in tools for improving the practice of evidence-based medicine. The Agency for Healthcare Research and Quality (AHRQ), part of the US Department of Health and Human Services, serves as the current locus of funding and direction of such research.

Also of great concern to US policymakers is the growing evidence of inequity in the use of certain services by race and sex. One recent study documented the independent influence of both race and sex on physicians’ decisions (Schulman et al., 1999). A new study of Medicare managed-care enrollees provided strong evidence that blacks are less likely to receive recommended clinical care for a number of conditions, controlling for other factors known to be important in determining service use (Schneider et al., 2002). Large differences have been documented in the use of surgical services by insured persons that could not be fully explained by differences in medical need (Schulman et al., 1999). The reasons underlying these differences in care, which result in either or both the overuse of services among some groups and the under-use among others, are not yet well understood,46 but could reflect patient preferences and organisational or systemic barriers). A federal mandate drawn up in 2000 by the Department of Health and Human Services set 2010 as the year by which any documented healthcare disparities should be eliminated.

Differences in use of medical services are not unique to the US system but are common in other OECD countries as well. Even among countries that provide universal, comprehensive insurance coverage, higher-income peoples tend to use specialist care more often than would be predicted based on their medical needs, while lower-income persons rely more often on generalist care (van Doorslaer et al., 2000). However, there is some evidence that other OECD nations have a more equitable distribution across the population of services obtained in relation to medical needs.47
**Unexceptional health outcomes and quality of care**

Although the United States devotes more resources to health care than any other OECD country, the population’s overall health status is only mediocre. Population diversity and societal characteristics tend to mask the achievements of the US health system in terms of outcomes and quality of care, however. Focused analysis of health system performance for patients with particular medical conditions yields a more nuanced picture of comparative strengths and weaknesses. Assessment of appropriate service use provides a sense of how treatment patterns contribute to the achievement of desired outcomes.

**Population health status**

As in other OECD countries, life expectancy and infant mortality have improved considerably in the past decade, continuing a longer-term trend. Life expectancy at age 65 averaged 17.7 years in 1999, up from 17.2 years in 1990. Similarly, the US infant mortality rate (per 1,000 live births) was 7.1 in 1999, declining from 9.2 in 1990. The United States trails most other OECD countries by these measures, however. Population health in the United States, as measured by these crude indicators, falls considerably short of what would be expected on the basis of the country’s income level (Figure 30).

**Figure 30. Life expectancy and GDP per capita, 1999**

![Graph showing life expectancy and GDP per capita](image)

*Note:* The regression line is: Life expectancy = 70.69 + 0.0003 * GDP per capita

\[
\text{R squared} = 0.59
\]

*Source: OECD Health Data, 2002.*

Of course, the population’s health status is influenced by a wide range of factors in a complex way, and, in terms of both socio-economic characteristics and health-related behaviour, the United States differs significantly from many of its OECD counterparts. For instance, while it has achieved laudable
results to date in reducing tobacco consumption, it suffers from the most acute and costly obesity problem of all OECD countries (Table 24) (Sturm, 2002). Factors such as drug use and crime rates (see next Chapter) also affect mortality rates. Econometric analysis suggests that the positive effect of high income and health expenditure in the United States may be partially offset by lower accessibility of some groups to health services as proxied by public expenditure shares; country-specific factors not captured in the regressions seem to account, however, for most of the gap in health status between the United States and better-performing countries (Annex V).

Table 24. Tobacco consumption and nutrition among OECD countries

<table>
<thead>
<tr>
<th>Tobacco consumption</th>
<th>Obese population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Per cent population daily smokers</td>
</tr>
<tr>
<td></td>
<td>19901</td>
</tr>
<tr>
<td>Australia</td>
<td>28.6</td>
</tr>
<tr>
<td>Austria</td>
<td>27.5</td>
</tr>
<tr>
<td>Belgium</td>
<td>32.0</td>
</tr>
<tr>
<td>Canada</td>
<td>28.2</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>26.1</td>
</tr>
<tr>
<td>Denmark</td>
<td>44.5</td>
</tr>
<tr>
<td>Finland</td>
<td>25.9</td>
</tr>
<tr>
<td>France</td>
<td>28.5</td>
</tr>
<tr>
<td>Germany</td>
<td>31.2</td>
</tr>
<tr>
<td>Greece</td>
<td>38.5</td>
</tr>
<tr>
<td>Hungary</td>
<td></td>
</tr>
<tr>
<td>Iceland</td>
<td>30.3</td>
</tr>
<tr>
<td>Ireland</td>
<td>30.0</td>
</tr>
<tr>
<td>Italy</td>
<td>25.7</td>
</tr>
<tr>
<td>Japan</td>
<td>37.4</td>
</tr>
<tr>
<td>Korea</td>
<td>34.6</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>33.0</td>
</tr>
<tr>
<td>Mexico</td>
<td>25.1</td>
</tr>
<tr>
<td>Netherlands</td>
<td>37.0</td>
</tr>
<tr>
<td>New Zealand</td>
<td>28.0</td>
</tr>
<tr>
<td>Norway</td>
<td>35.0</td>
</tr>
<tr>
<td>Poland</td>
<td>41.5</td>
</tr>
<tr>
<td>Portugal</td>
<td>19.0</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>35.9</td>
</tr>
<tr>
<td>Sweden</td>
<td>25.8</td>
</tr>
<tr>
<td>Switzerland</td>
<td>34.0</td>
</tr>
<tr>
<td>Turkey</td>
<td>43.6</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>30.0</td>
</tr>
<tr>
<td>United States</td>
<td><strong>25.6</strong></td>
</tr>
</tbody>
</table>

| Median              | **30.2** | **27.0** | **8.5** | **11.2** |

1. Or nearest available year.

Source: OECD Health Data, 2002.
Clinical outcomes

When tied to a particular disease or clinical condition, health outcomes become more pertinent indicators of health system performance, because they provide information that can be used to determine the value of incremental spending. US researchers have undertaken numerous targeted studies of clinical outcomes that have focused on differences in morbidity and mortality across different populations (such as managed care enrollees and those insured under traditional arrangements, or patients who received different treatments for particular conditions). Summarising the research on the value of technological change for the treatment of five health conditions, Cutler and McClellan (2001) concluded that the total benefits of the changes exceeded the corresponding costs for at least four conditions over the periods studied. This study did not address whether similar benefits could have accrued from less costly investments. However, it found a clear and consistent association between more intensive treatment and better outcomes.

A number of studies have compared the outcomes of care furnished in the United States and Canada. One of them examined the use of invasive cardiac procedures and mortality rates for treatment of acute myocardial infarction, a form of ischaemic heart disease, among elderly patients (Tu et al., 1997). It found that the US patients were significantly more likely to undergo such procedures, but that long-term survival rates were equal in the two countries. The OECD’s Ageing-related Diseases project has also shed some light on differences across countries in the outcomes of care provided to patients with particular conditions. A multi-country study of care for patients with ischaemic heart disease (Moise and Jacobzone, 2002) showed that US patients were most likely to undergo invasive cardiac procedures. At an aggregate level, several countries were equally successful in reducing mortality rates, mirroring the Tu et al. results. However, when disaggregated by age, health outcomes (measured as deaths one year from hospitalisation for this illness) varied. The proportion of elderly US patients dying was slightly lower than in other countries, but some countries had somewhat better results for younger patients.

Processes of care

The quality of health care is a subject of considerable recent interest among US researchers and policymakers. Studying the under-use, overuse and misuse of services, analysts have documented shortcomings and have made broad estimates of their effects on health outcomes and health care costs. Studies of a number of surgical procedures conducted in the late 1980s and early 1990s found rates of overuse ranging from 2 per cent to 40 per cent, although the methods used have been criticised both for potential bias and for the use of expert opinion in determining appropriateness (Phelps, 1993). The Institute of Medicine estimated that between 44 000 and 98 000 patients die in US hospitals each year as a result of medical errors and that the preventable adverse events that often result generate total annual costs of between $17 and $29 billion (Kohn et al., 2000).

The United States is attempting to address quality problems, and perhaps more so than other countries. In response to the above Institute of Medicine report, the Department of Health and Human Services has established a Patient Safety Task Force to identify and implement improvement strategies. Quality concerns have also prompted proposals to improve standardised measurement and reporting on health care quality; to invest in improved systems for collecting, storing and accessing data on health and health care; and to redesign health care delivery systems to increase the predictability and reliability of their outputs. The debate centres on whether measurement and reporting systems will be mandatory or voluntary, and how such information is to be used. The information could be used to set performance standards or to assist purchasers and consumers in making informed choices. It could also be used privately, on a voluntary basis, by plans and providers in taking steps to improve quality. Although a wide array of technical issues (such as the risk adjustment of findings on outcomes) and issues relating to privacy must be addressed, some of these recommendations are now being implemented.
Summing up: strengths and weaknesses of the system

Taken together, these findings suggest that the performance of the US health system has room for improvement on at least two counts. The first challenge is to minimise opportunity costs associated with the growth in health spending as a percentage of GDP by encouraging efficiency in the delivery of care. Given the dual role of technology as a driver of expenditure growth and a source of significant benefits to the United States and other nations, the role of insurance in fostering use of health care, and the malpractice system that heavily influences health spending, addressing this challenge in a sensitive way will be difficult. Another challenge will be to improve access to health care. Indeed, the large number of uninsured receive medical care at a rather late stage in their sickness.

Any proposals for improving the US health system should take into account its strengths while attempting to remedy its weaknesses. Although the system’s complexity complicates reforms and adds to administrative costs, its diversity encourages technological advancement and permits consumer choice. Indeed, the system’s responsiveness to consumer preferences, adaptability to innovations in health care financing and delivery, and ability to satisfy patients at an individual level have served to build support for the status quo. Therefore, focused efforts to address problems, rather than sweeping changes in the fundamental structure of the system, are more likely to gain public support. But this does not mean that more fundamental reforms would not be desirable.

The agenda and prospective directions for reform

Comprehensive reform has not been on the agenda of US policymakers since former President Clinton’s proposal failed in 1994. Since then, policymakers in the Administration and the Congress have focused their attention on narrower health policy objectives, such as creation of SCHIP, the Health Insurance Portability and Accountability Act (HIPAA) and consideration of expanding Medicare to include outpatient prescription drug coverage. Policy proposals geared toward ensuring the long-term stability of Medicare have been the subject of great interest and heated debate but have made no headway. With a weaker economy, a deteriorating fiscal outlook, renewed strong growth in health spending and expectations for a resurgence in the number of uninsured, the environment for health policy has changed drastically. Despite this, there is no consensus and policy makers are still at loggerheads on the basic direction of reform. Thus, the outlook for reform of the US health system, and the shape it may take, remain uncertain. The remainder of this section reviews currently debated proposals and makes some recommendations for reform.

Enhancing economic efficiency

Current debate on reducing the rate of growth in health spending and of increasing its efficiency, both overall and in the Medicare programme, focuses on the question of the appropriate balance between regulation and competition as a means of achieving health system objectives, and there is strong disagreement about what strategies should be pursued. Policy makers are asking what is realistic to expect in terms of creating value-based competition among providers and health plans, given market failures, and what such competition could be expected to achieve. There is evidence that competition can improve efficiency, especially if the right incentives are in place, and help slow the growth in health costs to some degree (Annex VI). At the same time, there is growing frustration with the difficulties of maintaining a regulatory environment, given the complexities of health care financing and delivery in the United States. Politicians are uncomfortable with the level of detailed administrative decision-making that occurs in a system that is regulated in this manner. Providers and plans are unhappy with the associated burden of compliance with regulatory requirements as administrative complexity increases. Notably, though, they
seem to be also displeased with the oversight and control that private health plans and payers are able to exert in some markets.

**Commercial health insurance markets**

Policy proposals to control private health spending focus on improving the functioning of existing commercial insurance markets by reducing the subsidies that encourage over-consumption of health care and by fostering more consumer price sensitivity. A range of new products known as defined-contribution health insurance products has generated some interest among employers and policy-makers. They feature a medical savings account (MSA), contributions to which are tax-advantaged, paired with a major medical or supplementary policy for catastrophic care. They also tend to feature networks of providers paid on a fee-for-service basis and extensive use of Internet-based assistance to facilitate value-based purchasing of health care by individual consumers (Christianson et al., 2002). So-called “cafeteria-style” employee benefits plans, which would allow individual employees to determine how much of their total benefits package they wish to allocate toward health care versus other benefits, have been put forward as another option. There has as yet been little demand for such products and legal factors have restricted their development and use. There are concerns regarding their potential effect on broader risk-pooling among those of different health status. It has also been pointed out that they should be tax-advantaged only if families have satisfactory basic cover, including check-ups and preventive care. The Administration has proposed improvements to various of these arrangements, in particular making MSAs available to all employees, reducing the plan-deductible determining eligibility for tax breaks and increasing tax incentives. One recent innovation, Health Reimbursement Arrangements (HRAs), avoids many of the limitations of the MSAs. Such modifications are important to increase demand for these schemes and encourage broader participation.

The Administration is attempting to enhance individual choice and ownership of health coverage. It has proposed a tax credit to help those who do not have employer-provided insurance to purchase their own. It is working to loosen the restrictions on MSAs and to make them permanent. And, the IRS has issued a ruling determining the tax treatment of HRAs made by employers.

Breaking the link between employment and insurance coverage, which could occur with a change in tax policy, has also been proposed as a way of creating more individual choice and price sensitivity, purchase of insurance that is entirely portable, and tax equity. While this might indeed reduce over consumption, the impact on the number of uninsured is unclear. Nonetheless, there is no doubt that there are serious problems with the employer-based system. It contributes to job lock and excess costs attributable to administrative inefficiency, particularly for employers in the small-group market. Current tax concessions are both regressive and cost inflationary. Because of their unlimited nature they provide a strong incentive to favour health-care purchase over other forms of compensation and expenditure.

Improving private health insurance markets would improve efficiency but faces a number of obstacles. It is widely recognised that better information on health insurance options, plans, providers and treatments is needed to reduce the shrinking but still significant information asymmetries between consumers and other actors in the health system. Although efforts have been made to improve the availability of information, neither employers nor individual consumers have as yet incorporated information on plan performance into their purchasing and enrolment decisions to the extent expected by proponents of competition-based strategies (Marshall et al., 2000). As in other fields of specialised knowledge, some consumers may well need to use intermediaries to interpret information. Furthermore, the move toward increasingly large, overlapping provider networks reduces some of the distinctions across health plans that could potentially differentiate them in terms of quality of care.
There have been few proposals addressing the issue of restraining the cost increases from technology use. As noted, high US relative technology costs have been shown to reflect its earlier adoption and more widespread application. Internationally comparative clinical outcome studies indicate that technology use for some conditions may be at a point of diminishing marginal returns in the United States, suggesting that different patterns of technology use could enhance efficiency. Such patterns are influenced by a variety of US health system features, both on the demand and supply side, notably a fear of health-care rationing and minimal controls on either availability or use. With better information and consumer choice, it is to be hoped that the least efficient technology applications will be eliminated.

With the managed-care approach apparently reaching its limits, there is a need to strengthen economic incentives for patients, providers and insurers to make more cost-effective decisions. Public policy can support this by encouraging the use of health-insurance products that combine coverage for essential care with defined-contribution arrangements (such as Medical Savings Accounts) that reward value-based purchasing for optional care and thus reduce over-consumption. To support cost-conscious decision-making, further efforts are also required to develop the information base on the relative performance of health plans and providers and the relative value of different treatments and technology use. To foster efficient application of health technologies, evidence-based assessment of their costs and benefits should be encouraged and made publicly available. To ensure that such information is taken into account, economic incentives might be used (such as co-payments, selective contracting with agreed providers and provider-reimbursement schemes). Continuing tough enforcement of anti-trust policies could also contribute to cost-effective use of new technologies and pharmaceuticals (Annex VI). Finally, overuse of health-care services could be curbed by limiting subsidisation through the tax system (see below).

Public programmes

Reflecting the disparate views on competition and regulation, Medicare reform proposals that are meant to rein in health spending and increase efficiency may be separated into two groups. The first aims to allow private insurance markets a greater role in Medicare, reducing the programme’s function as a direct purchaser of health care and increasing its importance as a conduit for and mediator of individual consumer transactions with plans, as it was originally structured. The second seeks to strengthen Medicare’s ability to be a value-based purchaser of health care under the traditional component of the programme.

Proposals in the first camp contain a number of common elements. They would build upon the existing Medicare+Choice programme, which has established a means by which private health plans can participate in Medicare. They would require health plans to determine total premiums — through a bidding process, for example — and have the government separately determine the amount of its contribution to “premium support”. Depending on how the amount of contribution to the premiums was determined and how the traditional programme was treated in the competitive structure, beneficiaries could face increased incentives to make cost-conscious decisions between the traditional programme and the private options available locally. These proposals seek to increase efficiency of Medicare spending by requiring beneficiaries to consider of the costs of their own choices in coverage and by fostering competition among health plans and the traditional programme.

Such proposals, however, face many of the same challenges as do those to strengthen commercial insurance markets, with added challenges unique to Medicare. Programme beneficiaries are both less experienced than the working-age population in health plan decision-making and less equipped to serve as informed purchasers of health insurance and consumers of health care, despite their much greater use of services. For example, one recent study found that the elderly have much more difficulty accurately using comparative information to inform health plan choice than non-elderly peoples and that the differences are
A debate over implementing outpatient prescription drug coverage in Medicare has sprouted in recent years, even as the larger debate about fundamental reforms to Medicare remains unresolved.

About one-quarter of Medicare beneficiaries have no prescription drug coverage at all, and others have coverage that is limited by annual caps on benefits or greater cost sharing for drugs not included on health plan formularies. Nonetheless, programme beneficiaries accounted for 40 per cent of total drug spending in 1997. As a result of their levels of use and limited coverage, they paid about 45 per cent of their total prescription drug costs out of pocket in that same year (Crippen, 2001). With the expansion of demand for drugs and rising costs, along with the decline in private supplemental insurance coverage among beneficiaries, political pressure to furnish coverage to Medicare beneficiaries for prescription drugs has grown considerably in the last few years. A number of options for such a broadening in coverage have been debated.

As a temporary solution until a full drug benefit is implemented, the Administration has unveiled a short-term proposal to allow states to extend drug coverage to low-income senior citizens under Medicaid. Under the proposal, the federal government would allow states to expand Medicaid coverage of Medicare beneficiaries from the current 100 per cent of the federal poverty level up to 150 per cent. As an inducement to states, the federal government would pay 90 per cent of the costs that states would incur in expanding eligibility (rather than the usual cost sharing of around 60 per cent). Increasing coverage incrementally has obtained support from a range of political perspectives. Given current problems with state budgets, however, states may not be willing to take the pre-requisite step of expanding their programmes to include Medicare beneficiaries under 100 per cent of the poverty level, coverage for whom would be paid for only at the state’s current matching rate. Independent estimates suggest that almost 70 per cent of eligible persons would get coverage.

Another option for coverage (also supported by the Administration) is to add a drug benefit to the Medicare package, which could be managed by private benefits managers. The cost of the benefit would, of course, depend largely on the generosity of the coverage and how the benefit was structured (for example, to provide stop-loss or first dollar coverage). However, the Congressional Budget Office projects that, even absent a drug benefit, prescription drug costs for Medicare beneficiaries will total $113 billion (more than 1 per cent of GDP) in 2004, which makes the cost of full coverage significant, particularly if coverage increases consumption (Crippen, 2002).

Also possible is the complementary option of facilitating coverage by Medicare+Choice plans through subsidies, an approach that would not make the benefit uniformly available to all beneficiaries. In 2001, nearly 40 per cent of beneficiaries did not have the option of enrolling in a Medicare+Choice plan because no plans served their local area.

1. Only 18 of the 50 states now furnish Medicaid coverage to Medicare beneficiaries with incomes under 100 per cent of the federal poverty level.
Medicare+Choice programme enrollees are healthier, on average, than traditional programme enrollees. Congressional advisory bodies hold that plans have historically been overpaid in comparison with traditional programme costs. However, low payment updates since 1997 have mitigated this effect. The data needed to improve risk adjustment of premiums are costly for plans to collect, and implementation of improvements has been gradual. Some proposals call for breaking the link between Medicare+Choice programme payments and traditional programme spending, relying on a system of competition, negotiation or administered pricing under a revised formula to set payment rates. These approaches again raise unresolved questions about the role of the traditional programme under such schemes. Proposals generally call for fair competition between fee-for-service and private plans but differ on important details.

Proposals in the second camp also contain a number of common elements. Many would update Medicare’s benefits package to include items commonly provided by private health insurers such as prescription drugs (Box 7) and preventive care. Such an expansion of benefits is also part of the Administration’s framework for Medicare restructuring, which otherwise focuses on strengthening the programme’s financial sustainability, providing better insurance options and deregulation (Annex VII). Some proposals would increase the programme’s ability to undertake selective contracting or otherwise differentiate among providers on the basis of performance. They would also change methods of paying for care so as to establish incentives for delivery of effective health care. However, these proposals are subject to both technical and political feasibility constraints. From a technical perspective, sensitive measures and data systems, along with selection criteria, must be developed to support active purchasing strategies. In terms of political feasibility, it may be difficult for the programme to exercise its monopsony power by excluding providers or treating them preferentially. Some recommendations geared toward reform of the traditional Medicare programme would also give beneficiaries more incentives to be more cost conscious in their spending on health care. Because of the high rate of first-dollar supplemental (Medigap) insurance coverage, most Medicare beneficiaries do not directly bear the costs of their service use. Some proposals suggest redesigning the regulated Medigap market to require policies to retain some cost sharing, perhaps in conjunction with redesign of Medicare’s own cost-sharing arrangements.

Proposals to restructure Medicare have important implications for Medicaid beneficiaries as well as the state programmes that serve them. As noted, Medicaid has become the major source of financing for long-term care for the elderly and non-elderly with disabilities, providing services often excluded from Medicare and private insurance. While demand for such services is rising strongly, budget constraints have led nearly half of the states to consider cuts in Medicaid funding. This highlights the need for addressing the structural problems plaguing the programme. One reform proposal rejected in the mid-1990s was to provide funding to states in the form of block grants. Although concerns regarding the adequacy of the safety net would need to be addressed, this would both provide a stable financial base for, and allow the states to make innovative changes in, Medicaid programmes. An alternative would be to shift some of the burden of financing long-term care to other public or private payers.

In summary, with public health programmes facing cost increases that seem difficult for taxpayers to sustain, there is a need to step up reform efforts. In the case of Medicare, there is room for efficiency gains through reducing unnecessary care by harnessing the positive effects of competition among health plans and providers, although adequate protections for the elderly and disabled populations served by the programme must be maintained. While it can be argued that Medicare should provide the most effective treatments and services such as prescription drugs, the significant costs associated with enhanced benefits (up to 2 per cent of GDP by 2030) and the programme’s long-run solvency are major considerations. Medicaid is struggling to maintain its expanded coverage in the face of strongly rising programme costs, particularly for prescription drugs. Placing the programme on a sound financial footing will require co-ordinated policies because it is the main payer for services not covered by Medicare or private insurance.
Covering the uninsured

There is general consensus in the United States that the instability and incompleteness of insurance coverage for the population is a serious problem, both for uninsured individuals and society as a whole. However, while there is general support for reducing the number of uninsured, there is considerable disagreement about which strategies to use to accomplish this objective. The basic options for increasing coverage are to build on existing public programmes or to facilitate additional private coverage. Initiatives of both types have been taken in the recent past, representing efforts to target different segments of the uninsured population. SCHIP, which built upon the existing Medicaid infrastructure, was created to expand coverage of uninsured children. The 1996 Health Insurance Portability and Accountability Act (HIPAA), by contrast, was designed to improve continuity of private coverage for persons undergoing a change in employment status. The Trade Act of August 2002 provides a credit for eligible individuals (who have been displaced by trade and retirees aged 55-64 who have lost retirement benefit due to employer bankruptcy) to purchase health insurance. The Administration has also proposed broader tax credits (see below).

Broadening eligibility for Medicaid and SCHIP is a possible approach for extending coverage to additional groups, such as more of the poor and near-poor. The recent SCHIP experience shows that this approach can have an impact on coverage, although a quarter of poor children remain uninsured. State budgetary pressures call further expansion of these programmes into question, however. Indeed, the states’ share of health spending is projected to rise markedly over the next ten years or so.

In the past several years a number of proposals have been put forward to allow some early retirees under age 65 to buy into Medicare. However, there is a reluctance to enact such an expansion borne out of fiscal concerns and the desire not to put more health care under government control. Many such proposals target the 62-64 age group, given that Social Security eligibility begins at 62 and that this is the peak age of retirement from full-time work (Shea et al., 2001). Most of them would require beneficiaries to pay in at the full cost to the government of supplying coverage, although some would provide for subsidies. Some proposals would hinge eligibility on income, while others would link to loss of employer-sponsored coverage. Although the age cohort that comprises many early retirees does not have a high non-coverage rate, this group can be especially hard hit by loss of coverage. Premiums for individually purchased policies rise steeply with age in most states, reflecting average health expenditures for the 55-64 age group that are double those of the 45-54 year-olds (Shea et al., 2001).

Tax credits that would serve to subsidise private purchase of health insurance on the individual market have been proposed by the Administration as a means of promoting coverage among some of the uninsured. Their effectiveness would depend on critical design issues, such as the amount of the tax credit relative to premium costs; extent of eligibility for the tax credit; whether the credit is refundable for those whose tax burden is less than the credit amount; whether it is “advanceable” (that is, available at the time insurance is actually purchased); and whether reforms to the individual market (for instance regarding community rating) are included as part of such a policy. In addition to these design issues, analysts must consider the extent to which the availability of such tax credits would result in a reduction in employer-sponsored coverage and their impact on non-group insurance. The main issue for such proposals is the size of the tax credits relative to premium levels. The Administration’s proposed health insurance tax credit, which phases out with income, would offer to pay a share of premium costs for purchasing private insurance meeting certain minimum standards with a ceiling of $1 000 for individuals and $3 000 for families. Estimates of the non-group premium for comprehensive coverage range from $1 500 to $2 500 for an individual, and $5 000 to $7 000 for a family. Hence, some studies predict only a modest impact of such a credit on net insurance coverage (Gruber and Levitt, 2000), while others (Pauly and Herring, 2001) consider that a credit between half and two-thirds of the premium could have the desired effects.

94
Some experts have proposed the replacement of the current (unlimited) tax exclusion with a system of tax credits. Although this would probably encourage lower-cost coverage and increase take-up rates by lower-income workers, policy makers have not pursued this option, on the grounds that it would have a significant impact on current plans, union negotiations and other issues affecting worker compensation. As noted, there is also a risk that the employer-sponsored risk pool would shrink. One variant that seems attractive would be to cap the existing tax exclusion in order to free up additional budgetary resources to allow a combination of public programme expansion and sufficiently generous credits that would have a significant coverage-enhancing effect. The credits could be integrated with the exclusion, depending on the design. Such an approach would not discriminate against employer-provided coverage, which is desirable if the number without insurance is not to increase.

To sum up, the experience of the past decade has shown that the US voluntary health insurance system as currently structured, has not achieved full coverage of the population, even during a prolonged economic upswing. Lack of coverage causes both health and economic problems for the uninsured. The two basic options available to achieve full coverage are to build on existing public programmes possibly going so far as a universal system, or to ensure that private coverage is available to the uninsured. Recent experience suggests that expanding the eligibility for public programmes to include more populations not well served by private insurance can be effective. However, this option is limited by budget constraints and a desire not to increase political control over health care. The introduction of a health tax credit to promote private insurance coverage among the uninsured could be helpful. This approach also has budget implications but would avoid expanded public control. Capping the unlimited tax exclusion of employer-furnished health benefits could partly offset budgetary cost of any new tax credit (and any expansion of public programmes). Finally, it must be emphasised that there is evidence to suggest that increased coverage — whether through either one of these options or a combination of both — is unlikely to eliminate all disparities in quality and inequities across groups in the use of health services. Other policies are necessary to address this issue.

Conclusions

Ten years ago, an OECD review of the US health system concluded that it was doubtful whether mere marginal reforms could adequately deal with the problems facing it, namely soaring costs, low value for money relative to population health status and unsatisfactory coverage and access to health services. For a while, it seemed that this view was excessively pessimistic, but now it has become clear that the rise in managed care and the strong economy in the 1990s provided only a temporary respite. The discussion above has demonstrated that there are no easy solutions. Fundamental reform lacks sufficient political support. Indeed, the US system is seen domestically to have considerable advantages. Moreover, reform proposals, whether they favour competition or regulation, all have problematic side effects. Still, the ongoing issues facing the system need to be addressed. With managed care approaches to controlling costs reaching their limits, health spending is projected to accelerate, rising to 17 per cent of GDP in ten years and more than one-third of GDP in the longer term in the absence of corrective action (Council of Economic Advisers, 2002), the public component of which would be difficult for taxpayers to sustain. Because other countries achieve similar health outcomes at lower levels of expenditure, there may be opportunities to improve the efficiency of health care spending. As health care costs have been rising, the proportion of the population covered by health insurance has generally been falling, and a continuation of this trend is likely in the absence of new policy measures. Incomplete insurance coverage and delayed access to care adversely affects population health outcomes and possibly economic performance. Box 8 sets out some recommendations as to what could be the most promising avenues of reform, taking account of fiscal and institutional constraints that suggest that a multi-faceted approach may be required.
Box 8. **Recommendations concerning the health care system**

### Maximise efficiency and value for money

- Cap the unlimited tax exclusion that supports private employer-sponsored insurance in order to reduce the overuse of health care services, without discriminating against employer-sponsored provision, and to help finance new tax credits for the uninsured.

- Promote health insurance products that combine defined-contribution arrangements (such as Health Reimbursement Arrangements and Medical Savings Accounts), which reward value-based purchasing and thus reduce over-consumption, with coverage for essential and catastrophic care.

- Increase efforts to develop information on health plan and provider performance and on the quality of care with a view to spurring value-based competition and improvement in health outcomes.

- Institute policies to encourage investment in cost-effective health technologies and to foster efficient application of such technologies.

- Ensure that the trend toward vertical and horizontal consolidation among health care providers and insurers does not adversely affect competition, consistent with US antitrust laws. More generally, aim to improve antitrust enforcement in the sector.

- Explore the enhancement of the efficiency of the Medicare programme through alternative health insurance options, while maintaining adequate protection for beneficiaries.

- Ensure that any enrichments of the Medicare programme (such as the proposed prescription drug benefit) do not jeopardise the programme’s long-run solvency.

- Reform the medical malpractice litigation system to reduce defensive medicine, enhance quality improvement efforts and restore the supply lost because of resulting cost increases.

### Improving insurance coverage and access to health care

- Make sure that all Americans have health insurance coverage through a refundable tax credit to promote private insurance among the uninsured combined with expanded public programmes for those who lack private coverage.

- Explore additional ways to deliver care more efficiently in Medicaid and SCHIP.

- Research the causes of disparities in quality of care to design solutions consistent with US values.
IV. STRUCTURAL POLICY DEVELOPMENTS

While the longest expansion ever recorded is now history, the improvements in many areas of economic performance that accompanied it remain intact. The tight labour market together with robust gains in productivity led to markedly better work prospects for less-skilled workers and other groups weakly attached to the labour market, most notably single mothers. The strong economy reinforced economic policies to encourage work — such as the Earned Income Tax Credit and fundamental changes in welfare programmes in the mid-1990s — to generate improvements in work participation and income and falling poverty rates. This contrasts with the worsening in wellbeing experienced by disadvantaged groups in the 1980s expansion. Even social conditions often viewed as separate from macroeconomic performance, especially crime, have improved significantly over the past decade, and the buoyant economy and good policy — economic and non-economic — have played important roles. Even so, there are aspects of the labour market, education and in areas of international contention where improvements should be sought.

The recent weakening in the labour market will undoubtedly place economic stress on some individuals and highlight margins for policy improvement. One important challenge in this regard will be ensuring that temporary assistance programmes such as unemployment insurance adequately cover new entrants to the labour market. Further efforts to encourage work among welfare recipients should aim to provide sufficient ancillary support, such as childcare assistance and income support to families for whom the returns to work are low. Another subject which has received much attention over the past year is education policy, especially policies aimed at enhancing the quality of education received by children in poorly performing schools, which are often those in low-income areas. The reforms recently adopted will increase federal funding for such schools and introduce more incentives to improve their performance, although the success of these initiatives will depend on their implementation by the states.

The past year has also exposed other structural problems. The collapse of Enron and subsequent revelations have focused attention on weaknesses in corporate governance and financial reporting, and a myriad of proposals regarding changes in accounting practices, the choice and role of directors, executive compensation and defined contribution retirement plans have been floated. This summer’s Sarbanes-Oxley Act reforms the oversight of the accounting industry and toughens sanctions for misleading financial information. Nonetheless, further improvements should be considered. It is also important to vigorously enforce existing regulations and to note that investors, firms, auditors and regulators have already taken corrective action. Elsewhere, tensions have mounted on the international trade front, most notably from the imposition of safeguard measures for the domestic steel industry and new farm legislation that cements the earlier unwinding of the 1996 liberalisation effort. Finally, the Administration’s proposals in the environmental area have been mixed. Further progress in reducing fine particle emissions through tradable permits under the Clean Skies initiative is a natural extension of the 1990 Clean Air Act. Proposed changes to regulations regarding new source emissions from power plants and industry sources may worsen air quality and should be used to showcase the new emphasis on cost-benefit analysis before being implemented. A more in-depth review of some of these environmental policies is provided in the final section. A summary of this year’s recommendations and developments related to those from previous Surveys is given in Table 25.
<table>
<thead>
<tr>
<th>Year</th>
<th>Recommendation</th>
<th>Action</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Labor markets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>Avoid increasing the federal minimum wage.</td>
<td>No further changes have been made.</td>
<td>Too high a minimum might lower youth employment. Increased receipt of disability benefits has been an important factor in the exit of the less-skilled from the labour force and the programme needs reform. Current work requirements have little bite, and some reduction in credit states receive for past caseload reductions is appropriate.</td>
</tr>
<tr>
<td>2002</td>
<td>Identify strategies to increase employment of disabled.</td>
<td>No action since original recommendation in 1996.</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>Tighten work requirement for welfare recipients.</td>
<td>Under consideration.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1997</td>
<td>Improve public efforts to offer English language training to immigrants.</td>
<td>No action.</td>
<td>Immigrants’ integration and economic contribution is slowed by lack of English-language ability. Increasing incentives to meet standards is a positive step and now states must implement tough standards. Greater emphasis on choice in public schools should increase competition and quality, but perhaps not sufficiently. Federal support to low-income districts has been increased, but appropriations may be slowed by fiscal deterioration and states should carefully examine their school finance equalisation systems.</td>
</tr>
<tr>
<td>2000</td>
<td>Bring more schools up to the standards now in place.</td>
<td>No Child Left Behind Act provides for testing and focuses on establishing accountability.</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>Expand competition in primary and secondary schooling.</td>
<td>No Child Left Behind Act increases choice in public schooling.</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>Reduce funding disparities across school districts and reconsider design of state programmes.</td>
<td>No Child Left Behind Act provides additional federal funding for schools in lower-income areas.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Product markets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td>Improve competition in local telephone industry.</td>
<td>No action.</td>
<td>Market share of entrants has risen but remains small. Move away from market-based outcomes is a step backwards. Supply bottlenecks contributed to the electricity crisis in California in 2000-2001, and additional capacity has begun to develop nation-wide. Such a move would lessen need for new capacity. Since 11 September, attention has focused on new security initiatives at airports. Market share of entrants has risen but remains small.</td>
</tr>
<tr>
<td>2000</td>
<td>Roll back the extra support given to farmers in past few years.</td>
<td>This year’s farm bill both increases support and distortions.</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>Improve energy infrastructure, particularly in electricity transmission and generation.</td>
<td>Energy legislation under consideration.</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>Consider move to real-time pricing of electricity.</td>
<td>No action.</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>Improve infrastructure at airports, including air-traffic control systems.</td>
<td>No action.</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>Permission for local incumbent operators to enter long-distance telephone markets should be de-linked from extent of local competition.</td>
<td>No action.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Financial markets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1997</td>
<td>Reassess bankruptcy and patent laws with aim of curbing abuses.</td>
<td>Legislation to reform personal bankruptcy laws moving through Congress.</td>
<td>Legislation near completion. Advantages over private firms hurt competition and rapid growth may create risks to financial system.</td>
</tr>
<tr>
<td>2000</td>
<td>Break links of government-sponsored enterprises with the federal government.</td>
<td>No action.</td>
<td></td>
</tr>
</tbody>
</table>
Table 25. **Summary of structural recommendations (continued)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Recommendation</th>
<th>Action</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>Create independent regulatory board for auditors and limit consulting services by auditors.</td>
<td>Sarbanes-Oxley Act of 2002 has already become law.</td>
<td>Lack of independence and close relationship between auditors and their clients has contributed to problems with financial accounts.</td>
</tr>
<tr>
<td>2002</td>
<td>Consider move toward principles-based accounting rules.</td>
<td>Sarbanes-Oxley Act calls for study.</td>
<td>Rules-based approach has generated a preoccupation with loopholes that has distorted financial information.</td>
</tr>
<tr>
<td>2002</td>
<td>Examine expensing of stock options.</td>
<td>No government action.</td>
<td>Options may have contributed to manipulation of earnings and encouraged short-termism by managers.</td>
</tr>
</tbody>
</table>

**Environment**

<table>
<thead>
<tr>
<th>Year</th>
<th>Recommendation</th>
<th>Action</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>Consider introducing a domestic cap-and-trade system for CO₂ emissions.</td>
<td>Administration has proposed a climate change plan.</td>
<td>Proposed goals could be met more efficiently with a cap-and-trade system.</td>
</tr>
<tr>
<td>2000</td>
<td>Make evaluation of environmental costs of agriculture when providing support to this sector.</td>
<td>This year’s farm bill increases the size and scope of environmental programmes in this sector.</td>
<td>This is one of the few favourable aspects of the farm bill.</td>
</tr>
<tr>
<td>2000</td>
<td>Increase fuel taxes in lieu of tightening CAFE standards.</td>
<td>No change in fuel taxes contemplated; action on CAFE standards unlikely for a couple of years.</td>
<td>CAFE standards are a second-best approach to reducing environmental effects from motor vehicle use.</td>
</tr>
<tr>
<td>2001</td>
<td>Consider a carbon tax on all carbon-based energy products, including coal and natural gas.</td>
<td>No action.</td>
<td>US contributes disproportionately to global carbon emissions and existing programmes (e.g. CAFE standards) achieve reductions less efficiently.</td>
</tr>
</tbody>
</table>

**Taxation**

<table>
<thead>
<tr>
<th>Year</th>
<th>Recommendation</th>
<th>Action</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>Increase the limits for contributions to tax-free savings accounts.</td>
<td>No action.</td>
<td>Moving toward a consumption tax base would increase incentives for personal savings.</td>
</tr>
<tr>
<td>2001</td>
<td>Eliminate deductions for mortgage interest and state and local income tax.</td>
<td>No action.</td>
<td>Deductibility disadvantages non-residential investment and lowers the tax base.</td>
</tr>
<tr>
<td>2001</td>
<td>Extend Earned Income Tax Credit.</td>
<td>No action.</td>
<td>An expansion that lowers the penalty for two–earner families and increases the credit for single households would provide a needed boost to work incentives for low-skilled men.</td>
</tr>
</tbody>
</table>

*Source: OECD.*
Problems in corporate governance and accounting practices have emerged

Last year witnessed a record pace of corporate bankruptcies. The collapse of Enron, an energy producer also heavily involved in energy trading, highlighted weaknesses in corporate governance and accounting practices. Revelations that Worldcom, a telecommunications firm, had improperly reported costs also shook investors’ faith in the efficacy of existing enforcement mechanisms. The pick-up in the pace of bankruptcies last year (Table 26) is unsurprising in itself, given the weak economy and downturn in aggregate profits. But the natural forces of creative destruction that are the primary cause behind most such failures do not alter the fact that opaque and potentially misleading financial reports seem to have contributed to a misreading of the potential risks posed by Enron and apparently a significant number of other firms as well. Moreover, there has been a large run-up in the number of firms restating past earnings, suggesting that accounting standards had become lax and some practices used recently were “aggressive”. Investigations of potentially criminal misconduct by officers of major corporations, auditors and analysts at investment banks (who may have provided misleading guidance to investors) have drawn additional attention to the accuracy of disclosed financial information. Other revelations and investigations by the Securities and Exchange Commission (SEC) on how (and in some cases whether) energy and telecommunications companies (and possibly others) tried to manipulate reported earnings through, for example, excessive trading (that boosted revenues and costs and left profits unaffected) indicate that the earnings game on Wall Street may have reached a dangerous level, hurting shareholders and firms alike. Stock markets have swooned thus far this year in part as a result.

Table 26. The largest corporate bankruptcies, 1980 to present

<table>
<thead>
<tr>
<th>Company</th>
<th>Bankruptcy date</th>
<th>Total assets Pre-bankruptcy ($ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worldcom Inc.</td>
<td>21 July 2002</td>
<td>107 000</td>
</tr>
<tr>
<td>Enron Corp. ¹</td>
<td>2 December 2001</td>
<td>63 392</td>
</tr>
<tr>
<td>Texaco, Inc.</td>
<td>12 April 1987</td>
<td>35 892</td>
</tr>
<tr>
<td>Financial Corp. of America</td>
<td>9 September 1988</td>
<td>33 864</td>
</tr>
<tr>
<td>Global Crossing Ltd.</td>
<td>28 January 2002</td>
<td>25 511</td>
</tr>
<tr>
<td>Adelphia Communications</td>
<td>25 June 2002</td>
<td>24 410</td>
</tr>
<tr>
<td>Pacific Gas and Electric Co.</td>
<td>6 April 2001</td>
<td>21 470</td>
</tr>
<tr>
<td>Mcorp.</td>
<td>31 March 1989</td>
<td>20 228</td>
</tr>
<tr>
<td>Kmart Corp.</td>
<td>22 January 2002</td>
<td>17 007</td>
</tr>
<tr>
<td>NTL Inc.</td>
<td>8 May 2002</td>
<td>16 834</td>
</tr>
<tr>
<td>First Executive Corp.</td>
<td>13 May 1991</td>
<td>15 193</td>
</tr>
<tr>
<td>Gibraltar Financial Corp.</td>
<td>8 February 1990</td>
<td>15 011</td>
</tr>
<tr>
<td>FINOVA Group, Inc., (The)</td>
<td>7 March 2001</td>
<td>14 050</td>
</tr>
<tr>
<td>HomeFed Corp.</td>
<td>22 October 1992</td>
<td>13 885</td>
</tr>
<tr>
<td>Southeast Banking Corporation</td>
<td>20 September 1991</td>
<td>13 390</td>
</tr>
<tr>
<td>Reliance Group Holdings, Inc.</td>
<td>12 June 2001</td>
<td>12 598</td>
</tr>
<tr>
<td>Imperial Corp. of America</td>
<td>28 February 1990</td>
<td>12 263</td>
</tr>
<tr>
<td>Federal-Mogul Corp.</td>
<td>1 October 2001</td>
<td>10 150</td>
</tr>
</tbody>
</table>

¹. The Enron assets were taken from the 10-Q filed on 19 November 2001. The company has announced that its accounts were under review at the time of filing for Chapter 11.

Source: BankruptcyData.com.

The most important weakness brought to the fore by the Enron case (and reinforced by subsequent developments) concerns the relevance and accuracy of corporate financial statements. Published financial reports often provide an incomplete picture of the risks borne by corporations. Some
risks are simply very difficult to quantify. One example is counter-party risk, i.e. the risk that a firm’s suppliers or customers — or firms further up or down the value-added chain — might fail. Other examples encompass the treatment of joint ventures and outsourcing. Some risks, however, can be deliberately hidden; examples include the creation of off-balance-sheet special-purpose entities (SPEs) that in fact are not at arms-length, the lack of explicit documentation or other kinds of “aggressive accounting”. The latter factor may have been compounded by the large share of revenues provided by consulting, rather than audits, at the major accounting firms, and the potential conflicts of interest created by such close relationships between auditor and client.

More broadly, recent trends in executive compensation and investment banking practices may have accentuated the wedge between the interests of shareholders and executives. Over the course of the 1990s, analysts at investment banks increasingly received lucrative bonuses based on the overall revenue of their investment banking divisions, perhaps creating an incentive to issue overly favourable estimates of future performance (Fuller and Jensen, 2002). At the same time, the expansion in the use of stock options in executives’ compensation increased their incentive to focus on projects with short-run payoffs at the expense of the long-run performance of the firm. Enron offered an excellent example (Morgenson, 2002). Such incentives were exacerbated by the failure of financial reports to clearly communicate the details of stock option grants to executives, both in terms of the impacts on the financial position of the firm and the expected positive effects of such grants on incentives. While stock options have become an increasingly important component of compensation (Lebow et al., 1999), the standards set by the Financial Accounting Standards Board (FASB) do not require firms to count options granted as an expense. Such grants at the largest 1500 firms were about 20 per cent of reported earnings in 2001, up from some 3½ per cent in 1995 (Liang and Weisbenner, 2001).

While reforms are called for, corrective actions by market participants — shareholders, firms, analysts, auditors and regulators — are already underway. It is important to note that some recent disclosures may eventually be shown to have been in violation of current regulations and laws (such as the mis-statement of costs at Worldcom), in which case effective enforcement of existing law will prove valuable. In addition, the Sarbanes-Oxley Act of 2002 created a new oversight body to supervise accountants, tightened the responsibility of corporate officers for financial reports and stiffened penalties, including prison sentences for criminal misconduct and increased funding for enforcement at the Securities and Exchange Commission (SEC). (Annex IX contains a more detailed description of some of the provisions of the Sarbanes-Oxley Act). A new Public Company Accounting Oversight Board will police the accounting industry. The Board will be financed by fees paid by public companies and will establish audit, ethics and independence requirements for accounting firms (with SEC oversight). The new law also prohibits accounting firms from providing a number of consulting services for companies they audit and requires rotation of lead audit partners after five years. In an effort to increase the accuracy of financial statements, chief executives (CEOs) and chief financial officers (CFOs) must certify that financial statements provided to the SEC are accurate; wilful violation could result in fines up to $5 million and up to 20 years in prison. Moreover, CEOs and CFOs will be required to reimburse companies for bonuses on profits from stock sales if financial statements are revised for violations of securities laws.

Nevertheless, further steps to improve financial reports should be considered. One important issue is the accounting of the costs of stock options. The question of expensing of stock options has proven to be quite controversial. In the early 1990s, the FASB considered requiring firms to treat options grants as an expense, only to be thwarted by overwhelming political pressure from high-technology industries and the Congress, and the debate has been similarly heated this year (Schlesinger, 2002). A requirement that firms expense options should be studied. Financial reports should provide clearer information to investors on the costs borne by the firm to compensate its executives and other employees as well as the benefits of incentive-based pay. However, there are considerable difficulties associated with expensing options — notably the lack of information appropriate for pricing at small firms with limited or no history of stock
prices and the difficulty in pricing options with long horizons (as many options used in compensation packages have a ten-year horizon, much longer than traded options). These difficulties may be overcome through clear regulatory guidance and could become less problematic if expensing became mandatory and hence experience was accumulated. If further study suggests expensing of stock options would provide better information to investors, it should be mandatory. The current practice of not expensing options while requiring expensing of share grants distorts firms’ incentives regarding the choice between the two.

In addition, it may prove useful to change some aspects of Generally Accepted Accounting Principles (GAAP). First, a move towards standards based on principles, rather than the rule-based prescriptive style of GAAP, which spurs the search for loopholes, could prove fruitful, along the lines of the standards promulgated by the International Accounting Standards Board (IASB). Greater co-ordination between FASB and IASB may also improve standards. The Sarbanes-Oxley Act calls for the FASB to research the costs and benefits of a move to principles-based practices. Finally, it is important to note that many of the provisions of the Sarbanes-Oxley Act also apply to foreign firms that may face different rules in their home countries. Implementation of these provisions should ensure that the regulatory burden does not become unbearable, particularly when foreign firms are subject to effective oversight elsewhere. The comment period prior to implementation will allow the SEC to consider how best to face these issues once input has been received.

**Figure 31. US student performance and educational expenditure relative to OECD averages, 1998**

1. Cumulative expenditure per pupil in primary and secondary education up to the age of 15 at purchasing power parity exchange rates.
   Source: OECD.

The collapse of Enron and the associated losses of retirement assets by its employees who concentrated their defined contribution retirement (401k) accounts in Enron stock has also generated calls for reform in this area. Over the past two decades, the form of retirement saving in the United States has changed dramatically. About 85 per cent of retirement savings contributions today go to defined contribution plans, and typically the employee has substantial discretion over the allocation of these funds (Poterba et al., 2001). In some cases, employees choose to pursue an investment strategy with little diversification, and in Enron’s case this led to dramatic losses. In response, some proposals that would limit the degree to which employees could concentrate their retirement portfolios in the stock of their employer have been considered in Congress, and the Administration has suggested providing greater information to employees regarding the risks associated with different portfolios. The latter set of proposals may be superior, by both preserving options for investors and increasing awareness regarding
retirement planning. Information provision has very important effects on the saving behaviour of households, with financial education increasing asset accumulation (Bernheim et al., 1997). Congress has also been considering reforms to limit the degree to which companies can restrict the ability of employees to trade their company stock invested in their retirement accounts.

Progress in education reform

Improving the educational system in the United States, particularly at the primary and secondary levels, has been at the forefront of public debate for many years. The forces spurring concern have been several. One was a perception that the quality of compulsory education is low and that expenditures do not generate an acceptable return on investment. For example, the United States landed squarely within the OECD average in reading, mathematics and scientific achievement in the first results from the Programme for International Student Assessment (PISA) — a performance level that would generate concern, given the tendency to always hope to be above average — while spending 50 per cent more than the average (Figure 31). Part of these results can be explained by the human-capital intensity of schooling, which tends to raise education expenditures in richer countries; relative to GDP, the comparison appears less dramatic. However, the rapid increase in education expenditure per pupil since the 1970s (which has averaged 2½ per cent per year when deflated by the overall consumer price index, Figure 32) has not been matched by an improvement in student performance (as measured, for example, by the National Assessment of Educational Progress test scores) — i.e. the productivity of the education system has fallen (Hoxby, forthcoming). Of perhaps greater concern has been the persistent failure of schools in poor urban and rural areas. The PISA study confirmed this tendency, with the United States showing a somewhat greater sensitivity of student performance to socio-economic background than other OECD countries.

The role of the federal government in compulsory education was boosted by recent reforms…

The current Administration has made reform of the role of the federal government in primary and secondary education one of its most important priorities. The four goals for such reform, outlined in early 2001, were to raise accountability through mandatory testing, a re-orientation of expenditures to programmes aimed at increasing teacher quality and student performance, increased flexibility in setting priorities at the local level, and greater choice for parents whose children attend failing schools. Around the start of 2002, the Congress passed and the President signed the No Child Left Behind Act — the most significant change in the federal role in education since the Elementary and Secondary Education Act of 1965. Each of the proposed goals was addressed in some way.

This legislation significantly boosted federal expenditures on education, although the increase is modest when compared to overall education expenditures, over 90 per cent of which are undertaken at the state and local level, and appropriations may be squeezed by the overall budget concerns discussed in Chapter II. It also targeted expenditures on poor students and disadvantaged schools to a greater extent than previously by boosting Title I spending by 20 per cent. This change will disproportionately benefit some urban school districts, where federal Title I allotments will rise much more than the overall 20 per cent expansion in the programme. In an effort to enhance school performance and link spending to performance, students are required to take annual tests in reading and mathematics from third through eighth grade. The test results are to be tracked from year to year (at the school level, with some disaggregation by demographic group) and made available to parents to improve the accountability of public schools to parents; in addition, performance will be assessed by race, gender and other criteria to monitor the progress of different groups and identify systemic failures. States gained limited discretion in the use of federal money, but this freedom falls significantly short of the discretion proposed by proponents of block grants (as in the TANF welfare programme, discussed below). Also, states retained some freedom
with regard to their performance standards, but biennial national exams are a mandatory component of a national assessment. Moreover, states will be required to demonstrate that all teachers are qualified by 2005 and that every student either meets state standards or is receiving extra help within 12 years. The bill also creates a new programme aimed at ensuring that every third-grader can read well.

Figure 32. Per pupil spending and student performance

1. Data deflated by the consumer price index.

*Source: US Department of Commerce, Statistical Abstract of the United States; National Center for Education Statistics and OECD.*
... and a limited degree of school choice will be allowed within the public school system...

An aspect of the recent reform that has proven quite controversial and has attracted a great deal of academic research is the linking of school choice with school accountability by allowing students in failing schools to choose to attend a different public school — similar to a programme that has been operating in Florida since 1999 (although in Florida students have the option to attend a private school). The Administration’s proposal to allow a voucher programme in which parents would receive money to move their children from “failing” public schools to other public or private schools was not included in the legislation. This option proved politically controversial because it would have allowed students who leave their school to bring their funds with them to a private school. The final legislation included provisions under which children will be eligible for supplementary services such as tutoring if their school is failing, and parents will be allowed to transfer their children from a persistently failing public school to another public school in the same school district, thereby introducing a limited role for accountability and competition in public schooling. This reform falls short of a pure-choice regime, and it makes the state the arbiter in determining which schools are failing. Perhaps more importantly, if the putative purpose of choice is to improve the education of economically and socially disadvantaged students, allowing choice among students at failing schools may address this goal in only a very indirect manner – particularly if the measure of school performance is not properly designed. For example, changes in test scores are at best a very noisy measure of school improvement (Kane and Staiger, 2001). Hence basing school choice on such measures may induce a degree of randomness in the population eligible for choice, because, while the level of test scores is relatively stable at a school over time, year-to-year changes can be volatile. It may, therefore, fail to target disadvantaged students (Figlio and Page, forthcoming). It is very important to design performance measures that accurately track the at-risk population and to adjust for normal year-to-year fluctuations. Therefore, states should develop criteria for determining failing schools that are robust to such variations. With that said, teachers should be encouraged to maintain high standards in view of the evidence that has raised student performance in Florida, for example (Figlio and Lucas, 2000).

Aside from limiting choice to students in failing schools, there may be other weaknesses in programmes that limit choice to public schools within the same school district. First, about a third of high school students live in school districts with only one public high school, rendering choice within such a district meaningless at that level (Epple and Romano, forthcoming). The extent of this problem varies greatly across states. Moreover, the quality of schools within a district is not fixed and may respond in unexpected ways to programmes that allow choice within a district. For example, large urban districts may contain high-quality schools, often in high-income areas, that would be attractive to students allowed choice. However, affluent families in such areas may be persuaded to move to suburban school districts if peer-group effects are important in education choices, the poorer students in urban areas are viewed as less attractive peers, and suburban areas contain fewer poor students and hence a more attractive peer group (Epple and Romano, forthcoming). The quantitative importance of this channel is difficult to gauge. However, anecdotal reports and interviews across major urban school districts suggest that concern regarding flight of families with high-achieving students and sufficient income from urban areas following a wide-ranging choice programme is high (Kozol, 1991). Moreover, recent evidence finds that “white flight” — white families leaving public schools with concentrations of poor minority children — has been significant, perhaps because of peer effects or lower-quality schooling (Fairlie and Resch, 2002).
... but with the federal government’s small role, the reforms may have a limited impact

The presence of serious concerns regarding sorting by income across school districts highlights the importance of residential choice on education policy. School financing is another area where residential choices impact education. In the 1998-99 school year, nearly 44 per cent of the direct financing for school expenditures came from local and intermediate (e.g. county or municipal level) sources, primarily property taxes (US Department of Education, 2001). The importance of local financing in education is far greater than in most other OECD countries (Table 27). While disparities in expenditures across districts have been falling in general with the implementation of school finance equalisation (SFE) programmes (Hussar and Sonnenberg, 2000), they remain important in at least some states. At the state level, it may be useful to reconsider the incentives created by SFE programmes and perhaps alter their structure in order to avoid unintended effects on overall expenditure levels. For example, the California version essentially forbids differences in per-pupil spending across districts; any increase in local tax revenues for education, either through higher property values or an increased tax rate, increases state-wide funding but has virtually no effect on district spending. Hence, the tax rate has been equalised at the minimum rate throughout the state,

Table 27. Sources of funds for educational institutions

<table>
<thead>
<tr>
<th>Country</th>
<th>Primary, secondary and post-secondary non-tertiary education</th>
<th>Public sources</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Central government</td>
<td>Regional government</td>
</tr>
<tr>
<td>United States</td>
<td>7</td>
<td>50</td>
</tr>
<tr>
<td>Australia</td>
<td>28</td>
<td>72</td>
</tr>
<tr>
<td>Austria</td>
<td>67</td>
<td>12</td>
</tr>
<tr>
<td>Belgium</td>
<td>0</td>
<td>95</td>
</tr>
<tr>
<td>Canada</td>
<td>5</td>
<td>62</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>79</td>
<td>0</td>
</tr>
<tr>
<td>Denmark</td>
<td>32</td>
<td>11</td>
</tr>
<tr>
<td>Finland</td>
<td>40</td>
<td>0</td>
</tr>
<tr>
<td>France</td>
<td>73</td>
<td>11</td>
</tr>
<tr>
<td>Germany</td>
<td>5</td>
<td>77</td>
</tr>
<tr>
<td>Greece</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>Hungary</td>
<td>63</td>
<td>0</td>
</tr>
<tr>
<td>Iceland</td>
<td>37</td>
<td>0</td>
</tr>
<tr>
<td>Ireland</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>Italy</td>
<td>79</td>
<td>4</td>
</tr>
<tr>
<td>Japan</td>
<td>24</td>
<td>57</td>
</tr>
<tr>
<td>Korea</td>
<td>92</td>
<td>8</td>
</tr>
<tr>
<td>Mexico</td>
<td>81</td>
<td>19</td>
</tr>
<tr>
<td>Netherlands</td>
<td>94</td>
<td>0</td>
</tr>
<tr>
<td>Spain</td>
<td>44</td>
<td>51</td>
</tr>
<tr>
<td>Switzerland</td>
<td>3</td>
<td>52</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>21</td>
<td>0</td>
</tr>
<tr>
<td>Country mean</td>
<td>53</td>
<td>25</td>
</tr>
</tbody>
</table>

Source: OECD Education Database.
and the SFE programme has probably depressed education expenditures (Silva and Sonstelie, 1995). In
contrast, the SFE programme in New Jersey allows some portion of increased tax revenues to flow through
to local education expenditures, even in wealthy districts, while increasing spending more than
proportionately in poor districts that increase local taxes or property values. This set of incentives would
tend to increase education expenditures but is more costly (as the incentives provided to poor districts are
not self-funding, and hence require a transfer of other tax revenue to education outlays) and preserves some
inequality in resources across districts (Hoxby, 2001). The structure of SFE programmes deserves careful
attention, and some states may benefit from substantial redesign of their systems.

Moreover, mortgage interest payments and state and local income and property taxes are
deductible from income in determining federal tax liability, and deductibility is most valuable to
high-income households. This, combined with the importance of local taxation and property values in
education finance, provides a federal subsidy to primary and secondary school expenditures that
disproportionately benefits high-income households (Barro, 1983; Loeb and Socias, 2001). In 1989 this
indirect subsidy resulted in total federal support to education (direct and indirect) in high-income states that
exceeded such support in low-income states (Loeb and Socias, 2001). While more up-to-date estimates are
unavailable, the situation is still likely similar, at least qualitatively.

The complicated role of residential choices suggests several areas where policy may be improved
if policymakers choose to move further in the direction of improving educational opportunities for
disadvantaged students. First, it may be useful to encourage competition between school districts by
expanding the role of inter-district choice within the recent move to greater choice, particularly in areas
where school districts are geographically small. Such a move would help to minimise the offsetting effects
that residential sorting may have on an intra-district-based choice system and may help to ease capacity
constraints in good schools. The design of such an inter-district choice system deserves careful study, as
such programmes have had only limited effect in the past. For example, a bit less than 30 per cent of
school districts had some sort of inter-district choice plan in 1993-94, but less than 2 per cent of eligible
students attended a school outside their district, suggesting that significant barriers impeding choice
outside a student’s own district (such as transportation) may exist (Epple and Romano, forthcoming).
Moreover, competition would be enhanced by expanding the option of choice beyond students in failing
schools to all students. Whether choice should be extended beyond public schools in a limited geographic
area to include private schools deserves further study and more exploration at the state and local level.
Beyond an expansion of choice opportunities, reconsideration of the deductibility of mortgage interest and
state and local taxes seems appropriate, as recommended in previous Surveys. Such deductibility increases
complexity, places non-residential investment at a disadvantage, and indirectly subsidises education
expenditures for high-income households. Eliminating this indirect subsidy while maintaining or
expanding Title I funding for poor school districts would result in increased targeting of federal
expenditures on disadvantaged students. Of course, such a significant change in policy would also require
complementary adjustments to the tax system and careful co-ordination with the states — both because of
its effect on educational financing and on the broader economy.

The debate over school choice programmes involving private schools is likely to continue after
this summer’s Supreme Court decision in the case of Zelman v. Simmons-Harris. Most private schools in
the United States are affiliated with a religion. In the Zelman case, the constitutionality of a school choice
programme in Cleveland, Ohio that allows students to use government-provided tuition aid at private
schools, including those with religious affiliation, was challenged based on the First Amendment’s
Establishment Clause that forbids state support of religion. (In Cleveland, nearly all students with vouchers
attended religious, primarily Catholic, schools, reflecting the dominance of such schools in the private
sector). The Court ruled that the purpose of the vouchers was to provide educational assistance to poor
children and did not violate the Establishment Clause. Whether this decision will be followed by more
broad-ranging choice programmes remains to be seen. Significant obstacles remain. In particular, a
majority of state constitutions forbid aid to religious institutions, regardless of purpose, and these provisions may prevent state educational voucher programmes, if implemented, from including the majority of private schools.

**Social aspects of wellbeing have improved, in part because of policy actions**

*Inequality remains substantial, but poverty has declined*

The end of the longest expansion on record presents an opportunity to assess some of its achievements — such as a return to somewhat faster potential growth, noted above, and the impact of the tight labour market of the late 1990s on inequality and poverty. Over the 1980s, the expansion coincided with a period of sharply rising income inequality among households and a greater fraction of households in poverty. In the 1990s, the uptrend in income inequality continued, but slowed significantly in the latter half of the decade. At the same time, the poverty rate fell due to the enhanced labour market prospects of less-skilled workers. The decline in poverty is an important achievement, signalling both an improvement in the welfare of disadvantaged individuals and their increased labour force participation and hence a more efficient use of the economy’s resources. However, commentators worry about increased inequality or persistent pockets of poverty and the tensions caused by these factors (Krueger, 2002). For example, some fear that high levels of inequality create an unequal starting line for young children and hence call for education policies targeted towards disadvantaged households, as discussed above. Other concerns include the possibility that rising inequality may lower social cohesion — perhaps leading to social tensions.

**Figure 33. Trends in income inequality**

![Graph showing trends in income inequality](image)

*Source: US Census Bureau.*

*The uptrend in inequality has slowed, but the gap between low- and high-skilled workers remains wide*

Turning first to the facts on income inequality, the ratio of household income at the 80th percentile to the median household income has risen continuously for over 30 years (Figure 33). In contrast, the ratio of median household income to household income at the 20th percentile fell in the mid-1970s and then rose sharply, on net, through the early 1990s.67 Since then this ratio has fallen back to the level that prevailed in the early 1980s. It is more informative to look at households by educational
attainment when considering the forces generating the shift towards increased inequality (Table 28). The real income of high-school graduates has held steady over the past 30 years — rising until the late 1970s, falling until the mid 1990s and then stabilising. In contrast, the real income of college graduates has grown 35 per cent and the real income of individuals with less than a high school education has fallen 25 per cent. The rapid increase in the demand for education/skill (and decrease in demand for unskilled labour) probably reflects two factors. Most studies suggest that the most important factor has been skill-biased technological progress — the shift to the information age that has placed an even greater premium on education and skill (Acemoglu, 2000). In addition, the increased exposure of less skill-intensive industries to foreign competition from developing countries and less-skilled workers to greater competition from low-skilled immigrants has placed downward pressure on their wages, and the declining real value of the minimum wage may have lowered earnings for some workers (Card and Dinardo, 2002). These trends appear unlikely to reverse any time soon, although there have been offsetting positive developments. First, the pre-tax incomes of less-educated groups stabilised in the 1990s. Moreover, the expansion of the EITC provided an additional boost to after-tax income for low-income families. In addition, the emphasis on education opportunities for disadvantaged groups noted above is a positive step. A shift in immigration policy towards an emphasis on skilled workers could both alleviate downward pressures on the incomes of disadvantaged groups and ease shortages of workers in certain categories (notably high-technology, although such shortages have lessened substantially with the high-technology recession) (Borjas, 1999).

Table 28. Household income by level of educational attainment

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than high school diploma¹</td>
<td>30 588</td>
<td>27 176</td>
<td>23 357</td>
<td>20 546</td>
<td>22 750</td>
</tr>
<tr>
<td>High school graduate²</td>
<td>36 324</td>
<td>40 302</td>
<td>36 906</td>
<td>35 230</td>
<td>36 720</td>
</tr>
<tr>
<td>College graduate³</td>
<td>52 152</td>
<td>58 613</td>
<td>64 903</td>
<td>65 183</td>
<td>71 435</td>
</tr>
</tbody>
</table>

Note: Data before 1991 are not strictly comparable to later data because of a change in survey design.
1. After 1990, refers to households with a 9th to 12th grade education. In earlier years, refers to households with 1 to 3 years of high school education.
2. After 1990, refers to households with a high school graduate. In earlier years, refers to households with 4 years of high school education.
3. After 1990, refers to households with a bachelor degree or more. In earlier years, refers to households with 4 or more years of college.

Source: US Census Bureau.

However, poverty fell to the lowest level in many years in 2000

Poverty developments have been more encouraging in recent years and have so far only risen marginally with the 2001 recession. The decline in the poverty rate (Figure 34) reflects a decline in poverty across all major demographic groups — households headed by married couples and by single females or sorted by race. The poverty rates for households headed by single females and blacks, at 27.9 and 22.1 per cent, respectively, reached all-time lows in 2000 and barely increased in 2001. In part, these declines may reflect shifts in policy — such as the effects of welfare reform, discussed in more detail below — but the more important factor appears to be the strong labour market of the late 1990s. The unemployment rates for women who maintain a family, blacks and Hispanics all fell to their lowest levels since the early 1970s (Figure 35); this occurred at the same time that labour force participation among these groups reached the highest level recorded. The very tight labour market finally overcame the adverse shifts in labour demand.
for less-skilled workers noted above, lifting many families out of poverty — in contrast to the 1980s experience. This raises a warning flag, as the unemployment rate has risen once again to about 6 per cent (and higher for the disadvantaged groups noted above). Freeman (2001) estimates that only a very tight labour market — with an aggregate unemployment rate below 5 per cent — is sufficient to offset the other factors depressing wages for low-skilled groups and hence boost incomes for the poorest families. But such a low rate of unemployment may not be consistent with stable inflation; for example, the OECD estimates that the non-accelerating-inflation rate of unemployment is just above 5 per cent.

**Figure 34. Trends in poverty**

![Figure 34](image)

*Source: US Census Bureau.*

**Figure 35. Selected unemployment rates**

![Figure 35](image)

*Source: Bureau of Labor Statistics.*
The official measures of poverty do not take into account the effect of taxes, in-kind transfers or mandatory work-related expenses and out-of-pocket medical costs on income needs. Alternative experimental measures that take these factors into account have been developed, following a National Academy of Sciences (NAS) report in 1995 (Citro and Michaels, 1995). In general, these alternatives indicate that slightly more families live in poverty than the official measure. The higher rate of poverty in the experimental measures arises because mandatory expenses tend to raise the number of families in poverty, and this effect is only partially offset by in-kind transfers and the progressivity of the income tax system — notably through the Earned Income Tax Credit (EITC) (see Annex VIII). Short (2001) estimates that the poverty rate among full-time working families, taking into account the effect of taxes and other factors recommended by the NAS, would have been 2\(\frac{3}{4}\) percentage points higher (or, in percentage terms, 29 per cent higher) in 1998 without the EITC. The EITC programme became more generous over the 1990s — notably in 1993 — and hence the decline in the poverty rate including taxes and other mandatory expenses was even greater over the course of the 1990s than the decline in the official figure. Importantly, the increased generosity of the EITC has been focused primarily on families with children. More precisely, it has disproportionately benefited families headed by single mothers (as two-parent households are more likely to earn amounts that lower or eliminate the EITC, and single individuals without children receive a smaller credit). The current structure of the EITC has a much smaller effect on the income of other disadvantaged groups, such as young black men, although improving the return to work among these groups may have other beneficial side-effects, as discussed below. Similarly, last year’s tax cut package significantly expanded the child tax credit from $500 to $1,000 per child and made it fully refundable; this expansion, once fully in effect, is expected to increase the aggregate value of the credit from less than $1 billion in FY 2001 to over $9 billion by FY 2006, providing a boost to incomes of working families but no benefit to the working poor without children.

The reformed welfare system will be tested by the weakened labour market

Welfare reform has been high on the policy agenda, particularly over the past year — as the 1996 legislation is due for re-authorisation over the coming year and the weaker economy returns attention to at-risk groups. The welfare programme has many goals, and many forces have spurred reforms in the past decade. The major welfare reform of the 1990s — the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) — had four major goals: i) end dependence of needy parents upon government benefits by promoting job preparation, work and marriage; ii) aid needy families so that children may be cared for in their homes or those of relatives; iii) prevent and reduce out-of-wedlock pregnancies, and establish goals for preventing and reducing their incidence; and iv) encourage formation and maintenance of two-parent families. The dramatic decline in caseloads since the mid-1990s reveals a substantial reduction in the number of families receiving cash support. However, it neither quantifies improvements in work prospects or family formation nor separates the influence of welfare reform from the effect of the strong pace of economic growth in the second half of the 1990s.

Before turning to such an evaluation, the major aspects of PRWORA should be considered. This legislation continued the trend in previous welfare reforms of placing increased emphasis on work requirements. The most important change was the end of unlimited federal funding for states and the elimination of guaranteed benefits for individuals; in the current programme, states receive a federal block grant for welfare purposes, and they have a great deal of discretion in spending those funds. Second, reform placed a five-year limit on cumulative individual participation in the new federal welfare programme, Temporary Assistance for Needy Families (TANF). Finally, the new system imposed work participation requirements on adult welfare recipients. Adults are now required to work (or perform work-related activities, such as education, training, job search or community service) after two years of receiving benefits. By this year, at least half of each state’s adult recipients were required to be in such activities, although credits against this mandate from reduced caseloads have made the obligation
Interestingly, the flexibility given to states and the work-oriented focus of US social policy have been increasingly influenced by experiments elsewhere in the OECD and have been followed by similar efforts by other countries. Notably, Canada’s Self Sufficiency Project, launched in two provinces in 1992, included a strong work requirement and income support to encourage work and proved very successful (Michalopoulos et al., 2000). Canada also granted greater flexibility to provinces in designing social assistance programmes in 1996. The United Kingdom launched the Working Families Tax Credit in 1999, a programme similar to the EITC. And some communities in Germany have begun experimenting with time limits for welfare (Feist and Schöb, 1998).

Table 29. Important aspects of state TANF programmes

<table>
<thead>
<tr>
<th>Work requirements</th>
<th>28 states require work immediately upon receipt of benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9 states require work within 6 months or less of receipt of benefits</td>
</tr>
<tr>
<td></td>
<td>13 states require work within 24 months of receipt of benefits</td>
</tr>
<tr>
<td></td>
<td>1 state requires work within 30 months of receipt of benefits (under a waiver)</td>
</tr>
<tr>
<td>Age of youngest child exemption from work requirement</td>
<td>Over 12 months: 5 states</td>
</tr>
<tr>
<td></td>
<td>Under 12 months: 24 states</td>
</tr>
<tr>
<td></td>
<td>Under 6 months: 18 states</td>
</tr>
<tr>
<td></td>
<td>Case-by-case basis: 4 states</td>
</tr>
<tr>
<td>30 states allow individual development accounts</td>
<td>26 for post-secondary education</td>
</tr>
<tr>
<td></td>
<td>22 for first home purchase</td>
</tr>
<tr>
<td></td>
<td>25 for business capitalisation</td>
</tr>
<tr>
<td></td>
<td>4 for medical expenses</td>
</tr>
<tr>
<td></td>
<td>12 for other uses</td>
</tr>
<tr>
<td>Highlights of state time limit policies</td>
<td>38 states apply a 60-month time limit</td>
</tr>
<tr>
<td></td>
<td>4 states apply a 36- to 48-month time limit</td>
</tr>
<tr>
<td></td>
<td>4 states apply a 24-month or shorter time limit</td>
</tr>
<tr>
<td></td>
<td>5 states do not apply time limits</td>
</tr>
</tbody>
</table>


Within the federal guidelines, states have significant control over programme design; this flexibility was granted following the experimentation with welfare reform by states in the early 1990s and has resulted in important programme differences across states. With the sharp reductions in welfare caseloads since 1996, states have had the funding — at least through 2000 — to expand support activities to include greater expenditure on job search, education or supplementary services such as day care. In addition, states have established different rules regarding time limits, eligibility for benefits and sanctions (Table 29). Twenty-eight states require participation in work or work-related activities immediately upon
receipt of benefits, while nine require work within six months of receipt of benefits. Similarly, all states exempt — in some way — parents of young children from work requirements, but the cut-off age for those children varies considerably, from less than six months to three years of age. A majority of states have allowed Individual Development Accounts (IDA) that allow asset accumulation for education expenses, first home purchase or business capital (among other purposes, which vary by state); the assets accumulated in such accounts do not count in determining eligibility for TANF benefits. Finally, a majority of states (38) have implemented a five-year time limit on lifetime benefits (the maximum allowed under PRWORA), while four states have implemented a time limit of two years or less. Because some states have implemented time limits below the maximum and, in some cases, time spent receiving benefits prior to 1996 counts against time limits, families in 20 states began to reach time limits by the end of 2000. Families in most states will run up against time limits by the end of 2002.

**Figure 36. Welfare caseloads**

<table>
<thead>
<tr>
<th>Per cent of total US population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
</tr>
</tbody>
</table>


Reform helped move families into work, although the strong economy probably helped even more

Turning to the effects of these reforms on work participation, income and family outcomes, a number of challenges arise. Welfare caseloads fell dramatically — from about 5½ per cent of the US population in 1995 to 2 per cent in 2000 (Figure 36). The large reduction and other changes in income or family outcomes discussed below occurred during a booming economy, and the identification of the share caused by welfare reform and that due to other effects, including a strong economy, is fraught with difficulties. For example, the labour market tightened to a degree not seen for 30 years between 1996 and 2000, just the period when welfare reform occurred throughout the country. Most studies have focused on distinguishing cyclical effects from those due to changes in welfare rules on welfare participation (Bell, 2001; Blank, 2002; Moffitt, forthcoming) These studies can be split into those examining the effect of welfare changes associated with state-specific waivers in the early 1990s, prior to PRWORA, and the effects of PRWORA. Table 30 summarises the results of some of the studies examining waivers prior to PRWORA, which show greater cross-state variation in policies and implementation and hence facilitate the identification of changes in welfare on participation, and Table 31 summarises the results from more recent studies examining the effects of PRWORA. Most studies show that changes in the economy and changes in welfare policy — whether waivers prior to PRWORA or PRWORA — have played an important role in reducing welfare caseloads since the early 1990s. Generally, the changes to welfare under PRWORA have
Table 30. **Major research on caseload changes using data prior to 1996 welfare reform**

<table>
<thead>
<tr>
<th>Study</th>
<th>Results on key variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Council of Economic Advisers (1997)</td>
<td>Share of caseload change due to economic factors:</td>
</tr>
<tr>
<td></td>
<td>24 per cent to 31 per cent in 1989-93</td>
</tr>
<tr>
<td></td>
<td>31 per cent to 45 per cent in 1993-96</td>
</tr>
<tr>
<td></td>
<td>Share of caseload change due to waivers:</td>
</tr>
<tr>
<td></td>
<td>13 per cent to 31 per cent in 1993-96</td>
</tr>
<tr>
<td></td>
<td>3 per cent to 5 per cent estimated change in AFDC caseloads due to one-point increase in unemployment rate</td>
</tr>
<tr>
<td>Levine and Whitmore (1998)</td>
<td>Economic effects of the same size as CEA</td>
</tr>
<tr>
<td></td>
<td>Waiver states have almost twice the caseload reduction, but no difference in unemployment rate</td>
</tr>
<tr>
<td>Ziliak <em>et al.</em> (2000b)</td>
<td>No separate estimates of economic effects alone;</td>
</tr>
<tr>
<td></td>
<td>66 per cent of change due to economic and seasonal factors in 1993-96</td>
</tr>
<tr>
<td></td>
<td>Share of caseload change due to waivers:</td>
</tr>
<tr>
<td></td>
<td>-9 per cent in 1993-96</td>
</tr>
<tr>
<td></td>
<td>2 per cent estimated change in AFDC caseloads due to one-point increase in unemployment rate that lasts five months</td>
</tr>
<tr>
<td>Blank (2001b)</td>
<td>Share of caseload change due to economic factors:</td>
</tr>
<tr>
<td></td>
<td>29 per cent in 1990-94</td>
</tr>
<tr>
<td></td>
<td>59 per cent in 1994-96</td>
</tr>
<tr>
<td></td>
<td>Share of caseload change due to waivers:</td>
</tr>
<tr>
<td></td>
<td>-22 per cent in 1990-94</td>
</tr>
<tr>
<td></td>
<td>28 per cent in 1994-96</td>
</tr>
<tr>
<td></td>
<td>5 per cent estimated change in AFDC caseloads due to one-point increase in unemployment rate</td>
</tr>
<tr>
<td>Figlio and Ziliak (1999)</td>
<td><em>In static models</em>:</td>
</tr>
<tr>
<td></td>
<td>Share of caseload change due to economic effects:</td>
</tr>
<tr>
<td></td>
<td>-10 per cent to 36 per cent in 1993-96</td>
</tr>
<tr>
<td></td>
<td>Share of caseload change due to waivers:</td>
</tr>
<tr>
<td></td>
<td>0 per cent to 24 per cent in 1993-96</td>
</tr>
<tr>
<td></td>
<td><em>In dynamic models</em>:</td>
</tr>
<tr>
<td></td>
<td>Share of caseload change due to economic effects:</td>
</tr>
<tr>
<td></td>
<td>18 per cent to 76 per cent in 1993-96</td>
</tr>
<tr>
<td></td>
<td>Share of caseload change due to waivers:</td>
</tr>
<tr>
<td></td>
<td>-7 per cent to 1 per cent in 1993-96</td>
</tr>
<tr>
<td></td>
<td>6 per cent to 9 per cent in long-run rise in caseloads due to one-point rise in unemployment rate</td>
</tr>
<tr>
<td>Wallace and Blank (1999)</td>
<td>Share of caseload change due to economic effects:</td>
</tr>
<tr>
<td></td>
<td>50 per cent for 1990-94</td>
</tr>
<tr>
<td></td>
<td>47 per cent for 1994-96</td>
</tr>
<tr>
<td></td>
<td>Share of caseload change due to waivers:</td>
</tr>
<tr>
<td></td>
<td>-13 per cent for 1990-94</td>
</tr>
<tr>
<td></td>
<td>22 per cent for 1994-96</td>
</tr>
<tr>
<td></td>
<td>5 per cent to 6 per cent rise in caseloads due to one-point rise in unemployment rate</td>
</tr>
<tr>
<td>Moffitt (1999)</td>
<td>Reduction in participation due to waivers:</td>
</tr>
<tr>
<td></td>
<td>-1.7 percentage points among women high-school dropouts, -0.8 to –1.0 percentage points among all women</td>
</tr>
<tr>
<td></td>
<td>Among high-school dropouts, significant effects on weeks and hours of work; no significant effects on earnings or income</td>
</tr>
<tr>
<td></td>
<td>0 to 0.3 percentage point rise in participation due to one-point rise in unemployment rate</td>
</tr>
</tbody>
</table>

1. Author’s calculations, not shown in paper.

*Source: Blank (2001a).*
Table 31. **Major research on caseload changes including data after 1996 welfare reform**

<table>
<thead>
<tr>
<th>Study</th>
<th>Results on key variables</th>
</tr>
</thead>
</table>
| Council of Economic Advisers (1999) | Share of caseload change due to economic factors:  
26 per cent to 36 per cent in 1993-96  
8 per cent to 10 per cent in 1996-98  
Share of caseload change due to waivers:  
12 per cent to 15 per cent in 1993-96  
Share of caseload change due to TANF:  
35 per cent to 36 per cent in 1996-98 |
| Wallace and Blank (1999)   | Estimated caseload change due to economic factors:  
20 per cent to 36 per cent in 1990-94  
8 per cent to 12 per cent in 1994-98  
Estimated caseload change due to waivers:  
-4 per cent to –5 per cent 1990-94  
26 per cent to 31 per cent in 1994-96  
Estimated caseload change due to TANF:  
28 per cent to 35 per cent in 1997:1-1998:6 |
| Grogger (2000)             | TANF and waivers have identical (negative) effects on participation, creating a 2.1 percentage point decline (exclusive of time limit effects).  
Time limits have significant negative effect on participation in families with young children. |
| Blank and Schoeni (2000)   | Waivers have a significant effect on AFDC participation, labour market participation, earnings, income and poverty rates, as well as marital status.  
TANF has significant negative effects on welfare participation, larger than the effects of waivers.  
TANF has relatively small but significant effects on earnings, poverty rates, and household structure.  
Economic factors fully explain labour market changes in the TANF period. |
Waivers have significant effects on employment, but not on welfare participation.  
TANF has a significant effect on welfare participation and on employment.  
Stronger effects on more educated single mothers. |

*Source: Blank (2001a).*

had a larger effect on welfare caseloads than earlier reforms. This seems consistent with the increased emphasis on sanctions, diversion (*i.e.* caseworker efforts to steer cases to the labour market or away from welfare — perhaps to save cases from potentially binding time limits in the future) and time limits in PRWORA relative to earlier waiver programmes.
Information on the efficacy of welfare reform in achieving goals aside from caseload reduction, such as increased work participation, lower poverty rates and improved family outcomes, is more spotty. The employment of women who maintain families — the broad group most likely to be affected by changes in welfare policy — rose sharply over the 1990s — both before and after PRWORA — while their unemployment rate fell, particularly after 1996 (Figure 37). Blank and Schoeni (2000) attribute all of the increase in work participation among women likely to participate in welfare since 1996 to the strong economy, whereas Hill and O’Neill (2001) report a strong positive effect of PRWORA on employment. Earlier research on the effects of work requirements (summarised in Karoly, 2001), often using comparison groups created through random assignment, found positive effects of such requirements on work participation and earnings (and little effect on poverty, reflecting the loss of welfare assistance). It seems likely that PWRORA has had some small effect on work and earnings, but the strong economy was perhaps more important for the improvements over the late 1990s. Also, the success of welfare reform in spurring work participation — relative to the aggressive goals set in PRWORA — has been modest.

Progress in meeting the work participation mandate in the legislation has been aided by the rapid reduction in overall caseloads, as states received credit for caseload reductions in determining whether work participation in their state has met the goals outlined in PWRORA. In 1999, a majority of states needed such credits to meet the 90 per cent work participation rate for two-parent families, and nearly half the states required their credits to meet the 35 per cent work participation rate for all families (US Department of Health and Human Services, 2000). This suggests that tougher work requirements may prove difficult to meet. Finally, it is important to note that policy changes other than changes in welfare, most notably the expansion of the EITC, have been more important in spurring the increase in work participation since the 1980s observed among women who might otherwise be eligible for welfare (Eissa and Liebman, 1996; Meyer and Rosenbaum, 2001).

The number of families in poverty headed by a female has fallen precipitously in the 1990s (along with the aggregate poverty rate discussed above), and since the enactment of PRWORA the poverty rate of this group has fallen to an all-time low. This decline has been sharper than the decline among all other families, in part because of welfare reform, but with the strong economy playing the larger role (Blank and Schoeni, 2000). The number of families headed by a female with no husband present has fallen since PRWORA, both in absolute terms and as a percentage of all families (US Census Bureau, 2001), signalling some positive effect of welfare reform on family formation (Blank and Schoeni, 2000;
Knox et al., 2000). However, Bitler et al. (2002) highlight how reforms can have unintended consequences by documenting that welfare changes seem to have led to an increase in children living with neither parent and little change in the number of children living with both parents. These results are particularly important, given the family formation goals originally stated for TANF and the emphasis on such goals in this year’s debate on TANF re-authorisation. Overall, the somewhat conflicting pattern of results and limited number of studies to date suggest that conclusions regarding the effects of TANF should be viewed as preliminary and strongly call for a reorientation of focus away from caseload reductions and towards the effects of welfare reform on economic and other aspects of wellbeing. One important component of future welfare policy should be a continuing emphasis on evaluating the effects of the different aspects of TANF.

The recession may place strains on the safety net

While the decline in welfare caseloads and poverty rates through 2000 was impressive, the deterioration in the labour market seems likely to place strains on many families and could potentially reveal areas where the welfare system needs further amendment. In particular, the unemployment rate among women who maintain families has risen more sharply than the aggregate unemployment rate since the onset of the recession — jumping from a low of 5.0 per cent in December 2000 to near 8 per cent for much of this year — the highest level since the early stages of TANF in 1997. Anecdotal reports suggest that successful welfare leavers (i.e. those who found steady work) may be among the first to lose jobs with the slowing in the service sector, as such workers have low tenure and, probably, low productivity. The decline in welfare caseloads slowed markedly through the end of 2001, and caseloads could begin to rise with the run-up in unemployment in this group. In the early 1990s, the increase in welfare caseloads lagged the recession (Figure 36). Pockets of stress have already emerged: for example, the number of people sleeping in New York City’s homeless shelters this past February rose 23 per cent from a year earlier, to about 32,000 (Egan, 2002). If the labour market for low-skilled and marginally attached workers improves only slowly, as after the last recession, welfare caseloads and poverty rates among families headed by females with no husband present may reverse their downward trend, at least temporarily. Indeed, this poverty rate ticked up in 2001, but remained the second lowest on record.

Some further changes may enhance the safety net while strengthening the TANF programme

Traditionally, an important component of the safety net for recent job losers has been the unemployment insurance (UI) system. However, there is concern that heads of families who have left welfare for work and subsequently lose their jobs receive limited or no UI benefits, primarily because of insufficient prior work experience (Kaye, 1997; Gustafson and Levine, 1998; Vroman, 1998). In addition, such job losers who have run up against their time limits would be ineligible for TANF assistance. While such problems are likely to arise, the fact that the economy remained strong for many years after the implementation of welfare reform implies that fewer job losers will be ineligible for UI benefits than would have been the case if the recession had started earlier, and only a small subset of families are likely to run up against their time limits (Holzer, 2000). Nonetheless, coupling the work requirements of PRWORA with some changes in the UI system or appropriate attention to supplemental work services may improve the functioning of the safety net. Two issues are particularly important. First, eligibility for UI is based on earnings over a five-quarter base period that ends at least one quarter prior to job loss, making job losers with short work histories ineligible. Including the most recent quarter of earnings in eligibility calculations — a possibility with new information technologies — would broaden the set of eligible job losers. It may also be desirable to focus more effort on supplementary services (such as transportation subsidies or childcare assistance) or broaden UI eligibility to include part-time workers or individuals that leave their job “involuntarily” but not due to dismissal, such as for family difficulties, as many single mothers separate from employment under such conditions (Gustafson and Levine, 1998). Such an
expansion may open avenues for abuse, however, and might therefore require potentially costly monitoring. Supplementary services that lower “involuntary” separations are another possibility, and a programme allowing states to experiment further along these dimensions (as with the earlier AFDC waivers) would provide a starting point for subsequent improvements.

Other changes in TANF may prove fruitful. Some states have chosen to temporarily suspend time limits during periods of macroeconomic stress. Such action at the federal level and a link between TANF block grants to the states and the state’s unemployment rate could prove useful and need not undermine the elimination of the entitlement to cash assistance under TANF. In particular, such funding could provide job training, search assistance or other supplementary services to improve the chances of finding a job. A broader reconsideration of the functioning of time limits should be undertaken, now that some experience with reform has been accrued, as such limits will be more binding in future years. Hence policies that best trade off the work incentives associated with time limits and the difficulties of finding jobs for certain individuals or during times of macroeconomic stress will be even more important. Grogger (2000) finds an important effect of time limits in reducing welfare use among mothers with younger children. Kaestner and O'Neill (2002) report that teenagers from disadvantaged backgrounds in 1997 were less likely to receive welfare or have a child and more likely to finish high school than similar teenagers 20 years earlier, consistent with the tougher welfare policy. Such positive effects need further research and must be balanced against changes in the wellbeing of such families, especially any negative impact on young children. In addition, both the Administration’s and some Congressional proposals for TANF re-authorisation include a stiffening in work requirements, by raising the fraction of families participating in work activities to 70 per cent in 2007 and increasing the required weekly hours of work of such participants to 40 hours, from the current 30. As noted earlier, the current work requirements are being met only because of credits related to caseload declines, and these tougher work requirements may prove difficult to meet. This difficulty could be exacerbated by the fact that current TANF recipients are, on average, less skilled than in earlier years, as the strong economy of the late 1990s drew more-skilled welfare recipients into the workforce (Moffitt and Stevens, 2001). Officials in New York City estimate that roughly 25 per cent of the current caseload is physically or mentally unfit for work (Steinhauer, 2002). Such anecdotes should provide some caution when tightening work requirements.

Tougher work requirements also seem likely to boost childcare and other supplementary service needs among welfare recipients. During the 1996 to 2000 period, states found that the decline in caseloads reduced spending on cash assistance, allowing spending to increase elsewhere to facilitate work, especially on childcare. Such freedom has been important in expanding the group of families supported by TANF funds beyond the caseload figures reported above. For example, the US General Accounting Office (2002c) estimates that the number of families not receiving cash assistance but receiving supplementary assistance such as childcare equals at least 46 per cent of reported caseloads, or 830 000 families. However, states have been limited in the amount of funds dedicated to cash assistance that can be diverted to childcare, and it would be useful to allow greater discretion in the use of such funds. Such discretion has been under consideration; one proposal was to allow states freedom to apply for waivers to spend block grants for a number of programmes aimed at families in need, such as welfare, childcare assistance and food stamps. The experience with waivers under AFDC in the early 1990s suggests that such action may produce a useful laboratory to evaluate potential further improvements in programme design. However, it appears unlikely the Congress will approve of such discretion. Rather, it may boost the amount of funds dedicated to cash assistance that can be used for childcare and may allow states greater discretion in programme design for Food Stamps and other programmes where federal requirements have been more specific than is the case with TANF.

The sharp decline in TANF caseloads has led to some pressure to reduce the associated block grant — a move that clearly would have contradicted the initial spirit of the TANF grant, which was designed to limit the cyclicality of TANF expenditures. Moreover, such pressure generated a perverse
incentive — essentially discouraging the accumulation of large rainy day funds, which would prove useful during a weak economy such as was experienced over the past year. The debate on TANF re-authorisation, including the Administration’s proposal, has not focused on expenditure reduction but rather on maintaining the same nominal level of TANF expenditures as authorised over the past six years; consideration of an inflation adjustment may be in order. In addition to TANF re-authorisation, other programmes associated with PRWORA will be revisited — including the Food Stamp Program, the Child Care and Development Block Grant and funding for abstinence education. It may also prove useful to strengthen efforts to increase awareness of supplemental programmes that encourage workforce participation, such as childcare assistance and Food Stamp eligibility among working families or families that have recently stopped receiving cash assistance. Since the enactment of PRWORA, the participation of children in poverty in the Food Stamp Program has fallen markedly, apparently because families that leave TANF have not chosen to continue Food Stamp participation, even when eligible (US General Accounting Office, 1999). Similarly, only a fraction of families potentially eligible for childcare assistance received any in the late 1990s (US Department of Health and Human Services, 1999). This may reflect a lack of awareness regarding eligibility. Increasing awareness and take-up rates among the eligible population for these programmes, especially food stamps, should be a priority in re-authorisation, especially given the worsening in wellbeing for some families and children for whom the work provisions of TANF have not proven successful (Haskins et al., 2001).

Finally, the Administration has placed a high priority in its proposals for TANF re-authorisation on encouraging family formation. The primary proposal focuses on increased education regarding the benefits of marriage. Such programmes do not address the impediments to marriage in existing social and tax policy, nor do they improve the attractiveness of marriage from an economic standpoint. Existing tax and social programmes (e.g. the EITC, Food Stamps, etc.) penalise marriage, as the income unit is the family, and effective marginal tax rates are higher for married two-earner couples near the poverty line. For example, the structure of the EITC implies a marginal tax rate (excluding state and local taxes) near 40 per cent for families approaching the phase-out limit for income and of 30 per cent after the phase-out limit is reached (Sawicky and Cherry, 2001). Avoiding marriage eliminates these high tax rates. Reform in this area could prove expensive but would represent a more concerted commitment to encouraging family formation. In addition, policies to increase the income of less-educated workers, especially low-skill males who have not shared in recent expansions of the EITC, may encourage family formation, as the deterioration in the financial “marriage-ability” of such individuals has contributed importantly to lower rates of marriage (Wilson, 1987; Neal, 2001). In this regard, the emphasis of education reform on less-advantaged groups is well placed, and reform of the EITC to include greater assistance for individuals without children, as discussed above when reviewing poverty policy, may prove effective.

Crime is down

“More pink slips mean more crimes. It doesn’t take long before you start seeing that impact at street level.”

The recent slowing in the economy has been accompanied by an up-tick in crime, potentially reflecting diminished labour market opportunities (Eggen, 2002). However, the link between criminal activity and the business cycle is more tenuous than is often presumed, and the most important change regarding crime in the United States has been the sharp reduction in criminal activity over the past decade. Between 1993 and 2000, the incidences of violent and property crime both fell by nearly half. The rate of criminal activity has many economic implications, ranging from the impact of the relatively high incarceration rate in the United States on aggregate measures of unemployment to the effects of gun control legislation on the costs of committing and preventing crime. Before turning to the evolution of crime in the United States, a comparison of crime rates across countries indicates that the United States is
not a particularly high crime country, at least in the mid-1990s. In 1995, the total crime rate (i.e. violent and property crime) in the United States was similar to that in Canada, France, Italy, Scotland, Sweden and Switzerland (Figure 38). Crime was notably lower in Austria and Finland, and somewhat higher in England and Wales and the Netherlands. Among the countries for whom earlier comparable data is available (from 1988 or 1991), only the United States and Canada experienced a decline in crime, and others experienced considerable increases (Mayhew and van Dijk, 1997). However, it is important to note that there are limitations to international crime statistics that make comparisons difficult. (Although the referenced data are comparable across countries, their definition and scope differ in some cases from national statistics). The following discussion focuses primarily on data from the US Department of Justice.

**Figure 38. Rates of crime victimisation across countries, 1995**

Percentage of population victimised in year

![Graph showing rates of crime victimisation across countries, 1995](image)

1. England and Wales.
2. Scotland.

*Source: Mayhew and Van Dijk (1997).*

**Table 32. Rates of crime victimisation in 1993 and 2000**

<table>
<thead>
<tr>
<th></th>
<th>1993</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Violent Crime</td>
<td>49.9</td>
<td>27.9</td>
</tr>
<tr>
<td>Rape</td>
<td>2.5</td>
<td>1.2</td>
</tr>
<tr>
<td>Robbery</td>
<td>6.0</td>
<td>3.2</td>
</tr>
<tr>
<td>Assault</td>
<td>41.4</td>
<td>23.5</td>
</tr>
<tr>
<td>Property Crime</td>
<td>318.9</td>
<td>178.1</td>
</tr>
<tr>
<td>Burglary</td>
<td>58.2</td>
<td>31.8</td>
</tr>
<tr>
<td>Theft</td>
<td>241.7</td>
<td>137.7</td>
</tr>
<tr>
<td>Motor vehicle theft</td>
<td>19.0</td>
<td>8.6</td>
</tr>
</tbody>
</table>

*Source: US Department of Justice.*

The sharp reduction in the incidence of crime in the United States is impressive: the rate of violent crime fell from 50 cases per 1 000 persons aged 12 and older in 1993 to 28 in 2000, and the rate of property crimes, such as burglary and car theft, fell from 319 cases per 1 000 persons aged 12 and older in 1993 to 178 cases in 2000, a nearly 50 per cent reduction over this short period (Table 32). The reduction
in crime was widespread across the country. Part of the decline in crime reflects increased imprisonment. The number of people incarcerated (i.e. held in federal or state correctional institutions) has risen steadily in recent decades, reaching ½ per cent of the population in 2000 (Figure 39). The strong trend extended to the number of persons under the supervision of the criminal justice system (i.e. including parolees) which exceeded 3 per cent of the adult population in 1999. Several aspects of the incarcerated population are particularly noteworthy. First, it is disproportionately comprised of minority groups, especially blacks: 6.8 per cent of black males were in state, federal or local prisons/jails in 1997. In addition, the growth in the incarcerated population has been concentrated among those convicted of drug-related offences; in 1997 about 24 per cent of those held in federal or state prisons were serving a sentence for a drug-related conviction. There has been concern in some quarters that the growth in the prison population from drug-related crimes has displaced room in prisons for other offenders and may represent an inefficient use of limited prison space, a topic discussed below. The recent weakening in state revenues and associated budgetary pressures, combined with the high cost of maintaining such a large incarcerated population, have led to some cuts in expenditures on criminal justice at the state level and even pressures to reconsider tough sentencing laws. Finally, two statistics help to further illustrate the economic importance of crime. First, the United States spends over 1½ per cent of its GDP on criminal justice, notably above the share in other OECD economies — particularly for incarceration (Figure 40). At the same time, estimates of the cost of individual crimes — which include tangible losses related to property values, medical expenditures, and other factors and intangible losses associated with a lower quality of life — are large. The costs of crime (direct and indirect, including related private and public expenses) may be as large as 5 per cent of GDP (International Centre for the Prevention of Crime, 1998). Simply applying the costs from violent crimes estimated by Miller et al. (1996) to the numbers of such crimes in 1993 and 2000 suggests that the losses from such crimes fell from $130 billion in 1993 to $75 billion in 2000; this change equals about ½ per cent of current GDP. Of course, this ignores improvements due to falling property crime, and increased incarceration expenses. However, this set of figures indicates that crime has large economic consequences.

The decline in crime has likely reflected a variety of societal and economic trends

Much research has recently focused on the factors that contributed to the decline in crime. One factor that seems to have been important is improved policing, which has raised the probability of apprehension, thus lowering the returns to crime. The most famous example has been the Broken Windows approach pursued in New York City and elsewhere, which focuses on stringent enforcement against minor offences. The increased police presence on the street, close monitoring (using information technology) of local crime trends, and the apprehension of individuals committing minor offences have contributed to the sharp decline in more serious offences (Kelling and Sousa, 2001). However, such practices have been only one factor contributing to the fall in crime rates — as suggested by the widespread nature of the decline across the country. Other factors have also been important — such as the “technological innovation” of crack cocaine (Blumstein, 1995)74, changing attitudes toward drug use (Bowling, 1999) and a decline in the youth population (Harcourt, 2001). More generally, the evolution of the economy has generated a new set of incentives, and these incentives are the primary focus herein.

With regard to economic incentives, the opportunity cost of engaging in criminal activities — linked to the wages available from legal work and the probability of being employed for the appropriate demographic group — is crucial. The improved job prospects for those without a high school degree, young men overall, or young black men (all groups historically more likely to participate in criminal activities) has been one positive factor since the mid-1990s, as has the increase in wages for the less skilled. In the 1970s, the share of the total population between 15 and 29 rose sharply, reaching 27¾ per cent in 1980; by 1999, this share had retraced its earlier run-up and fallen to 20½ per cent of the population, reflecting the maturation of the baby boom (US Census Bureau, 2000a). The increase in the
young labour force was accompanied by high unemployment among young males through the early 1990s. Over the rest of the decade their unemployment rate fell sharply — especially for blacks and those with less than a high school education. The propensity to commit crimes is higher among young males, presumably reflecting their higher unemployment rates, the lower wages from legal work among the young (Freeman, 1999) and the smaller penalties likely to be faced by young offenders (because penalties for minors are less than those for adults). Thus, fluctuations in the youth share of the population have been one important factor explaining the rise and subsequent fall in crime rates. In addition, the falling return to work for low-skilled labour beginning in the late 1970s and the stabilisation and turnaround in this return in the 1990s has been an important determinant of youth participation in crime (Grogger, 1998).
The changes over time in the unemployment rates of groups most likely to commit crimes has had a more complicated relationship with crime rates — reflecting both an effect of unemployment on the propensity to commit crime, and an effect of crime and detention for criminal offences on measured unemployment rates. Regarding the former, many studies have found only a small effect of unemployment on crime (Chiricos, 1987; Freeman, 1983 and 1995), although more recent studies have suggested a more important link between the two (Gould et al., 2000; Raphael and Winter-Ebmer, 2001). Regarding the latter, the rapid increase in the rate of incarceration over the past two decades, shown above, markedly decreased the number of young men, especially young black men, in the civilian non-institutional population (relative to the level that would have prevailed if the incarceration rate had remained unchanged). Hence, this change likely decreased their measured unemployment (both because those who commit crime are likely to be worse candidates for legal work, and because the supply of jobs for which young men are likely to be eligible is less than perfectly elastic). The aggregate unemployment rate has been lowered by about \( \frac{1}{4} \) percentage point by the high rate of incarceration (Katz and Krueger, 1999) — a nontrivial amount. Western and Pettit (1998) focus on more disaggregated groups, and find a massive effect of incarceration on the employment-to-population ratio of black men aged 20-35 with less than a high school education (Figure 41). Their estimates suggest that the observed stability in this group’s employment-to-population ratio becomes a trend decline once incarceration is considered.

**Policies aimed at poverty and educational opportunities may help preserve the reductions in crime**

Two important implications of the sharp run-up in the incarceration rate of young black men are immediately apparent. First, the flow of incarcerated persons back into the non-institutional population is likely to rise in coming years, reflecting the rising outflow from the large stock of prisoners; such an up-tick is already apparent in recent years, with the population on parole rising 34 per cent between 1990 and 1999 (and over 220 per cent since 1980) (US Bureau of Justice Statistics, 2000). Because the costs of committing crime are lower for previously incarcerated individuals — who earn less from legal work (Freeman, 1999) — the increase in the proportion of the population previously incarcerated may put upward pressure on crime rates. In addition, the share of the population aged 15 to 29 will rise slightly in coming years (US Census Bureau, 2000b), as the baby echo generation matures, suggesting that the decline in crime attributable to this factor is over. Several policy moves could help to offset such an increase. The
first would be a continuation of the recent trend towards more active policing, perhaps integrated with stringent monitoring of paroled offenders; such moves, by raising the probability of punishment, would discourage recidivism. More active measures aimed at boosting the return to work among disadvantaged groups could also play a role, given the importance of this factor in crime fluctuations (Gould et al., 2000). Thus, further expansion of the EITC, suggested in previous Surveys, could help slightly. An expansion designed to increase the return to work for young men, who have been left out of the large increases in the EITC over the 1990s, would be most effective in this regard.

**Figure 41. The effect of incarceration on the employment-to-population ratio of young black men**

![Graph showing employment-to-population ratio of young black men](image)


In addition, a greater emphasis on education opportunities for disadvantaged groups could help restrain crime. Schooling may reduce crime in several ways — by raising the opportunity cost of crime through higher wages and by changing social attitudes towards crime. Research has found it difficult to find a causal link running from education to crime, probably because of the endogeneity issues that often plague such correlations. In this case, it appears likely that unidentified characteristics that predispose a person to criminal behaviour are likely to lower educational attainment, clouding any causal relationship from educational attainment to propensity to commit crime (Witte, 1997). However, recent research suggests that higher educational attainment (high school graduation) significantly lowers the propensity to commit crime (Lochner, 1999; Lochner and Moretti, 2001). In addition, individuals who participated in Head Start — an early education programme for young children from disadvantaged backgrounds — have a lower propensity to commit crime (Garces et al., 2000). These results suggest that improving the educational prospects of disadvantaged students — as begun with this year’s education reform and perhaps extended along the lines suggested earlier — could contribute to a continuation of the recent favourable trend in crime rates.

But policies regarding drugs and guns have also been very important

The growth in the share of the population previously incarcerated brings back a topic mentioned earlier: the important role that increased imprisonment for drug offences has played in the growth of the incarcerated population. This increase occurred at a time when drug use in the United States fell (Reinarman and Levine, 1997) and hence reflects the increased attention of the criminal justice system to drug offences, rather than an increase in drug offences *per se*. Even proponents of the “war on drugs” have
suggested that drug policy may have gone far enough or perhaps even too far (Alter, 2001). Some of this concern may stem from a view that precious police and prison resources are being diverted from other criminal offences to minor drug offences. Empirical evidence is mixed: Miron (1999) suggests that murder rates are positively related to the intensity of drug prohibitions, while a number of studies show a negative relationship between the intensity of the “war on drugs” and crimes — both drug-related and not (Desimone, forthcoming; Chaloupka et al., 1999; Farrelly et al., 2001). Kuziemko and Levitt (2001) find that the increased emphasis on drug crimes has resulted in a substantial “crowding out” of prison space for non-drug offences. However, they also find that imprisoning a drug offender has roughly the same effect on the occurrence of non-drug related crimes as imprisoning a non-drug offender, reflecting either a tendency for drug criminals to commit other crimes or externalities associated with drug-related enforcement. Markowitz (2000) finds that both stricter drug control and higher alcohol taxes lower the probability of being a victim of many types of crime. Both of these recent studies suggest that concerns regarding the stringency of drug enforcement may be misplaced.

Figure 42. Household ownership of guns

Finally, any analysis of crime in the United States must discuss the prevalence of guns: about two-fifths of US households owned a gun in recent years, down modestly from half several decades ago (Figure 42). Guns are involved in nearly 70 per cent of homicides. However, research has had difficulty finding a link between gun ownership and crime, and it has often been argued that it deters crime. Research efforts have reached sharply different conclusions, and hence an evaluation of sensible policy changes is difficult. These difficulties reflect a lack of data (with some studies having only national time series data, e.g. Maggadino and Medoff, 1984) and potentially imperfect measures of gun ownership or inadequate controls for reverse causation from crime to gun ownership (Kleck and Patterson, 1993). Recently, Duggan (2001) found a large positive effect of gun magazine subscriptions, his proxy for gun ownership, on homicides and Cook and Ludwig (2002) a positive impact of gun ownership on burglary — more guns mean more crime. On the other hand, Lott (1998) suggested that concealed weapons laws — which allow individuals to carry firearms for self-defence — had lowered crime in several states, perhaps reflecting a deterrent effect of guns on crime. At present, the debate is unresolved, although some of the limitations created by poor data have been lessened by new data sources. While the form of future gun control reform could extend in many directions, further research on the externalities associated with gun ownership and the costs of regulatory shifts would be worthwhile (Cook et al., 2000). With regard to crime reduction,
reinforcement of current efforts to keep guns out of criminals’ hands would perhaps be the most important of many potential efforts.

**Stepping back in trade and agriculture**

*Trade tensions have risen, mostly from safeguard measures in steel*

While a full treatment of other structural developments would take this chapter too far afield, the last year has seen steps backwards (for the most part) in two areas: trade and agricultural policies. With regard to trade policy, however, some positive actions have been taken. The Administration pursued the initiation of a new global round of trade talks that was launched at Doha in November 2001. To facilitate these negotiations, the Administration succeeded in obtaining Trade Promotion Authority (TPA) from Congress after an eight-year hiatus. The legislation also expanded trade preferences for the Andean, African, and Caribbean regions and provided more generous trade adjustment assistance for displaced workers. This assistance includes income support and wage insurance, funds for worker training and a new refundable tax credit that covers 65 per cent of monthly health insurance premiums. As recommended in previous *Surveys*, TPA is crucial to the trade round initiated at Doha and other efforts to lower trade barriers. In this regard, the Administration has proposed a set of trade reforms for the WTO agriculture negotiations in the context of the Doha Development Agenda. The proposal calls for reduced tariffs, a lower ceiling of allowed levels of trade-distorting domestic support to 5 per cent of a country’s total value of agriculture production, elimination of direct export subsidies, and a number of associated measures. Other positive trade policy initiatives include the continued efforts to establish a Free Trade Area for the Americas and support of China’s entry into the WTO, which came at the end of 2001.

**Figure 43. Steel imports and employment losses**

![Steel imports and employment losses](image)

1. Change of first-half average from 2001 average level.

However, these positive steps have been partially overshadowed by some protectionist measures. Perhaps the most damaging action over the past year was the decision last winter to impose tariffs that initially range from 8 to 30 per cent on imports of certain steel products for three years (with exemptions for certain developing countries and free-trade partners, such as Mexico and Canada, and with other case-by-case exemptions). As discussed in last year’s *Survey*, employment in the US steel industry has been falling rapidly in recent years (Figure 43) as a result of the strong dollar, slowing domestic
manufacturing activity and restructuring. The degree of restructuring has been hampered by the large costs of liabilities for pensions and health coverage of retirees, which have limited the benefits of restructuring to potential acquirers and created calls for further government assistance. Last year, the Administration launched a Section 201 (safeguard) investigation to determine whether the domestic steel industry had been hurt by imports, and the positive determination by the International Trade Commission (ITC) last December triggered the imposition of tariffs in March. Safeguard actions, which are allowed under WTO rules, allow governments to impose temporary tariffs to counter import surges, which cause serious injury; there is no requirement to find unfair trading practices abroad before raising taxes on imports. But governments must determine that imports are a main source of economic difficulties rather than broad macroeconomic conditions. In any event, steel imports rose through the late 1990s and remained at high levels before plunging with the decline in industrial production in 2001, while job losses in the domestic industry continued. More recently, the resumption of growth in the domestic manufacturing sector in early 2002 and the new tariffs have boosted domestic steel prices. Between January and August of this year, the producer price index for all steel mill products rose nearly 10 per cent.

It remains unclear what steps will be taken to place the domestic industry on a sustainable footing. Government support for domestic steel producers has been a recurrent aspect of trade policy (Barringer and Pierce, 2000). The US government restricted imports from 1984 through 1992 in order to help the steel industry adjust to international competition and global steel over-capacity. While some progress was made domestically, restructuring remains incomplete and international over-capacity is still a concern. Under the current safeguard mechanism, restructuring is again a critical issue. The Administration has asked steel producers for information on restructuring that will be used when it reviews the safeguard action next year. Moreover, negotiations are proceeding within the OECD to address the problem of global excess capacity. These negotiations involve virtually all major steel-producing nations and are aimed at addressing distortions that have impeded restructuring, particularly those related to government assistance that have prevented closure of inefficient capacity. As part of this process, the United States has suggested that participants consider prohibiting subsidies to the steel sector except for assistance aimed at promoting capacity closure, facilitating worker adjustment, and covering other related social costs. In addition to this and other less important measures, it has proposed that governments refrain from the use of export credits related to steel in certain cases, limit multilateral development bank financing that would contribute to global steel over-capacity and liberalise market access in the steel sector as part of the Doha negotiations. Such action should be complemented with efforts to lower trade barriers and ensure effective competition in the global industry. This would provide benefits to consumers world-wide.

The signal sent by the safeguard measures for steel may hamper attempts to move forward on trade liberalisation elsewhere. Global trade tensions remain high. As a result, the EU, Japan, Korea, Brazil, China, New Zealand, Norway and Switzerland have lodged complaints at the WTO arguing that the US safeguard action is not in conformity with agreed rules. In addition, the Administration has placed duties on Canadian softwood imports, complicating that trade relationship. These duties followed the finding that such lumber has been dumped on the US market and has received subsidies from the Canadian government. The dispute has been brewing for many years: it was held in abeyance between 1996 and 2001 by the bilateral Softwood Lumber Agreement (SLA), which subjected Canadian exporters to graduated fees on the exports if they exceeded certain quotas. After this agreement expired in March 2001, the US industry filed petitions for countervailing and anti-dumping duties, and a preliminary positive determination by the ITC led eventually to the imposition of provisional duties exceeding 30 per cent in August 2001. The final positive determination of dumping and subsidisation by the ITC was reached in May 2002 and the definitive level of duties remains under consideration. Canada appears willing to engage in the long and costly dispute settlement mechanisms of the NAFTA and the WTO to find some final resolution on this issue. The gain to some American timber producers from these actions will be costly to US households. One estimate reports that the SLA already raised timber prices by enough to boost the cost of a new house in the United States by around $1 000 (Lindsey et al., 2000).
Finally, the WTO has ruled on the long-running dispute over Foreign Sales Corporations (FSCs). FSCs came into law in 1984, replacing a similar earlier measure; the programme provided a preferential tax rate for export earnings under certain conditions. The EU complained to the WTO about the programme in 1997, and in 2000 it ruled that the FSC regime was an impermissible export subsidy. In response, the United States repealed the existing provisions and replaced them with a form of territorial taxation for foreign source income (in the FSC Repeal and Extraterritorial Income Exclusion Act). However, the plaintiffs viewed these changes as insufficient, and the WTO agreed in August 2001. This ruling has been upheld, and the WTO has determined that the EU may impose sanctions of up to $4 billion. US authorities have indicated that major changes to this aspect of tax law can be expected in response to the FSC ruling, perhaps avoiding the imposition of sanctions. For example, the Congress is considering legislation that would remove the export subsidy while substantially altering (and simplifying) taxation of US multinationals. However, progress has been slow.

And potentially higher agricultural subsidies have also aggravated tensions

The United States has cemented the unwinding of its experiment with increased reliance on markets promised by the 1996 Federal Agricultural Improvement and Reform (FAIR) Act by passing the Farm Security and Rural Investment Act of 2002. The FAIR Act improved the link between market conditions and planting decisions by de-coupling crop payments from current production, ending mandatory set-asides, phasing out dairy price supports and making other more minor adjustments. It was expected to reduce overall agricultural support sharply by 2000-01. This outcome did not materialise because of unanticipated adverse changes in farm prices associated with the strong dollar and unusually favourable growing conditions in the world’s major production regions. Falling prices led to declining incomes for farmers, and a series of emergency assistance packages since 1998 ensured that outlays for farm income stabilisation more than tripled between 1996 and 2001 (and in fact were even higher in 2000). The net effect of these changes was a significant increase in the US total producer support estimate (PSE) over the 1996-2000 period. At an average of 23 per cent of gross farm receipts in 1999-2001, support to producers was little changed from the 1986-88 average of 25 per cent, but was significantly above the 13 per cent in 1995-97 (OECD, 2002b).

The new farm bill is a return to policies pre-dating the FAIR Act. In one sense, the new legislation is simply an acceptance that the move towards market forces was not supported by the political process and was creating continual pressure for “emergency” assistance, and hence can be seen as a continuation of business as usual. However, it would have been more fruitful from an economic perspective to consider changes in policies that did not impede market signals, such as tying producer support to fluctuations in total farm income explicitly (as has been studied at the Department of Agriculture, e.g. Offutt, 2000 and Gunderson et al., 2000). But a move in the direction of such explicit income support payments and their attendant stigma would have been unpopular. According to the Congressional Budget Office, the changes in the legislation are expected to boost budgetary expenditures to farmers by more than $80 billion over the years 2003-12 (assuming that the recent trend of annual “emergency” spending would not have continued).

The return to pre-1996 types of market intervention may further distort production although the total impact is difficult to gauge. In particular, a key element of this year’s farm bill is marginally higher loan rates (i.e. subsidies, as loan repayment terms are very favourable when crop prices are at low levels) for most crops, especially grains, and such subsidies can spur production above levels that may have otherwise prevailed. Payments for wheat, feed grains, cotton and rice (previously called production flexibility contract payments) were re-instituted, but their levels were also raised, and they were expanded to include soybeans, other oilseeds and peanuts. Such payments are based on historical yields and acres planted but could have an indirect affect on current production since that may affect future eligibility for
additional payments to farmers when commodity prices fall below their target prices were created. These “counter-cyclical payments” are also tied to historical, not current, production. They may indirectly affect current production because they are related to current market prices and reduce the variability of revenue, and farmers may believe current planting decisions may affect eligibility for payments in future years. The boost to farmers incomes provided by government policies has been motivated by concerns over both the incomes of farmers and the health of rural regions. As is well-known, poorly-targeted agricultural policies are inefficient instruments for achieving such goals. As discussed in last year’s Survey, average farm incomes exceed non-farm incomes, and the majority of farm payments go to a small share of farmers.

Market distortions associated with agricultural policies have also contributed to the increase in trade tensions. As discussed previously, agriculture will be an important issue in the Doha round of global trade negotiations. While the Administration’s proposal for the Doha round are a positive step, the new farm bill marks a shift in the forthright position the United States had taken towards liberalisation of the agricultural sector. With that said, it is important to remember that producer support has remained much greater in a number of other OECD countries, including Japan and the European Union (EU) (Figure 44). Furthermore, they failed to match the 1996 US effort to de-couple support from production decisions. However, the US levels of support in recent years have increased and moved closer to the OECD average.

![Figure 44. Agricultural Producer Support Estimates, 2001](image_url)


**Progress on some environmental issues has been mixed**

On the environmental front, the Administration presented plans over the past year to address climate change (see Chapter V) and air pollution. The Administration’s Clean Skies initiative aims to lower emissions by power plants of sulphur dioxide (SO₂), nitrogen oxides and mercury by about 70 per cent by 2018 through a tradable permit system. The permit system is modelled after that contained in the 1990 Clean Air Act, which created a cap and trade system for SO₂ reductions. That Act’s goals for such emissions reductions have been more than met; tightening caps further for sulphur dioxide and nitrogen oxides, and expanding caps to include mercury emissions, represents a natural next step. One area for consideration may be whether even greater flexibility in emission caps and trading may be appropriate. For example, both sulphur dioxide and nitrogen oxides contribute to fine particle emissions and acid rain. Even
though nitrogen oxide trading is not national, there may be some room for substitution between reductions in sulphur dioxide and nitrogen oxides emissions — although nitrogen oxides contribute to ground level ozone levels. Currently, permit prices for sulphur dioxide emissions lie nearly $1 500 per ton below those (on the regional market in the North-eastern states) for nitrogen oxides. Some have argued that a limited degree of substitution regarding reductions between these two types of particle emissions might provide similar health benefits at lower cost (Lutter, 2002). However, this degree of substitutability for air quality purposes is debatable. With regard to other policy changes affecting air quality, the Environmental Protection Agency has proposed that rules regarding new source emissions from power plants and industry sources be reformed based on extensive public comment over the last ten years. These rules require firms to undergo a cumbersome process when they modify their facilities in order to determine whether the proposed changes would adversely affect air quality. Because of the complex emissions accounting process and differing views of what constitutes “routine maintenance, repairs, and replacement” under this rule, critics have suggested that it has discouraged modernisation of existing plants. The new source review reforms would clarify the definition of routine maintenance and provide several other incentives for facilities to improve their emissions control. In addition, the Clear Skies initiative would replace the new source review programme for power plants with mandatory caps. This is a more efficient and cost-effective method to control emissions. The initiative also provides for other industrial sources to opt-in to the mandatory cap programme.

Some aspects of sustainable development

There is growing concern that long-run sustainable development may be compromised unless measures are taken both in the United States and elsewhere to achieve balance between economic, environmental and social outcomes. This section looks at three issues in the environmental dimension of sustainable development that are of particular importance for the United States. In each case, indicators are presented to measure the progress and the evolution of potential problems, and an assessment is made of relevant government policies. The section also considers whether current institutional arrangements are in place to integrate policymaking across the different elements of sustainable development (see Box 9). The section considers first the policies that have been put in place to limit the contribution of the United States to global climate change. It then looks at water pollution abatement policy. Finally, for natural resources, the section looks at the policies that have been adopted or are required for longer-term sustainability, focusing on water supply.

<table>
<thead>
<tr>
<th>Box 9. Policy integration across sustainable development areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>The executive branch of the government has two instruments to integrate decision making in the economic and environmental dimensions of sustainable development:</td>
</tr>
<tr>
<td>• The National Environmental Policy Act of 1969 directs that an environmental impact assessment (EIA) should be carried out “to the fullest extent possible” for policies, regulations and public laws, as well as for the projects undertaken by federal agencies. Cost-benefit analysis is not mandatory, and the use of monetary values is even forbidden “when there are important qualitative considerations”.</td>
</tr>
<tr>
<td>• The Executive Order 12866 of 1993 mandates a cost-benefit analysis (CBA) for most new federal regulations and calls for benefits to justify costs. Under the Regulatory Right to Know Act, the Office of Management and Budget reviews these CBAs and issues an annual report to Congress on this area. This order impacts on environmental policy particularly since about half of all regulatory costs and benefits can be attributed to environmental regulations (Office of Management and Budget, 1997).</td>
</tr>
<tr>
<td>While major projects and regulations are reviewed by the OMB before implementation, at least one agency, the Army Corps of Engineers — charged with public works in the area of waterways — may have overestimated benefits in order to justify major projects (US Department of the Army, 2000 and US General</td>
</tr>
</tbody>
</table>
However, ex-post studies are carried out by the same agency that is sponsoring a policy, project or regulation, which raises concerns over potential conflicts of interest. For instance, studies of the costs and benefits of the Clean Air Act were undertaken by the Environmental Protections Agency (EPA) in a way that did not allow evaluation of individual programmes. At present, the Truth in Regulation Act requires an audit of CBAs by the General Accounting Office (GAO) only if there is a request by Congress.

Other pieces of environmental legislation continue to forbid the comparison of costs and benefits in the design of environmental standards and give the highest priority to the protection of public health. Indeed, the EPA, under the previous Administration, stated that policy for protecting public health should be pursued “without regard to cost” (Browner, 2000). Such a view has resulted in more emphasis being given during the past decade to the benefits of regulations rather than their costs. This tendency has been enforced by statutory provisions that allow private citizens — in practice environmental pressure groups — to take court action to require government agencies to implement the law (OECD, 2000).

While product-oriented laws often have a cost-benefit test, waste- or emission-related laws tend not to stipulate such assessments (Hahn et al., 2002). These differences can produce odd results. For example, benefits must exceed costs for measures to eliminate arsenic in drinking water, while a measure with a cost-benefit ratio of 5 to 1 may be accepted to prevent water pollution from intensive livestock operations.

Even if the institutional set-up to foster policy integration is better developed in the United States than in most other Member countries, certain weaknesses remain. Thus, the rationalisation of CBA, as recommended in the 2000 OECD Economic Survey (OECD, 2000), is still desirable. Moreover, the concerns about conflicts of interest of institutions in charge of CBAs could be addressed through the establishment of an independent institution to audit such analyses that would be responsible to the Congress.

### Climate change

**Main issues**

Over the past century, greenhouse gases (GHGs) have accumulated in the earth’s atmosphere and temperatures have increased. It is widely agreed that one reason for this is anthropogenic activities. With emissions continuing to grow, climate change may impose significant costs on OECD and, especially, non-OECD countries. With its one-quarter share of global GHG emissions, the United States exerts a major influence on various facets of climate change. Whether this represents a disproportionate share depends on how world GDP is measured. Recognising that human influences on climate change could represent a new challenge for long-term global sustainability, the Administration, while not ratifying the Kyoto Protocol, has proposed a Climate Change Policy for the next ten years with the aim of reducing GHG emissions relative to GDP in a fashion that does not place an undue burden on the current generation. This section looks at the main components of federal and state policy in this area.

**Performance**

GHG emissions declined relative to GDP during the 1990s at a rate comparable with that in other OECD countries (Table 33). However, as economic growth was faster than elsewhere, total emissions rose by 11 per cent in the period 1990 to 1999 in contrast to a stable level of emissions in the rest of the OECD area (Table 34). This left emissions just over 42 per cent higher, per dollar of GDP, than on average elsewhere in the area, but emissions per unit of GDP (using 1995 purchasing power parity exchange rates) in several other countries (Australia, Canada, Czech Republic, Greece, New Zealand, Poland and Slovakia)
### Table 33. Indicators of greenhouse gas (GHG) emission intensity
Grammes of CO₂ equivalent per $PPP of GDP, in 1995 prices

<table>
<thead>
<tr>
<th>Country</th>
<th>Total GHG emissions</th>
<th>CO₂ emissions, electricity</th>
<th>CO₂ emissions, transport</th>
<th>Other GHG emissions</th>
<th>Level, 1999</th>
<th>Average annual percentage change 1990-1999</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>1 053</td>
<td>370</td>
<td>155</td>
<td>528</td>
<td>-2.07</td>
<td>-0.21</td>
</tr>
<tr>
<td>Austria</td>
<td>419</td>
<td>72</td>
<td>91</td>
<td>256</td>
<td>-1.87</td>
<td>-2.75</td>
</tr>
<tr>
<td>Belgium</td>
<td>617</td>
<td>97</td>
<td>101</td>
<td>419</td>
<td>-1.36</td>
<td>-2.12</td>
</tr>
<tr>
<td>Canada</td>
<td>893</td>
<td>151</td>
<td>193</td>
<td>549</td>
<td>-0.98</td>
<td>-0.12</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>1 058</td>
<td>457</td>
<td>88</td>
<td>513</td>
<td>-3.05</td>
<td>2.55</td>
</tr>
<tr>
<td>Denmark</td>
<td>549</td>
<td>194</td>
<td>94</td>
<td>261</td>
<td>-1.64</td>
<td>-1.43</td>
</tr>
<tr>
<td>Finland</td>
<td>652</td>
<td>181</td>
<td>105</td>
<td>366</td>
<td>-1.88</td>
<td>-0.02</td>
</tr>
<tr>
<td>France</td>
<td>416</td>
<td>32</td>
<td>103</td>
<td>260</td>
<td>-1.69</td>
<td>-2.04</td>
</tr>
<tr>
<td>Germany</td>
<td>536</td>
<td>169</td>
<td>96</td>
<td>271</td>
<td>-4.00</td>
<td>-3.86</td>
</tr>
<tr>
<td>Greece</td>
<td>813</td>
<td>275</td>
<td>130</td>
<td>408</td>
<td>-0.24</td>
<td>0.07</td>
</tr>
<tr>
<td>Hungary</td>
<td>786</td>
<td>250</td>
<td>84</td>
<td>453</td>
<td>-2.33</td>
<td>1.44</td>
</tr>
<tr>
<td>Iceland</td>
<td>395</td>
<td>4</td>
<td>88</td>
<td>303</td>
<td>-1.28</td>
<td>0.00</td>
</tr>
<tr>
<td>Ireland</td>
<td>694</td>
<td>165</td>
<td>103</td>
<td>426</td>
<td>-4.27</td>
<td>-2.41</td>
</tr>
<tr>
<td>Italy</td>
<td>439</td>
<td>105</td>
<td>92</td>
<td>242</td>
<td>-1.05</td>
<td>-0.82</td>
</tr>
<tr>
<td>Japan</td>
<td>432</td>
<td>130</td>
<td>82</td>
<td>221</td>
<td>-0.30</td>
<td>-0.03</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>344</td>
<td>6</td>
<td>242</td>
<td>97</td>
<td>-11.46</td>
<td>-30.20</td>
</tr>
<tr>
<td>Netherlands</td>
<td>573</td>
<td>138</td>
<td>82</td>
<td>352</td>
<td>-2.38</td>
<td>-1.03</td>
</tr>
<tr>
<td>New Zealand</td>
<td>1 096</td>
<td>92</td>
<td>175</td>
<td>828</td>
<td>-2.28</td>
<td>4.58</td>
</tr>
<tr>
<td>Norway</td>
<td>487</td>
<td>4</td>
<td>113</td>
<td>369</td>
<td>-2.54</td>
<td>1.31</td>
</tr>
<tr>
<td>Poland</td>
<td>1 195</td>
<td>481</td>
<td>90</td>
<td>624</td>
<td>-4.96</td>
<td>-6.63</td>
</tr>
<tr>
<td>Portugal</td>
<td>540</td>
<td>149</td>
<td>106</td>
<td>285</td>
<td>0.41</td>
<td>2.58</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>957</td>
<td>200</td>
<td>76</td>
<td>680</td>
<td>-4.47</td>
<td>-1.21</td>
</tr>
<tr>
<td>Spain</td>
<td>537</td>
<td>127</td>
<td>130</td>
<td>280</td>
<td>0.41</td>
<td>1.12</td>
</tr>
<tr>
<td>Sweden</td>
<td>358</td>
<td>41</td>
<td>112</td>
<td>204</td>
<td>-1.55</td>
<td>0.07</td>
</tr>
<tr>
<td>Switzerland</td>
<td>276</td>
<td>3</td>
<td>79</td>
<td>195</td>
<td>-0.62</td>
<td>-1.96</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>526</td>
<td>132</td>
<td>108</td>
<td>287</td>
<td>-3.66</td>
<td>-5.30</td>
</tr>
<tr>
<td>United States</td>
<td>792</td>
<td>278</td>
<td>196</td>
<td>318</td>
<td>-1.89</td>
<td>-0.60</td>
</tr>
<tr>
<td>OECD total</td>
<td>649</td>
<td>196</td>
<td>140</td>
<td>312</td>
<td>-1.80</td>
<td>-0.98</td>
</tr>
<tr>
<td>OECD less US</td>
<td>557</td>
<td>143</td>
<td>104</td>
<td>309</td>
<td>-1.90</td>
<td>-1.79</td>
</tr>
<tr>
<td>EU</td>
<td>506</td>
<td>120</td>
<td>103</td>
<td>283</td>
<td>-2.36</td>
<td>-2.60</td>
</tr>
</tbody>
</table>


were higher than in the United States. The difference between US emissions and the OECD average is concentrated in the electricity and transport sectors. The comparatively high intensity electricity is due to both its relatively intensive use of in the economy and its higher carbon content than elsewhere. Indeed, emissions of carbon dioxide per unit of electricity generated are more than 50 per cent higher than in the rest of the OECD area because abundant US coal resources have led to relatively intensive use of coal for power generation. The use of coal in the electricity industry has remained stable in the past decade, whereas decreases have occurred on average elsewhere. In the transport sector, high GHG emissions per unit of GDP are predominantly due to comparatively high emissions per vehicle, the average vehicle in the United States producing almost twice as much carbon as that elsewhere, rather than greater use of vehicles relative to GDP. In contrast to the falls registered on average in other OECD countries, carbon emissions per vehicle have risen in the United States in the 1990s, due to increased travel as emissions per mile driven have slightly decreased.
Table 34. GHG emissions and sectoral indicators

<table>
<thead>
<tr>
<th></th>
<th>Total GHG emissions</th>
<th>CO₂ emissions per Kwh electricity</th>
<th>Manufacturing CO₂ emissions per unit of industrial production</th>
<th>Residential CO₂ emissions per unit of private consumption</th>
<th>Road transport CO₂ emissions per vehicle</th>
<th>Electricity use per unit of GDP</th>
<th>Industrial output per unit of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1999</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source: GHG National submissions to UNFCCC, national sources and UNFCCC; carbon dioxide data, IEA; industrial production, private consumption, OECD.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Policies

The new goal of the Administration is to achieve a reduction in GHG emission intensities from their expected level in a gradual and flexible fashion. It judged that the binding absolute targets in the Kyoto Protocol were too narrow both in their time horizon (2008-12) and in their geographic coverage (industrialised countries only) and would subject the economic structure of the country to a sharp shock. The Administration’s objective is to reduce GHG intensity by 18 per cent in the next decade, so lowering greenhouse gas emissions by 4 per cent relative to what might have occurred otherwise. However, the absolute level of emissions might still be above their 2002 level and a further 30 per cent reduction would be needed to reach the targets in the Kyoto Protocol, assuming that economic growth is in line with expectations. Even if the United States had signed the Kyoto Protocol with a fully functioning trading mechanism, it is likely that its domestically produced emissions would have fallen by a similar amount to the fall envisaged by the Administration. The compliance would have been achieved through the purchase of credits on the world market. Consequently, while domestically produced emissions may not differ much from those that might have occurred under the Kyoto Protocol, pressure on the rest of the world to reduce emissions will be significantly reduced by the United States not ratifying the Protocol. According to analyses from the Environmental Protection Agency (EPA), the Administration’s proposal would cost between $10 and $15 per abated tonne of carbon equivalent. The objective for the fall in intensity is similar to that which occurred in the 1990s, which might suggest that the target represents little in the way of additional efforts to abate emissions (Viguier, 2002 and de Moor et al., 2002), but with energy prices now expected to remain lower in real terms than they were on average from 1973 to 1990 energy efficiency may not rise as rapidly in the next decade as in the past.

A key element in the package is a change to the current voluntary registry of reductions in emissions (introduced by the 1992 Energy Act), which might create an economic incentive to reduce emissions. The registry would record the reductions in emissions of participating companies, verified by third-party auditors, in a way that would ensure that those reductions were tradeable. The government would pledge to accept these credits in any market-based programme to limit GHG emissions that might be introduced following the proposed check on progress in meeting emission-intensity goals in 2012. If the market expects the result of the 2012 review to be some form of binding carbon constraints in the future, these credits should have immediate value. However, the price would be both low and volatile, as long as there is uncertainty about future policy. When fully developed, this infrastructure could form the base for various possible incentive programmes or a cap and trade system.

Another key element is changes in regulations designed to prolong the life of existing nuclear plants, and research and development programmes aimed at improving their operating efficiency. In addition, co-operative research programmes are being launched to lower their capital costs. Administrative procedures are also being streamlined to reduce regulatory uncertainty and speed construction times. In total, one-fifth of the projected policy-induced savings in emissions may come from greater use of nuclear energy.

The Climate Change Policy package would also create or prolong a number of tax credits. It is proposed to extend the renewable electricity production tax credit to 2007. Combined heat and power plants, residential solar power systems, methane produced from landfills and vehicles powered fully or partially by fuel cells would also be accorded tax credits. However, less has been done to address the emissions related to transport, and gasoline prices remain low compared with most OECD countries. The reluctance to take measures in this area appears to be related to particularly high abatement costs. The existing, costly programme that exempts ethanol from excise taxes on gasoline will be continued. A number of research programmes are being undertaken with the objectives of developing hydrogen as a fuel and directly capturing carbon from power plants using fossil fuels.
Several states have taken initiatives to lower GHG emissions. Following the adoption of a new law in July 2002, California is, by 2005, to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of GHGs from motor vehicles beginning with 2009 models. A few states have introduced caps on carbon dioxide emissions in the electricity sector, either for new or major existing plants (Table 35). Full details of the trading system and registry that will have to accompany these schemes have not yet been fully settled. In addition, many states have implemented renewable energy mandates or introduced price surcharges that are designed to fund such projects. Overall, in the 13 states with quotas, which account for about 30 per cent of US electricity consumption, renewables are mandated to reach nearly 5 per cent of consumption by the end of this decade, as against only around 1 per cent at present (Database of State Incentives for Renewable Energy, 2002). The prevalence of these programmes has led to legislative proposals to introduce a national quota for the production of renewable electricity. Most states have introduced the mandates in a relatively efficient fashion, at least taken individually, using tradeable certificates.

Conclusions

The Administration’s climate change strategy has three aspects: the development of new abatement technologies, building on experience with the use of market mechanisms to lay the groundwork for current and future action, and improving understanding of the mechanisms of global warming. This strategy is based on a commitment to improve the understanding of the causes and potential harms posed by climate change, and to develop technologies that promise to significantly slow the growth of emissions. It is also the first step in a long-term commitment to slow and — if the science continues to justify this course of action — stop and then reverse the growth of GHG emissions. Importantly, it lays the foundation for taking advantage of the growing US experience with building better and more flexible institutions to address environmental problems. However, as yet, the new Climate Change Policy does not reap the benefits of the decentralisation of decision-making available through the application of an economic instrument such as an overall cap and trade programme. The proposed system is a poor substitute for such arrangements, as the cost per abated tonne of action will depend on market expectations that caps will be introduced in the future — and by a different Administration. The respective marginal costs of the various tax and fiscal measures have not been equalised, implying an inefficient allocation of abatement efforts that may be accentuated by the proliferation of piecemeal state initiatives. Finally, the confirmation of the US intention not to ratify the Kyoto Protocol will have marked spill-over effects on other countries as, in aggregate, the remaining signatories will have little need to reduce their emissions of greenhouses gases. Consequently, if an international market in emission permits emerges, prices will be low, thereby reducing incentives to reduce emissions (Buchener et al., 2002).

Reducing water pollution

Main issues

Clean drinking water is an essential commodity that depends in part on the supply of surface and ground water also being of good quality. But, in addition, water is of value as a source of recreation and provides a base for many economic activities. The main issues for policy in this area are how to change policies so that given objectives can be attained at a lower cost than at present through the introduction of new market-based mechanisms in addition to reforming existing regulations.
Table 35. **State programmes for reducing carbon dioxide emissions from electricity generation**

<table>
<thead>
<tr>
<th></th>
<th>Electricity sales</th>
<th>Renewable electricity targets</th>
<th>Public benefit fund levy</th>
<th>Carbon cap for generators</th>
<th>Net metering$^3$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2000, TWh</td>
<td>2002 Per cent of sales</td>
<td>End year$^1$</td>
<td>Enforcement</td>
<td>$ per MWh</td>
</tr>
<tr>
<td>Maine</td>
<td>12.2</td>
<td>30.0</td>
<td>30.0</td>
<td>Possible</td>
<td>0.59</td>
</tr>
<tr>
<td>Nevada</td>
<td>27.8</td>
<td>4.0</td>
<td>15.0</td>
<td>Obligation</td>
<td>Yes</td>
</tr>
<tr>
<td>Connecticut</td>
<td>30.0</td>
<td>6.5</td>
<td>13.0</td>
<td>Credit trading</td>
<td>Yes</td>
</tr>
<tr>
<td>Minnesota</td>
<td>59.8</td>
<td>10.0</td>
<td>30.0</td>
<td>Goal</td>
<td>Yes</td>
</tr>
<tr>
<td>Hawaii</td>
<td>9.7</td>
<td>7.0</td>
<td>9.0</td>
<td>Goal</td>
<td>Yes</td>
</tr>
<tr>
<td>New Jersey</td>
<td>70.0</td>
<td>3.0</td>
<td>6.5</td>
<td>Penalty price</td>
<td>0.43</td>
</tr>
<tr>
<td>Pennsylvania$^4$</td>
<td>133.8</td>
<td>2.0</td>
<td>6.0</td>
<td>Obligation</td>
<td>Yes</td>
</tr>
<tr>
<td>Illinois</td>
<td>134.7</td>
<td>5.0</td>
<td>5.0</td>
<td>Goal</td>
<td>Yes</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>51.8</td>
<td>1.0</td>
<td>4.0</td>
<td>Penalty price</td>
<td>0.20</td>
</tr>
<tr>
<td>Texas$^5$</td>
<td>318.3</td>
<td>0.5</td>
<td>2.7</td>
<td>Credit trading</td>
<td>Yes</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>65.1</td>
<td>0.5</td>
<td>2.2</td>
<td>Credit trading</td>
<td>Yes</td>
</tr>
<tr>
<td>Arizona</td>
<td>61.1</td>
<td>0.4</td>
<td>1.1</td>
<td>Goal</td>
<td>Yes</td>
</tr>
<tr>
<td>Iowa</td>
<td>39.1</td>
<td>0.8</td>
<td>0.8</td>
<td>Obligation</td>
<td>Yes</td>
</tr>
<tr>
<td>California</td>
<td>244.1</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Ohio</td>
<td>165.2</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>New York</td>
<td>142.0</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Oregon</td>
<td>50.3</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>New Mexico</td>
<td>18.8</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Delaware</td>
<td>11.3</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>10.2</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>7.3</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>States with renewable targets</td>
<td>1 001.2</td>
<td>1.1</td>
<td>4.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Memorandum items:**
- United States: 3 337
- OECD excluding United States: 4 603

1. The end year for achieving the target varies from state to state but is generally towards the end of this decade.
2. States raise this levy on electricity sales and use the proceeds to subsidise renewable energy investments.
3. Net metering allows small producers of renewable electricity to supply surplus electricity to the grid.
4. Applies to competitively supplied electricity only.
5. Target is for capacity: output estimated from average utilisation factors and compared to 2000 consumption.

*Source*: Larsen and Rogers (2002); Rabbe (2002).
**Performance**

The quality of surface water in the United States is good and appears to be improving. Data that are available, typically for concentrations of selected pollutants, suggest that surface water quality was good in general prior to the introduction of the new federal water policy in 1972. At that time, large areas of water met quality standards for designated uses, although some metropolitan areas experienced serious water pollution problems (Freeman, 2000). Since then, quality appears to have improved somewhat (Figure 45), even if the improvement has not been as rapid in the United States as elsewhere (Table 36). Permit monitoring data confirm the impression of good quality, with about two thirds of the assessed rivers supporting fishing and almost 40 per cent supporting swimming (see below). The condition of estuaries is somewhat less satisfactory, especially on the Atlantic seaboard and parts of the Gulf of Mexico, with the major problem being excess nutrient and sediment loads generating algae growth. Agriculture is the main source of conventional pollutants (as defined by the Clean Water Act, CWA) in rivers. It produces an estimated 83 per cent of loadings of total suspended solids, and, at the beginning of the 1980s, agricultural non-point sources accounted for 93 per cent of total non-atmospheric discharges to water (Puckett, 1994).

**Policies**

Federal actions to reduce pollution in rivers and surface water are governed by the CWA, which has, in practice, resulted in a dirigiste policy. Under its general provisions, federal regulations specify the pollution performance required in over 40 industries, but in theory companies are free to employ any technology that delivers the same or better performance. The typical permit granted at the state level, however, specifies not just the emission level from the source, but also the technology that is to be used. Though this technology is generally suggested by the polluter, the permits may become unduly restrictive as best practices evolve. Moreover, if the ambient water quality is below the level required for the relevant stretch of water, regulated dischargers have to use state-of-the-art technology without consideration of costs. The CWA was primarily aimed at controlling industrial pollutants and sewage treatment plants as can be seen from the definitions of pollutants. Nitrogen and phosphorus are regulated pollutants under the CWA, but non-point sources of these elements are not within the scope of the CWA, thus practically exempting agricultural non-point discharges from regulations.

The Clean Water Act also suffers from a mismatch between its objectives and the instruments available to the regulator. The Act allows regulation only of point sources, and with that limited scope it is impossible to achieve the envisaged goals of zero pollution. As a result, its impact on the increase in the number of miles of swimmable and fishable waters has been small (Table 37). The improvements were, however, concentrated in populated areas where benefits are likely to be greatest. In rural areas there has been much less improvement, as non-point sources of pollution (mainly from agriculture) are not regulated by the CWA, though large intensive livestock operations are regulated as point sources. Moreover, subsidies to support crop prices encourage farmers to spread nutrients that pollute streams when used excessively. The EPA considers that the CWA has provided monetised benefits in line with costs. However, analysis of specific regulations (Hahn et al., 2002 and Hahn, 1996) casts some doubt on this conclusion — as in these cases benefits were estimated at only 5 per cent of costs — as does the negative assessment of Freeman (2002).  

In any case, costs could have been substantially reduced by the introduction of a more flexible regulatory mechanism that allowed the trading of pollution permits within a given watershed. Indeed, in one state-led initiative, in North Carolina, the cost of meeting voluntary nitrogen and phosphorus reduction targets was reduced from an estimated $50 to $100 million to just $11 million with the help of a trading system (Council of Economic Advisers, 2002). The EPA has suggested widening the scope for trading under the CWA, as such programmes might lower compliance costs by up to 50 per cent. However, it is
not yet clear that the CWA will allow trading mechanisms such as watershed-based Total Maximum Discharge Limits. Such limits set an overall ceiling on discharges of pollutants, but the Act is based on a zero emission goal and does not allow an existing permit holder to ever increase emissions above the levels set in the current permit — a provision that would conflict with a full trading regime.

Figure 45. Ambient water quality in US rivers and streams: violation rates
Per cent of all measurements exceeding national water quality criteria

1. Violation levels are based on the following US Environmental Protection Agency water quality criteria: fecal coliform bacteria — above 2000 cells per litre; dissolved oxygen — below 5 milligrams per litre; total phosphorus — above 1.0 milligrams per litre; and total lead, dissolved — 50 micrograms per litre.

Table 36. Performance indicators: water pollution

<table>
<thead>
<tr>
<th>Selected rivers</th>
<th>Biochemical oxygen demand</th>
<th>Nitrates</th>
<th>Total phosphorus</th>
<th>Nitrogen balance on agricultural land</th>
<th>Nitrate fertiliser use</th>
<th>Phosphate fertiliser use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1985-87 to 1995-97, annual average change</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage changes, 1980-85 to last three years</td>
<td>Annual percentage change 1979-99</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Austria</td>
<td>..</td>
<td>20.1</td>
<td>-42.8</td>
<td>-2.4</td>
<td>7.8</td>
<td>1.3</td>
</tr>
<tr>
<td>Belgium</td>
<td>-51.8</td>
<td>2.7</td>
<td>55.9</td>
<td>-0.5</td>
<td>-0.9</td>
<td>-4.5</td>
</tr>
<tr>
<td>Canada</td>
<td>..</td>
<td>-2.1</td>
<td>-19.3</td>
<td>8.4</td>
<td>3.4</td>
<td>0.1</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>-45.2</td>
<td>-20.9</td>
<td>..</td>
<td>-5.8</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Denmark</td>
<td>-46.9</td>
<td>-33.1</td>
<td>-49.0</td>
<td>-2.7</td>
<td>-2.2</td>
<td>-5.8</td>
</tr>
<tr>
<td>Finland</td>
<td>..</td>
<td>37.3</td>
<td>-27.6</td>
<td>-1.9</td>
<td>-0.5</td>
<td>-5.1</td>
</tr>
<tr>
<td>France</td>
<td>-38.0</td>
<td>10.3</td>
<td>-3.0</td>
<td>-0.9</td>
<td>0.9</td>
<td>-3.5</td>
</tr>
<tr>
<td>Germany</td>
<td>-19.3</td>
<td>2.4</td>
<td>-64.2</td>
<td>-3.6</td>
<td>-0.5</td>
<td>-5.6</td>
</tr>
<tr>
<td>Greece</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>-5.3</td>
<td>-1.0</td>
<td>-2.5</td>
</tr>
<tr>
<td>Hungary</td>
<td>-32.2</td>
<td>-25.0</td>
<td>-27.5</td>
<td>n.a.</td>
<td>-3.2</td>
<td>-11.0</td>
</tr>
<tr>
<td>Iceland</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>-0.2</td>
<td>-0.8</td>
<td>-3.5</td>
</tr>
<tr>
<td>Ireland</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>2.5</td>
<td>2.8</td>
<td>-2.3</td>
</tr>
<tr>
<td>Italy</td>
<td>..</td>
<td>30.3</td>
<td>-33.3</td>
<td>-3.7</td>
<td>-1.2</td>
<td>-2.3</td>
</tr>
<tr>
<td>Japan</td>
<td>-7.4</td>
<td>..</td>
<td>..</td>
<td>-0.7</td>
<td>-2.4</td>
<td>-1.5</td>
</tr>
<tr>
<td>Korea</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>3.9</td>
<td>0.1</td>
<td>-1.1</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>-8.9</td>
<td>-5.0</td>
<td>-2.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>74.1</td>
<td>-73.0</td>
<td>28.9</td>
<td>-2.3</td>
<td>2.3</td>
<td>1.5</td>
</tr>
<tr>
<td>Netherlands</td>
<td>-23.2</td>
<td>-13.9</td>
<td>-54.9</td>
<td>-1.8</td>
<td>-1.7</td>
<td>-1.6</td>
</tr>
<tr>
<td>New Zealand</td>
<td></td>
<td></td>
<td></td>
<td>3.3</td>
<td>10.2</td>
<td>-0.4</td>
</tr>
<tr>
<td>Norway</td>
<td>..</td>
<td>-1.0</td>
<td>-21.6</td>
<td>0.1</td>
<td>-0.3</td>
<td>-3.7</td>
</tr>
<tr>
<td>Poland</td>
<td>-12.5</td>
<td>4.8</td>
<td>-26.1</td>
<td>-4.9</td>
<td>-2.1</td>
<td>-5.6</td>
</tr>
<tr>
<td>Portugal</td>
<td>-20.4</td>
<td>19.2</td>
<td>87.3</td>
<td>3.8</td>
<td>-0.9</td>
<td>0.2</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>0.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>104.7</td>
<td>10.4</td>
<td>-13.1</td>
<td>1.0</td>
<td>1.3</td>
<td>1.7</td>
</tr>
<tr>
<td>Sweden</td>
<td>..</td>
<td>6.1</td>
<td>-31.6</td>
<td>-3.2</td>
<td>-1.5</td>
<td>-6.0</td>
</tr>
<tr>
<td>Switzerland</td>
<td>..</td>
<td>16.0</td>
<td>-27.5</td>
<td>-2.7</td>
<td>-0.5</td>
<td>-3.2</td>
</tr>
<tr>
<td>Turkey</td>
<td>122.0</td>
<td>-8.4</td>
<td>8.5</td>
<td>-3.4</td>
<td>3.9</td>
<td>-0.4</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>-16.5</td>
<td>7.8</td>
<td>16.9</td>
<td>-2.1</td>
<td>0.0</td>
<td>-1.4</td>
</tr>
<tr>
<td>United States</td>
<td>-3.7</td>
<td>-3.1</td>
<td>6.4</td>
<td>2.2</td>
<td>0.4</td>
<td>-1.2</td>
</tr>
</tbody>
</table>

Source: OECD, Environmental Data, Compendium 1999.

Although US drinking water supply is of very good quality, there have been concerns about the presence of some chemicals in the water supply. This led Congress to mandate the EPA to establish safe standards for 83 contaminants. Subsequent analysis showed, however, that the cost per saved life varied considerably across the different substances. The 10 most cost-effective measures cost $2.7 million per cancer-related death avoided, but the 60 least effective measures cost $127 million per cancer-related death avoided (Raucher et al., 1993). Perhaps as the result of these findings, the Safe Drinking Water Act was amended in 1996 to include a cost-benefit criterion for future changes in maximum limits.
Table 37. **The impact of the Clean Water Act on river quality**

<table>
<thead>
<tr>
<th></th>
<th>Swimmable</th>
<th>Fishable but not swimmable</th>
<th>Boatable but not fishable</th>
<th>No use supported</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Per cent change in miles relative to position without Act</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>All rivers</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With Clean Water Act</td>
<td>7.4</td>
<td>4.6</td>
<td>-5.3</td>
<td>-12.2</td>
</tr>
<tr>
<td>With zero point emissions</td>
<td>15.0</td>
<td>5.3</td>
<td>-11.0</td>
<td>-20.6</td>
</tr>
<tr>
<td><strong>Rivers in populated areas</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With Clean Water Act</td>
<td>11.5</td>
<td>7.9</td>
<td>-15.0</td>
<td>-31.1</td>
</tr>
<tr>
<td><strong>Rivers in rural areas</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With Clean Water Act</td>
<td>3.1</td>
<td>3.0</td>
<td>-2.1</td>
<td>-6.6</td>
</tr>
</tbody>
</table>

*Note:* The estimates are based on simulations from the National Water Quality Pollution Control Assessment Model and assume constant emission intensities in polluting activities in the absence of the Clean Water Act. Water use categories are defined in terms of ambient concentrations that allow activities to be undertaken safely.

*Source:* Bingham et al. (2000).

### Conclusions

This discussion illustrates that the extent to which costs have to be matched against benefits depends on the type of water. For surface and ground water, there is no requirement that benefits must exceed costs, only that the cost of the regulation should be “reasonable”. However, since 1996, proposals to regulate commercial providers of drinking water must be subjected to a cost-benefit analysis. These different approaches result in very different rule-making in the areas of river and drinking water quality, which may impose significant costs on society. Moreover, policies could be implemented at a lower cost by using economic instruments, such as the trading of pollution permits, to a greater degree. Finally, even if it is the biggest contributor to water pollution, agriculture is largely exempted from measures to restrain discharges, and agricultural support continues to encourage pollution-intensive production.

Table 38. **Water level changes in the High Plains aquifer**

<table>
<thead>
<tr>
<th>State</th>
<th>Percentage of total aquifer area</th>
<th>Average area weighted water level change</th>
<th>Predevelopment (1940) to 1980</th>
<th>1980 to 1996</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Water level change, in feet</td>
<td>Rate of change, in feet per year</td>
<td>Water level change, in feet</td>
</tr>
<tr>
<td>Colorado</td>
<td>8.6</td>
<td>-4.2</td>
<td>-0.10</td>
<td>-4.7</td>
</tr>
<tr>
<td>Kansas</td>
<td>17.5</td>
<td>-9.9</td>
<td>-0.25</td>
<td>-7.7</td>
</tr>
<tr>
<td>Nebraska</td>
<td>36.6</td>
<td>0.0</td>
<td>0.00</td>
<td>+1.6</td>
</tr>
<tr>
<td>New Mexico</td>
<td>5.4</td>
<td>-9.8</td>
<td>-0.25</td>
<td>-6.2</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>4.2</td>
<td>-11.3</td>
<td>-0.28</td>
<td>-3.7</td>
</tr>
<tr>
<td>South Dakota</td>
<td>2.7</td>
<td>0.0</td>
<td>0.00</td>
<td>-0.8</td>
</tr>
<tr>
<td>Texas</td>
<td>20.4</td>
<td>-33.7</td>
<td>-0.84</td>
<td>-6.1</td>
</tr>
<tr>
<td>Wyoming</td>
<td>4.6</td>
<td>0.0</td>
<td>0.00</td>
<td>-1.9</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>-9.9</td>
<td>-0.25</td>
<td>-2.8</td>
</tr>
</tbody>
</table>

Moving towards sustainable use of renewable and non-renewable resources

Main issues

The United States is endowed with an abundance of natural resources, and potential areas of concern are therefore numerous. Moreover, with the federal and state governments owning almost 40 per cent of the land mass and controlling the use of the seas, the public sector is intimately involved in the management of natural resources. For some natural resources, progress has been made in moving towards sustainable use, though often at a high cost. Thus, the transition away from over-fishing has begun, but a statutory ban of the use of tradeable quotas has made this process unnecessarily costly. Similarly, soil erosion has been reduced, but at a high cost in terms of budgetary outlays. Less progress has been made in the critical area of water supply. This section focuses on the sustainable use of water resources.

Water supply: performance

The United States as a whole has no shortage of water, but large parts of the west are arid. Among economic activities, agriculture withdraws the largest share of ground water (65 per cent of the total) and the second highest amount of surface water. The availability of groundwater is a primary concern, since more than half of the population and a large proportion of agriculture depend on this source of water. Many aquifers have slow natural recharge rates, and current extraction rates are leading to depletion. For example, the water level in the High Plains (Ogallala) Aquifer, which irrigates more than 20 per cent of all US cropland, has fallen steadily (Table 38) and is close to economic depletion in parts of Texas and Kansas (Woods et al., 2000). There are also problems in California and New Mexico. Overall, about 10 per cent of the national water supply represents depletion of stored water (Goolehon, 2000), with the result that withdrawals, relative to renewable sources, are high in the United States compared with most other countries (Table 39).

Water supply: policy

Water use policy is marred by a failure to let its scarcity be reflected in its price. A recent survey found that six of the thirteen municipalities in California that relied on groundwater charged a marginal price of zero and that twelve charged a price below 60 per cent of the marginal cost of production (Timmins, 2002), resulting in excessive water use and inefficient transfers from taxpayers to users. Moreover, there was clear evidence that the municipalities that had acquired groundwater rights were not pricing it in a way that optimised the surplus that it could generate over time. Furthermore, agricultural water prices are set far below what industrial and household users pay in order to boost farmers’ income. In the region of the Sacramento River, for example, households pay 16 times more than the maximum price that may be required from the irrigators (OECD, 2001), and the multiple rises to 100 in some cases (Antonelli and Sperry, 2001). In addition, farmers’ use of water is boosted by publicly-funded irrigation works that they repay for up to 50 years at a zero interest rate; and by agricultural price support and drought insurance that encourages farming of marginal land requiring extensive irrigation.

A further problem is that the legislative framework for water control suffers from underground water being considered as a common good, in contrast to the treatment accorded to oil and gas. Most states rely on a complex set of legal principles that, while recognising the private ownership of groundwater, only partially account for the linkages between the water under one property and that under a neighbouring property. Consequently, landowners have little incentive to keep water underground, as their neighbours might otherwise pump the water before them. Nonetheless, some states (Florida, Iowa, Wisconsin and Minnesota) have regulated aquifer use by establishing water management districts (Committee on Valuing Ground Water, 1997). These are empowered to licence wells and enforce well-spacing rules, in an attempt
to limit the underground flow of water from one property to another. Some states restrict the amount of water that a landowner can extract to that which can reasonably be used on the land, but there are few other restrictions on the trading of groundwater.

Table 39. **International water supply use comparison**

<table>
<thead>
<tr>
<th>Abstraction relative to renewable resources</th>
<th>Water use</th>
<th>Water use per unit of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Per cent</td>
<td>Billion m³</td>
</tr>
<tr>
<td>Australia</td>
<td>4.3</td>
<td>15.1</td>
</tr>
<tr>
<td>Austria</td>
<td>4.2</td>
<td>3.5</td>
</tr>
<tr>
<td>Belgium</td>
<td>45.1</td>
<td>7.7</td>
</tr>
<tr>
<td>Canada</td>
<td>1.7</td>
<td>47.5</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>14.3</td>
<td>2.3</td>
</tr>
<tr>
<td>Denmark</td>
<td>12.3</td>
<td>0.7</td>
</tr>
<tr>
<td>Finland</td>
<td>2.1</td>
<td>2.3</td>
</tr>
<tr>
<td>Germany</td>
<td>22.3</td>
<td>40.6</td>
</tr>
<tr>
<td>Greece</td>
<td>12.1</td>
<td>8.7</td>
</tr>
<tr>
<td>Hungary</td>
<td>4.7</td>
<td>5.6</td>
</tr>
<tr>
<td>Iceland</td>
<td>0.1</td>
<td>0.2</td>
</tr>
<tr>
<td>Ireland</td>
<td>2.6</td>
<td>1.2</td>
</tr>
<tr>
<td>Italy</td>
<td>32.1</td>
<td>56.2</td>
</tr>
<tr>
<td>Japan</td>
<td>21.2</td>
<td>89.3</td>
</tr>
<tr>
<td>Korea</td>
<td>35.6</td>
<td>24.9</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>3.4</td>
<td>0.1</td>
</tr>
<tr>
<td>Mexico</td>
<td>17.1</td>
<td>79.2</td>
</tr>
<tr>
<td>New Zealand</td>
<td>0.6</td>
<td>2.0</td>
</tr>
<tr>
<td>Norway</td>
<td>0.7</td>
<td>2.8</td>
</tr>
<tr>
<td>Poland</td>
<td>18</td>
<td>11.3</td>
</tr>
<tr>
<td>Portugal</td>
<td>15.3</td>
<td>11.0</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>1.5</td>
<td>1.2</td>
</tr>
<tr>
<td>Spain</td>
<td>36.8</td>
<td>40.8</td>
</tr>
<tr>
<td>Sweden</td>
<td>1.5</td>
<td>2.7</td>
</tr>
<tr>
<td>Switzerland</td>
<td>4.8</td>
<td>2.5</td>
</tr>
<tr>
<td>Turkey</td>
<td>16</td>
<td>37.4</td>
</tr>
<tr>
<td>United Kingdom¹</td>
<td>6.7</td>
<td>9.8</td>
</tr>
<tr>
<td>United States</td>
<td><strong>19.9</strong></td>
<td><strong>493.1</strong></td>
</tr>
<tr>
<td>Total of available countries</td>
<td>10.8</td>
<td>999.8</td>
</tr>
</tbody>
</table>

1. England and Wales only.

Source: OECD.

The law governing surface water trading in the arid west is more efficient than that for groundwater, as it recognises the rights of other users. Under this law, a junior water-right holder has the right to compensation from the senior user if water use is changed, with seniority being determined by the point in time at which use was first established. Thus, the trading of surface water rights is more
complicated than for groundwater trading but more economically efficient. However, in some states the documentation of water rights is poor, and therefore transaction costs for the trading of surface-water rights can be quite high. Nevertheless, water rights markets do work, notably for additional water supplies, as in the North Colorado Water Conservation District, though even there the market is not entirely free (Kemper and Simpson, 1999).

Conclusions

In order to conserve water resources, price increases in dry areas are needed to ensure that water is used with due regard to its scarcity. Even cost-based water pricing systems are inefficient as they ignore the fact that the resource is being depleted. In such a case, the price should include not only current extraction cost but also the foregone benefits that the extracted water would have provided to future users. Price increases are especially necessary for supplies of irrigation water to agriculture. At least, irrigators should pay the same price as other users for water of similar quality. The Bureau of Reclamation could encourage the development of water markets by removing restrictions on changes in use and location. Pricing based on farmers’ “ability to pay” should be abandoned and the legislation on the use of subsidised water on large farms be made more effective. If the maintenance of farm incomes is an important social policy objective, it would be preferable to implement income-support schemes that do not depend on production than to provide support via low water prices.
NOTES

1. This description applies to married individuals filing jointly. The income limits and/or exemption amounts are different for individuals who are single or married and filing separate returns.

2. The tax code currently provides assistance to families through the dependent exemption, head-of-household filing status, the child tax credit, the child and dependent care tax credit, and the Earned Income Tax Credit. The proposal would create a uniform definition of a qualifying child for these purposes.

3. It is normal for receipts to lag income growth, especially when the pace of labour market recovery is slow.

4. An exception is the Veterans’ Administration health system, an integrated system of health care financing and delivery for benefit of the nation’s military retirees.

5. In practice, nearly all firms with 200 or more workers offer health insurance, as do 65 per cent of employers with between 3 and 199 employees (Gabel et al., 2001). Firms that employ many low-wage workers are least likely to offer insurance, as are companies with high employee turnover. Some workers are not covered because their employer does not offer coverage. Others are not eligible to enrol because of waiting periods or minimum standards for hours worked. Still others choose not to enrol because of the amount of the contribution the employee is required to make or because they have coverage available through another source.

6. Since 1993 the percentage of employers offering health benefits to retirees under the age of 65 has dropped from 46 to 31 per cent, while the percentage of employers offering coverage designed to supplement Medicare for eligible retirees has fallen from 40 to 24 per cent (Fronstin, 2001b). It should be mentioned, however, that there is mandatory COBRA coverage and HIPAA protection for people leaving employer coverage (including retirees).

7. In 2000, 7 per cent of Americans under age 65 held an individually purchased health insurance policy (Fronstin, 2001c). Although about one-third of Medicare beneficiaries have an individually purchased, private supplemental (Medigap) policy, this market is heavily regulated, and its problems are not the same as those in the standard non-group commercial market for health insurance.

8. All states are required by law to have coverage arrangements for individuals who are hard to insure in the individual market. About 30 states have high-risk pools, which (when well funded) can provide more affordable coverage than community rating.

9. Employers and workers each pay half of a mandatory payroll tax of 2.9 per cent to fund the hospital insurance (Part A) component of Medicare, which furnishes insurance for inpatient hospital care and health care in skilled nursing facilities and some other institutions. Those entitled to Part A are also eligible to enrol in Part B, which offers coverage for physicians’ services, laboratory work and other medical supplies and services at the cost of a subsidised monthly premium. General tax revenues finance 75 per cent of the cost of Medicare Part B; the other quarter is financed through premium revenues.

10. Prospective payment systems establish levels of payment (which may be based, in whole or in part, on an estimate of resource requirements) in advance of the provision of services, as opposed to cost-based payment systems, which determine payments retrospectively as a function of actual costs incurred.
Prospective payment systems may establish rates per service, provide a bundled payment for a group of services, or set rates based on another unit, such as per diem, per discharge or per episode of treatment.

11. In traditional Medicare, most hospital inpatient services are paid according to a system of diagnosis-related groups (DRGs), which establishes national rates per discharge based on the diagnosis and type of service furnished. Adjustments to hospital payments take into account higher input prices in urban areas, the provision of graduate medical education and charity care. Physicians’ fees for each covered service are set according to a relative value scale, which was developed and is updated in consultation with medical experts, and conversion factors that adjust for various components of practice expense.

12. The primary forms of supplemental insurance coverage are employer-sponsored plans for retirees and individually purchased “Medigap” policies, each of which cover about a third of Medicare beneficiaries, and Medicaid, which provides supplemental coverage for about 15 per cent of beneficiaries.

13. Prior to the Medicare+Choice programme, only health maintenance organisations could participate in Medicare. Now preferred provider organisations and other types of managed care plans, as well as privately administered fee-for-service plans and medical savings accounts are also eligible.

14. In the first three years of Medicare+Choice, health plan withdrawals and service area contractions affected 1.7 million beneficiaries who had to change plans or switch to the traditional programme. Total beneficiary enrolment in private health plans peaked at 6.3 million at end-1999. Within two years that had fallen to about 5.5 million, the same as in 1997.

15. Updates to payment levels, which are set in statute, have not kept pace with health-care cost increases in some areas.

16. Under federal law, state Medicaid programmes must cover certain groups and are permitted to expand coverage to other designated groups such as all children 18 and under who live in families with incomes below 100 per cent of the federal poverty level. They are permitted, but not required, to cover pregnant women and infants under age 1 whose family income is between 133 and 185 per cent of that level.

17. The federal government’s cost share ranges from 50 to 83 per cent. With limited exceptions, it also pays half states’ administrative costs for Medicaid. At nearly 60 per cent, the average federal contribution has changed little over the past decade.

18. Reliance on social assistance programmes to finance long-term care is not unusual among OECD countries.

19. For those who are dually enrolled in Medicare and Medicaid, Medicare serves as the primary payer, while Medicaid covers cost sharing, deductibles and payment for care not covered in the Medicare benefits package, such as prescription drugs and long-term care. States’ ability to mandate managed care enrolment for dual enrollees is limited by federal provisions allowing Medicare beneficiaries to have unrestricted choice among health care providers.

20. Most states have chosen to furnish SCHIP coverage by expanding Medicaid eligibility, although others are creating new programmes or subsidising private coverage.

21. SCHIP enrolment increased from 2.7 million in December 2000 to 3.5 million in December 2001, according to estimates of the Kaiser Commission on Medicaid and the Uninsured.

22. However, since the federal welfare reforms were implemented in 1996-97, Medicaid eligibility no longer coincides with eligibility for receipt of cash assistance.

23. As the use of flexible spending accounts has been limited by the “use it or lose it” (at the end of the year) requirement, the Treasury has very recently announced a new programme to address this issue. Under the Health Reimbursement Arrangement programme, employers of any size can set up a pre-tax employee
benefit that can be used to pay out-of-pocket expenses and unused balances from one year can be used for spending in subsequent years.

24. Recent innovations like Health Reimbursement Arrangements may spur future evolution of the market toward personal care arrangements of a defined contribution type.

25. Community hospitals are accessible by the general public and include short-term general hospitals and special hospitals focusing on obstetrics and gynaecology, rehabilitation care or other selected services.

26. Prospective payment systems for care provided in settings that can substitute for some inpatient care, such as outpatient departments, have only recently been developed and implemented by Medicare and other payers. Formerly, Medicare’s payments to these providers were calculated on the basis of incurred costs.

27. In practice, there is considerable overlap along the continuum of needs. Home care agencies supply both home health care and other types of personal assistance on a short- and long-term basis. Nursing homes and some hospitals offer skilled nursing care, while rehabilitation hospitals and rehabilitation departments of acute care hospitals furnish sub-acute rehabilitation care.

28. In 2000, the United States spent around 10 per cent of its total health expenditures on pharmaceuticals, as compared with an OECD average of about 15 per cent and a range of 9 to 25 per cent. As a share of GDP, this represents \( \frac{3}{4} \) per cent compared with an OECD average of \( \frac{1}{4} \) per cent.

29. Spending on direct advertising to consumers nearly tripled from 1997 to 2000, reaching $2.3 billion.

30. The data in the Figure refer to 1999 because more recent data are not yet available for all countries.

31. In 2000, 70 (31) per cent of public (total) spending was made by the federal government.

32. It must be noted, however, that OECD Health Data reflect only inpatient figures, although outpatient surgeries account for about half of all surgical procedures in the United States.

33. See Danzon and Kim (1998) and Danzon (1999). Even here, the OECD has discontinued the collection and dissemination of data regarding the number of prescriptions because they were found to be problematic.

34. While it seems that the US deflator for medical services is biased upwards (McClellan and Cutler, 2001), in Europe medical price trends are rather understated, according to OECD experts.

35. Population ageing contributes to spending growth, as the elderly consume approximately three times as much health care as their under-65 counterparts. However, ageing has been less pronounced in the United States than elsewhere.

36. With the stock market correction along with large legal awards eroding insurers’ reserves, malpractice insurance premiums have surged, recently rising at a median annual rate of 15 per cent for general surgeons and nearly doubling for some specialists. Obstetricians are now paying as much as $100 000 a year to protect themselves, according to press reports. Some cases of outright withdrawal have occurred.

37. Of concern is the increase in the number of programme beneficiaries concurrent with a reduction in the relative number of workers financing the programme.

38. The estimated depletion date was 2015 in 1999, 2023 in 2000 and 2029 in 2001.

39. This part of Medicare, with no trust fund constraint, is about to exceed hospital costs.
There is evidence, however, that insurance coverage has declined primarily because increasing costs have led workers not to take up coverage even when offered it (Cutler, 2002).

Although little work has been done to make international comparisons of access to care, survey research in five English-speaking countries sheds some light on differences in access perceived by the population. Schoen et al. (2000) found that the United States was similar to Australia and New Zealand, but dissimilar to Canada and Great Britain in terms of differences in perceived accessibility across income groups. Two- to three-fold differences were found between those with above- and below-average incomes on measures of difficulty in obtaining care, care-related financial problems and quality of service received.

Very few published studies have addressed waiting times for health care services in the United States; however, studies have documented shorter waiting times for cardiovascular procedures in US hospitals, as compared with other countries. See, for example, Carroll et al. (1995).

See, for example, Wennberg et al. (1989), which compared rates of discharge, readmission and length of stay between Boston, Massachusetts and New Haven, Connecticut, and found that, adjusted for health care needs, they were 47, 29, and 15 per cent, respectively, higher in Boston. A full compendium of such data is produced annually as The Dartmouth Atlas of Health Care in the United States.

First, the percentage of women aged 65 to 69 who obtained a mammogram in the past two years ranged from 21 per cent to 77 per cent across the nation’s hospital referral regions. Second, the average number of visits to specialists for beneficiaries in the last six months of life ranged from two per decedent (in Mason City, Iowa) to more than twenty-five per decedent (in Miami, Florida).

The problem is most evident in the Medicare programme, where payments to health plans are still linked to payment levels in the traditional fee-for-service programme. As a result, health plans in certain areas are able to furnish prescription drug coverage and improved cost sharing, whereas in other areas plans have withdrawn from the market because they are unable to compete with the traditional programme at the established payment rate. The net result is that some beneficiaries have significantly more health care benefits — including covered services and lower cost sharing — available to them than do their counterparts living in a neighbouring county.

One recent study by Epstein et al. (2000) found evidence that some such differences may reflect differences across populations in the relative rate at which services are furnished beyond what is clinically appropriate (overuse) and the rate at which needed care is not furnished (under-use). Using retrospective review of medical charts, the researchers found that black patients with end-stage renal disease who were appropriate candidates for transplant surgery were less likely than their white counterparts to be referred for transplant evaluation, placed on a waiting list or undergo transplantation.

A study of 11 OECD countries found that in the United States and three others (Portugal, Austria and Greece) the poorest fifth of the population benefited from 20 to 30 per cent fewer physician visits than the richest fifth, after controlling for indicators of the level of medical need (van Doorslaer et al., 2001).

There are limitations of such comparisons. For instance, US doctors tend to undertake drastic measures to save a troubled foetus. This leads to higher infant mortality rates relative to countries where efforts to save foetuses are not as great. On the other hand, in 1999, 17 per cent of mothers did not receive early prenatal care and 22 per cent of children aged 19-35 months had not received the recommended combined series of vaccinations (National Center for Health Statistics, 2001).

This study builds on previous work by Cutler et al. (1998) in which the quality-adjusted cost of treating heart attack patients was shown to have declined about 1 per cent annually between 1983 and 1994.

Other studies showed similar findings for post-surgical mortality and cancer survival (Roos et al., 1990; Roos et al., 1992; GAO, 1994). However, studies comparing acute myocardial infarction treatment and
outcomes found that the United States attained better outcomes in patient functional status or quality of life (Roleau et al., 1993; Mark et al., 1994).

51. In 1998, health care quality was the subject of a report by a Presidential Commission. It is also the subject of an ongoing investigation by the Institute of Medicine and of current research sponsored by AHRQ and others.

52. Some limited international comparisons are available. One study of the provision of coronary angiography and bypass surgery in one Canadian and several American hospitals found higher rates of inappropriate service provision in the American hospitals studied (Roos et al., 1994). However, procedure rates were much lower in Canada, and the study did not address the extent of under-use, or the degree to which these procedures were not furnished to appropriate candidates in Canada versus the United States.

53. Moreover, using data from surveys and certification, the government has measured physical restraint use in nursing homes and set targets to decrease it to no more than 10 per cent. The target has been achieved and further reductions are now underway.

54. There is no agreement on the importance of job lock, however, nor on its significance for welfare (see Gruber and Madrian, 2002).

55. Some efforts to develop competition at the provider rather than the health plan level have emerged in response to these issues. For example, the Buyers Health Care Action Group of Minneapolis, Minnesota, has established a system of discrete provider groups to compete on cost and performance (Christianson and Feldman, 2002).


57. An example of such a system is that existing for federal employees, which, in the Administration’s view, could serve as a model for Medicare reform. See Council of Economic Advisers (2002) and Feldman et al. (2002).

58. These organisations include the Congressional Budget Office, the General Accounting Office and the Medicare Payment Advisory Commission.

59. Such an approach would address the contentious issue of over-billing (in order to get inflated matching funds from the federal government).

60. Without community rating, selection problems might be exacerbated as healthier people might drop their current group coverage in order to reduce their premiums.

61. Currently GAAP is 4 530 pages in length.


63. The Title I programme provides federal assistance to help raise the performance of disadvantaged children. Part A of Title I provides federal funds to states to increase resources available to schools with high concentrations of low-income students.

64. Figlio (2001) presents a slightly more detailed, yet highly accessible, introduction to recent work on school accountability.

65. This difficulty arises for several reasons. One is that the importance of peer-group effects is controversial (see Epple and Romano and the citations therein). Another is that the importance of such a channel
depends upon the number of students that exercise choice and on the degree to which spaces in attractive schools are rationed (rather than openly available to all applicants within a district). The extent of both these features under the current reform is unknown.

66. In sum, spending in states with court-ordered SFE programmes has tended to rise (Evans et al., 1998).

67. Two factors are important in considering trends in household income inequality. First, the long-term increase in female participation has tended to lower inequality among families, if the value of the time not spent working is not counted. Second, snapshots of inequality do not measure lifetime inequality in earnings. But even accounting for these factors, inequality has increased markedly (Burtless et al., 2001).

68. The large increase in the value of the credit reflects both its doubling and the expected increase in eligible households and greater take-up due to its refundability.

69. Meyer (2001) presents an accessible discussion of how policy changes, particularly in the EITC, increased the return to work and labour force participation among single working mothers prior to 1996.

70. Some states have adopted similar policies without federal guidance. For example, Virginia suspends time limits in communities where the unemployment rate exceeds a certain threshold (10 per cent). Illinois stops the clock for recipients who are working at least 30 hours a week and earning too little to get out of poverty, are in college and earning at least a 2.5 grade point average, or are caring for a sick child who is dependent on life-support equipment.


72. Two points are of note. First, signs of an up-tick in crime in 2001 have already become available through the Federal Bureau of Investigation’s Uniform Crime Reports, which record crimes reported to police. The crime victimisation statistics that are reported here rely on samples of households and include crimes not reported to the police, but these data lag and are not available through 2001. Also, a hole in the crime statistics is the prevalence of financial crime, such as fraud and embezzlement. Such statistics are not available on a historically comparable basis. However, anecdotal reports indicate that such offences are at high levels (as has happened in the past at the end of long expansions in financial activity, e.g. during the savings and loan crisis in the late 1980s and early 1990s). Another contributing factor may be demographic shifts: the increasing share of the population accounted for by the baby boom may be linked to a rise in “white collar” crime, as older people are less likely to commit other crime and perhaps more likely to commit financial crimes (Labaton, 2002).

73. These estimates are only crude approximations. They are found by applying the costs of rape/sexual assaults, robberies and assaults to the numbers of such crimes in each year. Note that the estimated costs for violent crimes that result in death is much higher and hence would boost the levels reported.

74. The influence of crack cocaine on crime rates proposed by Blumstein (1995) is complex and reflects economic forces. Crack is easier to store and sell in small units than powder cocaine. This lowered its price, increased the number of interactions between buyers and sellers, and facilitated entry into the market. All these factors boosted criminal activity associated with crack. Reduced social acceptance of crack by the 1990s was one factor contributing to falling crime.

75. See the discussion in Freeman (1996), Levitt (1998), and Imrohoroglu et al. (2001).

76. Nearly 40 per cent of victimisations of violent crime involve alcohol, and about four in ten incarcerated individuals report being under the influence of alcohol at the time of their offence Greenfield (1998).

77. For example, limits on US actions could result from ongoing disputes before the WTO. Indeed, many OECD countries complained that the so-called “Byrd amendment”, a 2000 law (the Continued Dumping
and Subsidy Offset Act) that allows the US government to distribute the proceeds of antidumping and countervailing duties to domestic firms in the relevant industry (in 2001, this amounted to $206.8 million), violates international trade rules. In July 2002 a WTO panel ruled against the United States in an interim judgement.

78. The relative level of the loan rate for soybeans is, however, less distortionary and may reduce the substitution of soybean acreage for grains that has occurred in recent years.

79. In 2000, the United States represented 21 per cent of world GDP aggregated using 2000 purchasing power parity (PPP) exchange rates but 31 per cent using market rates.

80. The Administration estimates that implementing the Kyoto Protocol in the United States would cost $400 billion of lost output and would cost five million jobs. These are short-run estimates based on the interaction of an energy model that determines carbon prices and the DRI macroeconomic model of the US economy (Fleisher, 2002 and US Energy Information Administration, 1998 — especially Chapter 6). Model simulations suggest that even a policy that stabilised emissions from the electricity sector at their 1990 levels by 2010 would raise electricity prices by one third and natural gas prices by up to 20 per cent. The peak annual loss in GDP would be between 0.4 and 0.8 per cent (US Energy Information Administration, 2002). OECD estimates suggest that the economic cost without flexibility mechanisms could amount to 0.3 per cent of GDP (OECD, 1999). Other studies of the economic costs reviewed in OECD (1999) range from 0.2 to 2.2 per cent of GDP.

81. Such a reduction amounts to around 100 million tonnes carbon equivalent per year by 2012, a similar cut to that envisaged for domestic emissions by the previous Administration, which aimed at making up the shortfall from the Kyoto targets by purchasing permits from abroad or using other flexibility mechanisms allowed under the Protocol.

82. See US Environmental Protection Agency (2001).

83. With uncertainty about abatement costs and the possibility that they are steeply rising in the short run, a pure cap-and-trade programme may require modification in order to provide some assurance against excessive price swings.

84. Uniform proportional cuts in carbon emissions result in abatement costs of $880 per tonne of carbon saved against a cost of only $160 in the electricity sector (Babiker et al., 2000).

85. An Energy Information Administration analysis, based on a model that assumes a relatively inelastic supply of natural gas, suggests that a mandate would cost less to electricity consumers.

86. The Act contains a list of toxic pollutants and also identifies biological oxygen demanding materials, suspended solids, fecal coliforms and acidity as conventional pollutants. Heated water is not classed as a pollutant.

87. There is another weakness as well. While the benefits and the costs of the situation with the Clean Water Act were compared to a situation without the Act, the benefit and cost baselines were prepared independently, raising the possibility that they were inconsistent.

88. The value of the long-run surplus that can be extracted from a water well depends on the extent to which the current rate of pumping is lowering the depth of water in a well and hence raising future pumping costs.

89. The impact on trading is accentuated by the rules under which the public-sector bodies (such as the Federal Bureau of Reclamation — the second largest wholesale supplier of water in the west — and the California Water Bureau) allocate irrigation water to a given tract of land and often to a given use. In addition, farmers easily circumvent existing restrictions on large farms purchasing subsidised water.
BIBLIOGRAPHY

Acemoglu, D. (2000),

Alter, J. (2001),

Antonelli, A.M. and P.B. Sperry (2001),
A Budget for America, Heritage Foundation, Washington, DC.

Auerbach, A. (1994),

Autor, D. and M. Duggan (2001),


“Health Insurance and Access to Care for Symptomatic Conditions”, Archives of Internal Medicine, Vol. 160, No. 9.

“Lack of Health Insurance and Decline in Overall Health in Late Middle Age”, New England Journal of Medicine, Vol. 345, No. 15, 11 October.


Ball, L. and R. Moffitt (2001),

Barringer, W. and J.P. Kenneth (2002),
Paying the Price for Big Steel, American Institute for International Steel.
Barro, S. (1983),

Bernanke, B.S., T. Laubach, F.S. Mishkin and A.S. Posen (1999),

Berndt, E. (2000),

Bernheim, B.D., D.D. Garrett and D. Maki (1997),

Berube, A., A. Kim, B. Forman and M. Burns (2002),


Bitler, M.P., J.B. Gelbach and H.W. Hoynes (2002),

Blank, R. (2001a),

Blank, R. (2001b),

Blank, R. and D. Card (1993),


Blumstein, A. (1995),

Board of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds (2002),
Borjas, G.J. (1999),

Bowling, B. (1999),

Browner, C.M. (2000),
30 Years of U.S. Environmental Protection: Speech marking the 30th anniversary of Earth Day, John F. Kennedy School of Government, Harvard University, 17 April.
http://www.epa.gov/history/topics/epa/30a.htm.

Bruen, B. and J. Holahan (2001),

Buchner, B., C. Carraro and I. Cercosimo (2002),

Burnett, J.K. and R.W. Hahn (2001),
“A Costly Benefit”, Regulation, Fall, Washington, DC.

Burtless, G., B. Bosworth and C. Sahm (2001),

Butterfield, F. (2002),

Capps, C., D. Dranove, S. Greenstein and M. Satterthwaite (2001),

Card, D. and J.E. Dinardo (2002),

Carroll, R.J., B. Soderfeldt, B.C. James and L. Malmberg (1995),

Centers for Medicare and Medicaid Services (2002),
National Health Expenditures, March.

Chaloupka, F., M. Grossman and J. Tauras (1999),

Chiricos, T. (1987),
Christensen, S. and J. Shinogle (1997),
“Effects of Supplemental Coverage on Use of Services by Medicare Enrolees”, Health Care Financing Review, Vol. 19, No. 1, Fall.

Christensen, S and J. Wagner (2001),

Christianson, J., R. Feldman, and D. Wholey (1997),

Christianson, J.B. and R. Feldman (2002),


Clark, P.K. (1987),

Commission to Strengthen Social Security (2001),
Strengthening Social Security and Creating Wealth for All Americans, 21 December.

Committee on Valuing Ground Water (1997),
Groundwater: Economic Concepts and Approaches, National Academy of Sciences, National Academy Press, Washington, DC.

Congressional Budget Office (2002a),
The Economic and Budget Outlook, January.

Congressional Budget Office (2002b),
“The Effect of Changes in Labor Markets on the Natural Rate of Unemployment”, April.

“Which Types of Hospital Mergers Save Consumers Money?”, Health Affairs, Vol. 16, No. 6, November/December.

Cook, P., M. Moore and A. Braga (2000),

Cook, P. and J. Ludwig (2002),

Council of Economic Advisers (1997),
Council of Economic Advisers (1999),
Executive Office of the President of the United States, September.

Council of Economic Advisers (2002a),
_Economic Report of the President_, Executive Office of the President of the United States, February.

Council of Economic Advisers (2002b),
*Health Insurance Credits*, February.

Crippen, D. (2001),
Statement of Dan L. Crippen, Director, Congressional Budget Office, Medicare Reform: Providing
Prescription Drug Coverage for Seniors, before the Committee on Energy and Commerce Subcommittee

Crippen, D. (2002),
Statement of Dan L. Crippen, Director, Congressional Budget Office, Projections of Medicare and
Prescription Drug Spending, before the Committee on Finance, US Senate, 7 March.

“Managed Care and Physicians’ Provision of Charity Care”, _Journal of the American Medical
Association_, Vol. 281, No. 12, 24-31 March.

Cunningham, R. and D.B. Sherlock (2002),
“Bounceback: Blues Thrive as Markets Cool Towards HMOs”, _Health Affairs_, Vol. 21, No. 1,
March/April.

Cutler, D.M., M. McClellan, J.P. Newhouse and D. Remler (1998),
“Are Medical Prices Declining? Evidence from Heart Attack Treatments”, _Journal of the American
Medical Association_, Vol. 113, No. 4, November.

Cutler, D.M. and M. McClellan (2001),
“Is Technological Change in Medicine Worth it?”, _Health Affairs_, Vol. 20, No. 5, September/October.

Cutler, D.M. (2002),

Danzon, P. and J. Kim (1998),
Economics.

Danzon, P. (1999),
“Price Comparisons for Pharmaceuticals: A Review of US and Cross-National Studies”,
Washington, DC.

Danzon, P.M. and M.V. Pauly (2001),
“Insurance and New Technology: From Hospital to Drugstore”, _Health Affairs_, Vol. 20, No. 5,
September/October.

Database of State Incentives for Renewable Energy (2002),
Data extracted from [www.dsireusa.org](http://www.dsireusa.org) on 3 June 2002.


Feder, J., H.L. Komisar and M. Niefeld (2000),

Feist, H. and R. Schöb (1998),

Feldman, R.D., D.R. Wholey and J.B. Christianson (1998),

Figlio, D. (2001),

Figlio, D. and M. Lucas (2000),

Figlio, D. and M. Page (forthcoming),

Figlio, D. and J.P. Ziliak (1999),

Fleisher, A. (2002),
White House Press Briefing, 12 February.


Fox, P.D. (2001),
“Employer Contracting with HMOs for Medicare Retirees”, AARP report No. 2000-13, August.

Freeman, A.M. (2000),

Freeman, A.M. (2002),

Freeman, R. (1983),

Freeman, R. (1995),

Freeman, R. (1996),
Freeman, R. (1999),

Freeman, R. (2001),

Fronstin, P. (2001a),

Fronstin, P. (2001b),

Fronstin, P. (2001c),

Fronstin, P. (2002),

Fuller, J. and M.C. Jensen (2002),
“Just Say No to Wall Street”, Amos Tuck School of Business at Dartmouth College Working Paper No. 02-01.

Gabel, J.R. (1999),

Gabel, J.R., P.B. Ginsburg, J.D. Pickreign and J.D. Reschovsky (2001),


Gabel, J.R., K. Dhont, H. Whitemore and J. Pickreign (2002),

Gale, W.G. and S. Potter (2002),

Gale, W.G. and P. Orszag (2002),

Garces, E., D. Thomas and J. Currie (2000),


Given, R. (1996),

Glied, S. (2000),

Glied, S. (2001),

Gold, M.R. (2001),


Goolehon, N. (2000),
*Water Use and Pricing in Agricultural and Environmental Indicators*, Economic Research Service, United States Department of Agriculture Washington, DC.


Gramlich, E. (1990),

Gramlich, E. (1995),

Greenfeld, L. (1998),
“Alcohol and Crime”, US Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

Grogger, J. (1998),

Grogger, J. (2000),
Gross, D.J., L. Alexihi, M.J. Govspamp, J. Corea, C. Caplan and N. Bramgan (1999),
“Out-of-Pocket Health Spending by Poor and Near-Poor Elderly Medicare Beneficiaries”, *Health Services Research*, Vol. 34, April.

Grossman, M. (1999),

Gruber, J. (2001),

Gruber, J. and B.G. Madrian (2002),


Gustafson, C. and P. Levine (1998),

Haddad, B. (1997),
“Putting Markets to Work: the Design and Use of Marketable Permits and Obligations”, Public Management Occasional Papers No. 19, OECD.

Hahn, R.W. (1996),

Hahn, R.W., S.M. Cavanagh and R.N. Stavins (2002),
“National Environmental Policy in the Clinton Years”, Fondazione Eni Enrico Mattei Working Paper No. 32.

Hamoudi, A. and J. Sachs (1999),
“Economic Consequences of Health Status: A Review of the Evidence”, Center for International Development at Harvard University, mimeo.

Harcourt, B.E. (2001),

Haskins, R., I. Sawhill and K. Weaver (2001),


Hill, M.A. and J. O’Neill (2001),

Hitiris, T. and J. Posnett (1992),

Ho, V. and B. Hamilton (2000),

Holahan, J. and B. Garrett (2001),
“Rising Unemployment and Medicaid”, Urban Institute Health Policy Online Series No. 1, 16 October.

Holzer, H.J. (2000),

Hoxby, C.M. (2001),

Hoxby, C.M. (forthcoming),

Hussar, W. and W. Sonnenberg (2000),

“Out-of-Pocket Medical Spending for Care of Chronic Conditions”, Health Affairs, Vol. 20, No. 6, November/December.

Imrohoglu, A., A. Merlo and P. Rupert (2001),

Institute of Medicine (2001),
Coverage Matters: Insurance and Health Care, National Academy Press, Washington, DC.

Institute of Medicine (2002),
Care Without Coverage: Too Little, Too Late, National Academy Press, Washington, DC, May.

Internal Revenue Service (2002),

International Centre for the Prevention of Crime (1998),
Johnson, N. and D. Tenny (2002),

Joint Economic Committee (2002),

Juhn, C., K. Murphy and R. Topel (2002),
“Current Unemployment, Historically Contemplated”, paper prepared for the Brookings Panel on Economic Activity, 4-5 April.


Kaiser Commission on Medicaid and the Uninsured (2001a),

Kaiser Commission on Medicaid and the Uninsured (2001b),
“Medicaid Coverage During a Time of Rising Unemployment”, Policy Brief, December.

Kaiser Family Foundation (2001),
“Rising Unemployment and the Uninsured”, Policy Brief, December.

Kane, T.J. and D.O. Staiger (2001),

Karoly, L.A. (2001),

Katz, J.N. (2001),

Katz, L. and A. Krueger (1999),

Kawachi, I. and B.P. Kennedy (1997),

Kaye, K. (1997),

Kelling, G.L. and W.H. Sousa, Jr. (2001),

Kemper, K.E. and L.D. Simpson (1999),


Langdon, D., T. McMenamin and T. Krolik (2002),
February.

Larsen, C. and H. Rogers (2000),
of State Incentives for Renewable Energy (DSIRE), North Carolina State University, December.

Lebow, D., L. Sheiner, L. Slifman and M. Starr-McCluer (1999),
“Recent Trends in Compensation Practices”, Federal Reserve Board Finance and Economics Discussion

Lenain, P., M. Bonturi and V. Koen (2002),
“The Economic Consequences of Terrorism”, OECD Economics Department Working Papers
No. 334, July.

Levine, P.B. and D. Whitmore (1998),


Levitt, L. and M. Freeland (2002),
“National Medical Care Spending”, Health Affairs, Vol. 21, No. 2, March.

Liang, J.N. and S. Weisbenner (2001),
Federal Reserve Board Finance and Economics Discussion Series No. 2001-57.

Lindsey, B., M. Groombridge and P. Loungani (2000),
“Nailing the Homeowner: The Economic Impact of Trade Protection of the Softwood Lumber Industry”,
Cato Institute Center for Trade Policy Studies, Trade Policy Analysis No. 11, 6 July.

Lochner, L. (1999),
Paper No. 465.

Lochner, L. and E. Moretti (2001),

Loeb, S. and M. Socias (2001),
“Federal Contributions to High Income School Districts: The Use of Tax Deductions for Funding
K-12 Education”, Stanford University, mimeo, May.

Long, S.H. and M.S. Marquis (2001),
“Have Small-Group Health Insurance Purchasing Alliances Increased Coverage”, Health Affairs, Vol. 20,
No. 1, January/February.

Lott, J. (1998),

Lowenstein, R. (2000),
Luft, H. and R. Miller (1997),
“Does Managed Care Lead to Better or Worse Quality of Care?”, *Health Affairs*, Vol. 16, No. 5, September/October.

Lutter, R. (2002),

Maggadino, J. and M. Medoff (1984),

Manheim, L.M., G.J. Bazzoli and M.-W. Sohn (1994),

Markowitz, S. (2000),


Mayhew, P. and J.J.M. van Dijk (1997),


McKibbin, W.J. and P.J. Wilcoxen (2002),

Medicare Payment Advisory Commission (2000),

Meyer, B.D. (2001),

Meyer, L.H. (2001),

Meyer, B.D. and D.T. Rosenbaum (2001),

Miller, R. and H. Luft (1997),
“Does Managed Care Lead to Better or Worse Quality of Care?”, *Health Affairs*, Vol. 16, No. 5, September.


Miller, T. and S. Leatherman (1999),

Mills, R. (2000),

Miron, J. (1999),

Mishkin, F.S. and K. Schmidt-Hebbel (2001),
“One Decade of Inflation Targeting in the World: What Do We Know and What Do We Need to Know?”, NBER Working Paper No. 8397, July.

Moffitt, R.A. (1999),

Moffitt, R.A. and D.W. Stevens (2001),

Moise, P. and S. Jacobzone (2002),

Morgenson, G. (2002),


National Association of State Budget Officers (2002),
“NASBO: Medicaid to Stress State Budgets Severely into 2003”, Washington, DC, 15 March.

National Center for Health Statistics (2001),
“Health, United States, 2001”, Department of Health and Human Services, Center for Disease Control and Prevention, August, Hyattsville, Maryland.

National Governors Association and National Association of State Budget Officers (2002),

Neal, D. (2001),
Newhouse, J.P. (1992),

Newhouse, J.P. (1993),

Newhouse, J.P. (2001),

Nordhaus, W. (2002a),

Nordhaus, W.D (2002b),

Obstfeld, M. and K. Rogoff (2000),

OECD (1992),

OECD (1999),
*Action Against Climate Change*, Paris.

OECD (2000),

OECD (2001a),
*Economic Outlook 69*, June.

OECD (2001b),
*Environmental Indicators for Agriculture – Volume 3: Methods and Results*, Paris.

OECD (2002),
*Economic Outlook 71*, June.

Office of Management and Budget (2002),
*Fiscal Year 2003 Mid-Session Review, Budget of the United States Government*.

Offutt, S. (2000),
“Can the Farm Problem Be Solved?”, M.E. John Lecture, The Pennsylvania State University, 18 October.

Okunade, A.A. and V.N.R. Murthy (2002),

O’Leary, C.J. and S.A. Wandner (eds.) (1997),
Or, Z. (2000),

Pauly, M.V. and B. Herring (2001),

Petrick, K.A. (2001),

Phelps, C.E. (1993),

Philipson, T. and R. Posner (2001),

Pollitz, K., N. Tapay, E. Hadley and J. Specht (2000),
“Early Experience with ‘New Federalism’ in Health Insurance Regulation”, *Health Affairs*, Vol. 19, No. 4, July/August.

Potter, J., S. Venti and D. Wise (2001),

Pritchett, L. and L.H. Summers (1996),

Puckett, L.J. (1994),

Rabbe, B.G. (2002),

Raphael, S. and R. Winter-Ebmer (2001),

Raucher, R.S. *et al.* (1993),

Reed, M., P. Cunningham and J. Stoddard (2001),
“Physicians Pulling Back from Charity Care”, Issue Brief No. 42, Center for Studying Health System Change, August.

Reinarman, C. and H. Levine (1997),

Rice, T., J. Gabel, L. Levitt and S. Hawkins (2002),
Roberts, J.M. (2001),

Robinson, J. (2001),

Robinson, J.C. (1996),

Roos, L.L., E.S. Fisher, S.M. Sharp, J.P. Newhouse, G. Anderson and T.A. Bubolz (1990),

Roos, L.L., E.S. Fisher, R. Brazauskas, S.M. Sharp and E. Shapiro (1992),
“Health and Surgical Outcomes in Canada and the United States”, Health Affairs, Vol. 11, No. 2, Summer.


Rouleau, J.L., L.A. Moyé, M.A. Pfeffer et al. (1993),

Saad, L. (2001),

Sawicky, M. and R. Cherry (2001),

Schick, A. (1997),

Schlesinger, J. (2002),

Schneider, E.C., A.M. Zaslavsky and A.M. Epstein (2002),
“Racial Disparities in the Quality of Care for Enrolees in Medical Managed Care”, Journal of the American Medical Association, Vol. 287, No. 10, 13 March.

Schoen, C. and C. Desroches (2000),


Thorpe, K.E. and C.S. Florence (1999),

Thornton, J. (2002),

Timmins, C. (2002),

Trude, S., J.B. Christianson, C.S. Lesser, C. Watts and A.M. Benoit (2002),


US Bureau of Justice Statistics (2000),

US Census Bureau (2000a),
“Resident Population Estimates of the United States by Age and Sex, April 1, 1990 to July 1, 1999; with short-term projections to April 1, 2000”, 24 May,

US Census Bureau (2000b),
“National Population Projections—Summary Tables”, 13 January,

US Census Bureau (2001),

US Department of the Army (2000),

US Department of Education (2001),

US Department of Education (2002),
“Meeting the Highly Qualified Teachers Challenge: The Secretary’s Annual Report on Teacher Quality”, Office of Postsecondary Education, June.

US Department of Health and Human Services (1999),
US Department of Health and Human Services (2000),
“Temporary Assistance to Needy Families (TANF) Program: Third Annual Report to Congress”,
Administration for Children and Families, Office of Planning, Research, and Evaluation, August.

US Department of Justice (2001),

US Department of State (2002),

US Energy Information Administration (1998),

US Energy Information Administration (2002),
“Impacts of 10 per cent Renewable Portfolio Standard, SR/OIAF/2002-03, February, Washington, DC.

US Environmental Protection Agency (2001)
Analysis of Multi-Emissions Proposals for the U.S. Electricity Sector, Requested by Senators Smith, Voinovich, and Brownback, November, Washington, DC.

US Environmental Protection Agency (2002),

US General Accounting Office (1994),

US General Accounting Office (1999),

US General Accounting Office (1997),
Challenges Facing EPA’s Efforts to Reinvent Environmental Regulations, gao/rced-97-155, Washington, DC.

US General Accounting Office (2002a),
Delaware River Deepening Project, GAO-02-604, Washington, DC.

US General Accounting Office (2002b),
Budgetary Implications of Selected GAO Work for Fiscal Year 2003, Washington, DC.

US General Accounting Office (2002c),

US House of Representatives (2000),

US Office of Management and Budget (1997),
Report to Congress on the Costs and Benefits of Federal Regulations, Washington, DC.
Van Doorslaer, E. et al. (1997),

Van Doorslaer, E., X. Koolman and F. Puffer (2000),

Van Doorslaer, E., X. Koolman and F. Puffer (2001),
“Equity in the Use of Physician Visits in OECD Countries: Has Equal Treatment for Equal Need Been Achieved?”, Paper presented at Measuring Up: Improving Health Systems Performance in OECD Countries, Ottawa, Canada, 5-7 November.

Viguier, L. (2002),

Vladeck, B. (2001),


Wallace, G. and R. Blank (1999),

Wennberg, J.E., E.S. Fisher and J.S. Skinner (2002),
“Geography and the Debate Over Medicare Reform”, Health Affairs, web exclusive, 13 February.

Wennberg, J.E., J.L. Freeman, R.T. Shelton and T.A. Bubolz (1989),

Western, B. and B. Pettit (1998),
“Incarceration and Employment Inequality Among Young Unskilled Men”, Princeton University mimeo.

Wilensky, Y.G. (2001),
“Medicare Reform — Now is the Time”, New England Journal of Medicine, Vol. 345, No. 6, August.

Wilkinson, R.G. (1992),

Wilkinson, R.G. (1996),
Unhealthy Societies: The Afflictions of Inequality, Routhledge, London.

Wilson, W.J. (1987),
The Truly Disadvantaged: The Inner City, The Underclass, and Public Policy, University of Chicago Press, Chicago.

Witte, A.D. (1997),
Witte, A.D. and R. Witt (2001),


Woolhandler, S. and D.V. Himmelstein (2002),
“Paying for National Health Insurance — And Not Getting It”, Health Affairs, Vol. 21, No. 4, July/August.


Zuckerman, S., G. Kenney, L. Dubay, J. Haley and J. Holahan (2001),
The Federal Reserve responded rapidly to the terrorist attacks of 11 September, taking action to ensure the functioning of financial markets and to provide liquidity to financial institutions. After the attacks, liquidity bottlenecks were severe as a result of the destruction of a portion of the infrastructure of US financial markets including telecommunication networks. This created great difficulties and complications in the processing of financial transactions — trading, clearing and settlement of various financial instruments — and dislocation of liquidity for financial institutions. Some had to operate in emergency sites with varying degrees of preparedness. Depository institutions with excess reserve balances had considerable difficulties unloading them in the market, whereas depositories awaiting funds had to scramble to cover overdraft positions. This situation caused the effective demand for reserves to balloon.

On 11 September, the Federal Reserve informed financial markets that the Federal Reserve System was functioning normally and that the discount window was available to meet liquidity needs. Depository institutions responded by borrowing at an unprecedented level. During the week, discount borrowing surged to a record high of $11.8 billion from a weekly average of $143 million before the attack (Figure A1). In the following two weeks, discount loans dropped sharply, however, and returned to the low levels seen earlier in the year. In the days following the attack, the closure of the nation’s air transportation system led the Federal Reserve to extend record levels of credits to depository institutions as Federal Reserve float surged. It continued to credit the accounts of the depositories for deposited checks, although checks normally shipped by air could not be presented to the checkwriters’ depositories due to the grounding of airplanes. In addition, the Federal Reserve made liquidity available by establishing temporary swap lines with the European Central Bank (ECB) for $50 billion and the Bank of England for $30 billion and by expanding existing swap lines with the Bank of Canada (from $2 billion to $10 billion). Foreign financial institutions tapped into these lines to meet their needs for dollars.

In the week following the attacks, the Federal Open Market Committee (FOMC) held an unscheduled meeting and decided to ease monetary policy further by cutting its target federal funds rate by ½ percentage point to 3 per cent. The injection of liquidity through various channels including open market operations pushed the level of reserve balances to an all-time high. The ample liquidity caused the Federal funds rate to trade significantly below its new target level. By the end of the month, however, it had moved back to around the targeted rate. The longstanding policy of the Federal Reserve to provide enough liquidity to stabilise the financial markets in the wake of unexpected developments helped to minimise the disruptive impact of the terrorist attacks. However, the financial system’s resilience also helped to mitigate any destabilising effects.
The Federal Reserve and other regulators have been analysing the lessons from the 11 September episode with a view to further enhancing the smooth operation of financial markets and their effectiveness in responding to unexpected developments. Well-designed business-continuity plans are crucial to providing a high degree of resilience. Many institutions found that disaster-recovery plans of particular business lines were not always accessible or up to date, despite Y2K preparations. Sometimes the primary and backup sites used different computer hardware and software, and some firms lost the use of both sites because they had arranged their backup facilities in nearby buildings for efficiency and convenience. Geographic and market-based business concentrations intensified the disruptive impact. Besides the geographic concentration of financial institutions in the New York financial district, some critical market functions such as clearing and settlement of financial instruments relied on only a few institutions. These problems can be addressed by moving toward wider geographic diversification of critical operations and toward a split-operations approach, especially for clearing and settlement entities, in which two or more active sites provide backup for each other. In the long term, establishing diverse telecommunications services may address the vulnerabilities by eliminating points of failure. Significant telecommunication vulnerabilities resulting from concentrations became evident when failures affected numerous institutions. Given the current physical infrastructure, overcoming them may not be easy. Lastly, interdependence among financial participants, both domestic and abroad, points to the importance of co-ordination of appropriate practices for business continuity among the financial institutions and the regulators. Contingency planning decisions made by an individual institution may affect not only the safety and soundness of that institution but also the safety and the soundness of other institutions and therefore the stability of the whole financial system.

Source: Board of Governors of the Federal Reserve System.
ANNEX II

BUDGET ENFORCEMENT PROCEDURES

The budget enforcement procedures that have governed debates over spending and revenue expired at the end of FY 2002. These procedures (established by the Budget Enforcement Act (BEA) of 1990 and later extensions) consisted of annual caps on discretionary spending and a pay-as-you-go requirement (i.e. a budget neutrality requirement) for legislated changes in mandatory programmes or revenues. The BEA followed the late 1980s experience with the Budget Enforcement and Deficit Control Act of 1985 — often referred to as the Gramm-Rudman-Hollings (GRH) Act (after the principal senators behind the legislation). GRH established a schedule of fixed federal deficit targets for 1986-91, which reached zero in the final year. The targets were to be enforced by a process termed sequestration, under which discretionary spending in many categories would be subject to across-the-board cuts in the event the deficit target was estimated to be breached. However, the deficit targets were not binding, in the sense that they could be overruled by subsequent legislative action, and they were not reached. The BEA replaced the deficit targets of GRH with a set of annual budget caps that limited discretionary outlays and the budget neutrality requirement on any law that would alter mandatory spending or revenues. The original law was set to expire in 1995, but was extended several times, most recently in the Balanced Budget Act of 1997.

Between 1991 and 1997, discretionary spending grew much more slowly than inflation, and sequestration was only necessary in the initial year of the new procedures, suggesting some positive effect from the BEA. However, the slowing in expenditure growth stemmed primarily from the defence cutbacks that followed the end of the cold war, and this would arguably have occurred without the BEA. Moreover, the emergence of growing surpluses by the latter half of the decade was followed by a breakdown in the tightness of the discretionary caps through a series of “emergency” appropriations in 1999 and 2000 and a lifting of the caps for 2001 and 2002 to accommodate new higher levels of appropriations.

Academic research has examined the efficacy of the budget enforcement provisions. Auerbach (1994) and Gramlich (1995) both note that the provisions regarding discretionary spending under GRH and BEA could be overruled by a simple majority of Congress and hence would seem to have little binding effect. Gramlich (1990) attributes the failure of GRH to this escape clause. Moreover, the appropriation caps have applied only to discretionary spending and mandatory spending has been (and will be to a larger extent in the future) the most important source of spending growth (Gramlich, 1995), implying that such caps (if renewed) will have less effect on future spending than they may have had in the past. Other observers are more sanguine, and attribute an important role for the budget enforcement provisions in restricting spending growth (e.g. Schick, 1997; Dharmapala, 2001). Given the impending spending pressures and the deterioration in the budget outlook relative to recent expectations, a renewal of the caps and pay-as-you-go provisions of BEA could prove useful.
Federal government. One of the most prominent roles of the federal government in health care is as a purchaser of health insurance and third-party payer for health care. The federal government serves in this capacity for 39 million elderly and disabled persons, 9 million federal government employees and their dependants, and 6 million active members of the military and their families. It finances, in conjunction with the states, state-run insurance programmes for the poor and near-poor children. It runs a health care delivery system designed to serve military veterans. In addition, the federal government influences the health system by serving as a primary locus for collecting health data and the principal source of funding for health services research. Notably absent is a national health planning function, although various federal agencies track health system characteristics, trends and aspects of performance.

State governments. Responsibility for regulating health care providers and insurance companies is the prerogative of the individual states. Another critical role they play is in the management and financing (together with the federal government) of public programmes to provide health insurance or direct health care to poor children and families. They also purchase health insurance on behalf of state government employees, thus influencing the local markets for insurance products. There is significant variation in how active states are in their regulatory, management and purchasing activities.

Local (city/county/parish) governments. Local governments, in conjunction with states, play an important role in financing the so-called safety net providers (e.g. county hospitals) that serve the indigent. They also maintain emergency response service systems.

Private sector. Most health care facilities are privately owned and operated. Hospitals and other institutions can be run either not-for-profit or for-profit. Similarly, health insurance plans are private. Most operate for profit, with the significant exception of most Blue Cross/Blue Shield plans. Some serve as contractors to Medicare, being responsible for administrative functions such as making payments to health care providers and practitioners.
ANNEX IV

REGULATION OF HEALTH INSURANCE AND PROVISION

The health insurance industry is regulated by states, which results in some diversity of approaches, although the National Association of Insurance Commissioners develops model legislation and regulation in key areas that provide a common framework used by many states. In general, the philosophy underlying insurance regulation is pro-competitive. Nevertheless, states do impose a variety of requirements pertaining to financial solvency, quality assurance, benefits and other characteristics of insurance products. Most large employers self-fund their health benefits programmes and are thus exempt from state regulation, including patients’ bills of rights that have been enacted in several states.

The regulation of private “Medigap” policies designed to supplement Medicare coverage is an exception to general insurance regulation standards in certain respects. Congress enacted legislation in 1989 in an effort to correct failures in the market for such insurance, such as beneficiaries purchasing numerous duplicative policies. Despite these regulations, the Medigap market is recognised as problematic in that the plans offering prescription drug coverage experience significant adverse selection, and thus high premium costs, and the design of the permitted benefits package may not well represent the current preferences of either consumers or policy makers.

An important, recent development in the regulation of private health insurance is the enactment of the Health Insurance Portability and Accountability Act (HIPAA) of 1996. This law established certain insurance portability standards and renewal protections designed to promote continuous insurance coverage for persons at risk of a break in coverage. It is believed to have affected the small-group insurance market more so than the individual market, primarily because it established insurance accessibility requirements without addressing the rating rules that determine premium amounts and, thus, affordability (Pollitz et al., 2000).

There is great variation across states in how regulation affects the market for health care provision. Each state sets its own level and type of regulation. States are responsible for regulating the delivery of health care. They establish license and certification requirements for hospitals, physicians and other providers. Some states also regulate to ensure access in under-served areas or to avoid perceived oversupply of certain services (through certificate-of-need regulations, for example). States in general rely on the tradition of professionalism as a form of self-regulation to create and promote voluntary compliance with standards of performance and accountability. As a side-effect of this approach, the ability of consumers and public officials to obtain information on performance of health care providers of all types was very limited up until the past five years or so. In recent years, however, providers have begun to respond to demands for information, partly in an effort to avert further prescriptive regulatory requirements.
NOTES

1. Under the law, insurers are authorised to sell only 10 standardised plans. In addition, insurers are required to issue these policies, without any medical underwriting, to beneficiaries upon their becoming eligible for Medicare at age 65 and under other circumstances set in law.

2. It applies to consumers in federally and state-regulated health plans as well as self-funded employer plans. Examples of changes made under the law included reduced opportunities for insurers to apply pre-existing condition exclusions to new enrollees, provided those enrollees had maintained continuous coverage.

3. For example, accreditation by private oversight entities is widely sought by hospitals and other health care providers as a seal of approval recognised as meeting standards surpassing minimum state certification requirements. In fact, accredited hospitals are in many cases deemed to have met state license and public programme certification requirements. In addition, physicians conduct quality review activities that have legal protections against disclosure of potentially incriminating information.
Econometric analysis can shed some light on the causes of cross-country differences in aggregate health outcomes. The relationship of a number of potential health determinants is explored using a panel of 30 OECD countries in the period of 1965-99. The focus is on life expectancy at birth and infant mortality, which are the most widely available measures of the health status of a population at the national level.

The model

A linear regression linking health outcomes to plausible correlates is estimated. One interpretation of this regression is that it represents a production function in which health is an output that is produced by a set of inputs, although the estimates could also simply be viewed as summarising the partial correlations between health outcomes and the variables examined. Specifically, the following regression equation is estimated by using a fixed-effects model:

\[ H_{i,t} = \beta_0 + \beta_1 I_{i,t-T} + \beta_2 F_{i,t-T} + \beta_3 E_{i,t-T} + \beta_4 M_{i,t-T} + \beta_5 X + v_i + \epsilon_{i,t} \]

where \( i \) is the country, \( t \) is the time period, and \( T \) is a time lag, taken to be five years. \(^1\) \( H_{i,t} \) is the measure of health outcome, \( v_i \) is a country-specific fixed effect and \( \epsilon_{i,t} \) is a mean zero, finite variance error.

\( I \) is the log of real GDP per capita in 1995 US dollars using purchasing power parity exchange rates. Numerous studies have found a positive relationship between income and health outcomes for different time periods and country samples (for example, Or, 2000; Hamoudi and Sachs, 1999; Pritchett and Summers, 1996). \(^2\) However, some studies suggest that beyond some threshold level, additional income may have a diminishing impact on health (Wilkinson, 1992).

The fertility rate \( (F) \) is included because there is some evidence of a potential link between demographic factors and health outcomes such as life expectancy or infant mortality (for example, Hamoudi and Sachs, 1999). A priori, lower fertility rates can be associated with better nutrition and parental care, leading to lower infant mortality rates as well as longer life expectancy, other things being equal. \(^3\)

A large economic literature suggests that individuals with higher levels of education \( (E) \) can produce health more efficiently by increasing health knowledge and improving the ability to process health information (Grossman, 1999). Also, ethnographic studies show almost universally that at the household level, women provide most of the direct care for children. This is taken into account by separately controlling for education attainment in the male and female population.

\( M \) is an indicator of medical resources. One can expect increasing health care spending to be related to better health outcomes, assuming that a greater amount of resources leads to an improvement in the level and the quality of health care services available. \(^4\) Apart from total health expenditure as a share of

---

\(^1\) H. I. Or, 2000.

\(^2\) M. Pritchett and J. D. Summers, 1996.

\(^3\) R. Wilkinson, 1992.

\(^4\) This is a share of domestic expenditure on health care.
GDP, the share of public expenditure in total health expenditure is included to proxy the degree of availability and accessibility of health services. This approach has been used in most studies, given the difficulties in obtaining internationally comparable data (in particular for coverage; see Or, 2000).

$X$ is a vector of other health determinants. Income inequality can be harmful to population health through various channels. Life-style factors such as cigarette and alcohol consumption and environmental factors such as the extent of urbanisation, unemployment and air pollution are also considered. Finally, the country-specific fixed effect captures time-invariant differences in health outcomes across countries. Factors that may evolve very slowly over time, such as racial disparities in health-care use (emphasised in Deaton and Lubotsky, 2001) would be reflected in the fixed effect.

Results

Table A1 displays regression results for life expectancy and infant mortality based on selected specifications. Column 1 shows a version of the life expectancy equation that excludes the vector $X$. The estimated coefficients have in general the expected sign, although they are not always statistically significant. After controlling for income inequality (Column 2), the public spending share becomes significant, while total health expenditure becomes insignificant. Regression results for infant mortality are broadly consistent with those for life expectancy. Most notably, however, educational attainment (especially female) seems to be more important in explaining the variation in infant mortality rates across OECD countries than that in life expectancy (see Columns 3-4). Again, income per capita is one of the most important determinants of infant mortality, although other variables also enter the regressions with significant coefficients. If additional regressions are added, the results do not change significantly and are therefore not reported.

Using the panel regression results, it is possible to assess the relative importance of potential health determinants and explain why the United States lags behind many OECD countries by these measures. Table A2 presents a decomposition of population health outcomes of the United States compared with the top five OECD countries using the regressions shown in Columns 2 and 4 of Table A1. In particular, the low share of public expenditure in total health expenditure — possibly and speculatively proxying for a low degree of availability and accessibility to health care — is an important correlate of the low life expectancy in the United States relative to the better performing OECD countries. For example, the low public share in health expenditures is estimated to be associated with a reduced life expectancy (in logarithms) of 0.0217, which is 52.6 per cent of the life expectancy gap between the United States and the five leading OECD nations. On the other hand, relatively high US income per capita and health expenditure relative to GDP are estimated to contribute (in logarithms) positively to life expectancy and negatively to the infant mortality rate. However, a significant caveat to the results is that country-specific factors not captured in the regressions seem to account for most of the actual gap in health status between the United States and five best-performing OECD countries.
Table A1. **Fixed effects model of population health**

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Dependent variable: log of life expectancy at birth</th>
<th>Dependent variable: log of infant mortality rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income per capita</td>
<td>0.0568 * (9.06)</td>
<td>-0.8102 * (-8.76)</td>
</tr>
<tr>
<td></td>
<td>0.0758 * (9.10)</td>
<td>-1.1260 * (-5.10)</td>
</tr>
<tr>
<td>Fertility</td>
<td>-0.0115 * (-3.17)</td>
<td>0.1828 * (4.17)</td>
</tr>
<tr>
<td></td>
<td>-0.0092 ** (-2.09)</td>
<td>0.1-38 *** (1.74)</td>
</tr>
<tr>
<td>Female education</td>
<td>0.0070 (0.72)</td>
<td>-0.2398 (1.13)</td>
</tr>
<tr>
<td></td>
<td>0.0053 (0.33)</td>
<td>-0.5630 * (-3.02)</td>
</tr>
<tr>
<td>Male education</td>
<td>-0.0067 (-0.59)</td>
<td>0.0614 (0.27)</td>
</tr>
<tr>
<td></td>
<td>-0.0017 (-0.10)</td>
<td>0.3537 (1.61)</td>
</tr>
<tr>
<td>Total health expenditure</td>
<td>0.0042 * (2.59)</td>
<td>-0.0810 * (-3.99)</td>
</tr>
<tr>
<td></td>
<td>0.0018 (1.03)</td>
<td>-0.0410 (1.47)</td>
</tr>
<tr>
<td>Public share in health expenditure</td>
<td>0.0366 (1.46)</td>
<td>0.1579 (0.69)</td>
</tr>
<tr>
<td></td>
<td>0.0617 *** (1.81)</td>
<td>-0.1280 (-0.42)</td>
</tr>
<tr>
<td>Income inequality</td>
<td>-0.0002 (-0.65)</td>
<td>-1E-03 (-0.23)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of observations</td>
<td>168</td>
<td>119</td>
</tr>
<tr>
<td></td>
<td>119</td>
<td>162</td>
</tr>
<tr>
<td></td>
<td>162</td>
<td>115</td>
</tr>
</tbody>
</table>

**Note:** The reported standard errors of the coefficients are based on the White heteroskedasticity-consistent covariance matrix, which reduces the sensitivity of inference and hypothesis testing using OLS estimators of heteroskedasticity. The Wald test for group-wise heteroskedasticity strongly rejects the null hypothesis of homoskedasticity. White heteroskedasticity-consistent t-statistics are reported in parentheses. Levels of significance are indicated by asterisks: * 1 per cent; ** 5 per cent; *** 10 per cent.

Definitions of variables: Income per capita = log of real GDP per capita, PPP; Fertility = fertility rate (average number of children per women of age 15-49); Female education = log of average years of secondary schooling in the female population (age of 15 and over) from Barro-Lee (2000); Male education = log of average years of secondary schooling in the male population (age of 15 and over) from Barro-Lee (2000); Total health expenditure = percentage of total health expenditure in GDP; Public share in health expenditure = share of public expenditure in total health expenditure; Income inequality = Gini coefficients, high quality data observations from Deininger and Squire (1996).

**Source:** OECD (unless otherwise specified).
Table A2. **Population health accounting**

<table>
<thead>
<tr>
<th></th>
<th>United States – Top Five</th>
<th>Percentage of the gap</th>
<th>United States – Top Five</th>
<th>Percentage of the gap</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Log of life expectancy at birth</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explained</td>
<td>-0.0412</td>
<td></td>
<td>0.5769</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.0336</td>
<td></td>
<td>0.5544</td>
<td></td>
</tr>
<tr>
<td>Income per capita</td>
<td>0.0108</td>
<td>-26.3</td>
<td>-0.2558</td>
<td>-44.3</td>
</tr>
<tr>
<td>Fertility</td>
<td>-0.0031</td>
<td>7.6</td>
<td>0.0257</td>
<td>4.5</td>
</tr>
<tr>
<td>Female education</td>
<td>-0.0012</td>
<td>-3.0</td>
<td>-0.2031</td>
<td>-35.2</td>
</tr>
<tr>
<td>Male education</td>
<td>0.0003</td>
<td>0.8</td>
<td>0.1041</td>
<td>18.1</td>
</tr>
<tr>
<td>Total health expenditure</td>
<td>0.0078</td>
<td>-19.0</td>
<td>-0.1936</td>
<td>-33.6</td>
</tr>
<tr>
<td>Public health expenditure share</td>
<td>-0.0217</td>
<td>52.6</td>
<td>0.0496</td>
<td>8.6</td>
</tr>
<tr>
<td>Income inequality</td>
<td>-0.0011</td>
<td>2.6</td>
<td>0.0081</td>
<td>-1.4</td>
</tr>
<tr>
<td>Country specific factors³</td>
<td>-0.0273</td>
<td>66.4</td>
<td>1.0356</td>
<td>179.5</td>
</tr>
<tr>
<td>Residual</td>
<td>-0.0076</td>
<td></td>
<td>0.0226</td>
<td></td>
</tr>
</tbody>
</table>

1. The top five healthiest countries in terms of life expectancy are Japan, Sweden, Canada, Switzerland, Norway and the top five countries in terms of infant survival are Finland, Sweden, Norway, Japan and France. The decomposition of the contribution to the difference in health outcomes from individual determinants is based on regression results in Columns 2 and 4 of Table A1.

2. Percentage of the actual gap between the United States and the top five countries in (logs of) life expectancy and infant-mortality.

3. Not otherwise accounted for.

*Source: OECD.*
NOTES

1. Since changes in health outcomes are most likely to be gradual over time, panel data are used where the observations are at five-year intervals. The dependent variables are observed at most eight times for each country: 1965, 1970, 1975, 1980, 1985, 1990, 1995 and 1999. The explanatory variables refer to variables observed roughly five years prior to these years since any causal relationship between changes in health outcomes and its determinants is less likely to be contemporaneous. That is, it is reasonable to view factors as influencing health outcomes only with some time lags.

2. Strong evidence in this respect for the United States is provided by Deaton and Paxson (2001) and Thornton (2002).

3. Similarly, one might expect a negative correlation between population growth and health outcomes, if rapid population growth is associated with lower access to medical care. But this hypothesis was not tested here.

4. Hitiris and Posnett (1992) report a significant negative impact of health expenditure on mortality rates in a panel of 20 OECD countries for the period of 1960-87. However, some studies find that the impact of medical care is very small or even positive in the United States (see Thornton, 2002, for example).

5. The channels through which income inequality is associated with a worse health status include under-investment in human capital, loss of social cohesion and dis-investment in social capital, and potentially harmful consequences of stress brought about by relative deprivation. Van Doorslaer et al. (1997) report that income inequality is closely related to inequalities in mortality or in morbidity. See Wilkinson (1996) and Kawachi and Kennedy (1997) for evidence and Smith (1999) for skepticism.

6. The conclusion is especially speculative since the figures exclude the tax expenditure from exclusion of employer-provided health insurance and because the relative level of US public spending is so much greater than its relative share of total health spending.
The social welfare implications of competition in health care have long been the subject of heated debate on both theoretical and empirical grounds. The conventional wisdom is that both health care and health insurance are substantially different from the textbook case of perfectly competitive markets, mainly because they are characterised by adverse selection and moral hazard, as well as poor consumer information. The assessment of the social welfare effects of increased competition has important policy implications. If competition improves social welfare, then strict regulation of anti-competitive activity and mergers may be socially beneficial. In any case, policymakers have to decide on the extent of competition they wish to see (and the implications for consumer choice), in what areas it should be encouraged (among health plans and/or providers), over which dimensions it should play a role (price and/or quality) and what sorts of restrictions (such as price floors or quality standards) should be implemented. In this annex the objective will be to give a brief summary of the theory and evidence on the impact of competition in this sector.

A fundamental problem in the health care market is that individuals have more information about their risk types than insurers (Rothschild and Stiglitz, 1976). This informational asymmetry can lead to an adverse selection problem. Studies suggest that the resulting welfare losses can be substantial (Cutler and Zeckhauser, 2000). High-risk individuals may purchase complete coverage, whereas low-risk patients may buy incomplete coverage or opt not to buy any at all. However, there is some evidence that most consumers are not dipping in and out of the insurance market as their health prospects change (Royalty and Solomon, 1999). Insurance companies may seek out good risks while avoiding bad risks, which is known as "cream skimming". There is also some evidence that HMOs have tended to enrol healthier individuals, compared to traditional fee-for-service plans (Newhouse, 1996).

Moral hazard is another widely recognised distortion in health care markets. It can arise if insurance changes patient behaviour, leading them to consume health services beyond a socially optimal level. In this case, competition may not be the first-best solution, and market power on the part of firms selling health services could increase social welfare by raising prices and restricting output (French, 1996; Pauly, 1998). This is based on the assumption that competitive pricing in insurance markets does not adjust to deal with moral hazard (such as through consumer cost sharing), an assumption that may not be valid (Gaynor et al., 2000).

There is also concern that consumers are often poorly informed about the quality of health care providers or plans and also prices, so that increased competition in health care markets may lead to lower quality of care or the under-provision of necessary health services (Gaynor and Haas-Wilson, 1999). Several mechanisms can serve to improve consumers’ knowledge of the quality of care. For instance, the use of the Internet can empower patients by providing them with information. With the growth of managed care, there has been renewed interest in measuring the quality of care. For example, quality report cards developed by private groups and public payers are increasingly used to measure the quality of managed care plans. While it is not yet clear how effectively consumers can use available information, one recent study indicates that health plan information can have a significant effect on consumer choice (Chernew et al., 2001). In principle, increased information on quality can not only help consumers make...
informed choices but also strengthen market functions by encouraging competition based on quality and by allowing payments to be linked to performance measures, such as treatment outcomes.

The hypothesis has been advanced that hospitals in more competitive markets will engage in a medical arms race on facilities or quality in order to attract consumers and physicians who bring customers with them. As a result, competition among hospitals may produce an excessive supply of care with its marginal value less than its marginal social costs (Robinson and Luft, 1985). However, this concern has been reduced in recent years as increased price competition among hospitals along with the rapid growth of managed care seems to have improved social welfare (Kessler and McClellan, 2000; Gaynor and Haas-Wilson, 1999). Analysing longitudinal Medicare claims data for elderly non-rural beneficiaries hospitalised with cardiac illness over the period of 1984-94, Kessler and McClellan (2000) show that hospital competition has unambiguously improved social welfare since 1990. That is, it has led both to substantially lower costs and significantly lower rates of adverse health outcomes, while in the 1980s it had entailed higher costs and, in some cases, higher rates of adverse outcomes. In states with high HMO enrolment rates, welfare gains have been uniformly larger. In a related study by Kessler and McClellan (2001), for-profit hospitals are shown to have important spillover benefits on medical productivity. Areas with a presence of for-profit hospitals are found to have lower expenditures, but virtually the same patient health outcomes.

With the rise in managed care, health care markets have seen waves of strategic alliances, mergers and acquisitions, and integration. If this trend continues, many markets are expected to be dominated by a few large firms in the near future, with increased risks of exercise of market power. This portends an increasing role of antitrust policy in health care markets. Since 1980, the US Department of Justice and Federal Trade Commission (FTC) have initiated 136 antitrust cases in the health care sector (Philipson and Posner, 2001). Although there is still much to learn about the implications of health market consolidations (such as their implications for the responsiveness of the system to external changes in demand, technology and other forces and for dimensions of health care such as quality of care or consumer choice), on balance they may not all be socially optimal, even if they generate efficiency gains — for a literature survey on this issue, see Gaynor and Vogt, 2000.

Given declining demand for inpatient hospital services, potential gains from economies of scale and increased price sensitivity on the part of buyers, some degree of horizontal consolidation in health care markets may be appropriate. New technologies have led to less invasive medical interventions and more outpatient care, which has left many hospitals with costly excess capacity (Gaynor and Anderson, 1995). Using data from over 3 500 hospitals in the years 1986-94, Conner et al. (1997) found that, on average, merging hospitals reduced costs more than others. However, the cost savings from mergers were significantly higher in less concentrated markets. Efficiency gains from economies of scale can be exhausted at relatively small sizes (Given, 1996). As to economies of scope, for example in the monitoring of health care services, it is not clear that companies must be large to achieve such efficiency gains, the more so since firms specialising in these services have sprung up.

There are only a few empirical studies that estimate the effects of consolidations on prices or health outcomes. Applying the methods in Kessler and McClellan (2000) to two hospital merger cases that faced FTC scrutiny during 1994-95, Kessler and McClellan (1999) confirm that both the proposed mergers would have lowered the degree of competition. But they find that, for Medicare patients with heart disease, only one merger would clearly have led to higher expenditures and increased rates of adverse health outcomes. The US antitrust authorities have lost several cases when evidence showed that a non-negligible fraction of patients travelled outside the community, so that merged hospitals would have lacked the monopoly power to raise prices significantly. Noting that a majority of patients are averse to travel, Capps et al. (2001) show that hospital mergers can lead to significant price increases. Some evidence also suggests that merged HMOs seem to increase premiums (Christianson et al., 1997). However, the overall
causal relationship between HMO mergers and subsequent premium increases is rather weak. This is possibly due to the threat of potential entry of new competitors (i.e., market contestibility).

The tentative conclusion drawn from the evidence is that some degree of competition is advantageous, but that the various kinds of market failures point to the need for circumscribing its extent through appropriate regulation. This is by no means easy, because health care is a complex market and because it is so closely intertwined with the market for health insurance, itself heavily regulated.

NOTES

1. Consumers tend to show persistence in their health spending arrangements lasting four years or even longer (Newhouse et al., 1989; Eichner et al., 1997).


3. Reviewing the existing empirical literature on the consequences of competition in markets for hospital services in the United States, they observed an interesting pattern, supporting their own results: i) research based on data prior to the mid-1980s finds that competition among hospitals tended to lead to increases in excess capacity, costs, and prices; ii) by contrast, research based on more recent data generally finds that it contributes to a reduction in excess capacity, costs, and prices. There are some exceptions, of course, such as Manheim et al. (1994).

4. During 2001, the FTC placed renewed emphasis on stopping collusion and other anti-competitive practices that raise health care costs and decrease quality. In particular, given the strongly growing cost of prescription drugs, the FTC dramatically increased its attention to pharmaceutical-related matters, to which one-quarter of its resources were devoted in 2001. In its non-merger enforcement cases, the FTC focused on efforts by branded drug manufacturers to slow or stop competition from lower-cost generic drugs. With regard to health care providers, antitrust investigations put a stop to anti-competitive collusive conduct of several groups of physicians, which was found to have driven up consumer costs.
ANNEX VII

THE BUSH ADMINISTRATION’S FRAMEWORK FOR MEDICARE REFORM

In July 2001, the Administration released a set of principles intended to guide congressional development of an acceptable restructuring proposal:

− All seniors should have the option of a subsidised prescription drug benefit as part of modernised Medicare.

− Modernised Medicare should provide better benefits coverage for preventive care and serious illnesses.

− Today’s beneficiaries and those approaching retirement should have the option of keeping the traditional plan with no changes.

− Medicare should provide better health insurance options, like those available to all Federal employees.

− Medicare legislation should strengthen the programme’s long-term financial security.

− The management of traditional Medicare should be strengthened so that it can provide better care for seniors.

− Medicare’s regulations and administrative procedures should be updated and streamlined, while the instances of fraud and abuse should be reduced.

− Medicare should encourage high-quality health care for all seniors.

ANNEX VIII

THE EARNED INCOME TAX CREDIT

The Earned Income Tax Credit (EITC) has become one of the largest federal programmes targeted at increasing the resources available to low-income households. The nonwastable credit boosts the return to work for less affluent families and is one important example of how social goals in the United States are increasingly addressed through the tax code. In recent years, the EITC has provided over $30 billion per year to low-income families and lifted more than 5 million families out of poverty. Total EITC benefits have been about equal to federal expenditure on food and nutrition assistance in recent years and significantly above the $16½ billion federal contribution to the welfare programme, Temporary Assistance to Needy Families. As the EITC provides a credit only to households with earned income, it meshes well with the work-centred approach to assistance that underlies recent social policy. However, it results in a more complicated tax code, which generates costs and errors and produces higher marginal tax rates for households in the income range over which the credit phases out (see below). Federal marginal tax rates in the phase-out range reach about 40 per cent for households in the relevant range (Sawicky and Cherry, 2001). Moreover, the credit depends on household income, and hence creates a sharp marriage penalty for low-income households — although the extent of this was reduced by the Economic Growth and Tax Relief Reconciliation Act of 2001.

The amount of the EITC a household may receive depends upon its characteristics. For households with one qualifying child, the EITC equalled 34 per cent of the first $7 140 in earned income during 2001; the credit was phased out (at a rate of 15.98 per cent) when income exceeded $13 090 (and therefore equalled zero when income exceeded $28 281). For households with two or more qualifying children, the credit equalled 40 per cent of the first $10 020 in earned income during 2001 and the credit was phased out (at a rate of 21.06 per cent) when income exceeded $13 090 (and therefore equalled zero when income exceeded $32 121). Households without children could also claim a credit, which equalled 7.65 per cent of the first $4 760 in earned income during 2001 and was completely phased out at an income of $10 710. The beneficiary must be over 25 years of age in households without children.

In addition, the EITC adds a substantial degree of complexity to the calculations required of low-income households when filing their tax returns. This complexity has important consequences for both beneficiaries and the government. The complicated calculations required to determine EITC eligibility have led to a boom in the percentage of low-income households using professional tax preparation services. About 70 per cent of households receiving the EITC hire a professional preparer — notably above the share in the overall population — and a recent study of such households in the Washington, DC area reports that nearly 13 per cent of the typical EITC benefit is consumed by the costs of professional tax preparation and associated services (Berube et al., 2002). The complexity of EITC computations has also probably contributed to the high error rate associated with the programme. In 1999, around 30 per cent of EITC payments were made in error (Internal Revenue Service, 2002). However, it should be noted that the costs of administering the EITC are low, and hence any increased effort to lower the error rate must be weighed against the costs associated with such efforts. One potentially moderate cost avenue is simplification. The recent Administration proposal to create a uniform definition of a qualifying child for tax purposes may help in this regard.
ANNEX IX

SELECTED PROVISIONS OF THE 2002 SARBANES-OXLEY CORPORATE REFORM ACT

Creation of Public Company Accounting Oversight Board
- SEC to have oversight and enforcement authority over new Board, which will inter alia establish auditing, quality control, ethics, independence and other standards; inspect accounting firms; conduct investigations and disciplinary proceedings and impose sanctions; collect a registration fee from accounting firms.
- Accounting firms must disclose to Board names of clients and fees received from each for audit and other services.
- Board may request testimony and documents from any client of accounting firm.

Auditor independence
- Separation of audit and other services, such as bookkeeping, financial information system design and implementation, appraisal services, management functions, legal services, investment advice, etc.
- Rotation: lead audit partner and reviewing partner must rotate every 5 years.

Corporate governance
- Board of directors: public accounting firm reports directly to audit committee, which is responsible for appointment, compensation and oversight of accounting firm; auditor must report to committee all alternative treatments of financial information within GAAP that have been discussed with management, and method preferred by auditor.
- Independence of audit committee: cannot be affiliated with company or subsidiary; cannot accept consulting, advisory or other compensatory fees from company.
- Forfeiture of profits: if restatements occur due to material non-compliance of company, CEO and CFO to reimburse company for their bonuses or other incentive or equity-based compensation and any profits realised from sales of company securities.
- Improper influence by company on audits: unlawful for officers or directors to fraudulently mislead auditors.
- Insider transactions: no company may extend or arrange credit in the form a personal loan to or for any director or executive officer.
- Certifications and responsibilities for officers are tightened and are so are criminal penalties.
- Management assessment of internal controls: annual reports must include internal control reports.
- Breaking of securities laws, fraud, obstruction of justice: fines and/or imprisonment for destruction, alteration or falsifications of records with intent to obstruct investigations, and for accountants violating audit work-paper retention rules; stronger protection of whistleblowers.
- Code of ethics: company to disclose whether it has code of ethics for senior financial officers.

Pension funds
- No director or executive officer may directly or indirectly purchase, sell or transfer equity of the company during a blackout period if it was acquired in conjunction with service or employment.
Enhanced financial disclosure
- Real-time disclosure of financial information: company to disclose to public in timely fashion information concerning material changes in financial condition or operations, in plain English.
- Accounting standards: current or future off-balance sheet transactions (including contingent obligations) and other relationships with unconsolidated entities must be disclosed; pro forma financial information shall be presented in a manner that does not contain or omit an untrue statement of material fact and that reconciles it with the financial condition and result of operations under GAAP.
- Insider transactions: insider transaction forms to be filed with SEC within 2 business days.
- SEC to study principles-based accounting system; SEC to study filings of companies to determine extent of off-balance sheet transactions and use of special purpose entities; SEC to study all its enforcement actions involving violations of reporting requirements imposed under the securities laws, and restatements of financial statements, over the last 5 years; SEC to identify areas of reporting most susceptible to fraud, inappropriate manipulation or inappropriate earnings management, such as revenue recognition and off-balance sheet special purpose entities.

Reinforcing the SEC
- Increase in SEC funding and staff (at least 200 new positions for oversight of auditors).
- SEC may prohibit officers or directors from serving under certain circumstances.
- SEC to regularly review company disclosure.

Accounting firm consolidation
- GAO to study consolidation of accounting firms since 1989 and consequent reduction in number of firms capable of providing audit services to large businesses, impact on capital formation and securities markets.

Analysts’ independence
- SEC to adopt rules to reasonably address conflicts of interest that can arise when research analysts recommend equities and rules to foster greater public confidence in securities research (including as regards analysts’ relationships with investment banking, their compensation and any retaliation).

Rating agencies
- SEC to study credit rating agencies.

Investment banks, brokers, dealers, investment advisors
- GAO to study if investment banks and financial advisers assisted public companies in manipulating earnings and obfuscating their true financial condition, and generally in creating and marketing transactions that may have been designed solely to enable companies to manipulate revenue streams, obtain loans, or move liabilities off balance sheets without altering economic and business risks faced by companies or any other mechanism to obscure a company’s financial picture. GAO to recommend regulatory or legislative changes.

Note: CEO: Chief executive officer; CFO: Chief financial officer; GAAP: Generally Accepted Accounting Principles; GAO: General Accounting Office; SEC: Securities and Exchange Commission.

Source: OECD.
ANNEX X

CALENDAR OF MAIN ECONOMIC EVENTS

2001

November

Against the backdrop of a steepening decline in production following 11 September and falling inflation and inflation expectations, the Federal Open Market Committee (FOMC) lowered the target federal funds rate by 50 basis points to 2 per cent. The Committee maintained its view that the “the risks are weighted mainly towards conditions that may generate economic weakness for the foreseeable future”. The Board of Governors approved a request to lower the discount rate to 1.5 per cent.

December

The FOMC lowered the target federal funds rate by 25 basis points to 1.75 per cent, bringing the market rate to the lowest level in forty years. The Committee maintained the view that the “the risks are weighted mainly towards conditions that may generate economic weakness for the foreseeable future”. The Board of Governors approved a request to lower the discount rate to 1.25 per cent, the lowest level since 1948.

Enron filed for Chapter 11 protection (bankruptcy) early in the month. The company’s financial accounts had portrayed a misleading picture of the risks borne by the firm by hiding certain debts off its balance sheet and employing aggressive accounting techniques that did not accurately portray the economic position of the firm. As a result, its auditor, Arthur Andersen, came under intense scrutiny. Both Enron and Arthur Andersen would become the objects of criminal investigations, and reports of misleading information from other firms and re-statements of earnings would multiply over coming months.

The House of Representatives narrowly passed a bill containing Trade Promotion Authority. The International Trade Commission (ITC) determined as a result of its safeguard (Section 201) investigation that the US steel industry had been injured by imports. This action allowed the Administration to impose tariffs on imports if it so desired.

2002

January

The FOMC left the target federal funds rate unchanged at 1.75 per cent and maintained its view that “the risks are weighted mainly towards conditions that may generate economic weakness in the foreseeable future”.

193
The President signed the No Child Left Behind Act. This legislation increased federal support for low-income school districts, further strengthened recent efforts to increase testing and accountability in primary and secondary education and provided for greater supplementary services and school choice for students at failing schools.

The WTO affirmed its earlier rulings that the tax provisions provided under the FSC Repeal and Extraterritorial Income Exclusion Act were impermissible export subsidies. This ruling represented the final word on the issue, and only the determination of penalties, slated for later in the year, remained unresolved.

February

President Bush sent to Congress his budget proposal for FY 2003. The weaker-than-expected economy and new spending following 11 September combined to generate expected federal deficits of $106 billion and $80 billion in FY 2002 and 2003, respectively.

March

The FOMC announced that its assessment of the risks to the economic outlook was now balanced with respect to the prospects for price stability and sustainable growth. The target federal funds rate remained at 1.75 per cent.

The Congress passed and the President signed the Job Creation and Worker Assistance Act of 2002 (the stimulus bill). This legislation provided for accelerated depreciation allowances for new equipment purchases in the three years after 11 September 2001 and increased the generosity of corporate loss provisions. A 13-week extension in the maximum duration of unemployment insurance benefits was also included.

The Administration imposed tariffs of up to 30 per cent on steel imports, with a number of exclusions for developing countries, free-trade area partners and other case-by-case exemptions that would be announced in the following months. A series of countries have lodged complaints with the WTO arguing that the US action had not been taken in conformity with agreed rules.

April

The House of Representatives passed a bill to change oversight of accounting firms and practices in response to the series of revelations regarding misleading corporate accounts since the collapse of Enron the December 2001.

May

The FOMC left the target federal funds rate unchanged at 1.75 per cent and maintained its view that the risks to the economic outlook were now balanced with respect to the prospects for price stability and sustainable growth.

Action occurred relating to a number of measures affecting international trade. The Senate passed a bill containing Trade Promotion Authority that differed substantially from that approved by the House of Representatives in December. The President signed the Farm Security and Rural Investment Act of 2002 (the farm bill). This legislation increased support to agriculture and did so in a manner that is likely to impede market signals to a greater extent than previous programmes. The ITC reached a final decision that
Canadian softwood lumber imports were dumped on the US market and benefited from subsidies, allowing a still-pending final determination of countervailing and antidumping duties.

**June**

The FOMC left the target federal funds rate unchanged at 1.75 per cent and maintained its view that the risks to the economic outlook were now balanced with respect to the prospects for price stability and sustainable growth.

The House of Representatives passed the Medicare Prescription Drug Act, which provided a prescription drug benefit to the elderly under Medicare and included a number of other small reforms. The measure is estimated by the Congressional Budget Office to increase expenditures over 2002-11 by $279 billion. Proposals in the Senate have taken a substantially different form.

**July**

The President sent his mid-session review of the budget to Congress. The Administration predicted budget deficits of $165 billion in FY 2002 and $109 billion in FY 2003 and anticipated a return to budget surpluses by 2005. This forecast assumed significant restraint in spending increases.

The spring’s financial market turbulence worsened with a multiplicity of cases of corporate malfeasance culminating in the failure of Worldcom, the largest bankruptcy in US history. The dollar fell below parity against the euro and equity prices plunged to five-year lows.

The Congress passed and the President signed the Sarbanes-Oxley Act of 2002. The bill created a regulatory board to oversee accounting firms that has guaranteed financing and limited accounting industry representation, limited the types of consulting services that accounting firms can provide, and required new disclosure practices for public companies and their officers. In addition, criminal penalties for misconduct by corporate officers have been stiffened and new sanctions introduced.

**August**

The Congressional Budget Office predicted budget deficits of $157 billion in FY 2002 and $145 billion in FY 2003. This forecast assumed significant restraint in spending increases.

The Congress passed and the President signed trade legislation that granted Trade Promotion Authority to the Administration, extended adjustment assistance providing benefits to displaced workers, and increased trade benefits for certain regions.

The FOMC left the target federal funds rate unchanged at 1.75 per cent but changed its assessment of the economy to a view that “the risks are weighted mainly towards conditions that may generate economic weakness”.

**September**

The FOMC left the target federal funds rate unchanged at 1.75 per cent and maintained its assessment that “the risks are weighted mainly towards conditions that may generate economic weakness”.

The 2002 fiscal year ended without Congress agreeing on any of the FY 2003 appropriations bills.