10. Military expenditure

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I. Introduction

World military expenditure in 2002 is estimated at \$794 billion (in current dollars), accounting for 2.5 per cent of world gross domestic product (GDP) and representing an average of \$128 per capita. The rate of increase in 2002, at 6 per cent in real terms, is double that in 2001. The current level of world military expenditure is 14 per cent higher in real terms than it was at the post-cold war low of 1998, but is still 16 per cent below the level of 1988, when world military expenditure was close to its cold war peak. The United States accounted for most of the increase in 2002 (three-quarters), followed by China (11 per cent), Russia, Brazil and India (each accounting for 2–3 per cent of the global increase). The countries with the highest defence burden are of two types—low- and lower middle-income countries in regions of conflict, and high-income countries in the Middle East.

This chapter provides an analysis of the trends and developments in world and regional military expenditure, focusing on the impact of the 'war on terrorism' on military spending in 2002. Section II presents a general overview of military expenditure based on SIPRI data. Section III presents the main developments and issues in US military expenditure and section IV does the same for European countries, including the Russian Federation. Section V provides regional surveys of the developments in military expenditure in four regions or sub-regions—the Middle East, Africa, South Asia and East Asia. The main conclusions of the chapter are summarized in section VI.

Appendix 10A presents SIPRI data on military expenditure for 158 countries for the 10-year period 1993–2002. World and regional totals are provided in table 10A.1. Country data are provided in three formats: in their original form, in local currency and current prices (table 10A.2); in constant (2000) US dollars (table 10A.3); and as a share of GDP (table 10A.4). Appendix 10B presents data on the expenditure on military personnel and equipment of the members of the North Atlantic Treaty Organization (NATO). Appendix 10C presents the sources and methods for SIPRI's military expenditure data.

¹ This is an increase from 2001, when world military expenditure was \$751 billion, 2.4% of world GDP and an average of \$122 per capita. These figures differ from those presented in Sköns, E. et al., 'Military expenditure', SIPRI Yearbook 2002: Armaments, Disarmament and International Security (Oxford University Press: Oxford, 2002), chapter 6, because of a change in the SIPRI methodology for currency conversion, which has resulted in a lower figure for Russian military expenditure and thus for the world total. See table 10.3 below and appendix 10C.

² In 1998 world military spending was \$910 billion at constant (2000) prices and exchange rates.

Table 10.1. World and regional military expenditure estimates, 1993–2002 Figures are in US \$b., at constant (2000) prices and exchange rates. Figures in italics are percentages. Figures do not always add up to totals because of the conventions of rounding.

Region ^a	1993	1994 1	.995	1996	1997	1998 1	.999	2000	2001 20		% change 93–2002
Africa	7.4	7.7	7.2	6.9	7.1	7.6	8.4	8.8	[8.9]	[9.6]	+ 30
North	2.5	2.9	2.7	2.8	3.0	3.1	3.3	3.6			$+ 44^{b}$
Sub-Sahara	in 5.0	4.8	4.5	4.1	4.1	4.4	5.1	5.2			$+ 4^{b}$
Americas	385	365	347	328	328	321	322	333	338	368	-4
North	365	344	324	306	304	298	299	310	313	344	- 6
Central	2.8	3.4	3.0	3.1	3.2	3.2	3.4	3.4	3.5	3.3	+ 18
South	17.6	17.4	20.0	18.3	20.9	20.1	19.6	19.5	21.5	21.1	+ 20
Asia&Ocean	ia 120	121	123	128	128	127	129	134	140	147	+ 23
Central		0.4	0.4	0.4	0.5		0.5				
East	99.8	101	103	107	107	105	106	111	116	[122]	+ 22
South	12.0	12.0	12.6	12.8	13.4	13.5	14.6	15.2	16.2	17.3	+44
Oceania	7.7	7.7	7.4	7.4	7.4	7.7	7.5	7.3	7.4	7.4	– 4
Europe	196	192	178	177	177	175	177	180	181	181	- 8
CEE	25.6	25.9	20.1	18.8	19.6	16.9	17.8	18.9	20.1	21.4	- 16
Western	171	166	158	158	157	158	159	161	161	160	-6
Middle East	[53.5]	54.1	50.9	51.7	56.5	60.7	60.0	67.3	73.8		$+38^{c}$
World	762	740	707	691	696	690	696	723	741	784	+ 3
Change (%)		- 2.9	- 4.4	-2.3	0.7	- 0.9	0.9	3.9	2.5	5.8	

^a For the country coverage of the regions, see appendix 10A, table 10A.1. CEE = Central and Eastern Europe. Because of lack of consistent time-series data, Africa excludes Angola, Benin, Congo (Rep. of), Congo (Democratic Republic of, DRC), Eritrea, Liberia, Libya and Somalia; Central America excludes Honduras; Asia excludes Afghanistan; Europe excludes Yugoslavia (Serbia and Montenegro); and the Middle East excludes Iraq. World totals exclude all these countries.

Source: Appendix 10A, tables 10A.1 and 10A.3.

II. World military expenditure

The level of world military expenditure in 2002 is estimated at \$784 billion at constant (2000) prices and market exchange rates, corresponding to approximately \$794 billion in current dollars. It exceeded the 1993 level by 3 per cent in real terms. In several regions—Africa, Latin America, East and South Asia, and the Middle East—military expenditure was also significantly higher in 2002 than in 1993 (table 10.1). In other regions it was not yet as high as in 1993 but was approaching that level: in North America and Western Europe the difference was 6 per cent, but rapidly falling in North America. The only region where military expenditure is still significantly lower than in 1993 is Central and Eastern Europe, but, apart from that region, the post-cold war 'peace dividend' had almost vanished by 2002.

^b Change over the period 1993–2000.

^c Change over the period 1993–2001.

Region	1993	1999	2000	2001
Middle East	6.0	5.8	5.8	6.3
North America	4.3	2.9	2.9	3.0
Central and Eastern Europe	3.6	2.6	2.6	2.7
World	2.9	2.3	2.3	2.4
Africa	2.2	2.2	2.1	2.1
Western Europe	2.5	2.0	1.9	1.9
Asia and Oceania	1.6	1.5	1.5	1.6
Latin America	1.4	1.3	1.2	1.3

Table 10.2. World and regional defence burdens, 1993 and 1999–2001 Figures are military expenditure as a percentage of GDP.

Sources: Military expenditure: appendix 10A, table 10A.2; GDP: listed in appendix 10C. For the country coverage of the regions see appendix 10A, table 10A.1.

The Americas account for the greatest share of world military expenditure (47 per cent in 2002), owing to the high share of the USA. Europe accounts for 23 per cent and Asia, with Oceania, 19 per cent. Africa and the Middle East account for smaller shares—1 and 10 per cent, respectively. However, dollar comparisons of expenditure data based on market exchange rates (MERs) tend to understate the purchasing power of developing and transition countries (see the sub-section below on the major spenders). The actual difference between regions is thus somewhat narrower than table 10.1 suggests.

Global resource allocation

World military expenditure in 2002 corresponds to an average of 2.5 per cent of world GDP³ and \$128 per capita.⁴ This is approximately one-third of the average gross national income (GNI) per capita in low-income countries, which was \$430 in 2001.5

High-income countries, with 16 per cent of the world's population, account for three-quarters of world military expenditure (appendix 10A, table 10A.2). Low-income countries, with two-fifths of world population, account for 5 per cent; however, since these countries account for only 3 per cent of world GNI, the military budget imposes a greater burden on their economies.

There are marked regional disparities in the share of GDP devoted to military expenditure (the 'defence burden'). Table 10.2 shows global and regional defence burdens in 1993 and the three years 1999-2001. While the defence

³ This share is based on an estimate for world GDP in 2002 of \$32 059 billion, as provided in International Monetary Fund (IMF), World Economic Outlook (IMF: Washington, DC, Sep. 2002), annex table 1, p. 167, URL http://www.imf.org/external/pubs/ft/weo/2002/02/index.htm.

⁴ The estimate of world military expenditure per capita is based on a world population of 6224 billion in 2002, estimated by applying the growth rate of 1.24% to the world population figure for 2001 of 6.148 billion. United Nations, World Population Prospects: The 2002 Revision, Annex tables, available at URL http://www.un.org/esa/population/publications/wpp2002/wpp2002annextables.PDF>.

⁵ World Bank, World Development Report 2003: Sustainable Development in a Dynamic World (Oxford University Press: New York, 2003), table 1, 'Key indicators of development', p. 235.

burden fell significantly between 1993 and 1999 in North America and in both European sub-regions, it levelled off during 1999–2001. In North America and Central and Eastern Europe it has increased since 1999. In the developing regions of Africa, Latin America, and Asia with Oceania, and in the Middle East, the defence burden scarcely changed between 1993 and 1999. In 2001 there was a major increase in the defence burden in the Middle East, while the burden in other developing regions remained roughly constant.

The major spender countries in 2002

On the basis of military expenditure figures converted at market exchange rates, the five countries with the highest military expenditure in 2002 are the USA, Japan, the UK, France and China. These countries accounted for 62 per cent of the world total in 2002 and the USA alone 43 per cent. The 15 countries with the highest spending accounted for 80–81 per cent of global military expenditure throughout the 10-year period 1993–2002, increasing to 82 per cent in 2002 (table 10.3, MER rank columns).

International comparisons of national expenditures are extremely sensitive to the choice of methodology for conversion of expenditure figures from national currencies to a common currency, in this case US dollars. The impact of the choice of conversion methodology can be seen in table 10.3, which shows the ranking in military spending by the use of both MERs and purchasing power parity (PPP) exchange rates. In the comparison based on PPP rates, the USA is still by far the biggest spender, but there is a smaller gap between it and the second in rank, which in this comparison is China rather than Japan. Furthermore, in the PPP ranking India and Russia have higher military expenditure than France, the UK, Japan and Germany.

Neither of these two sets of comparisons reflects comparative military capability: military expenditure figures are not measures of military capability, but only of the budgetary resources devoted to the military sector, and military capability depends on a number of additional factors. 6 International comparisons of military expenditure are also problematic for the purpose of comparing the amount of manpower, military equipment, and other goods and services that can be purchased from the military budget. The main reason for this is that the mix of resources that can be bought for a given budget varies between countries because of differences in relative prices. International comparisons of military expenditure made by use of MERs tend to understate the purchasing power of the military budgets of developing countries and countries in transition, because MERs are formed on the world market and in these countries a relatively large part of the domestic economy is not exposed to international competition. On the other hand, the use of PPP rates, based on price comparisons across the whole economy (GDP-based PPPs), may exaggerate the military purchasing power of military expenditure. One reason for this is that overall price comparisons do not account for the level of technology

⁶ See also chapter 9 in this volume.

Table 10.3. The 15 major spender countries in 2002 Figures are in US \$b., at constant (2000) prices and market and PPP exchange rates. Figures in italics are percentages.

Ranki	Ranking in MER dollar terms			Ranki	Ranking in PPP dollar terms ^a			
Rank	Country	Size (\$b.)	World share (%)	Rank	Country	Size (\$b.)		
1	USA	335.7	43	1	USA	335.7		
2	Japan	46.7	6	2	China	142.9		
3	UK	36.0	5	3	India	66.5		
4	France	33.6	4	4	Russia	55.4		
5	China	31.1	4	5	France	36.8		
Sub-t	otal top 5	483.1	62			637.3		
6	Germany	27.7	4	6	UK	34.0		
7	S. Arabia	21.6	3	7	Japan	32.8		
8	Italy	21.1	3	8	Germany	31.0		
9	$Iran^b$	17.5	2	9	Saudi Arabia	28.8		
10	South Korea	a 13.5	2	10	Italy	26.9		
Sub-t	otal top 10	584.5	75		-	790.8		
11	India	12.9	2	11	South Korea	24.3		
12	Russia	11.4	2	12	Turkey	23.0		
13	Turkey	10.1	1	13	Brazil	22.8		
14	Brazil	10.0	1	14	$Iran^b$	20.2		
15	Israel	9.8	1	15	Pakistan	14.2		
Sub-t	otal top 15	638.7	82			895.3		
Worl	d	784	100	World	d	••		

PPP = purchasing power parity. The PPP dollar figures are converted at PPP rates, calculated by the World Bank PPP project, on the basis of each country's gross national product (GNP) structure.

Sources: Military expenditure: appendix 10A; PPP rates: World Bank, World Development Indicators 2002 (World Bank: Washington, DC, 2002).

that may be purchased with Western, and especially US, military expenditure, which is beyond the capacity of countries such as China or India. However, for the purpose of measuring the civilian resources forgone by allocating government expenditure to the military sector, PPP-converted military expenditure figures are the more relevant indicator. Thus, the higher ranking for China and India in PPP terms indicates that the amount of non-military purchases forgone is greater than MER-converted military expenditure data suggest.⁷

^a Myanmar would probably be in the top 15 list in PPP terms but is not included in the table because recent data are not available.

^b The figure for Iran is for 2001. No figure is available for 2002, but the ranking for Iran is not expected to have changed.

⁷ For a more detailed discussion of PPP exchange rates see 'Sources and methods for military expenditure data', SIPRI Yearbook 1999: Armaments, Disarmament and International Security (Oxford University Press: Oxford, 1999), appendix 7C.

Table 10.4. Countries with the greatest changes in military expenditure, 2002 Figures are in US \$m., at constant (2000) prices and market exchange rates. Figures in italics are percentages.

Volun	ne change in m	ilitary expenditure	Relative change in military expenditure				
Rank	Country	Change 2001–2002 (\$b.)	Rank	Country	Change 2001–2002 (%)		
Count	ries with the la	rgest increases					
1	USA	31.6	1	Latvia	64		
2	China	4.8	2	Nepal	34		
3	Russia	1.2	3	Angola	26		
4	Brazil	1.1	4	Nicaragua	25		
5	India	1.0	5	Estonia	20		
6	Turkey	0.9	6	Uganda	20		
7	Israel	0.8	7	China	18		
8	Japan	0.5	8	Burkina Faso	o 17		
9	South Korea	0.5	9	Lithuania	16		
10	Saudi Arabia	0.4	10	Botswana	15		
Count	ries with the la	rgest reductions					
5	Venezuela	-0.4	5	Venezuela	– 23		
4	Canada	-0.5	4	Argentina	-24		
3	Taiwan	-0.5	3	Belarus	- 29		
2	Argentina	- 1.0	2	Guatemala ^a	<i>– 44</i>		
1	Italy	-1.0	1	Macedonia	- 56		
				(FYROM))		
World	d	42			5. 7		

^a Guatemala's actual expenditure figure may be considerably higher than budgeted, as over 95% of the budget had been spent or allocated by mid-Sep. 2002.

Source: Appendix 10A, table 10A.3.

In previous editions of the SIPRI Yearbook, military expenditure figures for the 'transition' economies of the former Soviet Union were converted to dollars using PPP rates rather than MERs. In this edition, however, data for all countries are converted using MERs. There are two main reasons for this change of practice: to achieve methodological consistency across countries; and the current lack of reliable PPP data for all countries. Thus, while PPP rates are preferable in principle for measuring the economic cost of the military, the current state of the PPP data prevents their adoption on a global scale.

The main impact of the change of practice for comparisons with previous editions of the Yearbook is on the figure for Russian military expenditure, which is almost five times greater in PPP dollar terms (see table 10.3), and therefore also on the world total.

Countries with the greatest changes in military expenditure

The United States, with an increase of \$31.6 billion, accounted for 75 per cent of the increase in world military expenditure in 2002. Other countries with

large increases were China, Russia and Brazil (see table 10.4). These countries are all major spenders and regional powers, as are the next five in rank, partly explaining their large volume increases. Ranked instead by rate of relative change in military expenditure, the 10 countries with the steepest increases in military expenditure include a number of smaller countries, among them the three Baltic countries, which have been increasing their expenditure in preparation for joining NATO. The increase in Angola's military expenditure in 2002 is due primarily to the cost of providing support for the soldiers of the União Nacional para a Independência Total de Angola (UNITA, National Union for the Total Independence of Angola) and their families after the end of the civil war. China is the only major spender with a high rate of relative increase in military spending.

The countries with the sharpest reductions in military expenditure in 2002 were three in Latin America—Argentina, Guatemala and Venezuela—and two in Europe—Belarus and the Former Yugoslav Republic of Macedonia (FYROM). The reduction in Guatemala's budget in 2002 may result in the fulfilment of its goal of reducing military expenditure to 0.66 per cent of GDP, as stipulated in the 1996 peace accords.8 The fall in Argentina's military expenditure is a result of the economic crisis there. The FYROM's expenditure fell back in 2002 after reaching a very high level in 2001 owing to internal conflict.

III. The United States

US military expenditure is set on a strong growth path. After a decade-long period of reductions to adjust to the post-cold war security environment, it has been growing rapidly since 1999 at growth rates that approach those of the military build-up under President Ronald Reagan in the 1980s. In addition, budget allocations for homeland security have been increased significantly in response to the terrorist attacks of 11 September 2001.9 This section describes the trends in US military expenditure during the administration of President George W. Bush and the defence budget plans for the six-year period fiscal years (FYs) 2004–2009. It also describes the increases in expenditure directly related to the 11 September attacks. Finally, it discusses the impact of new budget trends on the US economy.

US military expenditure trends

The defence budget request for FY 2004, presented by the Bush Administration on 3 February 2003, amounted to \$379.9 billion in budget authority¹⁰ for

⁸ 'Peace accords subject to scrutiny', Latin American Caribbean & Central America Report, 19 Feb. 2002, Central America, p. 3. The peace accords were signed on 19 Dec. 1996 by the Guatemalan Government and the Unidad Revolucionaria Nacional Guatemalteca (URNG).

⁹ See also section I of chapter 1 in this volume.

¹⁰ Budget authority (BA) is the authority to incur legally binding obligations of the government which will result in immediate or future outlays. Most defence BA is provided by Congress in the form of enacted appropriations.

Table 10.5. US military expenditure, FYs 1999–2004^a

Figures are for fiscal years and in US \$b. Figures in italics are percentages.

	1999	2000	2001	2002	2003^{b}	2004^b
National Defense (ND) out	lays ^c					
ND in current prices	275.5	295.0	306.1	349.0	375.7	389.7
ND in FY 1996 dollars	261.2	271.3	276.4	308.0	326.9	334.9
Increase in real terms (%)	0.0	3.9	1.9	11.4	6.1	2.4
National Defense outlays as a share of GDP (%)	3.0	3.0	3.1	3.4	3.5	3.4

^a The US fiscal year runs from 1 Oct. of the previous year to 30 Sep. of the named year.

Source: US Executive Office of the President, Office of Management and Budget (OMB), Historical Tables: Budget of the United States Government Fiscal Year 2004 (US Government Printing Office: Washington, DC, 2003), tables 8.4, 8.7 and 8.8.

the Department of Defense (DOD), an increase of \$15.3 billion over the previous year. That was \$84 billion higher than in FY 2000, the last budget of the administration of President Bill Clinton. As budget authority is translated into actual expenditures, these have also increased. According to projections released in March 2003, the outlays for national defence in FY 2004—before any supplementary allocations had been decided—were projected to be 21 per cent higher in real terms than three years earlier, in FY 2001 (table 10.5). This growth rate is similar to that during the initial period of the Reagan Administration—an increase of 24 per cent in real terms over the four-year period FYs 1980–83. On the other hand, the defence burden in the early 2000s is only half of that at the height of the cold war. Military expenditure as a share of GDP is projected to grow from 3.1 per cent in FY 2001 to 3.5 per cent in FY 2003. This compares with a peak of 6.2 per cent in 1986 at the height of the cold war. The decline to 3.4 per cent of GDP forecast for FY 2004 is likely to be revised upwards as a result of the war on Iraq.

The Future Years Defense Program (FYDP) presented together with the budget, covering the six-year period FY 2004–2009, shows an increase to \$483.6 billion in FY 2009 (in current dollars). Budget authority for procure-

^b Data for FY 2003 and FY 2004 are estimates.

^c Outlays are expenditures, generally as cash payments. Official US budget data differ significantly from data provided by NATO and used for the tables on military expenditure in the SIPRI Yearbook.

¹¹ US Department of Defense, 'Fiscal 2004 Department of Defense budget release', News release, 3 Feb. 2003, URL http://www.defenselink.mil/news/Feb2003/b02032003_bt044-03.html.

¹² The description in this section is based on official US data. These differ significantly from the military expenditure data provided by NATO, which SIPRI uses for its military expenditure tables (appendix 10A), because the NATO data are standardized to enable cross-country comparisons.

¹³ US Executive Office of the President, Office of Management and Budget (OMB), *Historical*

Tables: Budget of the United States Government Fiscal Year 2004 (US Government Printing Office: Washington, DC, 2003), table 8.8. The period of the Reagan Administration was Jan. 1981–Jan. 1989. The growth rate slowed in FY 1984 but increased again in FY 1985 (+ 6.8%) and FY 1986 (+ 6.9%), after which there was again a slowdown.

ment is scheduled to increase from \$70 billion in FY 2003 to \$112.2 billion in FY 2009, and research, development, test and evaluation (RDT&E) is projected to grow from \$56.8 billion in FY 2002 to \$69.4 billion in FY 2009. The three major aims of the DOD budget for FY 2004 were: (a) winning the global war on terrorism, (b) sustaining the quality of the US forces, and (c) the transformation of the US military establishment.¹⁴ This is almost the same justification as that given for the FY 2003 defence budget. It has been argued in several analyses that most of the increases included in that budget were of only limited relevance to military transformation and the war on terrorism.¹⁵ The same seems to be true of the FY 2004 defence budget.

Since 11 September 2001, a significant amount of funding has been provided for purposes directly related to the attacks. Administration and congressional organizations report regularly on such spending; they include expenditure for recovery and rebuilding of destroyed facilities, for compensation to victims and support for airlines, and for the war on terrorism, much of which falls within the framework of homeland security.¹⁶

Funding for homeland security in the regular budget for FY 2001, adopted before 11 September 2001, amounted to approximately \$20 billion. In September 2001, an emergency supplemental bill of \$20 billion was adopted by Congress for purposes related to 11 September. (A second emergency supplemental bill was signed by the president in January 2002). In August 2002 a third emergency supplemental bill provided an additional \$28.9 billion, half of it for the DOD and intelligence activities, and the rest for security at ports and nuclear facilities, aid to countries involved in the war on terrorism, such as Afghanistan and Indonesia, and a number of home-district projects.¹⁷ Funding for these activities in the regular appropriation bills increased to \$44.8 billion in FY 2003.

The FY 2004 budget requests an allocation of \$36.2 billion for the Department of Homeland Security. Although it is difficult to calculate the change over the previous year because of the merger of several organizations into one, this reportedly represents a 10 per cent increase in real terms—far too low, according to many critics, who expected the threat of a catastrophic strike on the USA to peak with the prospect of a war with Iraq. 18

Another budget item related to the war on terrorism is the military assistance provided to other countries to gain their support. The FY 2004 budget request

¹⁴ US Department of Defense (note 11).

¹⁵ Gold, D., 'US military expenditure and the 2001 Quadrennial Defense Review', SIPRI Yearbook 2002 (note 1), appendix 6E; and O'Hanlon, M., 'Rumsfeld's defence vision', Survival, vol. 44, no. 2 (summer 2002), pp. 103-17.

¹⁶ See, e.g., US Executive Office of the President, Office of Management and Budget (OMB), 'OMB releases updated summary of government expenditures directly related to September 11th attacks', Press release, Washington, DC, 10 Sep. 2002. For a detailed official description of the Homeland Security Act and the Homeland Security Department, which came into existence on 1 Jan. 2003, see US Department of Defense, 'Analysis for the Homeland Security Act of 2002', Washington, DC, 2002, URL http:// www.whitehouse.gov/deptofhomeland/analysis>. See also section II of chapter 1 in this volume.

¹⁷ '\$28.9 billion is voted for counter-terrorism', *International Herald Tribune*, 25 July 2002.

¹⁸ Sheron, P., 'White House accused of shortchanging security budget', New York Times, 3 Feb. 2003,

Table 10.6. The structure of the US budget for military R&D, FYs 2001–2004 Figures are in US \$b., at constant (FY 2004) prices. Figures in italics are percentages.

R&D phase	2001	2002	2003	2004	% change 2001–2004
Science and technology (S&T) ^a Advanced component development and	9.3	10.2	10.9	10.2	10
prototypes ^b	8.4	10.4	10.9	13.2	57
System development and demonstration ^c	8.8	11.0	14.0	15.9	81

^a Includes the three earliest phases of R&D (basic research, applied research and advanced technology development).

Source: Kosiak, S., 'FY 2004 defense R&D request raises questions about administration's approach to transformation', Center for Strategic and Budgetary Assessments (CSBA), Washington, DC, 7 Feb. 2003, URL http://csbaonline.org/4Publications/Archive.

includes a total of \$2.3 billion in assistance to foreign partner countries, including \$250 million to Jordan, \$200 million each to Pakistan and Turkey, and \$150 million to Afghanistan.¹⁹

Expenditure for military transformation

The Bush Administration's commitment to its stated goal of transforming the US military forces to better meet the challenges of warfare in the 21st century²⁰ was called into question during 2002.²¹ One source of doubt is the fact that the Bush Administration has continued virtually all major weapon programmes inherited from the previous administration, many of which were so-called 'legacy' systems designed during the cold war. Only one major weapon programme was cancelled—the Crusader artillery system—by the end of 2002.

The administration's definition of transformational systems has also been questioned. While it argues that the proposed budget for FY 2004 includes \$23 billion for military transformation, some observers have questioned whether all the items are in fact 'transformational' systems. This is the case in

^b In previous budgets called the demonstration and validation phase. Represents the middle phase of the R&D process, focusing on the development of specific weapon systems and testing under realistic operational conditions.

^c In previous budgets called engineering and manufacturing development—the final phase of the R&D process.

¹⁹ US Department of Defense (note 11).

²⁰ The policy guideline and rationale for transformation are discussed in section I of chapter 1 in this volume.

²¹ Basic sources on military transformation include US Department of Defense, *Quadrennial Defense Review Report* (US Department of Defense: Washington, DC, Sep. 2001); and US Department of Defense (DOD) *Annual Report to the President and the Congress* (DOD: Washington, DC, 2002). For a critical discussion of these see Kosiak, S., Krepinivich, A. and Vickers, M., *A Strategy for a Long Peace* (Center for Strategic and Budgetary Assessments: Washington, DC, Jan. 2001); and O'Hanlon, M., *Technological Change and the Future of Warfare* (Brookings Institution Press: Washington, DC, 1999).

particular for ballistic missile defence (BMD) programmes, which are included in the official transformation agenda and account for one-third of allocations for transformation, although they were initiated before the policy of military transformation was adopted, and for other reasons.²² While some of the 'legacy' platforms can be used for the transformational agenda, it is difficult to argue that they are entirely transformational.

One way to analyse the extent to which the budget reflects the requirements of transformation is to look at the structure of the military research and development (R&D) budget. A study by the Washington-based Center for Strategic and Budgetary Assessments (CSBA)²³ has done this for the period FY 2001-2004, with the aim of analysing the impact of the first three years of the Bush Administration. The analysis shows that funding for the first stage of the R&D process, that is, science and technology (S&T) programmes, increased by only 10 per cent in real terms over the period, while expenditure on system development and demonstration (SDD), which is the last phase of R&D prior to production, increased by a full 81 per cent (table 10.6). It concludes that the rapid growth in SDD funding may indicate that the administration has abandoned the idea of skipping a generation of military technology and will continue instead with a broad range of long-planned, next-generation programmes. The CSBA analysis questions in particular the decision to continue all three planned combat aircraft programmes—the F/A-18E/F, the F-22 and the F-35 JSF. The Joint Strike Fighter programme accounts for much of the growth in SDD funding over the period FY 2001–2004 (\$3.5 billion out of the total increase of \$7.1 billion).

While the small share of military R&D expenditure allocated for S&T programmes suggests that efforts for transformation may not receive as much priority in the FY 2004 military expenditure plan as is required to implement transformation, the main argument of the CSBA analysis is that the emphasis on a large number of costly traditional programmes may in subsequent years crowd out emerging systems that would be more relevant to transformation. The cost of traditional weapon programmes that are funded by the FY 2004 SDD budget will grow significantly over the next 5–10 years as they move into production, perhaps preventing an increase of funding at that time for more promising transformational systems.

Economic impact

Current increases in US military expenditure are occurring in a context of huge budget deficits created primarily by the combined effect of the tax relief package decided in 2001 and economic recession, to which the defence budget is making an increasing contribution. The economic impact of the increasing

²² Kosiak, S., 'FY 2004 defense budget request: back to cold war-level spending, and beyond', Center for Strategic and Budgetary Assessments, Washington, DC, 31 Jan. 2003.

²³ Kosiak, S., 'FY 2004 defense R&D request raises questions about administration's approach to transformation', Backgrounder, Center for Strategic and Budgetary Assessments, Washington, DC, 7 Feb. 2003, URL http://csbaonline.org/4Publications/Archive>.

budget deficit and public debt aroused domestic political debate in the United States during 2002. A related issue is the effect of military spending in reducing potential resources for non-military sectors of the budget.

In a historical perspective, the US federal budget has generally been in surplus for most of its 215-year history.²⁴ Large deficits were incurred only in periods of depression (when receipts fell sharply) and of war (when military spending increased sharply). The only peacetime exception to this pattern was the period 1983–92, when huge budget deficits were incurred as a result of substantial increases in military spending and large tax cuts enacted in 1982 under the Reagan Administration. Thereafter, deficits declined consistently and in 1998 changed into a surplus, which by 2000 had reached 2.4 per cent of GDP. Since then, however, this surplus has disappeared and by 2002 there was a budget deficit amounting to \$158 billion and 1.5 per cent of GDP. The budget and economic outlook has undergone a dramatic deterioration during the years of the Bush Administration, from May 2001, when a 10-year surplus of \$5600 billion was projected for the period 2002–11, to the January 2003 projection of a surplus of \$20 billion for the same period.²⁵ While most of this deterioration is the result of reduced tax revenues, the effect of military spending is not negligible: in 2002 it accounted for 48 per cent of total federal discretionary spending—excluding the mandatory programmes (primarily social security and other benefit programmes). Furthermore, these projections were a best-case scenario, since they assumed no policy changes to current law—such as extending the duration of the tax cut—and no war in Iraq.

Views on the impact of budget deficits on economic growth differ. The Republican Party has changed its position since mid-2002, when it claimed that overspending 'creates a fundamental weakness in the foundation of economic growth',²⁶ to argue by late 2002 that the effect of the projected debt on long-term economic growth would be trivial. In contrast, the Democratic Party argues that the deteriorated fiscal outlook 'threatens America's future' because the reserve for meeting the retirement of the 1940s 'baby boom' generation has largely disappeared and because the rapid increase of the publicly held debt, which is projected to peak at \$4045 trillion in 2006, will result in a massive increase in debt interest payments, leaving less money available for other federal expenditure, such as for social programmes.²⁷ The congressional debate over funding priorities was already sharp when the FY 2003 budget was processed and is expected to become even harder because of the lack of fiscal manoeuvring room in the FY 2003 budget.²⁸

²⁴ Historical Tables: Budget of the United States Government, FY 2004 (note 13), p. 5.

²⁵ US Congressional Budget Office (CBO), 'The budget and economic outlook: fiscal years 2004–2013', Jan. 2003, URL http://www.cbo.gov/showdoc.cfm?index=4032&sequence=0.

²⁶ Cited from a speech by President Bush to the House of Representative Budget Committee in Sep. 2002. Humes-Schultz, S., Bush calls on Congress for budget restraint', *Financial Times*, 17 Sep. 2002, p. 4.

p. 4. ²⁷ US Congress, House Budget Committee, Democratic Caucus, 'As good as it gets: new CBO budget outlook shows chronic deficits even without new policies', 29 Jan. 2003.

²⁸ McGregor, D., 'Budget battles loom over funding priorities', *Financial Times*, 14 Feb. 2003, p. 6.

IV. Europe

The picture for military expenditure in Europe in 2002 is mixed. The major military spenders in Western Europe—France and the UK—are planning substantial spending increases, partly because of the war on terrorism. Other countries of Western Europe are not increasing military expenditure. In Central Europe, the NATO candidate countries have increased their military expenditure in preparation for membership,²⁹ while in the Balkans the gradual return to stability and the desire to modernize forces are creating contradictory impulses. Russia's increases in military spending are devoted primarily to the reconstruction of its armed forces and arms industry after the profound downsizing during the 1990s.

The European Union and NATO Europe

The terrorist attacks of 11 September 2001 led Western nations to re-evaluate their security policies in 2002, with resulting upward pressures on military expenditure, both direct and indirect. It is now possible to see some of the early consequences of these developments for West European military budgets and the security issues arising from them. It appears, at least at present, that rises in military expenditure are taking place only in some countries and on a much smaller scale than in the United States.

A number of factors are creating upward pressures. First, the enhanced perception of a terrorist threat is itself creating new demands on the military forces to be prepared for different types of expeditionary role, such as direct engagement with terrorist groups, coercion of states accused of harbouring terrorists, and peace support operations in weak states where terrorist groups might develop. These factors are reinforcing the drive to develop rapid reaction forces and is generating demand for new capabilities needed for antiterrorist missions, especially for rapid deployment and 'network-centric' warfare (NCW).³⁰ Second, the massive increase in US military expenditure as a result of 11 September has exacerbated the 'capability gap' between the USA and its West European allies. While this gap may be as much a doctrinal one as a capability or technological gap, it has been a source of concern because of its impact on the interoperability of military forces, and thus a problem for joint military missions under the NATO umbrella.31 Third, the military spending gap has given rise to a defence industrial concern in that the European arms industry has a much smaller domestic market.

²⁹ A background paper on military expenditure in the NATO candidate countries is available on the SIPRI Internet site at URL http://projects.sipri.se/milex.html. For a critical analysis of the content of the defence plans and performance of these countries see chapter 7 in this volume.

³⁰ Network-centric warfare is a combination of advanced sensors, including satellites and unmanned air vehicles (UAVs), to detect activities by small, diffuse enemy groupings, combined with a rapid and effective communications network to enable speedy decision making and precision weapons to attack the

³¹ Efforts to develop European capabilities in the context of the EU's European Security and Defence Policy (ESDP) are discussed in section II of chapter 6 in this volume.

In spite of these pressures, the West European countries in general are not increasing their military expenditure or as yet embarking on defence plans that require rapid increases in their future military spending. The divergence in military expenditure trends between the United States and the West European allies reflects a set of divergent approaches to security and to methods of achieving the required capabilities. It involves differences in security and defence policy goals, military doctrines, threat perceptions, and priorities as between military spending and fiscal policy goals.

This section describes the military spending trends of the major European Union (EU) and NATO European countries, relating these plans to fiscal policies and anti-terrorism measures.

Military expenditure in 2002

Military expenditure in Western Europe fell slightly in real terms during both 2001 and 2002, after a short period of increase since 1997, when the post-cold war decline ended. Most of the four major spenders in the region kept their military spending fairly level in 2002. France continued a decade-long trend of decline with military spending falling slightly in real terms in 2002—in spite of an additional allocation of €908 million (\$855 million) to cover the costs of French operations in Afghanistan.³² Germany increased military spending by 0.7 per cent in real terms in 2002, as a result of an extra allocation of €767 million for anti-terrorist activities following the 11 September attacks. This was to include the procurement of equipment for the Special Operations Division and of drones, reconnaissance satellites and satellite communications. Germany also allocated an extra €266 million (\$250 million) in 2002 to increase the readiness of its border patrol, which is included in military expenditure under the SIPRI/NATO definition.³³ However, the trend has been downward throughout the past decade. Italy's military spending fell by 4.5 per cent in 2002, the second year of cuts, although that followed a rise of more than 30 per cent between 1995 and 2000. The UK reduced spending by 1 per cent in real terms in 2002, although the 2001 figure was raised by the cost of the war in Afghanistan.

Future military spending, the war on terrorism and fiscal constraints

While 2002 saw only minor movements in military expenditure, some countries are planning increases for 2003 and beyond. However, only France and the UK have announced substantial rises from 2003, while Germany has capped its military spending in nominal terms at present levels up to 2006, implying a fall in real terms. The war on terrorism is one factor behind some planned increases, with a focus on expeditionary operations against terrorist

³² Lewis, J. A. C., 'France increases budget for overseas operations', *Jane's Defence Weekly*, 24 July 2002, p. 23.

³³ German forces modernization part of international shifts' (interview with the German Minister of Defence), *Defense News*, 17–23 Dec. 2001, p. 54.

groups and states that harbour them.³⁴ This entails the development of rapid reaction forces and capabilities such as strategic airlift; computers, command, control, communications and intelligence (C⁴I); and NCW. Of course, such capabilities were already seen as important for more general crisismanagement operations, and not all increases should be attributed to the war on terrorism.

France has announced an increase of 7.5 per cent (in nominal terms) in its 2003 defence budget, including an above-average increase (11 per cent) in procurement spending—to €13.62 billion (\$12.8 billion), planned to rise to €15.1 billion (\$14.2 billion) by 2008. Defence Minister Michèle Alliot-Marie described the purposes of the increase as improving the operational readiness of equipment, consolidating the professionalization of the armed forces (conscription was abolished in France in 2001) and modernizing equipment.³⁵ The goal is to increase interoperability with allies and to ensure France's ability to project power independently or as the leader of a coalition. In particular, France wants to keep up with the UK in military capability. Some of France's procurement plans, for instance, for satellites, unmanned air vehicles (UAVs) and cruise missiles, relate to capabilities suited to tackling small, elusive terrorist groups, but there are also traditional 'big ticket' items such as new fighter aircraft and a second aircraft carrier.³⁶

The UK's 2002 Spending Review announced increases of 1.2 per cent per year in real terms for military expenditure up to FY 2005/2006—a total increase of £3.5 billion (\$5.25 billion).³⁷ This was in conjunction with the New Chapter of the UK's Strategic Defence Review,³⁸ which addressed new military security challenges resulting from the war on terrorism. However, the full increase cannot be attributed to anti-terrorism measures, since less than half (£1.5 billion, or \$2.25 billion) is allocated to fulfil the goals of the New Chapter. The increases may also be seen as a desire to avoid falling too far behind the USA technologically so as to maintain the interoperability required for participating in US-led military action. Few specific new procurement plans were announced with the Spending Review, but the UK's Watchkeeper UAV programme is to be accelerated and the E-3D airborne warning and control system (AWACS) aircraft are to be upgraded.³⁹ The UK has also made an additional allocation of £1.75 billion (\$2.6 billion) to cover the cost of a

³⁷ British Ministry of Defence, *The Government's Expenditure Plans 2002–03 to 2003–04*, Cm 5412 (Stationery Office Ltd: London, July 2002).

³⁹ 'Strategic Defence Review (SDR): New Chapter', *Defence News Analysis*, 22 July 2002.

³⁴ Hoon, G., '11 September: a new chapter for the Strategic Defence Review', Speech at King's College, London, 12 May 2002, URL http://news.mod.uk/news/press/news press notice.asp?news Item id=1247>; and 'New French defense minister confirms spending hike', defense-aerospace.com, transcript of speech by the French Minister of Defence and Veterns Affairs, 17 June 2002, URL http://www.defense-aerospace.com/data/verbatim/data/ve285/index.htm.

35 Kemp, I. and Lewis, J. A. C., 'Going pro', *Jane's Defence Weekly*, 19 June 2002, pp. 54–57.

³⁶ 'Budget de rattrapage pour les armées Françaises' [Catch-up budget for French forces], Air & Cosmos, 4 Oct. 2002, p. 34; 'Increase in defence spending: new Chief of Staff', Keesing's Record of World Events, News Digest, Sep. 2002, p. 44995; and Taverna, M., 'French defense plan highlights new carrier', Aviation Week & Space Technology, 16 Sep. 2002, p. 28.

³⁸ British Ministry of Defence, *The Strategic Defence Review: A New Chapter*, Cm 5566, vol. I (Stationery Office Ltd: London, July 2002).

Table 10.7. Planned military expenditure and budget deficits, major West European spenders, 2002 onwards^a

Country	Budget surplus/ deficit as % of GDP, 2002 (expected)	Military expenditure as % of GDP, 2002	Military expenditure plans for 2003 onwards
France ^b	- 2.5	2.5	Increase of 7.5% for 2003
Germany ^b	- 2.9	1.5	Ceiling of €24.4 b. per year in 2003–06 ^c (approximately equal to the 2002 level)
$Greece^b$	+ 0.8	4.4	Aim to cut military expenditure as a share of GDP from 5% to 4%
Italy ^b	– 2	1.9	Nominal rise of 3.4% for 2003, but cut in investment expenditures
Netherlands ^b	-0.8	1.6	Annual budget to be €250 m. lower by 2006
Norway	+ 12.1	1.9	Nominal increase of 3.5% in 2003
Spain ^b	0	1.1	Nominal increase of 0.9% in 2003 ^d (i.e., below expected inflation)
Sweden	+ 1.8	1.9	Cut of 10% in 2003
UK	- 0.8	2.4	Real increase of 1.2% per year for the period 2002/03–2005/06

^a The table includes countries whose military expenditure in 2002 exceeded \$2 billion at constant (2002) prices and exchange rates.

Sources: Projected budget surplus/deficit, GDP for 2002: International Monetary Fund, World Economic Outlook (IMF: Washington, DC, Sep. 2002); planned military expenditure: France: 'Budget de rattrapage pour les armées françaises' [Catch-up budget for French forces], Air & Cosmos, 4 Oct. 2002, p. 34; Germany: German Ministry of Finance, 'Finanzplan des Bundes 2002 bis 2006' [Federal financial plan from 2002 to 2006], Berlin, Aug. 2002; Greece: Agence France-Presse (Athens), 'Greece plans 2.1 billion-euro military program', Space Daily, 25 Nov. 2002, URL http://www.spacedaily.com/2002/021125150046. eewjmqn4.html>; Italy: Information provided to SIPRI by the Italian Defence Ministry, Jan. 2003; Netherlands: Netherlands Ministry of Defence, 'English summary "defence and the strategic accord"', defense-aerospace.com, 11 Nov. 2002, URL http://www.defensie.nl/najaarsbrief/content/111102_summarynajaarsbrief.html>; Norway: Chuter, A., 'Norway's defense budget upholds restructuring plans', Defense News, 14–20 Oct. 2002, p. 9; Sweden: Andersson, H., 'Sweden looks at ways to fund rapid reaction force', Jane's Defence Weekly, 13 Mar. 2002, p. 12; UK: British Ministry of Defence, The Government's Expenditure Plans 2002–03 to 2003–04, Cm 5412 (Stationery Office Ltd: London, July 2002).

^b Eurozone country.

 $[^]c$ These figures are for the Ministry of Defence. The figures produced by NATO and used by SIPRI for Germany are considerably higher, as they include items such as border guards (under the Ministry of the Interior budget), foreign military assistance (under Foreign Affairs), military social security (under Ministry of Economics and Labour) and the cost of some overseas military operations (under the General Financial Administration budget head). The 2002 Ministry of Defence budget was €23.7 billion (\$22.3 billion), with an additional €767 million (\$722 million) for anti-terrorism measures.

^d Budget for the 'defence function', excluding military pensions and other items.

possible war in Iraq, although the actual cost is likely to be considerably higher.40

The cap on German military spending at €24.4 billion (\$23.0 billion) per year up to 2006 has led to cuts in planned procurement programmes, which otherwise would have exceeded the budget limit by \$10 billion over the period. As a result of these cuts, Germany has reduced the number of Airbus A400M transport aircraft it plans to procure from 73 to 60, and the numbers of IRIS-T and Meteor air-to-air missiles for the Eurofighter—all collaborative European projects. It is also halving the number of Tornado fighters to be upgraded.41 The reduced A400M order is sufficiently large to ensure the startup of the project, which had been in doubt because of the lack of confirmed German orders, although it will increase the unit price.⁴²

Italy's Defence Minister has stated the long-term aim of increasing military spending from 1 per cent to 1.5 per cent of GDP.⁴³ However, the 2003 budget includes a nominal rise of only 2.6 per cent, just ahead of inflation. Furthermore, investment spending, covering procurement, construction and R&D, is to be cut by 4.1 per cent because of the costs of moving to an all-professional force by 2004.44

One factor behind the West European caution in military spending is the EU Stability and Growth Pact (SGP), which commits eurozone member countries to limit their public-sector deficits to 3 per cent of GDP.⁴⁵ Furthermore, governments are unwilling to raise taxes or cut social expenditure to fund increases in military spending. The 'capabilities gap' must therefore be balanced against the fiscal gap.

However, while budget deficits may be a reason for some countries to restrict military spending, they do not seem in general to be the decisive factor. Table 10.7 compares plans for military spending announced for 2003 and beyond with the anticipated budget surplus or deficits in 2002 for the major West European spenders—some of them, although not all, eurozone members. As the table shows, there is no clear relationship between fiscal position and military spending plans. Thus, while Germany, which places a high priority on non-military security and influence, is cutting military expenditure in real terms in the face of a budget deficit, France, which traditionally gives high priority both to military power and to its defence industry, is increasing military expenditure even though this means violating the SGP rules.⁴⁶ Italy is also

⁴² 'Europe's A400M project ready to fly', Air Letter, 3 Dec. 2002, p. 4.

⁴⁴ Kingston, T., 'Italy: Eurofighter at all costs', *Defense News*, 7–13 Oct. 2002, p. 1.

⁴⁰ The International Institute for Strategic Studies projected a cost of the war to the UK of c. £3.2 billion (\$4.8 billion). 'Britain boosts war chest', BBC News Online, 12 Feb. 2002, URL http:// news.bbc.co.uk/1/hi/business/2753369.stm>.

⁴¹ 'Germany plans six billion euro spending cuts', Air Letter, 3 Dec. 2002, p. 4.

⁴³ Kingston, T., 'Italian Government weighs reforms', *Defense News*, 8–14 Apr. 2002, p. 4. This refers to the budget for the so-called 'defence function', excluding the paramilitary Carabinieri and military pensions, which form part of the overall defence budget.

⁴⁵ Details of the 1997 Stability and Growth Pact may be found on the European Union Internet site at URL http://europa.eu.int/scadplus/leg/en/s01040.htm.

⁴⁶ Budget projections from Oct. 2002, showing a deficit of 2.5% of GDP (table 10.7), later proved overly optimistic, and in Mar. 2003 the European Commission warned that France is likely to violate the

planning a slight rise in military spending in spite of approaching the 3 per cent limit. However, the government's ambitions to raise spending further do in this case seem to be constrained by the need to meet the SGP fiscal rules. With rather more favourable budget positions, Norway and the UK are planning to raise military spending, while Greece, the Netherlands, Spain and Sweden are planning reductions in theirs in real terms.

The likelihood of war in Iraq also called the SGP rules into question as it was widely expected to have deleterious consequences for European economies, quite apart from the direct cost to countries that may be involved, such as the UK. In response to this, the European Commission was considering suspending the budget deficit limit in the event of war, treating this as an 'exceptional circumstance'.⁴⁷

The Russian Federation

The Russian 'National Defence' budget was roughly flat in 2002, but in 2003 it is resuming the upward trend it has followed since 1998. The budgeted figure of 344.5 billion roubles (\$10.2 billion at market exchange rates) is approximately 7–8 per cent higher in real terms than that for 2002.⁴⁸ Total military expenditure budgeted for 2003, including military pensions, paramilitary forces and an estimated share of military R&D in the 'Basic Science' budget, is up by approximately 11–12 per cent in real terms at 542.9 billion roubles (\$16.1 billion), approximately 4.2 per cent of GDP.⁴⁹ The increases are aimed at furthering military reform, improving living conditions for servicemen and developing new weapon systems.⁵⁰

Higher military spending has been a priority for President Vladimir Putin since 1998 and is aimed at maintaining the capability of the Russian armed forces and the defence industry. In addition, higher spending in 2003 will be made easier by healthy economic conditions. Reasonable GDP growth continued in 2002. The government recorded a strong budget surplus for 2002 and expects to meet unusually high external debt repayments in 2003, thus reduc-

limit in 2003 and 2004 as well. Parker, G. and Graham, R., 'France "could breach deficit rules for three years", *Financial Times*, 3 Apr. 2003, p. 6.

⁴⁷ 'War may see "stupid" euro rules lifted', BBC News Online, 11 Feb. 2003, URL http://news.bbc.co.uk/2/hi/business/2750981.stm. The EU Monetary Affairs Commissioner, Pedro Solbes, argued that a war against Iraq could see the cap on budget deficits being suspended with reference to 'exceptional circumstances', which are a ground for allowing changes in the rules according to the 1997 agreement on the SGP.

⁴⁸ Russian Ministry of Finance, 'On the Federal Budget for 2003, as adopted by the President on 1 Jan. 2003', URL http://www.minfin.ru. Figures are based on budget projections of inflation in 2003 of 10–12%, real GDP growth of 3.5–4.4% and an average exchange rate of 33.7 roubles to the US dollar. The dollar figures for Russia are much lower than those given in previous Yearbooks because of the change this year from using PPP exchange rates to using market exchange rates to convert rouble figures to dollars. See section II above.

⁴⁹ Total military expenditure is calculated according to the SIPRI definition based on the Budget Law of the Russian Federation (note 48). For the calculation of Russian military expenditure budgeted for 2002 see Sköns *et al.*, *SIPRI Yearbook 2002* (note 1), table 6.8, p. 261.

⁵⁰ On the political context of the rise in Russian military expenditure see section IV of chapter 1 in this volume.

ing the country's debt burden.51 Since 11 September, Russia has also been a strong supporter of the war on terrorism,⁵² but the objectives of reform and military industrial capability predate its anti-terrorism agenda. The 2003 budget included a modest 500 million rouble (\$14.8 million) increase for antiterrorism measures.53

Military reform has proceeded slowly in Russia in recent years and the essential problem, described in the SIPRI Yearbook 1999,54 of an oversized, under-funded military, remains. Pay is low and accommodation is in short supply. With the added risk of being killed in Chechnya, conscription is widely avoided by young Russian men. Reform is therefore aimed at professionalization, reducing troop numbers and improving conditions for servicemen.55

Military reform made some progress in 2002, although lack of funds and, allegedly, obstruction from within the military have slowed the process.⁵⁶ Troop numbers were reduced from 1.27 million to 1.1 million,⁵⁷ and new plans were announced by Defence Minister Sergey Ivanov in November to increase the proportion of professional contract soldiers in the army, aiming at a fullyprofessional core force of 166 000 by 2007, with 50-60 per cent of the military to be professional by 2011. However, there is no time frame for the intended complete end to conscription. The process will be expensive, as contract soldiers cost 2.5–3 times as much to maintain as conscripts.⁵⁸

The specific 'Military Reform' budget for 2003, covering demobilization costs, is lower than in 2002, perhaps implying a slower rate of troop reductions. However, substantial military pay rises have been made in 2002 and 2003, and the main National Defence budget includes measures to improve soldiers' social conditions, including tackling the housing problem. Combat training is to be doubled by 2006. Such measures are essential to the reform process in making military service more attractive.⁵⁹

⁵¹ Interfax (Moscow), 'Interfax daily financial report for 25 Dec 02', 25 Dec. 2002, in Foreign Broadcast Information Service, Daily Report-Central Eurasia (FBIS-SOV), FBIS-SOV-2002-1225, 25 Dec. 2002; ITAR-TASS (Moscow), 'Russian federal budget for 2002 ends with large surplus', 4 Jan. 2003 (in English), in FBIS-SOV-2003-0104, 4 Jan. 2003; and 'Russian Duma Budget Committee Chairman outlines main provisions of 2003 budget', Rossiyskaya Gazeta (Moscow), 6 Sep. 2002, in FBIS-SOV-2002-0909, 6 Sep. 2002.

⁵² See section IV of chapter 1 this volume.

⁵³ ITAR-TASS (Moscow), 'Russia: Putin signs law increasing anti-terrorist spending in 2003', 20 Dec. 2002, in FBIS-SOV-2002-1220, 20 Dec. 2002.

⁵⁴ Arbatov, A. G., 'Russia: military reform', SIPRI Yearbook 1999 (note 7), pp. 199–212.

⁵⁵ See, e.g., Herspring, D. R., 'Putin and military reform: some first hesitant steps', Russia and Eurasia Review (Jamestown Foundation), vol. 1, issue 7 (10 Sep. 2002), URL http://www.jamestown. org/Pubs/view/rer 001 007 001.htm>.

⁶⁶ See, e.g., Blank, S., 'This time we really mean it: Russian military reform', Russian and Eurasia Review (Jamestown Foundation), vol. 2, issue 1 (7 Jan. 2003), URL http://www.jamestown.org/ Pubs/view/rer 002 001 002.htm>.

⁵⁷ 'Ivanov says military has shrunk by 14%', *Moscow Times*, 19 Nov. 2002.

⁵⁸ 'Russia: funding said main obstacle to military reform', *Trud* (Moscow), 22 Nov. 2002, in FBIS-SOV-2002-1122, 22 Nov. 2002.

⁵⁹ Interview by V. Dzhibuti, 'Sergey Ivanov eyes army priorities, reform, contract manning', Rossiyskaya Gazeta, 14 Jan. 2003, in Center for Defence Information Russia Weekly, no. 240 (17 Jan. 2003); and ITAR-TASS (Moscow), 'Funding of contract training to double by 2006', 25 Dec. 2002, in FBIS-SOV-2002-1225, 25 Dec. 2002.

Russia's State Armaments Plan for 2001–2010, approved in October 2001, is focused on developing new weapon systems.⁶⁰ Accordingly, the 2003 State Defence Order, covering procurement, repairs and R&D for both regular and paramilitary forces, was increased by approximately 21-22 per cent in real terms, to 109.8 billion roubles (\$3.26 billion). Of this, 60 per cent is for equipment purchase and repair, and 40 per cent for R&D. Procurement details are classified, but analysts have suggested that the military will obtain more Topol-M intercontinental ballistic missiles, S-300 air defence systems, and helicopters and C⁴I systems for the war in Chechnya. Development priorities include a fifth-generation fighter aircraft and UAVs.61

The Balkans

While 2002 was a year of relative calm in the Balkans following the end of the conflict in the FYROM in 2001, the region is still far from fully stable and military expenditure in most countries remains relatively high. In 2002 Croatia continued a falling trend that started with the end of the war in Bosnia in 1995, although the rate of decline is slowing as the country seeks to modernize its forces in preparation for NATO membership. Croatia now spends approximately 2.4 per cent of its GDP on the armed forces. Military spending in the FYROM tripled in 2001 because of the conflict with ethnic Albanian rebels. It was budgeted to fall in 2002, but is still approximately 50 per cent higher in real terms than its pre-war level, at about 3 per cent of GDP. The Federal Republic of Yugoslavia (Serbia and Montenegro) raised military expenditure in 2002 as part of its attempts to modernize its armed forces in order to avoid repetition of past failures such as that in Kosovo in 1999.62

It is now seven years since the 1995 General Framework Agreement for Peace in Bosnia and Herzegovina (the Dayton Agreement) brought an end to war in Bosnia and Herzegovina, but the country is still far from stability. Despite heavy international pressure, progress has been slow in integrating the two autonomous 'entities' created by the Dayton Agreement—the Bosniac-Croat Federation of Bosnia and Herzegovina (FBiH), and the Republika Srpska. They retain separate armed forces, with the Republika Srpska in particular resisting their integration.⁶³ The FBiH army is itself divided into the Bosniac (Muslim) Army of the Federation of Bosnia and Herzegovina (AFBiH) and the Croat Hrvatsko Vijece Obrane (HVO). Tension between ethnic groups remains high and refugees returning to areas from which they were expelled during the war often face violence and harassment.⁶⁴

⁶⁰ The revised State Armamaments Programme for 2001–10 and the State Ordnance Programme for the same period are described in Sköns et al. (note 1), pp. 262-63.

Pronina, L., 'Military spending boosted by 33%', *Moscow Times*, 17 Jan 2003.
 Kusovac, Z., 'Yugoslav Army embarks on restructure programme', *Jane's Defence Weekly*, 13 Feb. 2002, p. 12.

⁶³ See, e.g., 'Briefing: Bosnia and Herzegovina', Jane's Defence Weekly, 18 July 2001, pp. 21–25. ⁶⁴ International Crisis Group (ICG), The Wages of Sin: Confronting Bosnia's Republika Srpska, Balkans Report no. 118 (ICG: Sarajevo and Brussels, 8 Oct. 2001).

These tensions and the cost of maintaining three separate armed forces are reflected in exceptionally high levels of military expenditure. Official budget figures show the total military expenditure of the two entities consuming over 5 per cent of GDP since the formation of the current state in 1995.65 but even these are severe underestimates. An audit by the Organization for Security and Co-operation in Europe (OSCE) found that FBiH military spending in 2000 exceeded the amount budgeted by 77 per cent, reaching 10.5 per cent of GDP, and that of the Republika Srpska in 2000 exceeded the budget by 87 per cent, at 6.5 per cent of its GDP.66

Such levels of military expenditure represent a huge economic drain on a country still struggling to rebuild after the 1992-95 war. The OSCE Mission to Bosnia and Herzegovina has accordingly been pushing for cuts in spending by both entities for some time. ⁶⁷ As a result, both entities cut troop numbers by 15 per cent in each of the years 1999 and 2000. In 2002 the OSCE warned that force sizes were still incompatible with existing budgets; the FBiH responded with a troop cut of approximately 40 per cent, or 10 000 soldiers, by the end of June 2002. This cost 100 million convertible marks (KM)—approximately \$45 million—in compensation for demobilized soldiers, half of which was funded domestically, half by international donors.⁶⁸ The Republika Srpska is also following OSCE recommendations, announcing in August 2002 that it had acquired KM 17 million in funding, mostly from Yugoslavia (Serbia and Montenegro), for a 20 per cent cut in troops to 6400, probably by 2003.69

Domestic military expenditure has been supplemented by substantial external military assistance. Since 1996, the Bosniac AFBiH has received arms and training from the USA and a number of Muslim countries under the Train and Equip Program.⁷⁰ The Croat section of the FBiH (the HVO) is entirely dependent on external funds, while the Republika Srpska's army, the Vojska Republika Srpska (the VRS), is heavily supported by Yugoslavia. According to figures on receipts of military aid in 1998, as reported by the Bosnian Presidency to the OSCE in 1999, the HVO received DM 117.2 million from Croatia and DM 24.3 million from Brunei, Kuwait, Malaysia, Saudi Arabia and the United

65 International Monetary Fund (IMF), Bosnia and Herzegovina: Statistical Appendix, Country Report no. 02/60 (IMF: Washington, DC, Mar. 2002); and International Monetary Fund (IMF), Bosnia and Herzegovina: Selected Issues and Statistical Appendix, Staff Country Report no. 00/77 (IMF: Washington, DC, June 2000).

66 Reported in Organization for Security and Co-operation in Europe (OSCE) Mission to Bosnia and

⁶⁷ 'Downsizing of the armed forces in Bosnia and Herzegovina' (note 66); and 'Military expenditures reduction initiative', on the Internet site of the OSCE Mission to Bosnia and Herzegovina, at URL http://www.oscebih.org/military/eng/military.htm.

⁶⁸ 'B-H Government says dismissal criteria, funds main problem in army downsizing', ONASA (Sarajevo), 8 Feb. 2002, in Foreign Broadcast Information Service, Daily Report-East Europe (FBIS-EEU), FBIS-EEU-2002-0208, 8 Feb. 2002.

⁶⁹ Agence France-Presse, North European Service (Paris), 'Bosnian Serb Government says entity ready to cut army by 20%', 6 Aug. 2002, in FBIS-EEU-2002-0806, 6 Aug. 2002.

⁷⁰ Bowman, S. R., US Congress, Congressional Research Service, *Bosnia: US Military Operations*, CRS Issue Brief for Congress (US Government Printing Office: Washington, DC, 13 Nov. 2001).

Herzegovina and International Organisation for Migration (IOM), 'Downsizing of the armed forces of Bosnia and Herzegovina' (OSCE and IOM: Sarajevo, Jan. 2002). The audit also highlighted poor systems of financial control. Because of this profound unreliability, official military expenditure figures for Bosnia have not been included in the SIPRI military expenditure database (see appendix 10A).

Arab Emirates (UAE).⁷¹ The AFBiH received DM 110.8 million from the USA and Muslim states, and the VRS received DM 28.0 million from Yugoslavia, which pays the salaries of VRS officers.⁷²

Some external sources of funding are now being reduced. Thus, Croatia has ceased providing military aid.⁷³ However, the USA continued to fund the Train and Equip Program for the AFBiH in 2002, while Yugoslavia continued to support the VRS.⁷⁴

Overall, while there is some hope that the high levels of militarization in Bosnia and Herzegovina may begin to ease in the near future, deeper cuts will depend on integration of the two entities, which in turn would require far greater levels of trust and reconciliation between the different ethnic groups. It may be some time before military spending is reduced to a level commensurate with Bosnia's actual security needs and economic realities.

V. Regional surveys

This section provides brief surveys of the trends in military expenditure in four regions or sub-regions and tries to assess the impact of the war on terrorism on these trends. More comprehensive and/or supplementary background papers on regional trends in military expenditure can be found on the Internet site of the SIPRI military expenditure project.⁷⁵

The Middle East

Reported military expenditure in the Middle East rose by 5 per cent in real terms in 2002—a modest increase in view of the increased activity in the war on terrorism and the possibility of a US-led war against Iraq. Except for Israel and Turkey, the war on terrorism appears to have had a limited impact on the level of military expenditure in most of the major countries in the region, at least according to official data. In the combined military spending of the Arab countries in the Middle East for which data were available, the increase was only 2 per cent in real terms in 2002. 76 Saudi Arabia, the major spender in the

⁷¹ 1 Bosnian convertible mark (KM) = 1 Deutsche mark (DM); exchange rate as of Jan. 1998.

⁷² International Crisis Group (ICG), Is Dayton Failing? (ICG: Sarajevo and Brussels, 28 Oct. 1999).

⁷³ 'Briefing: Bosnia-Herzegovina' (note 63); and 'Zagreb not to finance Herzegovinian army', Radio Free Europe/Radio Liberty (RFE/RL), *RFE/RL Newsline*, vol. 5, no. 40, Part II (27 Feb. 2001).

⁷⁴ 'US to continue assisting reforms in Bosnian Federation's army', *Southeast European Times* (Internet edn), 5 Dec. 2001, URL http://www.balkantimes.com/html2/english/011206-GEORGI-001.htm; and Democratization Policy Institute (DPI), 'An agenda for Bosnia's next High Representative', DPI, Washington DC, 1 May 2002, URL http://www.anonime.com/dpinstitute/about/press/20020501 press.htm>.

⁷⁵ The project Internet site address is URL http://projects.sipri.se/milex.html. For detail on the military expenditure data for the countries in the regional surveys see also the notes to the tables in appendix 10A. For the armed conflicts mentioned in the surveys see chapter 2 and appendix 2A in this volume.

⁷⁶ This total excludes Israel and Turkey in the Middle East region. The SIPRI military expenditure table includes Turkey because it is based on strictly geographical criteria (see table 10A.1). Turkey's military expenditure increased by 10% in real terms in 2002 (see table 10A.3) and is scheduled to increase at about that rate in 2003 as well. Furthermore, in the event of war in Iraq or mobilization by the Turkish armed forces, this was to be increased by a further 15%. For more details see Urey, S., 'An amalgamated budget will be formed in the event of war', *Milliyet* (Istanbul), 19 Oct. 2002, in Foreign

region, has suspended new weapon purchases, and Kuwait, another major regional spender, is having difficulty with its Parliament over rising military expenditure in the light of underutilization of existing weapon systems.⁷⁷

In contrast to what their public support for the US-led war on terrorism would suggest, some Arab countries reduced their defence allocations in 2002. Public opinion in most Arab states has become increasingly negative towards increased military spending since the end of the 1991 Persian Gulf War as a consequence of the deterioration of social conditions. The fall in world oil prices towards the end of the 1990s further compounded the decline in living standards. The anticipated support of governments in the region for the war on terrorism seems to have further galvanized opinion against new increases in military expenditure. This is reflected in the official statements on public expenditure in some of the states after the September 2001 attacks on the USA. Two countries in the region, Lebanon and Oman, attributed cuts in their military spending specifically to the need to satisfy public demands for a greater emphasis on the social sector instead of supporting the war on terrorism, perceived by them as largely a US war on Arabs. To that end, Oman announced reduced military expenditure for 2002 and claimed to have achieved a reduction of approximately 6 per cent, with a specific shift of \$100 million into social welfare programmes.⁷⁸ In reality, however, its military expenditure rose by nearly 9 per cent in 2002. The military expenditure of Lebanon declined by approximately 16 per cent in real terms, with even further reductions planned for the next few years.⁷⁹

Saudi Arabia's ability to spend on defence is influenced not only by local opposition to increased military spending—galvanized by increasing unemployment and reinforced by increased anti-US sentiment since the 11 September attacks on the USA80—but also by continued US pressure on it to support the anti-terrorism measures fully, since the majority of the alleged culprits of the 11 September attacks were Saudi citizens. The Saudi Government has attempted to balance these competing influences. It refused to be part of the US coalition for Operation Enduring Freedom (to fight the Taliban in Afghanistan) in early 2002 and declined to allow the use of its territory as a launching pad for attacks in the operation. Similarly, at the time of writing it was non-committal on the use of US bases in Saudi Arabia for attacks on Iraq—leading the USA to move its vital bases to Bahrain and Qatar.81 However, in the face of growing anti-Saudi rhetoric within both official and private circles in the USA,82 in late 2002 Saudi Arabia published a list of its efforts

Broadcast Information Service, Daily Report-West Europe (FBIS-WEU), FBIS-WEU-2002-1022, 23 Oct. 2002.

⁷⁷ Kahwaji, R., 'Kuwait's Parliament blamed for delaying defense deals', *Defense News*, 1–7 July, 2002, p. 19.

⁷⁸ Stratfor, 'Oman opening door to closer ties with US', 11 Jan. 2002, The Global Intelligence Report. ⁷⁹ Interview with Khalil Hrawi, Defence Minister of Lebanon, *Jane's Defence Weekly*, 8 May 2002,

p. 32.

80 Economist Intelligence Unit (EIU), *Country Report: Saudi Arabia* (EIU: London, 5 Nov. 2002).

⁸¹ Country Report: Saudi Arabia (note 80).

⁸² Kafala, T., 'Tense times for Saudi Arabia', BBC News Online, 7 Dec. 2002, URL http://news.bbc. co.uk/2/hi/middle east/2546209.stm>.

and activities to stem the activities of terrorists and their sponsors since 11 September, either singly or in collaboration with others.⁸³ The decision to keep military expenditure for 2002 roughly constant, while at the same time boosting programmes already launched in the fields of education and health,⁸⁴ can be seen as the net result of these influences, as it satisfies both its citizens and its major weapons supplier, the USA.

In *Kuwait*, the main moderating influence on military spending is the Parliament, where a majority has expressed the opinion that most of the new weapons being purchased are of little value to the country and are only being forced on it by its major Western allies.⁸⁵ It has therefore either refused to approve or delayed decisions on new major weapon systems.⁸⁶ Notwithstanding this restraining influence on military spending, there is little evidence that Kuwait is either reducing or shelving major arms programmes. In fact, in announcing the budget for 2002, the government identified defence as a national priority and pledged to maintain military expenditure at a constant level.⁸⁷ Military expenditure rose by 4.5 per cent in real terms in 2002. In addition, the anticipated US-led attack on Iraq led to the mobilization of resources by the Kuwaiti authorities for a possible retaliatory attack by Iraq. At the time of writing, one-quarter of Kuwaiti national territory had been made available to the USA for use as military bases for its anticipated operations against Iraq.⁸⁸

High oil revenues and a small population mean that Kuwait has a relatively comfortable economy, and the impact of high military expenditure is hardly noticeable. However, there is evidence that military spending is eating into the country's Reserve Fund for Future Generations (RFFG), which was created to serve as an economic reserve for the future, since Kuwait's reserves of oil, its main source of revenue, are finite. In the past few years, and especially since the end of the Persian Gulf War, over \$83 billion of the fund has been used to defray the cost of the Iraqi invasion and contribute to the financing of the military and the budget deficits.⁸⁹

In 2002 *Israel* introduced a supplementary budget for defence for the third successive year to take care of its expanded security needs resulting from the intensification of the armed conflict with the Palestinians, and especially the widespread suicide bombings. The total military budget is approximately 9 per cent higher than it was in 2000, the first year in which a supplementary allocation was made to defence. Controlling the Palestinian uprising led to over 25 000 reserve soldiers being called up in 2002, which cost the government

⁸³ Knowlton, B., 'Saudis detail effort to track money flows', *International Herald Tribune*, 4 Dec. 2002, pp. 1, 5.

⁸⁴ Economist Intelligence Unit, Country Report: Saudi Arabia (EIU: London, 13 Feb. 2002).

⁸⁵ Kahwaji (note 77). See also Economist Intelligence Unit (EIU), *Country Profile: Kuwait* (EIU: London, 8 Aug. 2002).

⁸⁶ Kahwaji (note 77).

⁸⁷ 'Kuwait pledges to maintain arms spending', Defense-i.com, 23 Jan. 2002, URL http://www.defense-i.com/news/news/details.asp?id=14685.

⁸⁸ Economist Intelligence Unit (EIU), Country Report: Kuwait (EIU: London, 1 Dec. 2002).

⁸⁹ Country Profile: Kuwait (note 85).

some 10 million shekels (\$2.2 million) per day. 90 Similarly, the government has found it necessary to build a 115 km-long defensive fence between Israel and the West Bank as further protection for its citizens, at an estimated cost of approximately \$1 million per kilometre. 91 All this has had an adverse effect on the Israeli economy. The projected overall government deficit of 3.9 per cent of GDP was largely attributable to the escalating cost of the war against the Palestinians and preparations for anticipated reprisal attacks from Iraq in response to a US invasion. 92 In 2002 the government estimated that, since the Palestinian uprising, which began in late 2000, the Israeli economy had lost over 40 billion shekels (\$9 billion) or approximately 10 per cent of GDP.93 To stem the tide, the government decided in July 2002 to cut the 2003 budget by as much as 7.8 per cent.94 A sum of \$638 million is expected to be cut from the defence budget, which has been a major contributory factor to the overall budget deficit.95 However, some of the impact of the defence cuts might be offset by a promised increase in US military aid to Israel—by approximately \$200 million.96

Egypt, the largest Arab nation and a major recipient of US military aid (about \$1.2 billion annually), increased its military budget by only 5 per cent in real terms in 2002, in spite of the avowed commitment to support the war on terrorism. The impact on the Egyptian economy of the attacks of 11 September was so strong that any more major increases in military expenditure would have been unsustainable: tourism, which is one of Egypt's major foreign exchange earners, suffered greatly. To cushion the effect of the resulting shortage of foreign exchange, the USA, along with other donors, promised balance-of-payments support of about \$2.1 billion to make up for the loss in revenue from tourism and in proceeds from the Suez Canal.⁹⁷

Yemen is another recipient of substantial amounts of military aid from the USA. It has also benefited greatly from compensation for its cooperation with US efforts to eliminate suspected remnants of al-Qaeda in Yemen following the US-led coalition victory in Afghanistan. The USA has provided military aid of over \$100 million since September 2001.98 It also helped Yemen to convene a donors' meeting in Paris in October 2002 that yielded \$2.5 billion in economic support—a sum exceeding the total financial support the country has

'Israeli Cabinet approves cut in defence budget', Jane's Defence Weekly, 7 Aug. 2002, p. 17. See also 'Israeli Cabinet backs budget cuts' (note 94).

⁹⁶ 'Israeli Cabinet backs budget cuts' (note 94). See also Morris, H., 'Jerusalem suicide bomber kills 11', Financial Times, 22 Nov. 2002, p. 5.

97 'Egypt to "seek aid" after tourism slump', BBC News Online, 6 Jan. 2002, URL http://news.bbc.

⁹⁰ Opall-Rome, B., 'Anti-terror war strains Israel's economy', Defense News, 22-28 Apr. 2002, p. 36.

⁹¹ Brom, S. and Shapir, Y. S., 'Erecting a separation fence', *Tel Aviv Notes*, no. 42 (27 June 2002).
92 Machlis, A., 'Israel considers spending cuts', *Financial Times*, 30 July 2002, p. 8. See also Opall-

Rome (note 90).

⁹³ Israeli Ministry of Finance, 'State budget proposal for 2003: remarks by Vice Premier and Minister of Finance, Silvan Shalom, to the Fifteenth Knesset', URL http://www.mof.gov.il/bud2003sp.htm.

^{94 &#}x27;Israeli Cabinet backs budget cuts', BBC News Online, 30 July 2002, URL http://news.bbc.co.uk/ 2/hi/world/middle east/2162815.stm>. See also Tov, I., 'The politics and economics of the Israeli budget', Tel Aviv Notes, no. 53 (6 Nov. 2002), p. 2.

co.uk/2/hi/business/1745830.stm>. See also Economist Intelligence Unit, Country Profile: Egypt (EIU: London, 1 Nov. 2002).

⁹⁸ Economist Intelligence Unit (EIU), Country Report: Yemen (EIU: London, 21 Nov. 2002).

received since 1990⁹⁹ and constituting approximately one-quarter of its GDP. Defence has consistently been listed as one of the country's priority areas for public expenditure.

In similar fashion, both Jordan and Bahrain have benefited from their support for the war on terrorism. While *Jordan* saw its annual military assistance from the USA increased from \$75 million to \$100 million in 2002, 100 *Bahrain* received an increase in military assistance of approximately \$29 million. 101 The purpose of the increased military aid was to help reduce the cost of participating in the war on terrorism. 102

Africa

Military expenditure in Africa increased by about 8 per cent in real terms in 2002. As in previous years, the bulk of the increase came from the main spending nations—Algeria, Angola, Ethiopia, Morocco, Nigeria and South Africa. An increasing trend was also evident in some smaller countries.

Two main factors—reform of the armed forces (modernization of equipment and professionalization) and the fight against terrorism—appear to have overtaken armed conflict as the major driving force for military spending in Africa. 103 The war in the Democratic Republic of the Congo (DRC), which involved several countries in Central and Southern Africa, 104 is gradually ending and many of the countries involved have almost completely withdrawn their forces. The war in Angola also ended in early 2002 after government forces killed Jonas Savimbi, leader of the rebel UNITA forces. Pockets of armed conflict in West and Central Africa remain and will still lead to increased military expenditure in the states concerned. Military reform is, by its nature, a long-term exercise, so it is also likely to continue to influence the level of military spending in a number of states in the next few years.

In the three main African spending countries—Algeria, Nigeria and South Africa—modernization programmes continue to be the main reason for the upward trend in their military spending.

Algeria is continuing with its modernization programme. In 2001 it signed a 10-year agreement on military—technical cooperation with Russia, its main arms supplier.¹⁰⁵ The defence budget was 13 per cent higher in real terms in 2002 than in 2000. Military expenditure again eclipsed allocations to other sectors, including education, which until 1999 had always received the biggest budget. The modernization programme is driven by a number of factors, including: (a) the strong influence of the military; (b) the fight against fundamentalist Islamic groups, such as the Groupe Islamique Armé (GIA, Islamic Armed Group) and the Groupe Salafiste de Prédication et de Combat (GSPC,

⁹⁹ Country Report: Yemen (note 98).

¹⁰⁰ Kahwaji, R., 'Jordan's special forces' role to expand', *Defense News*, 3–9 June, 2002, p. 36.

White House requests increase in aid to Bahrain', *Middle East Newsline*, 22 Apr. 2002.

¹⁰² Kahwaji (note 100).

¹⁰³ On the current conflicts in Africa see chapter 2 in this volume.

¹⁰⁴ Seybolt, T., 'Major armed conflicts', SIPRI Yearbook 2002 (note 1), pp. 29–34.

^{105 &#}x27;Russians to help Algeria update forces', Jane's Defence Weekly, 13 June 2001, p. 15.

Salafist Group for Call and Combat);106 and (c) regional rivalry in the Maghreb, in particular between Algeria and Morocco over Western Sahara.

In Nigeria, military spending in 2002 fell in real terms by 12 per cent, but defence still received the highest share of the budget. Because government receipts were lower than expected, overall capital spending was cut by 47 per cent, but there is no breakdown to show whether this applied to all budget lines. However, there were reports that \$800 million was spent on arms imports from Russia in 2002—almost double the total budgeted allocation for defence.¹⁰⁷ In 2001, Nigeria signed a military cooperation agreement with Russia, to run until 2005, under which Russia will supply military hardware and train the Nigerian armed forces, especially in counter-terrorism tactics. 108

South Africa increased its military expenditure by 6 per cent in real terms in 2002, mainly to meet the cost of the Strategic Defence Packages (arms import programme) approved in November 1999. The government reported in 2002 that, because of the decline in the value of the rand, the total cost of the programme had increased by 25 per cent, from 42 billion rand to 52.7 billion rand, while the dollar value remained unchanged at \$4.7 billion. 109 To offset the effect of the depreciation, the defence budget was increased by 16.5 per cent in FY 2002/2003.¹¹⁰ This problem is likely to continue to exert upward pressure on the defence budget over the next few years.

Ethiopia's military expenditure continued the decline which started after the end of the war with Eritrea in 2000. In 2002, it fell by 8 per cent compared with 2001 and 44 per cent compared with 2000. However, two factors are likely to check this downward trend. First, a programme for modernization of military hardware is about to begin, with Russian support.¹¹¹ The bulk of Ethiopia's military hardware is Russian, and recently Russia cancelled around \$10 billion of mostly military-related debt owed by Ethiopia. 112 Second, the country's decision to eliminate the separatist group, the Oromo Liberation Front (OLF), and a number of terrorist groups from Somalia linked to al-Qaeda, may require more resources than the normal budget can accommodate.

In 2002 *Uganda* was finally allowed to increase its military spending above the 2 per cent of GDP ceiling imposed by donors. 113 Two key donors, the

¹⁰⁹ 'South Africa's arms programme costs rise', *Military Affairs*, 26 Feb. 2002, p. 5.

110 Heitman, H., 'Next South African budget 10% higher than planned', Jane's Defence Weekly, 27 Feb. 2002, p. 18.

111 'Russia renewing arms trade with Ethiopia, other African nations', Vremya MN (Moscow), 3 Aug. 2002, in Foreign Broadcast Information Service, Daily Report-Near East and South Asia (FBIS-NES), FBIS-NES-2002-0805, 8 Dec. 2002.

112 United Nations Office for the Coordination of Humanitarian Affairs (OCHA), Integrated Regional Network for the Horn of Africa (IRIN), 'Russia writes off US\$4.8 bn debt', 12 June 2001, cited in Horn of Africa Bulletin, no. 3 (2001), p. 12.

113 Omitoogun, W., 'Ùganda', in W. Omitoogun, The Military Expenditure of African States: A Survey, SIPRI Research Report no. 17 (Oxford University Press: Oxford, 2003, forthcoming).

¹⁰⁶ US Department of State, Patterns of Global Terrorism 2001, 21 May 2002, URL http:// www.state.gov/s/ct/rls/pgtrpt/2001/html/10252.htm#gspc>.

Olatuyi, J., 'Govt may go bankrupt by Dec., Kuta warns', *The Guardian* (Lagos, Internet edn), 1 Nov. 2002, URL http://nigeriaworld.com/news/source/2002/nov/headlines/1/11-news.html.

^{108 &#}x27;Nigeria-Russia: military cooperation accord', African Research Bulletin, 1-31 Mar. 2001,

United Nations Development Programme (UNDP) and the USA, supported an increase in spending to acquire the necessary equipment to deal decisively with the Lord's Resistance Army (LRA) rebellion in northern Uganda—action that was in 2002 equated with the war on terrorism.¹¹⁴ As a result, the Ugandan Government announced in October 2002 that 13–23 per cent of non-wage expenditure of all line ministries would be diverted to defence in 2002 and 2003.¹¹⁵ Only ministries involved in the government's poverty reduction programme were exempt. This means that Ugandan military expenditure, which has been increasing since 1998, will continue to do so, at least for the next two years. The 2002 military budget was 20 per cent higher than in 2000 and 27 per cent higher than in 1998.

South Asia

DC, 5 Dec. 2002.

Military expenditure in South Asia continued its long-standing rising trend in 2002. Two exceptions to this trend, Bangladesh and Sri Lanka, reduced their military expenditure in 2002. The decrease in Sri Lanka is attributable largely to the ongoing peace process, while economic constraints may have been the determining factor in Bangladesh. In *Sri Lanka* the FY 2002/2003 budget has been seen as the beginning of recovery after almost 20 years of war. It is hoped that the truce with the Liberation Tigers of Tamil Eelam (LTTE) will allow for a small increase in total central government expenditure and a substantial decrease in military expenditure, 116 although this will be hampered to some extent by the government's need to service loans taken to finance arms purchases made during the 2000 LTTE offensive. 117 A major recovery programme has been launched in cooperation with international donors and creditors in order to get the economy running. Issues to be addressed are the rebuilding of war-torn parts of the country, de-mining and the resettlement of nearly 600 000 internally displaced persons. 118

The single most important reason for the increase in South Asian military expenditure during the past 10 years has been conflict. For *India*, with a continuous conflict with Pakistan, has increased its military spending by almost 60 per cent in real terms over the past 10 years. Aspiring to be a regional power, India has also been influenced by the recent big increases in China's military expenditure. The increase in *Nepal*'s military expenditure began in 1996 as a consequence of the insurgencies by Maoist guerrillas in 1995. The

¹¹⁴ 'Uganda: new US ambassador supports boosting of defence budget to tackle terrorism', *New Vision*, 14 Nov. 2002, in Foreign Broadcast Information Service, *Daily Report–Africa (FBIS-AFR)*, FBIS-AFR-2002-1114, 15 Nov. 2002.

¹¹⁵ Osike, F., 'Cabinet slashes ministry budgets', *New Vision*, 9 Oct. 2002. URL http://www.newvision.co.ug/detail.php?mainNewsCategoryId=8&newsCategoryId=12&newsId08915.

^{116 &#}x27;Sri Lanka banks on peace in new budget', URL http://www.formin.gov.lk/news/oct-09 2002.html>.

T17 Deen, T., 'Sri Lanka hints at reduced weapons spend', *Jane's Defense Weekly*, 9 Oct. 2002, p. 4.

118 International Monetary Fund (IMF), 'Sri Lanka: poverty reduction strategy paper', Washington,

thrust of the enormous increase of 119 per cent between 1996 and 2002 came after a massive increase of guerrilla activities.¹¹⁹

Pakistan had a three-fold security problem during 2002. The armed forces were deployed both on the border with Afghanistan and on the Line of Control (LOC) between India and Pakistan. At the same time there was an internal security problem as a result of the popular dissent and internal unrest provoked by the government's pro-USA policy during the Afghanistan war. This led to overspending by Rs 15 billion (\$249 million) in the defence budget for FY 2001/2002, reportedly approved by the International Monetary Fund. 120 Still, because of its level of poverty—among the highest in the world—Pakistan is an exception to the normal pattern whereby war drives military expenditure. As a consequence of an already high defence burden and high poverty level, Pakistan has resorted to the use of nuclear deterrence rather than to dramatically increased military expenditure. 121

The war on terrorism and the ending of the war in Afghanistan have had an enormous impact on the security situation in South Asia. As a direct effect, President Bush lifted the US sanctions against India and Pakistan in late 2001 and US military aid was again allowed to be directed to the two countries. 122 Seen as a central partner in the war on terrorism and the hunt for al-Qaeda's leaders, in 2002 Pakistan received military aid from the USA in the form of military equipment worth \$75 million.123

Afghanistan

For obvious reasons, it is not meaningful to try to assess military expenditure in Afghanistan: for a long time, most of the allocations for military purposes have gone to different military factions and been financed primarily by external sources and by revenues from drug production and trafficking. Furthermore, with shifting governments and consequent shifts in government forces, it is not possible to compare government military expenditure over time, even if data were available.

As part of the rebuilding of Afghanistan and the setting up of a wellfunctioning government, France, Germany, India, the USA and other countries have started to train and equip voluntary Afghan armed forces. The stated objective of President Hamid Karzai is a total force of 80 000 men, of which 70 000 in the army. To be effective against some 700 000 paramilitaries in private armies, they are intended to be relatively well-equipped and mobile. 124

¹²¹ On Pakistan's military doctrine see section IV of chapter 5 in this volume.

¹²³ US Congress, 'FY 2003 congressional budget justification for foreign operations', 15 Apr. 2002, URL http://state.gov/m/rm/rls/cbj/2003/>.

^{119 &#}x27;Timeline: Sri Lanka: a chronology of key events', BBC News Online, URL http://news.bbc. co.uk/2/hi/south_asia/country_profiles/1166237.stm>.

¹²⁰ Haider, M., 'IMF may allow up to 6.1pc fiscal deficit', The Nation, 11 May 2002, in 'IMF may allow Pakistan increase in budget deficit', FBIS-NES-2002-0511, 11 May 2002.

^{122 &#}x27;And the walls come tumbling down: arms export policy and military aid post 9-11', Arms Sales Monitor, no. 47 (Jan. 2002), p. 1.

^{124 &#}x27;Afghan Army sans foreign aid impossible', The News (Internet edn), 5 Dec. 2002, URL http://www.jang.com.pk/thenews/dec2002-daily/05-12-2002/main/main12.htm; Morris, K., 'Can an Afghan army deliver peace?', BBC News World Edition (Internet edn), 3 Dec. 2002, URL http://

According to plans, the 18-month US training programme will provide 11 500 men for the Afghan Army and border guards. 125 However, out of the first battalion trained, one-third of the soldiers left after completing the training because of low salaries and lack of social support. 126 At the beginning of 2003, only 3000 of the hoped-for 80 000 soldiers were ready for service.¹²⁷ The International Security Assistance Force (ISAF) has also trained the Afghan National Guard. 128

US officials have estimated the cost of training, equipping and operating the Afghan Army at \$350 million per year, but the suggested total budget for the armed forces for 2003 was suggested by President Karzai to be \$300 million intended to cover salaries, basic equipment and renovation of barracks. 129 In 2002, US Foreign Military Financing (FMF) to Afghanistan amounted to \$7 million. For 2003, \$50 million has been budgeted, and the budget request for 2004 has been set at \$160 million, which would be approximately 45 per cent of the estimated total cost for the Afghan Army in that year. 130 In addition to FMF, a large part of salaries for the new Afghan Army was financed by the USA under the heading of Peace Keeping Operations to be administered by the military salaries trust fund of the UN Assistance Mission in Afghanistan (UNAMA). In 2002, \$30 million was also allocated for reintegration of former warriors, \$10 million of which was for reintegration of 15 000 child soldiers.131

The Russian Defence Minister, Sergey Ivanov, promised in September 2002 to provide the Afghan Army with military equipment to the value of \$100 million.¹³² Funds from the Afghanistan Reconstruction Trust Fund (ARTF), coordinating the funds donated during the February 2002 donor conference in Tokyo, can also be used to build and maintain the civil police authorities and for reintegration of former militiamen into society. 133

news.bbc.co.uk/2/hi/south asia/2537123.stm>; 'India to train Afghan Army', Asian Defence Journal, no. 7-8 (July/Aug. 2002), p. 52; and Landler, M., 'Afghans plan a new army of 70 000', New York Times (Internet edn), 3 Dec. 2002, URL http://www.nytimes.com/2002/12/03/international/asia/03AFG.html ?todaysheadlines=print&position=top>. See also chapter 4 in this volume.

125 United Nations, The situation in Afghanistan and its implications for international peace and security: Report of the Secretary-General, UN document A/56/1000–S/2002/737, 11 July 2002.

126 United Nations (note 125), p. 5.

127 Rashid, A., 'Dangerous neighbours', Far Eastern Economic Review, Jan. 2003, p. 18.

128 Deen, T., 'UN says the need is now for new Afghan Army', Asia Times, 28 Feb. 2002, available at URL <www.atimes.com/c-asia/DB28Ag02.html>.

129 United Nations (note 125), p. 4.

¹³⁰ US Congress (note 123).

¹³¹ US Congress, 'FY 2002 foreign operations emergency supplemental funding justification', URL http://www.fas.org/asmp/resources/govern/fy02_foropsemerg_justification.pdf.

132 Rashid (note 127), p. 18.

133 World Bank Group, 'Afghanistan Reconstruction Trust Fund. Paper: A proposal prepared by the World Bank, United Nations Development Programme, Asian Development Bank, and the Islamic Development Bank', 19 Mar. 2002 Washington, DC, URL http://lnweb18.worldbank.org/sar/sa.nsf/ Countries/Afghanistan/B79EA4F5547B3B3D85256BB4006FC901?OpenDocument>.

East Asia

Military expenditure in East Asia increased by approximately 5 per cent in real terms in 2002. China accounts for by far the greater part of the regional increase (\$4.8 billion out of a total increase of \$6 billion). The other main regional spender, Japan, also increased its military expenditure in 2002, but on a much smaller scale, maintaining its policy that military spending should not exceed 1 per cent of GDP. Together, China and Japan account for 64 per cent of total East Asian military expenditure. In stark contrast to China, the trend in Taiwan's military expenditure has been declining since 1993, reflecting its focus on key areas of defence and an increasing reliance on US support in the event of an armed attack by China. 134

A number of other countries in the region—Malaysia, Singapore, South Korea, Taiwan and Thailand—began in 2002 to resume procurement programmes that had been suspended as a result of the 1997-98 financial crisis. For most of these countries, this meant an increase in their military expenditure. Another factor driving military expenditure upwards in 2002 was the war on terrorism. Both Indonesia and Singapore increased their military expenditure as a direct consequence of their fear of terrorist acts, while the Philippines had to postpone already deferred procurement programmes to concentrate on internal security issues related to anti-terrorism.¹³⁵

China

The level of military expenditure in China is widely contested, at least when expressed in dollar terms. Official dollar estimates range from the US DOD assessment that it could be as high as \$65 billion¹³⁶ to the Chinese official figure of \$20 billion in 2002.137 SIPRI's estimates for Chinese military expenditure are based on a study published in the SIPRI Yearbook 1999:138 at \$31 billion in 2002 in constant (2000) prices, the SIPRI estimate falls between these two figures. there is less disagreement about the trend. Chinese military expenditure grew rapidly during the seven-year period 1995–2002—by 124 per cent in real terms according to SIPRI estimates. The increase in 2002 was 18 per cent and, according to China's Minister of Finance, Xiang

134 Eland, I., 'Is Chinese military modernization a threat to the United States?', Policy Analysis (CATO Institute), no. 465 (23 Jan. 2003), pp. 9–10.

135 International Crisis Group (ICG), 'Impact of the Bali bombings', ICG Indonesia briefing paper, Brussels, 24 Oct. 2002; and McNally, C. A. and Morrison, C. E. (eds), Asia Pacific Security Outlook

2002 (Japan Center for International Exchange: Tokyo, 2002), p. 141.

137 'China's defense spending much lower than world's average: interview', People's Daily (Internet edn), 8 Mar. 2002, URL http://english.peopledaily.com.cn/200303/08/eng20030308 112973.shtml>. ¹³⁸ Wang, S., 'The military expenditure of China, 1989–98', SIPRI Yearbook 1999 (note 7),

pp. 334-49.

¹³⁶ US Department of Defense, 'Annual report on the military power of the People's Republic of China, Report to Congress pursuant to the FY 2000 National Defense Authorization Act', 7 Dec. 2002, URL http://www.dod.gov/news/Jul2002/d20020712china.pdf. Some unofficial dollar estimates are up to twice as high as the official US estimate. US-China Economic and Security Review Commission, 'Report to Congress of the US-China Security Review Commission: the national security implications of the economic relationship between the United States and China', July 2002, URL http://www.uscc.gov/anrp02.htm, chapter 9, 'The defense budget and the military economy'.

Table 10.8. Official data on Chinese military expenditure, by function, 2000–2003

Category of spending	2000	2001	2002	2003
In local currency, at current pri	ces (m. yuan)			
Personnel	40 550	46 163	54 043	
Operations and maintenance	41 274	48 581	58 123	
Equipment	38 930	49 460	57 278	
Total, official figures	120 754	144 204	169 444	185 300
Total, SIPRI figures	[190 000]	[218 000]	[257 000]	
In US dollars, at constant 2000	prices and mark	ket exchange r	ates (\$ m.)	
Personnel	4 898	5 561	6 534	
O&M	4 986	5 852	7 027	
Equipment	4 703	5 958	6 925	
Total, official figures	14 587	17 371	20 486	22 300
Total, SIPRI figures	[23 000]	[26 300]	[31 100]	

Sources: Chinese State Council, Information Office, China's National Defense in 2002 (New Star: Beijing, Dec. 2002); and Appendix 10A. SIPRI estimates are based on Wang, S., 'The military expenditure of China, 1989–98', SIPRI Yearbook 1999: Armaments, Disarmament and International Security (Oxford University Press: Oxford, 1999), pp. 334–49.

Huaicheng, the 2003 defence budget was set to rise by 9.6 per cent over the 2002 budget. 139

In 2002 China published its fourth defence White Paper.¹⁴⁰ It is the most extensive of the four and elaborates on China's defence policy, on developments in the People's Liberation Army (PLA) forces during the past two years, and on future plans and the basis for these plans. Contrary to common assumptions, it states that, in accordance with the National Defence Law, all of China's defence expenditure comes from the state budget. It also states that all the commercial activities of the PLA have been divested¹⁴¹ and that all expenditure is being audited and supervised by the state and armed forces auditing organs.

The White Paper presents official military expenditure disaggregated into three categories—personnel, operations and maintenance, and equipment—each constituting approximately one-third of the total (table 10.8). During the three-year period 2000–2002, equipment expenditure shows the biggest increase, reflecting China's focus on equipment modernization, much of it in

¹³⁹ Beijing Xinhua Domestic Service (in Chinese), 'Understanding China's national defense outlays', 6 Mar. 2003, in 'PLA financial official explains China's increased military budget in 2003', FBIS-CHI-2003-0306, 10 Mar. 2003; and 'Xiang Huaicheng at NPC: PRC plans 9.6 percent increase in 2003', *Beijing Xinhua* (in English), 6 Mar. 2003, in FBIS-CHI-2003-0306, 7 Mar. 2003.

¹⁴⁰ Chinese State Council, Information Office, *China's National Defense in 2002* (New Star: Beijing, Dec. 2002).

¹⁴¹ In Aug. 1998 the government decided to ban the commercial activities of the PLA. Sköns, E. *et al.*, 'Military expenditure', *SIPRI Yearbook 2000: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2000), p. 245.

the form of arms imports from Russia. 142 The defence White Paper emphasizes China's policy of strengthening the indigenous development and production of advanced weapon systems—based on foreign technology—in order to increase Chinese self-reliance in the field of military equipment. It also notes that a substantial part of the increase in military expenditure has been devoted to increasing salaries and improving the social conditions of officers and servicemen. These improvements are related to the ongoing reform process within the PLA, which involves reductions in manpower with the aim of achieving a smaller and better-trained and -equipped armed force (of 2.3 million troops). A third point stressed is that the Chinese defence burden, as measured by military expenditure as a share of GDP, is relatively low. According to official figures, the defence burden in China has increased from 1.09 per cent in 1995 to 1.50 per cent in 2001. SIPRI figures are higher— 1.8 per cent of GDP in 1995 and 2.3 per cent in 2001—although still lower than the world average.

The White Paper also discusses four reforms relevant to the development of military expenditure: (a) a major change in the budgeting system to implement a zero-base budgeting method, making it possible to redirect funds to prioritized projects;¹⁴³ (b) outsourcing of non-military support functions, such as canteens, civil personnel administration and so on, to non-PLA organizations; (c) the divestiture of commercial activities support enterprises, such as property companies owning and managing barracks and farms supporting the PLA; and (d) acquisition reform, including the introduction of a system of public bidding.

VI. Conclusions

The return to growth in world military expenditure since 1998 and the acceleration in 2002 are the result of an increasingly diverse set of factors. The overall growth is the result of increasing military expenditure in most regions, although for different reasons, while the acceleration in 2002 is due almost exclusively to the huge increase in US military expenditure under the Bush Administration. The \$48 billion increase in US budget authority for national defence for FY 2002 is now translating into outlays. In addition, the emergency supplemental allocations subsequent to the 11 September 2001 attacks are reinforcing this increase.

While in the USA the war on terrorism was a major factor in the huge growth in military expenditure in 2002, this was not the case in Europe, the USA's greatest ally, and even less so in the rest of the world. Pressure for increased military expenditure in Western Europe as a result of 11 September terrorist attacks is being met with mixed responses. West European military expenditure declined slightly in 2002. While the two biggest spenders, France

¹⁴² See also chapter 13 in this volume.

¹⁴³ The ongoing and planned reforms of the Chinese defence budget system are described in National Institute for Defense Studies-Japan, East Asian Strategic Review 2002 (National Institute for Defense Studies-Japan: Tokyo, 2002), pp. 204-205.

and the UK, have decided to increase their military spending in 2003, most other European nations, notably Germany, are not and are even making further cuts. For the NATO candidate countries, the major driving factor in 2002 was the cost of restructuring armed forces in the region to meet NATO standards. Russia will increase its military expenditure in 2003 in an effort to revive the development of new, advanced weapon systems, thus maintaining capability in the defence industry, and to push forward the halting process of military reform.

In most parts of the world, specific regional factors are driving military expenditure. In the Balkans, there were signs that the end of conflicts in the region is beginning to reduce military expenditure. In the Middle East, increasing domestic demand for a shift in spending priorities from defence to the social sector has had a major influence on the level of spending, despite external pressure to commit resources to the war on terrorism. In Africa, the cost of the modernization of armed forces continued in 2002 to drive spending across the region. In South Asia, regional political rivalry and the armed confrontation between India and Pakistan continued to be the main factor that influenced spending. In addition, the war on terrorism led to increased spending in Pakistan. The huge increase in East Asia was the result primarily of the strong rise in Chinese military spending. Other East Asian countries have resumed procurement and restructuring plans, although their economies have only partially recovered from the 1997–98 financial crisis.

The impact of the war on terrorism on military expenditure and on the availability of other resources, such as military assistance, also varies in a regional comparison. This is due primarily to three factors: (a) the threat posed, or perceived, in different regions; (b) the balance between military and non-military means for addressing the threat of terrorism; and (c) public opinion on the war on terrorism.

A review of global expenditure trends shows that the rest of the world is not prepared, or cannot afford, to follow the USA's example in increasing military expenditure at the current level or for the same purposes. The pattern of relationships which developed in 2002 between the United States and the rest of the world over the war on terrorism tends more towards weighing the benefits of supporting the USA against the costs than towards unalloyed support of US efforts.

¹⁴⁴ This conclusion is confirmed by the military expenditure surveys for other regions than those presented in this chapter. Surveys of military expenditure trends in Central Europe, the South Caucasus, Central Asia and South America are available on the Internet site of the SIPRI military expenditure project, at URL http://projects.sipri.se/milex.html.