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THE SECOND-HAND ARMS MARKET AFTER THE COLD WAR

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I. INTRODUCTION

This research note explores the possible impact of the end of the Cold War on the international trade in second-hand arms. Characteristics of this phenomenon are outlined and some factors affecting future demand are identified. An approximation is then made of the supply of discarded major weapons triggered by the massive post-Cold war defence drawdown. We end with a case study of one supplier country's market position and a few remarks on policy questions.

II. SECOND-HAND WEAPONS TRANSFERS AFTER THE COLD WAR

Second-hand weapons are weapons of war discarded from the inventory of armed forces and offered for sale on the world market. They may be tactically, technically or economically obsolescent. Tactical obsolescence occurs when performance is no longer commensurate with the projected tactical environment. Technical obsolescence is brought about by breakdown or substandard performance that cannot be mended cost-effectively. Economie reasons to discard weapons include defence cuts, unacceptably high operating costs, or defence-industrial policy considerations.

These distinctions should make sense given distinct threat environments or conflict scenarios and defence-economic parameters around the globe. For instance, US and NATO weapons are state-of-the-art because, in the predominant war-winning scenario of the Cold War, quality offsets quantity and lack of strategic depth. Elsewhere, lower budgets may be played off against more expendable manpower and terrain, leading to less well-equipped armies able only to deny victory to agressors by providing limited and static defences. Thus discarded weaponry receives a new lease on life in the more benign environment of the lesser developed or Third World.

Useful though these distinctions may appear, it is misleading simply to situate second-hand arms on the «low» end of a continuum running between simple and sophisticated weaponry. The modern arms market serves as a mechanism to disseminate modern weapons technology or as a conveyor belt transporting great quantities of weapons to Third World regions. Often it serves both functions. The point is even defensible that the modern arms market has been a vehicle to globalise the particular configuration of the former East-West conflict. Thus, where Soviet clients were trained in Soviet armoured shock tactics, they acquired a taste for massed armoured forces and artillery firepower. The Soviet arms industry was able to supply large quantities of such weapons. Particularly in the Middle East the marketplace wedded these factors to demand variables like the prevailing instabilities in the region, the nature of the terrain, the multiplicity of actors, and oil money. All contributed to Richardson-type arms racing in the Middle East, with end strengths levelling off at high plateaus.

The role played in this process by the second-hand segment of the market is difficult to overlook. During the Cold War the superpowers made it a practice to deliver phased-out and refitted weapons to allied or friendly states. Soviet practices were particularly noteworthy (1).

Will this model survive in the post-Cold War world ? On the supply side, it is difficult to see how the political motives to deliver arms to Third World clients could remain essentially unchanged. On the industry level, it appears that Russian arms makers will find it extremely difficult to adapt to market forces, while the ability of their Western counterparts to launch new models and keep them in sustained production suffers from defence cuts. On the demand side it may be noted that even limited modern wars may require extraordinary numbers of major weapons and war consumables (2). Thus the second-hand market still offers cheap critical mass to state actors. To substate actors like insurrectionists, it offers cheapness

(1) See M.N. Kramer, « Soviet Arms Transfers to the Third World », *Problems of Communism* (36, 5) Sept/Oct 1987, 63. No quantitative analysis of the practice of upgrading discarded weapons and delivering them to client states is available. It can be hypothesized, however, that the well-known Stalinist habit of never throwing any weapons away, which stems from the desperate Soviet experiences in the early stages of WW-II, should, given the monotonous production of new arms, create countless robust and technically sound reserve weapons that could easily be upgraded to more modern standards.

(2) Israel and those Arab countries that it could conceivably regard as potential enemies (Syria, Iran, Iraq, Egypt, Jordan) between them own three times as many tanks as were involved in the WWII battle of Kursk, the greatest armoured battle in history.

and availability. While states are noticeably weakening, both internally and on the world stage, substate actors are prolific. Insurrectionists, while proverbially engaged in low-intensity conflict, require heavy weapons to raise conflict intensity when their political goals are insufficiently met. Almost no insurrections seem to be fought exclusively with light, hand-held weapons, and even small numbers of heavy weapons may decide their outcomes (3). Thus modern firepower is arguably to stay in general demand. Whether prevailing armament levels will remain constant is a moot point, and depends on the entire nature of the evolving world security system. But it seems a safe prediction that the demand for second-hand weapons will at least not decline relative to overall demand on the arms market.

III. The size and nature of the second-hand market

The size of the market for second-hand arms is difficult to gauge. Since they are in fact depreciated capital goods, turnover does not accurately reflect the fighting power transferred. Therefore a hardware approach is followed here, in that the argument is based on the quantities of heavy weapons concerned.

The lack of reliable data on transfers of light weapons virtually restricts much of the discussion to heavy weapons. Unfortunately, neither can the size of the second-hand market for these major weapons be estimated accurately from available open sources (4). Still one gets a feel of this activity by examining the weapons retrofit business. Retrofits are major modifications to weapons, designed to lengthen service life beyond original projections or to escape early tactical obsolescence. Table 1 shows that ongoing retrofit programmes represent twice the volume of 1992 worldwide arms transfers. This calls for careful evaluation, since these programmes may on average take several years to complete, and evidently some retrofits for Third World customers are not undertaken in their countries and will at some point be registered as exports. Yet it is clear that this activity is an important addition to the market of new weapons and may thus give a clue with regard to the size of the second-hand market. Tanks in particular appear to be both eligible for upgrading and a staple good in the second-hand market. This is probably due to their technical and operational longevity once critical components such as guns, engines and fire controls have been refitted. Artillery retrofits usually go even beyond

(3) A. Karp, « Arming Ethnic Conflict », *Arms Control Today*, September 1993, esp. 8-11.

(4) This is because databases built from open sources do not differentiate between new and second-hand transfers and are not necessarily exhaustive (though known recent major system transfers may well add up to totals supplied in intelligence-based compilations such a ACDA).

major modifications and armoured combat vehicles are often cheaper to make or repair by Third World countries themselves.

TABLE 1
Retrofits vs sales of land combat systems, 1992

Customers	*retrofit programmes*	*arms transfers*	*retrofits as a multiple of arms transfers*
Tanks			
3rd world	2971	430	6.9
other	3586	1303	2.8
total	6557	1733	3.8
ACV's			
3rd world	820	860	1
other	1734	765	2.3
total	2554	1625	1.6
Artillery			
3rd world	—	789	—
other	390	887	0.4
total	390	1676	0.2
CFE relevant land systems			
3rd world	3791	2079	1.8
other	5710	2955	1.9
total	9501	5034	1.9

Sources : SIPRI 1993B, 29, Table 3.5 and SIPRI 1993A, 458, Table 10.16.

Note : The new UN Register of Conventional Arms, from which data on 1992 transfers are taken, includes reexports of weapons systems to be retrofitted. These programmes typically take several years to complete, hence the third column does not purport to suggest one-on-one comparability in time.

IV. Functions specific to second-hand armament

Second-hand arms come at a discount, but even as their performance is acceptable to operators, their characteristics differ in important respects from those of new weapons. In a tactical sense older, used weapons may be subject to frequent breakdowns and costly repairs. Spare parts are often difficult to obtain and reliability degrades over time. Politically, they may perhaps be taken as a demonstration of the will to defend but not attack. However they could also signal the opposite, especially as their purchase leaves some budgetary leeway for procuring a more effective stocks of war consumables and weapons mix, such as more sophisticated equipment.

Ideally, second-hand weapons may also be used to sidestep and reduce the influence of the military. They present recipient governments with an opportunity to shift funds away from the defence function. Once lower military spending is accepted, it is politically difficult to raise spending again for a replacement cycle, particularly when the region in question is stable. However, the opposite may occur, as the operation and eventual replacement of cheaply procured equipment may force unwarranted expenditures downstream. Western European NATO countries have experienced this. American gifts and offshore funding for indigenous arms production in the 1950's have contributed to force structures that these countries found it difficult to sustain in the 1970's and 1980's, when reequipment fell due (5). Thus low procurement costs tend to mask the true cost of ownership.

V. Post-Cold War supply factors

Since the end of the Cold War the potential exists for a temporary glut in the second-hand market. The armed forces on both sides of the former East-West divide are being scaled down substantially, making much larger amounts of materiel obsolete than will come out of regular replacement cycles. To boot, this materiel tends to be of later vintage, making it more than usually suitable for transfers to third parties.

The process of shedding materiel on this scale began with the historic undertaking by the East, enshrined in the 1990 Treaty on Conventional armed Forces in Europe (CFE), to forfeit its great numerical advantage in conventional arms. By the time the treaty was in force, the Western camp regarded the Cold War as definitely over and started to plan for huge additional reductions. Both phases have an impact on the world arms market. The next paragraphs analyse the first phase and to some extent the second.

VI. The CFE Treaty

The CFE Treaty, of which all NATO and former Warsaw Pact allies are signatories, limits five categories of major weapons. These are battle tanks and other armoured combat vehicles (ACV), heavy artillery pieces, combat aircraft and attack helicopters. Limitation is as a rule supposed to take the form of outright destruction during 1991-1995. Since other approved modes of limitation do not include arms exports, it follows that the latter are for-

(5) For a brief discussion see the authors in ch. 5.1.2 of *Jaarboek Vrede en Veiligheid 1987*, Amsterdam, VU Uitgeverij, 1987, 79-81.

bidden, though this is not explicitly stated (6). Three ways to get around this can be identified. Firstly, limits are placed on categories, not individual items, so transfers between CFE signatories may precede eventual destruction. Secondly the treaty governs holdings as of 15 November 1990. Prior transfers to locations outside the treaty area are legally unassailable. Thirdly, specific exceptions have been made to the no-export rule. The first point is relevant for NATO, which persues a policy known as « cascading », whereas the other two pertain to the former Warsaw Pact. The following paragraphs discuss matters in that order.

VII. NATO : THE CASCADING PROGRAMME

As a result of CFE obligations the former Warsaw Pact countries have to reduce their holdings in these categories in Europe West of the Urals by some 56 % (7) through 1988-1995. Because it was numerically inferior, NATO as a whole is bound to flimsy reductions by comparison. However, since the treaty divides Europe into three reduction zones, the Central Zone wisely having been made the area of greatest reductions, individual NATO countries such as Germany and the US must cut their holdings quite substantially. This and other factors (8) have led to a movement to redistribute arms to less well-off allies, particularly at the south rim of the NATO area, who were in need of force modernisation and whose CFE-allowed holdings were comparatively generous anyway. This process is called cascading (9). Up to 4,000 heavy arms may be redistributed to the four southern NATO allies alone (Table 2), representing over two thirds of the Alliance's total limitation obligations (10). As a proportion of total allowed holdings, weapons cascaded up till now represent some 11 % of battle tanks and around 4 % of ACV's and artillery.

(6) J. Dean and R.W. Forsberg, « CFE and Beyond. The Future of Conventional Arms Control », *International Security*, (17, 1), Summer 1992, 83.

(7) Based on an estimate of Warsaw Pact holdings at the start of the CFE talks of 180,700 and reductions to 78,800. This includes the impact of German reunification, which has caused the Federal Republic to assume the former GDR's reduction obligations, wiping out the latter's permitted holdings entirely. The numbers refer to stocks of the five weapons categories put together.

(8) Besides obvious economic and operational advantages, it was argued that this process was needed to balance the shift of Russian weapons behind the Urals discussed below under VIII, and to secure NATO's flanks, thought to have become relatively more vulnerable. L. Feinstein, « CFE : Off The Endangered List ? », *Arms Control Today*, October 1993, 6 ; D. Lightburn, « Enhancing Security — Arms Transfers Under CFE Ceilings », *NATO's Sixteen Nations*, (36, 3), May/June 1991, 61.

(9) It goes without saying that the recipient country must destroy its own older weapons to the degree that its indivual ceiling cannot accomodate the cascaded arms.

(10) The difference between total official country holdings as of November 1990, and the total NATO ceiling is 5,892, representing the number of weapons to be scrapped without cascading. Total cascading, including weapons transferred to NATO's north flank, may reach some 4,500. This is appreciably more than was envisaged earlier (Lightburn, *ibid.*), which probably reflects the greater numbers that have become available since CFE, i.e. the problematic discussed below in Par. X.

TABLE 2

Intra-NATO arms transfers, 1991-1993

GREECE

	tanks	*ACV*	*artillery*	*aircraft*
FRG	75 Leo-1	200 M-113	150 MRL	
NL			171 M-30	
	170 Leo-1	177 M-113	53 M-106	
UK				32 F-4
US			72 M-110	
	671 M-60A	150 M-113	100 M-30	
Total	916	527	493	32

TURKEY

	tanks	*ACV*	*artillery*	*aircraft*
FRG			131 MRL	
	100 Leo-1	300 BTR	131 M-110	46 RF-4
NL				60 NF-5
Italy		100 M-113		
US	822 M-60A	250 M-113	72 M-110	9 F-4
Total	922	650	337	115

PORTUGAL

	tanks	*ACV*	*artillery*	*aircraft*
NL		104 M-113		
		22 YP-408		
US	80 M-60A			
Total	80	128		

SPAIN

	tanks	*ACV*	*artillery*	*aircraft*
US	310 M-60A	100 M-113	24 M-110	
Total	310	100	24	
Grand total	2148	1105	854	78

Sources : SIPRI 1993B, 70 ff (Annex 2), 58 ff (Annex 1) ; GAO 1993, 24 (Appx III) ; IS 1992, 116 (Appx Table 5) ; MvD 1992, 129 and 1993C, KL 3, KL 6.

Notes : The data above give an indication of the magnitude of the NATO cascading programme (which does not exist officially as an alliance 'programme') with regard to the so-called south flank states. They represent past transfers (the US programme however had not been completed as of Feb. 19, 1993). US transfers represent gifts, purportedly because the destruction costs are foregone (GAO 1993, 5). Dutch transfers as a rule are not free of charge but may be funded by an existing budgetary facility for south flank states. Note that Germany transfers some ex-GDR equipment as well.

Note especially that NATO apparently tries to maintain a balance between transfers to Greece and to Turkey.

Cascading may follow a compelling logic, but as a form of North-South arms transfer it invites criticism. The recipients have in the past proved unable to keep up with periodic accelerations of the East-West arms race (1968 ; 1977 ; 1981). Why, then, should this be redressed now that the basic European security problem is solved ? While it may be true that NATO's south flank countries have become intrinsically more vulnerable in the post-Cold War environment, the cascading programme may itself trigger destabilizing movements. It may fuel the long-standing Turkish-Greek conflict, since these two countries are the main recipients. It also gives rise to concerns in view of Turkey's possible use of the weapons in its anti-Kurdish campaigns. Cascading also exacerbates the treaty-induced maldeployment and lack of equipment of the ex-Soviet forces closest to Turkey and Greece. (Russian forces at the southern borders and forces of the new trans-kaukasian republics), in view of the later partitioning of CFE obligations between the Soviet Union's successor states (11). Finally, cascading contradicts the treaty's intent, especially as the average quality of NATO forces increases. As a delineation of East-West forces the treaty may be regarded as out of date, but the limits it imposes are important for building confidence during the long transition to democracy, and it has set in motion a process of thinning arsenals altogether.

VIII. Supply from Russia

Comparable processes are seen among the successor states of the Soviet Union. For instance, after Russia and Ukraine had agreed on their shares in the Soviet allowance, the warring states of Georgia, Armenia and Azerbeijan received equal but small allotments. But since formerly they had had hardly any weapons between them this allotment could not help but give a boost to the wars in the southern Kaukasus.

However the main problem from the perspective of the arms trade is the very substantial number of CFE-regulated weapons that the Soviet Union withdrew behind the Urals just before signing the treaty. Its motives were manifold. It wanted to avoid or postpone destruction for want of the necessary facilities and money, to preserve some capacity, presumably also for exports, to reequip Siberian divisions presently equipped with obsolete materiel (a form of internal « cascading » although there is no comparable provision to destroy old materiel freed in the Far East), and to reduce the political embarassment associated with destroying tens of thousands of weapons. After the demise of the Union, most of these stores remained in the Russian Federation, although some are in Kazakhstan and

(11) Allison, *op. cit.*, 28. Russia is restricted from having but a few tanks in the southern Kaukasus. As stated below, transfers to Georgia, Armenia and Azerbeidzjan have been restricted as well, a.o. in view of the tensions in this region.

Uzhbekistan. Since these weapons were outside the CFE area when the treaty was signed, the stored weapons could be legally exported. This is still the case, as the former Soviet Union has only made a binding statement to the effect that the weapons will be partly destroyed, and will not be used to reconstitute disbanded army units (Table 3) (12).

TABLE 3

Soviet weapons withdrawn behind the Urals by Nov 1990

	tanks	*ACV*	*artillery*
sent to units in East	8000	11200	1600
for repair/replacement			7000
store, to replace/suppl	8400	4700	16400
Subtotal	16400	15900	25000
'91 undertaking to destroy	6000	1500	7000
Total available for export	10400	14400	18000
probably available for exp	2400	3200	9400

Sources : IS 1992, 112 and paper Soviet delegation in Vienna, 14 June 1991.

The question remains what Russia intends to do with the stored weapons. It must have made sense to withdraw only the most recent vintages behind the Urals and anyway only some 40 % of Soviet CFE-relevant land weapons were older than ten years in 1988 (Table 4). These weapons could substitute for new ones on the world market, as has often been done in the past. But it is difficult to predict their impact, given the present flatness of the market. In 1992, Russian arms sales were but a tiny fraction both of weapons stored and of previous production levels (Tables 5 and 6). The stored heavy weapons may represent roughly between 60 %-100 % of all Soviet-made weapons currently in service in the Third World (Table 7). If the average sales level enjoyed by the Soviet Union in the mid-eighties is taken as a yardstick, it could take up to nine years to sell off the stored weapons altogether. But this unjustly presupposes that the country could

(12) Declaration by the Government of the Soviet Union in Vienna with a Protocol on Materiel East of the Urals, 14 June 1991 ; *Financial Times*, 7 Dec. 1990 ; *Arms Control Reporter* 1993, 407.B.415. There are no verification procedures governing this political undertaking, and it is unclear whether it pertains only to stored weapons or (also) weapons transferred to the Eastern part of the Russian Federation. Some of the storage sites are in Kazakhstan and Uzhbekistan. The sites are not in the CFE reduction zone, but the two countries are party to the Tashkent Declaration of 15 May 1992 in which the CIS Heads of State declare that they will refrain from making decisions or taking unilateral measures that will have a bearing on the reduction obligations of the former Soviet Union. (Since a very small part of Kazakhstan is in the CFE reduction zone, this country did ratify the CFE Treaty in 1992.) The picture remained unclear as of September 1993, when these two countries met with Russia to discuss the matter. (Discussion with Dutch government official; *Rossiskaja Gazeta* 23 May 1992 ; *Frankfurter Allgemeine Zeitung* 27 May 1992 ; *Red Star*, September 1993).

enjoy the historic market share of the Soviet Union (Table 8). (13) In reality, then, selling the weapons could take even much longer.

The key to Russia's behaviour with regard to these weapons may well lie in the state of its defence industry. Defence spending in Russia fell from 8.5 % to 5.2 % of GNP (constant 1991 prices) between 1989 and 1992 (14), and because manpower and exploitation costs ate the military's lunch,

TABLE 4

Proportion of ex-WP land systems >10 years old, 1988

	Tanks			*ACV*			*Arty*		
	inventory	*prod / imp*	*% >10 yrs*	*inventory*	*prod / imp*	*% >10 yrs*	*inventory*	*prod / imp*	*% >10 yrs*
NSWP	17400	4800	**72**	20328	7600	**63**	17194	5700	**67**
SU	53300	25300	**53**	56400	46000	**18**	48700	27300	**44**

Sources : IS 1992, 112-113 (inventories as of July 1988); DOD 1988, 34 (production and imports); IISS 1990, 34 (Soviet inventories).

Notes : NSWP: Non-Soviet Warsaw Pact. 'Inventory' denotes holdings as of Nov 1990. 'Prod/imp' denotes all domestic procurement (production plus imports) during 1980-1990. '% >10 yrs' denotes the percentage of inventories older than ten years in 1990.

TABLE 5

1992 world/Russian transfers as a percentage of Russian storage

Weapons	*world transfers* / *Russian storage*	*Russian transfers* / *Russian storage*
tanks	121	1.2
ACV	63	14.2
artillery	86	—

Sources : SIPRI 1993B, 28-29; IS 1992, 112.

(13) The end of the Cold War plays havoc with traditional political motives for Soviet transfers to the Third World. These can be summarised as : competition for influence with the West and China, obtaining base rights and the like, supporting warring allies and insurrectionists, fostering political dependence, and facilitating espionage (KRAMER, *op. cit.*, 59-60). Traditional buyers like Libya and Iraq who are still politically dependent on Russian arms supplies suffer from arms boycotts. Other « dependents » can no longer enjoy the generous terms the Soviet Union would sometimes offer. A country like Egypt, which in the more distant past used to depend on Russia for the sheer magnitude of its requirements, has long since become an American licensee. Finally, the peace process in the Middle East may in time make long-standing Soviet clients such as Syria and Jordan respectable enough for them to be eligible for Western sales.

(14) R. ALLISON, « Military Forces in the Soviet Union's Successor States », *Adelphi Paper* 280, Oct. 1993, 26.

TABLE 6

Recent US and Russian transfers as a percentage of 1990 production

Weapons	*1992 US transfers* / *1990 US production*	*1992 Russian transfers* / *1990 Soviet production*
tanks	173	0.5
ACV	113	4.5
artillery	81	—
combat aircraft	36	4.5
helicopters	2	—

Sources : DoD 1990, 38 ; SIPRI 1993B, 29.

TABLE 7

Possible Russian supply of second-hand weapons to the Third World set against the size of the Third World market

	tanks/artillery	*ACV*
probably available	11800	3200
total available	28400	14400
production in 1990	2650	4400
average export 84-88	3375	1490
average export 73-88	2880	1800
in service 1981	36000	10000
in service 1994 (est.)	40000	15000

Sources : Available weapons: Table 3 1990 production : DOD 1991, 22. Average exports 1984-1988 : ACDA 1989, 159. Average exports 1973-1988 : estimate based on CRS 1984, 28 and ACDA 1978, 159 and 1989, 129. In-service in Third World 1981 : Krause 1985, 395. In-service 1994 : extrapolation of 1981 figure.

TABLE 8

Years needed to sell Russian stores in 1980s market

	average No. by SU in 1984-1988	*ex-SU saleable stores (low)*	*ex-SU saleable stores (high)*	*years to go on stock (low)*	*years to go on stock (high)*
tanks	1457	2400	10400	1.7	7.1
ACV	2977	3200	1440	1.1	4.8
arty	1917	9400	18000	4.9	9.4

Sources : Tables 3 and 7 ; ACDA 1989, 129.

Note : 'High' and 'low' are based on what in Table 3 is called the 'total available' and the 'probably available' stores.

procurement came to a virtual standstill (15). The defence-industrial sector suffers from an acute crisis. In the Russian Federation, it still accounted for 55 % of industrial production in 1990 (16), by which date the output of tanks and heavy artillery had already fallen to a mere 37 % and 54 %, respectively, of their 1988 values (17). Since 80 % of all major conventional weapons assembly plants of the former Soviet Union are located in Russia (the balance being mostly in Ukraine) (18), the Russian Federation is particularly hard hit. Clearly, wooing the arms industries may be viewed as a political necessity by politicians in today's climate (19).

In view of this, it could be hypothesized that Russia will not contemplate exporting its holdings East of the Urals. But arguments to this effect can be plausibly countered. By selling discarded materiel at cut-rate prices the goverment would compete with Russia's defence industries. However this assumes that industry can finance production runs for cash exports in the first place, a tall order given Russia's inflationary environment and the flatness of demand in the world arms market, where Russian firms moreover are hard put to offer cheap credits and credit guarantees. Secondly, the revenues of second-hand sales are insufficient to alleviate Russia's crisis of public finance. To this can be replied that Russia's financial problem overrides all others (20). Besides, Russia and other Soviet successor states have adopted the policy to finance conversion schemes or even the armed forces from the proceeds of arms exports (21), a clever political ploy but one which does limit their room for maneuver in the sales area. Thirdly it can be argued that the elaborate government apparatus for arms

(15) Military procurement fell by 70-85 % in 1992. Domestic tank orders were a mere 20 in that year, down from 3200 in 1988. The share of civilian production in the output of Russian arms factories rose from 50 % to 80 %, largely as a result of falling military output. See *Handelingen Tweede Kamer 1992-1993*, Bijlage 22975, nr. 3, pp. 26 and 31 ; P. Almquist, « Arms Producers Struggle to Survive as Defense Orders Shrink », *RFE/EL Research Report*, (2, 25), 18 June 1993, 34.

(16) Ch. Smart, « Amid the Ruins, Arms Makers Raise New Threats », *Orbis*, (36, 3), Summer 1992, 350.

(17) See U.S.Department of Defense, *Military Forces in Transition*, 1991, 22.

(18) When major component factories are included, or when NBC and test facilities are factored in, the percentage falls to 70. Figures in CIA, *The Defense Industries of the Newly Independent States in Eurasia*, Jan 1993. Cited in Almquist *op. cit.*, 36.

(19) K. Sorokin, « Russische Ruestungsindustrie sucht Ueberleben im Export », *Europaeische Sicherheit*, May 1993, 241.

(20) Sorokin, *op. cit.*, points to the debt of $ 70 bn which needs servicing. The recent sale of fourty Vladivostok-based Foxtrot submarines to North Korea at scrap value is an example of seemingly ill-judged behaviour, raising a little cash while rocking the boat in the dispute between the IAEA and North Korea over nuclear inspections.

(21) See K. Sorokin, « Russia's 'New Look' Arms sales strategy », *Arms Control Today*, October 1993, 11-12 (Belarus and Russia) and Almquist, 39 (Ukraine).

exports is only geared to selling newly produced weapons (22). But this overlooks the long-standing Soviet practice of refurbishing discarded materiel for overseas customers. Besides, many fear that the weapons stores are inadequately protected against theft and black marketeering (23). Yet another point to be made is that the political necessity for giveaways to friendly or allied nations no longer exists. However, it can be argued that commercial sales packages can be made more attractive by including second-hand arms at cut-price, if only for cannibalisation purposes. Finally, the weapons could be used for a reconstitution of the mass mobilisation army and defence-industrial base, in scenarios that envisage an end strength of the armed forces at a little over two million men, such as the one recently advocated by defence minister Pavel Grachev. But to this the objection may be raised that the stored arms are not necessary for this purpose in the first place and that using them in this way would run counter to political undertakings that Russia adheres to. Besides, turning back the clock in this way would be entirely impossible in fiscal reality (24).

It follows that the Russian contribution to the second-hand market is difficult to predict, because there are no obvious reasons for stocking the weapons that the former Soviet Union, in a reflexive gesture based more on ingrained habits than cool analysis, decided to withdraw from the CFE reduction area.

It may be added that Ukraine has obtained a sizeable proportion of the holdings allowed under CFE, conferring on it the potential to become the second-largest military power on the continent. Ukraine might decide to sell part of these weapons at some point, particularly when a more Western-style government would get into power. Other successor states may want to follow the example of Kazakhstan, a successor state's whose naval shipyards are 90 % idle (25) and which is reported to have decided to sell its SU-24 fighter-bombers.

IX. Supply from Central Europe

Some of the Soviet Union's former allies in Eastern Europe have recategorized sizeable portions of their equipment in early 1991 by ear-

(22) The present sales apparatus is arcane, subject to frequent changes, and tends to directly represent industrial interests. *Oboroneksport*, *Spetsvneshtekhnika* and *Main Directorate for Cooperation* deal with new sales, production equipment transfers and sales to former WP allies, respectively. A *Main Administration for Military-Technical Cooperation* is tasked with coordination. Before the October 1993 coup a parliamentary committee wielded considerable influence as well. Almquist, *op. cit*, 37 and S.A. Karaoglanow, « Die Russische Ruestungsexportpolitik », *Wehrtechnik*, November 1992, 54-55.

(23) O. Diehl, « Russland als Waffenbasar », *Europa-Archiv*, 20 (1992), 609.

(24) Allison, *op. cit.*, 33-34.

(25) *Krasnaya Zvezda*, 28 January 1993, cited in Sorokin, *op. cit*, 11.

marking these holdings for exports, thereby obtaining exceptions from their CFE obligations (26) (Table 9). In some cases this export allowance is twice as high as the CFE ceiling. In addition, many heavy weapons accomodated under CFE ceilings may be put up for sale as well (e.g. Table 14), though the plans for this are unclear and to a degree irrelevant. For the 1992 sales figures indicate that, rather than being sold massively abroad, Central European weapons mostly contribute to the currently depressed prices for ex-Warsaw Pact materiel (27).

TABLE 9

CFE-related holdings, rights and obligations of former non-Soviet Warsaw Pact countries

Tanks

CFE ceiling	*Country*	*July 1988*	*Nov. 1990*	*Nov. 1992*	*allowed export*	*1992 export*
1475	Bulgaria	2850	2145	2209	466	
957	Czech Rep	2817	1198	1703	1052	
835	Hungary	1748	1345	1331		
1730	Poland	2850	2850	2807		
1375	Romania	2853	2851	2960		
478	Slovakia	1408	599	851	526	81
6850	East Eur.	14526	10988	11861	2044	81

Armoured Combat Vehicles

CFE ceiling	*Country*	*July 1988*	*Nov. 1990*	*Nov. 1992*	*allowed export*	*1992 export*
2000	Bulgaria	2515	2204	2232	110	210
1367	Czech Rep	3112	1692	2462	1310	20
1700	Hungary	1732	1720	1731		
2150	Poland	2456	2377	2416		2
2100	Romania	3140	3102	3143		(120)
683	Slovakia	1556	846	1231	655	
10000	East Eur.	14511	11941	13215	2075	232

(26) DEAN and FORSBERG, 1992, 89.

(27) Bulgaria has sold some materiel to Syria. Germany, too, is a player in the ex-Soviet market by virtue of its ex-GDR holdings. Bonn has transferred some of these to Hungary for free or at cut prices. See M. ROSKIN, « Slovak Separation and Central European Security », *Defense Analysis*, (9, 2), 1993, 225 ; A. ROBINSON, « Eastern Europa Caught Up in New Arms Race », *Financial Times*, 14 January 1994. New T-72 tanks were at one point offered for 500,000 dollars, one quarter of their value (SOROKIN, *op. cit.*, 12), whilst used T-72's are reputed to have fetched as little as 35,000 dollars. The fact that only a third to a quarter of Central Euopean materiel is less than ten years old (Table 4) may be a factor in this.

Artillery

CFE ceiling	*Country*	*July 1988*	*Nov. 1990*	*Nov. 1992*	*allowed export*	*1992 export*
1750	Bulgaria	2958	2116	2085	594	
767	Czech Rep	2323	1044	1612	1265	
840	Hungary	1586	1047	1037	47	
1610	Poland	3200	2300	2309		
1475	Romania	3825	3789	3928		
383	Slovakia	1162	522	806	633	
6825	East Eur.	15054	10818	11777	2539	

Combat aircraft

CFE ceiling	*Country*	*July 1988*	*Nov. 1990*	*Nov. 1992*	*allowed export*	*1992 export*
235	Bulgaria	449	243	335	156	3
230	Czech Rep	331	231	231	65	
180	Hungary	153	110	143		
460	Poland	734	551	508	53	
430	Romania	505	505	505		
115	Slovakia	166	116	116	33	
1005	East Eur.	2338	1756	1838	316	3

Combat helicopters

CFE ceiling	*Country*	*July 1988*	*Nov. 1990*	*Nov. 1992*	*allowed export*	*1992 export*
67	Bulgaria	44	44	44		
50	Czech Rep	43	37	37	6	
108	Hungary	39	39	39		
130	Poland	29	29	30		
120	Romania	13	13	15		
25	Slovakia	22	19	18		
500	East Eur.	242	181	183	6	

Sources : ACR 1993, 407.B.482 and A.5-6 ; ViennaFax (2, 10-11) Dec. 1991, cited in IS 1992, 113 ; UN Register, cited in SIPRI 1993B, 58ff.

Note : The november 1990 figures are artefacts. They include actual holdings per that date minus (later) allowances for set-aside weapons like the 'allowed for export' category.

X. Supply outside the CFE framework

CFE was a sign that the Cold War had ended. But it was not until the defeat of communism in Europe, which virtually coincided with CFE, that Western countries began planning in earnest for post-Cold War forces.

Because of the demise of communism as a force, the West no longer saw a security advantage in driving the mandatory materiel limits further down in a second round of negotiations that went underway after 1990. As a consequence, weapons freed by further voluntary reductions can be freely exported. These weapons are likely to be much more potent since CFE-reductions normally consist of the oldest weapon classes (e.g. Table 13). One can even say that the CFE ban on exports helped considerably to reduce the market overhang associated with the reductions that would have accompanied the end of the Cold War anyway. Thanks to CFE, Western governments can actively pursue the sale of more recent vintages at prices not too far removed from original procurement values.

There is no overview available of the size of the additional reductions, because planning started in the midst of CFE implementation and in some cases still goes on, and because the process is strictly unilateral. However the general pattern is quite clear. For instance total cuts in US defence spending were projected at 35 % in 1988-1998 (28), and current plans call for almost halving some key components of U.S. conventional Cold War strength (Table 10). German military procurement is even to be cut 60 % from Cold War levels (29). NATO nations as a whole plan to reduce the overall combined peace strength of their forces by almost 25 % between 1990 and 1997. Ground combat units and combat aircraft will be reduced by 25 %, in the Central Zone of Europe by 45 %. Of the remaining units, a larger proportion will be added to the reserve components (30). Estimating on the basis

TABLE 10

Evolution of planned reductions in key components of US post-Cold War conventional end strength

	1988 Reagan	*1992 Bush*	*1993 Clinton-1*	*1993 Clinton-2*
active army div.	*18*	*12*	*12*	*10*
*tactical AF wings**	*34*	*26.5*	*24*	*20*
aircraft carriers	*14*	*14*	*12*	*11*

Sources : JCS 1992, 3-3 ; M. Gordon in *New York Times*, 27 March and 2 September 1993.

Notes : * active and reserve. 'Bush' denotes the so-called « Base Force » planned on in the last Bush Budget. 'Clinton-1' represents the first Clinton Budget, largely a Bush leftover. 'Clinton-2' is the result of the so-called « Bottom-Up Review » of the defence effort.

(28) OMB Budget Authority figures cited in « A New Defense Industrial Strategy », *Airpower Journal*, (7, 3), Fall 1993, 17 (Fig. 1).

(29) C. Covault, « German Industry Confronts Crisis », *Aviation Week & Space Technology*, 31 Jan 1994, 44.

(30) NATO report 8 February 1993, cited in *Handelingen Tweede Kamer 1992-1993*, Bijlage 22975, nr. 3, p. 42.

TABLE 11

Hypothetical post-CFE cuts vs. CFE-mandated cuts in NATO forces, ultimo 1992

	CFE-mandated reductions 1990-1995	*additional reductions through 1997*
Tanks	3233	2200
ACV	2037	5400
Artillery	649	4000
Total	5919	11600

Sources : IS 1992, 110 (CFE limits and official November 1990 holdings); MvD 1993D, 42 (one quarter overall reduction).

Note : 'CFE-mandated reductions' are the sum of individual countries' reduction obligations, if any (i.e. individual individual country holdings as of 15 November 1990 minus CFE country ceilings, thus the impact of cascading is ignored). 'Additional reductions through 1997' represent one quarter of total holdings as of 11/90 minus CFE-mandated reductions, rounded.
Table 12 suggests that the hypothesised additional cuts may be understated. In a drawdown process, materiel budgets may be expected to fall faster than total expenditure, given a.o. (a) high initial costs of cutting manpower and (b) autonomous cost growth in weapons systems. Thus financial trends do not translate directly into volume trends.

TABLE 12

Impact of CFE-mandated vs post-CFE cuts, selected countries

Bulgaria

	7/88 holdings	*11/92 holdings*	*CFE ceiling*	*end strength*
tanks	2850	2209	1475	700
index	100	78	52	25
artillery	2958	2232	2000	500
index	100	75	68	17

Netherlands

	7/88 holdings	*11/92 holdings*	*CFE ceiling*	*end strength*
tanks	913	813	743	330
index	100	89	81	36
artillery	837	837	607	210
index	100	100	73	25

Sources : IS 1992, 110, 113; ACR 1993, 407.B.482; WEU 1992, 95; Mvd 1993A, 75.

Note : Bulgarian end strength based on IISS data on equipment in actual use.

of these figures, one may surmise additional voluntary cuts in materiel to be twice as big overall as the ones mandated by CFE (Tables 11 and 12), enough to saturate the world markets for years to come. (Table 14 even points to this being a conservative estimate.)

Arguably the end of the Cold War does more than merely make available discarded weapons for export. It also creates institutional and strategic incentives for these sales. The military may be allowed to use the proceeds of exports to finance their new procurement off-budget. This is irregular from the standpoint of public finance but politically the proposition to fund the costs of drawdowns with past appropriations seems irresistible (31). Industry may be included in the lobby through opportunities created by the retrofit market. Secondly, these transfers may be pursued for strategic reasons as well, since they provide standardization and a common supply base with customers who are in some cases regarded as future allies in coalition operations. Such standardization may also be thought by the U.S. to compensate for foreign base closures (32). Finally, the high cost of upkeep and storage serves as an incentive to sell the weapons quickly at a discount rather than to wait for possibly elusive customers.

There is no denying that the dissemination of the discarded materiel is rational from a standpoint of worldwide financial resource allocation. But the sales pressures created in the wake of the Cold War appear to be quite high. This clearly runs the risk of producing unwarranted effects on international stability.

XI. A case study of some policy problems

A detailed account of redundant weapons on offer by one country, the Netherlands, is given in Table 13. While this country's usual share in the market for major land weapons is nil, it is putting up for sale quantities of CFE-limited weapons as big as one third of the total transferred worldwide in 1992 (Table 14).

It is the policy of the Dutch government that these weapons may be sold to governments as well as to companies that are able to document final government destinations, provided always the recipients are deemed acceptable (33). This restriction to governments stems from an awareness of increased political vulnerability associated with government-to-government sales (as opposed to private deals to which the government has merely consented). Visibility is a key factor here. « Invisible » items in the weapons catalogue like antipersonnel land mines have proven an embarrassment

(31) This policy is not restricted to ex-Soviet states. In the Netherlands the export sales proceeds in excess of a yearly franchise are added to the defence budget estimates. In the U.S., plans exist to sell used aircraft as non-excess articles, which equally ensures retransfer of the proceeds into the service budgets. See *Handelingen Tweede Kamer 1990-1991*, Bijlage 21991, n[os] 2-3, 239. *Aviation Week and Space Technology*, 14 February 1994, 20.

(32) Fulghum, *ibid.* and Lightburn, *ibid.*

(33) See the authors in SIPRI (I. Anthony, ed.), *Arms Export Regulations*, Oxford 1991, 110-120 for a discussion of the criteria of Dutch arms exports policy.

TABLE 13

Retired Dutch arms on offer, 1991-1998, thousands of guilders

	qty	*price*	*age*
Aircraft			
F-16 fighter-bomber	20	det.	1978-1979
F-27 Mk 300 M Troopship	9	1000	1959-
Alouette III SA 3160 heli	48	500	1964-
Missiles			
Hawk air defence battery	8	(to be sold	by Thomson)
Warships			
Kortenaer ASW frigate	6	150.000	1975-1978
Zwaardvis submarine	2	88.000	1972
Potvis submarine	1	1.500	1965
Dokkum coastal minesweeper	8	300-500	1954-1956
Poolster combat supply ship	1	15.000	1964
Tanks/AFV/armoured utility			
Leopard II tank	115	det.	1982-1986
Leopard I-V tank	266	100	1969
YPR-765 armoured vehicle	727	400-700	1974-1987
M-113 A1	177	7.5-30	1965-1974
M-113 command/recce AV	266	200	1965
M-577 command/recce AV	51	120	1965
M-578 AV utility	25	300	1965
Leopard I bridgelayer	8	1400	1972
Leopard I recovery/sapper	9	1000	1972
tank transporter truck FTF	38	50	1973-1975
trailer for FTF	43	25	1966-1967
Other land vehicles			
air def. radar KL/MSS-3012	42	neg.	1963
Lance missile carrier	15	det.	1975-1976
truck YA 4440	3100	10	1978-1979
recovery vehicles YB 616	242	15	1961
recovery vehicles YB 626	68	15	1961
Landrover	1750	5	1980
jeep M38A1 NEKAF	2000	4	1955-1962
trailers, various	6143	0.25	1960-
trailer, water	1013	0.25	1960-
Artillery			
M-106 [M-113+4.2 mortar]	53	n.a.	1965
M-114/23 towed 155 mm	11	70	1943-1946
M-114/39 155 mm	29	400	1990
M-110 A2 8inch self-propelled	63	300	1966-1983
M-109 A3 155 mm	96	det.	1963
M-101 105 mm	6	30	1942-1945
mortar 120 mm Thomson-Brandt	65	100	1966
mortar 2 inch	141	0.5	1942-1945
mortar 81 mm	155	1	1958
106 mm AT recoilless gun**	151	2	1942-1945
40L70 air defence gun Bofors	50	100	1957
PRTL air defence AV	35	det.	1973-1979

	qty	*price*	*age*
Machine guns			
.30 inch Browning**	436	0.1	1942-1945
4 barrel .50 inch Browning*	92	5	1942-1945
.50 inch Browning**	300	5	1942-1945
Light guns			
Garand M-1 rifle**	8400	0.1	1942-1945
carabine .30 inch**	30693	0.1	1942-1945
pistol 9 mm Browning**	39097	0.75	1946-1948
UZI machine pistol*	25000	0.2	1964-1965
bren gun*	424	0.1	1942-1945
FAL gun*	15000	0.25	1960-
Mines, explosives, ammunition			
mine AP Nr 23 SER**	30000	0.08	1973
mine AP Nr 22 SER**	200000	0.005	1973
mine AP Nr 26 SER**	10000	0.08	1973
Chg Dem mine 18 kg TNT	2200	0.035	1973
Chg Dem Shaped DM 19	150	0.085	1973
Chg Dem Shaped 15 LB	700	0.195	1973
Chg Dem Shaped 40 LB	970	0.06	1973
Chg Dem mine 25 kg TNT	50000	0.14	1979
Ctg 105 mm HE W/F MTSQ How	2250	0.1	1973
Ctg 105 mm HE W/F PD How	5600	0.085	1973
Ctg 105 mm SMK HC How	3700	0.1125	1973
Ctg 105 mm SMK WP How	2700	0.085	1973
Ctg 105 mm ILL How	720	0.125	1973
Primer PERC MK 2-SER	34700	0.002	1973
25 mm 1091 APHE/T LKD	745000	0.058	1974
Ctg 105 mm APFSDS-T	62000	1	1980
Ctg 105 mm APDS-T	23000	0.8	1973
Ctg 105 mm HESH-T	12700	0.325	1973
Ctg 105 mm SMK F/Gun	7500	0.8	1973
Ctg 105 mm SH-T Prac	12000	0.5	1973
Ctg 105 mm DS-T Prac	4500	0.5	1973
(for M110/A2 SP howitzer :)			
HE M 509-SER	26250	2	1979
HE	32618	0.5	1973
HE Prac	287	0.6	1988
Chg Prop 8 in M188A1/Nr15	566	0.5	1981
Chg Prop 8 in M188	227	0.5	1984
Chg Prop 8 in M1-SER	636	0.15	1973
Chg Prop 8 in M2-SER	42545	0.3	1973
Chg Reducer PlashProp M3-SER	38369	0.005	1973
Primer Pefc Mk 2-SER	263900	0.002	1973
Time fuzes MTSQ M577	26200	0.075	1984-1987
Proximity fuzes	18000	0.15	1983-1987

Sources : MvD 1992 ; 1993B, 43 ; 1993C ; communications from MvD/DMKL and DMKLu.

Notes :

* will probably be destroyed (Dec. 93)

** will probably be destroyed (Dec. 93), put up for sale in 1992

A number of the weapons have already been sold. Note that weapons cascaded at no charge are not represented on the list.

once they became subjected to public scrutiny. These mines were in the original 1992 sales catalogue sent a.o. to Dutch embassies, as was was made public in the next summer. The Dutch Foreign Ministry instituted a selected ban on mine deliveries on 24 September 1993. Only countries that had ratified Protocol II of the Inhumane Weapons Convention (34) were now considered eligible buyers. The ministry presumably followed France, the Protocol's depositary, which earlier in 1993 had banned AP mine exports. The US Congress at the urging of Sen. Leahy had legislated a moratorium on the sale of anti-personnel mines as early as October 1992, and extended it for three years in 1993. Days after the Foreign Ministry's action, the Dutch Defence Ministry, itself motivated by a press report on the issue, suspended all sales (35).

TABLE 14

Dutch weapons on offer as a percentage of worldwide transfers, 1992

	on sale, Neth	*transfers, world*	%
Tanks	399	1733	23
ACV	1246	1625	77
large calibre art	205	1676	12
combat aircraft	20	270	7
major warships	9	33	27

Sources : Table 1 and SIPRI 1993b, 3.

It was an idea whose time had come. An estimated 65-110 million land mines clutter the earth, with particularly large concentrations in Afghanistan, Angola, Cambodia, Iraq and Kuwait (32-41 mn according to U.S. estimates). In the last twenty years the practice to map sowed minefields has been discarded by many combatant forces. According to the U.N. it would take 1,300 years to clear but a fifth of Afghanistan of land mines. Based on ICRC estimates, the cost of clearing the world from mines alone may be put at $ 100 billion (36). Yet the world is only at the early

(34) *Convention On Prohibitions Or Restrictions Of Use Of Certain Conventional Weapons Which May Be Deemed To Be Excessively Injurious Or To Have Indicriminate Effects* (entered into force, 2 December 1983). Protocol II is the *Protocol On Mines, Boobytraps And Other Devices*, which restricts the use that may be made of these weapons (e.g. no use in civilian areas ; only for military purposes ; minefield locations must be recorded, etc.).

(35) *Handelingen Tweede Kamer 1993-1994*, Aanhangsel 17. *Congressional Record, Senate*, 10 September 1993, S 11392-93. *Congressional Record, House*, 10 November 1993, H 9267. T. LIPPMAN in *Washington Post*, 8 August 1993. The authors in *Vrij Nederland*, 21 August 1993.

(36) Dept of State for Demining Coordinating Group, *Hidden Killers : The Global Problem with Uncleared Landmines*, 4 Aug 1993, 260 pp, abbv. version as USIA, *Uncleared Landmines : A Hidden Killer and Global Problem*, 5 Aug 1993. *The New York Times*, 29 November 1993, A16. *The Times*, 4 December 1993, 13.

stages of dealing with the problem of land mine sales. A mere 33 countries have ratified the Inhumane Weapons Convention up till now, making it the treaty with the lowest adherence of all multilateral weapons limitation treaties.

XII. To conclude : a modest proposal

The sales catalogue in Table 13 suggests the need for a ban on transfers of discarded hand-held firearms, hand grenades and other light munitions up to perhaps .50 machine guns, if only to non-governmental recipients. The flow of these weapons is impossible to monitor and demand from official sources is clearly insufficient to absorb all but a tiny fraction of them. Therefore unless they are destroyed they will end up in the private dealer circuit. Serial numbers and service marks may easily give indications of the source, guaranteeing future embarassment to governments. Given prevailing price levels, the financial impact of shredding will in all likelihood be nil. On the other hand, these weapons will remain deadly for decades to come. Thus both the world and the governments that together adminlstrate it have a clear interest to abide by such a limitation.

SOURCES OF TABLES

ACDA 1978 : U.S. Arms Control and Disarmament Agency, *World Military Expenditures and Arms Transfers 1968-1977*, Washington 1978.

ACDA 1990 : U.S. Arms Control and Disarmament Agency, *World Military Expenditures and Arms Transfers 1989*, Washington 1990.

ACR 1993 : Institute for Defense and Disarmament Studies, *Arms Control Reporter* 1993.

BASIC 1991 : *BASIC Report on European Arms Control* No. 16, 20 August 1991.

CRS 1984 : U.S. Library of Congress, Congressional Research Service, *Trends in Conventional Arms Transfers to the Third World by Major Suppliers, 1976-1983*, Washington 1984.

DOD 1988 : U.S. Department of Defense, *Soviet Military Power 1988*, Washington 1988.

DOD 1990 : U.S. Department of Defense, *Soviet Military Power 1990*, Washington 1990.

DOD 1991 : U.S. Department of Defense, *Military Forces in Transition 1991*, Washington 1991.

GAO 1993 : U.S. General Accounting Office, *Excess Defense Articles for Foreign Countries, GAO/NSIAD-93-164FS*, Washington 1993.

IISS 1990 : International Institute for Strategic Studies, *The Military Balance 1989-1990*, London 1990.

IS 1992 : J. Dean and R. Forsberg, « CFE and Beyond. The Future of Conventional arms control », *International Security* (17, 1), Summer 1992, 76-121.

JCS 1992 : Joint Chiefs of Staff, *1992 Joint Military Net Assessment*, Washington 1992.

Krause 1985 : J. Krause, *Sowjetische Militaerhilfepolitik in Entwicklungslaender*, Baden Baden 1985.

MvD 1992 : Ministerie van Defensie, *Defence Equipment for Sale*, Den Haag 1992.

MvD 1993A : Ministerie van Defensie, *Prioriteitennota*, Den Haag 1993 (also as *Handelingen Tweede Kamer 1992-1993*, Bijlage 22975).

MvD 1993B : Ministerie van Defensie, *Informatiebundel ten behoeve van de staatssecretaris*, Den Haag 1993.

MvD 1993C : Ministerie van Defensie, *Overzicht af te stoten roerende en onroerende defensiegoederen 1994-1998*, Den Haag 1993.

MvD 1993D : Ministeries van Defensie en Buitenlandse zaken, Letter, 8 April 1993, printed in *Handelingen Tweede Kamer 1992-1993*, Bijlage 22975, nr. 3.

SIPRI 1992 : *World Armaments and Disarmament. SIPRI Yearbook 1992*, Oxford 1992.

SIPRI 1993A : *World Armaments and Disarmament. SIPRI Yearbook 1993*, Oxford 1993.

SIPRI 1993B : E.J. Laurance, S.T. Wezeman and H. Wulf, *Arms Watch. SIPRI Report on the First Year of the UN Register of Conventional Arms*, Oxford 1993.

WEU 1992 : Assembly of Western European Union, *A New Security Order in Europe*, Paris 1992.