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MEMORANDUM

NATO-Warsaw Pact Force
Ratios in Central EuropeAPPROVED FOR
RELEASE -
HISTORICAL
COLLECTION
DIVISION HR70-14
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1. A recently acquired classified Soviet document suggests that Soviet and US planners have about the same appreciation of the *divisional* balance of forces in Central Europe. This document [redacted]

[redacted] contains two lists which provide comparative numerical ratings for the combat potential of various items of NATO and Warsaw Pact combat equipment and the relative potential of divisional-size combat units of the Warsaw Pact and its potential NATO enemies.* A comparison of the Soviet divisional ratings with a comparable US analytical tool--Armored Division Equivalents (ADE)--suggests that Soviet and US analysts have employed generally similar methodologies for determining the relative combat power of opposing forces, and yields nearly identical ratios of total Warsaw Pact and NATO division equivalents in Central Europe.

2. In a division-to-division comparison, the Soviet document provides relative ratings of individual

[redacted]

Comments and queries regarding this memorandum are welcome. They may be directed to [redacted] Office of Strategic Research [redacted]

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US and Soviet divisions which apparently take into account the greater size of US divisions but which score Soviet divisions higher than would a comparable US methodology (see table).

Division Equivalent Ratings

<u>Methodology</u>	<u>US Armored Division</u>	<u>Soviet Tank* Division</u>	<u>US Mechanized Division</u>	<u>Soviet Motorized Rifle Division</u>
US (ADE)	1.0**	0.64	0.98	0.70
Soviet (MRDE)	1.23	1.01	1.10	1.0***
Derived (Soviet ADE)	1.03	0.85	0.92	0.87

* Equipped with T-62 and BMP.

** The two US armored divisions in Europe are rated 1.02 and 1.03 ADEs.

*** Equipped with T-55 and BMP; 1.04 if equipped with T-62 and BMP.

-- *The US Methodology (Armored Division Equivalent--ADE).* According to the most comparable methodology used in the US, the relative combat power of NATO and Pact ground forces is expressed in terms of Armored Division Equivalents (ADE), which relate ground combat units to a standard US armored division. Like the Soviet system, the degree of equivalency is determined by combining the unit's total number of ground combat weapons and the quality of each weapon in terms of firepower, mobility, and survivability. A separate ADE is calculated for the unit in the offense and the defense, and the analysis employed herein assumes that NATO and Pact divisions are on the offense half of the time and on defense the other half.

-- *The Soviet Methodology (Motorized Rifle Division Equivalent--MRDE).* In the Soviet methodology, the "combat potential" score of a division is calculated by totalling the scores of all major items

TS #773239

of equipment in the unit.* All divisions are then normalized on the Soviet motorized rifle division (equipped with the T-55 and BMP), which is given a combat potential rating of 1.0

-- *Derived (Soviet ADE)*. In order to reduce the Soviet MRDE and US ADE to a common demonator, a Soviet version of the ADE methodology was derived. Using *Soviet* combat potential ratings, all Pact and NATO divisions were normalized on the US armored division.

3. From the data contained in the Soviet document, it is also possible to compare the relative combat power--as the Soviets might see it--of the Warsaw Pact and NATO divisions in Central Europe.** The numerical ratings applied to these divisions have been used to derive Pact-NATO divisional force ratios, which have been compared with ratios derived from the US ADE rating system (see table).

WARSAW PACT-NATO FORCE RATIOS
Division Equivalents

<u>Methodology</u>	<u>Division Equivalents</u>		<u>Ratio</u>
	<u>PACT</u>	<u>NATO</u>	
A. Actual	56	25	2.24 : 1
B. US (ADE)	35.64	18.58	1.92 : 1
C. Soviet (MRDE)	49.30	26.47	1.86 : 1
D. Derived (Soviet ADE)	41.36	22.14	1.87 : 1

* *Equipment item scores appear to reflect firepower, survivability, and mobility, and all equipment items are normalized on the T-55 tank, which is given a combat potential value of 1.0.*

** *The Soviet list does not include ratings for two of the 58 Pact divisions in Central Europe--the Polish airborne and sealanding divisions--and these are not included in the table.*

TS #773239

[REDACTED]

4. The close similarity of the force ratios obtained from the Soviet (or its derivation) and US methodologies suggests that Soviet and US analysts have used similar rating factors and weighted values in assessing the combat effectiveness of NATO and Pact weapon systems and divisions. Given the Pact's doctrinal requirement for an overwhelming numerical advantage opposite a few sectors of the enemy's defense line, these data suggest that a Pact force in Central Europe, which may seem excessive by Western standards, is probably considered adequate at best by the USSR.

5. Detailed data upon which the derived force ratios are based is available in [REDACTED] Office of Strategic Research.

TS #773239