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CIA HISTORICAL REVIEW PROGRAM  
RELEASE AS SANITIZED  
1999

16 March 1964

MEMORANDUM FOR: Mr. Arthur W. Barber  
Deputy Assistant Secretary, ISA  
(Arms Control)  
Department of Defense  
Washington, D. C. 20301

SUBJECT: Preliminary Assessment of Economic Impact  
of Production Freeze on Nuclear Weapons  
and Delivery Vehicles

1. The enclosure to this memorandum is our response to an ACDA request for a "rough order of magnitude" assessment of the economic impact of proposed freezes on nuclear weapons and strategic delivery systems. Mrs. Sivard of Mr. Alexander's Staff at ACDA has suggested that you, Mr. Kramish, and Mr. Loch receive copies.

2. It must be emphasized that the background text and caveats should be studied carefully for a full appreciation of the data presented in the table. This is especially important in the context of comparisons between the US and USSR.

SIGNED

EA  
Assistant to the Deputy Director (Intelligence)

Enclosure:  
Savings Implications  
of an ACDA Proposal

(2-1156)

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GROUP 1  
Excluded from automatic  
downgrading and  
declassification

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CENTRAL INTELLIGENCE AGENCY  
WASHINGTON 25, D. C.

6 MAR 1964

MEMORANDUM FOR: Mr. Archibald S. Alexander  
Assistant Director, Arms Control  
and Disarmament Agency  
Washington, D. C. 20006

SUBJECT: Preliminary Assessment of Economic Impact  
of Production Freeze on Nuclear Weapons  
and Delivery Vehicles

REFERENCE: Memorandum from Mr. Alexander to Mr. Cooper,  
dated 25 February 1964

1. The enclosure to this memorandum is our response to your request for a "rough order of magnitude" assessment of the economic impact of proposed freezes on nuclear weapons and delivery systems.

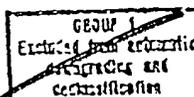
2. It must be emphasized that the background text and caveats should be studied carefully for a full appreciation of the data presented in the table. This is especially important in the context of comparisons between the US and USSR.

SIGNED

Assistant to the Deputy Director (Intelligence)

Enclosure:  
Savings Implications  
of an ACDA Proposal

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5 March 1964

Enclosure

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Savings Implications of an ACDA Proposal

A preliminary appreciation of the savings that might accrue to the Soviets as a result of the implementation of a freeze on the production of nuclear weapons and their delivery systems was derived from existing intelligence estimates of Soviet military expenditures and the assumption that all production and deployment of the weapons systems under consideration\* would cease as of 1 January 1963. The choice of the year, 1963, emphasizes the point that the calculation of saving provided in the table is meant to be illustrative rather than definitive. This year was also chosen because the underlying program estimates are considerably more reliable than those available for the years following. Obviously, actual Soviet strategic weapons programs for the years beyond 1963 may differ in important respects from those estimated for 1963.

In expenditure terms, the result of this procedure is that the \$6-7 billion savings detailed in the accompanying table, represents the maximum amount that could have been saved if the proposal under consideration had been implemented in 1963. The savings in investment expenditures represent the effect of the complete cessation of production of the various categories of equipment and the construction of related deployment facilities. The savings in operating expenditures represent the elimination of those personnel and operation and maintenance costs which would have occurred if the incremental deployment estimated to have occurred in 1963 had in fact not occurred.

There are a number of caveats that must be borne in mind when assessing the data in the table. These caveats may be divided

\* The Soviet weapon systems taken into account in calculating this saving were determined on the basis of the freeze proposals as outlined in US ACDA Memorandum for the Committee of Principals "Verification of a Freeze on Strategic Nuclear Vehicles" dated 6 February 1964. See the table for a listing of the systems.

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Table

Probable Maximum Saving in Estimated Soviet Military Expenditures  
for 1963  
Resulting from Freeze on Production of Nuclear Weapons  
and Strategic Delivery Systems a/

Million 1962 Dollars

	<u>Investment b/ Expenditures</u>	<u>Operating c/ Expenditures</u>	<u>Total</u>
ICBM Systems d/	1,600	49	1,700
Submarine Missile Systems	<u>1,100</u>	<u>38</u>	<u>1,200</u>
Submarines e/	860	38	900
Missiles	280	-	280
Aircraft f/	360	20	380
Air Surface Missiles g/	150	-	150
IRBM Systems h/	1,800	120	1,900
Nuclear Weapons i/	1,400	-	1,400
Total	<u>6,500</u>	<u>230</u>	<u>6,800</u>

- a. Figures have been rounded to two "significant" digits; therefore totals may not equal the sum of components.
- b. Includes expenditures for procurement of major weapon system hardware and construction of facilities where applicable.  
NOTE: Probable savings in research and development programs have not been included. See the text on this point.
- c. Includes only the increment in expenditures, 1963 over 1962, for such items as pay and allowances, other personnel costs, purchase of POL products, recurring spare parts, etc.
- d. SS-7 and SS-8.
- e. SSBN-H, SSGN-E, SSB-G, and SSLR-F.
- f. Blinder.
- g. Kipper, Kangaroo, and Kitchen.
- h. SS-4 and SS-5.
- i. Covers expenditures for finished weapons not just fissionable material.

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into two broad classes -- those which would tend to increase and those which would tend to decrease the size of the saving. The most important factors that should be noted with respect to increasing the saving are the omission from the calculation of possible savings in expenditures for ABM and research and development programs. The lack of a reliable methodology for estimating research and development expenditures for specific weapon systems and the high degree of uncertainty surrounding Soviet ABM intentions precluded a meaningful evaluation of savings associated with these programs.

A number of other factors which have been neither quantified nor included in this calculation, would tend to decrease the saving. One potentially significant omission pertains to limited replacement production of the systems under consideration [for purposes of confidence firings, training, normal attrition, etc.] The expenditures for such production could be substantial. In addition, the imposition of the postulated freeze would undoubtedly result in the retention in the active inventory of certain strategic weapon systems which previously had been scheduled to be phased out during 1963. Such retention would result in greater operating expenditures. Further, the savings in the table must be considered to be a gross rather than net calculation in an even more general sense -- i.e., to the extent that a freeze in strategic forces might result in a relative build-up of more conventional forces. The final major factor not quantified that would tend to decrease the saving is "termination costs". For this preliminary appreciation it was not possible to compute meaningful costs which might be generated by sudden cancellation of large-scale production and construction programs. Even if Soviet practices of defense budgeting were such that costs would not be reflected in the outlays of the Ministry of Defense, the cost to the economy in terms of real resources wasted might be substantial.

Although a judgment cannot be made with assurance, it appears likely that the influence of these latter factors would outweigh that of the factors tending to increase the saving, with the result that the saving would probably be less than that indicated by the

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calculation. Given an estimate of total Soviet military expenditures for 1963 of the equivalent of about \$48 billion, the calculation implies a saving of about 15 percent, whereas a range of 10-15 percent is probably more realistic. On the other hand, when the same calculation of saving is made on a ruble basis, the saving, because of price structure differences, equals about 15-20 percent of total Soviet military expenditures. Obviously, it is the ruble figures that would be of interest to the Soviet leaders.

In any event, the really important point to be made is that probably none of these numbers reflects fully the potential impact on the economy of the proposed freeze. For a number of years the production and deployment of nuclear weapons and their delivery systems have undoubtedly had first claim on the scarce supply of top quality manpower and material resources available to the Soviet economy. Implementation of the proposed freeze would free many of these resources for other uses -- e.g., badly needed investment programs.

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DDI-888-64

UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY  
WASHINGTON

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25 February 1964

MEMORANDUM

TO:

Assistant to the Deputy Director (Intelligence)  
Central Intelligence Agency

FROM:

Archibald S. Alexander *AS Alexander*  
Assistant Director, U. S. Arms Control and  
Disarmament Agency

SUBJECT: Proposed Study of Economic Impact in the USSR  
of Freeze of Strategic Nuclear Vehicles and  
Freeze of Production of Fissionable Materials  
Used in Nuclear Weapons.

1. By separate memorandum of this date, subject Proposed Study of the Structure of Soviet Industry with Reference to the Production of Weapons, I referred to the related project to develop a means for estimating the impact in the USSR of differing arms limitations. I expressed the hope that it would be possible to evolve useful information on the impact of such limitations on Soviet weapons production and on other parts of the economy which might be affected by a release of assets from defense production.

2. I wish now to request that CIA undertake an assessment of the economic impact in the USSR of the proposed freeze of (a) strategic nuclear vehicles and (b) the production of fissionable materials used in nuclear weapons. Although such an assessment is plainly included in the larger project mentioned in paragraph 1 above respecting the estimate of the impact in the USSR of differing arms limitations, the urgency of obtaining information on the impact of the two freeze proposals is such as to suggest that the present separate request be handled as promptly as possible. In view of the need for

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Downgraded at 3 year  
intervals; declassified  
after 12 years

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speed, all that is wanted is the rough order of magnitude (in dollar equivalent) of the impact of these two limitations.

3. Mrs. Sivard is the ACDA project officer for the purpose of the assessment of the impact in the USSR of arms control limitations, including the two freeze proposals. It is suggested that the appropriate CIA representatives get in touch with her for any questions which they may have.