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impact of Republic Sovereignty

Impact of Republic Sovereignty on Soviet Strategic Forces

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Key Judgments

Impact of Republic Sovereignty on Soviet Strategic Forces

Most Soviet strategic nuclear weapons—about 65 percent of the ICBM warheads, all of the SLBM warheads, 35 percent of the heavy bomber weapons, and about 45 percent of the medium bomber weapons—are located in the Russian Republic. Also, most of the air defense and ballistic missile defense forces and a large majority of the defense industry for strategic forces are located in Russia.

Nonetheless, substantial offensive and defensive strategic forces are deployed outside of Russia:

- Ukraine hosts about 20 percent of the ICBM warheads, about 40 percent
 of the heavy bomber weapons, and about 20 percent of the medium
 bomber weapons. Also, some 15 percent of the defense industry is based
 in Ukraine—including key production facilities for SS-18 and SS-24
 ICBMs.
- Byelorussia has only about 1 percent of the ICBM warheads but about 25 percent of the medium bomber weapons.
- Kazakhstan, the only Central Asian republic hosting offensive forces, has about 15 percent of the ICBM warheads, and about 30 percent of heavy bomber weapons. Also, several R&D test facilities for developing strategic weapon systems are located here.
- The Baltic states have numerous strategic air defense bases for protection of the northwestern approach to the USSR, an important ballistic missile early warning radar facility, and a base for a regiment each of Badger and Backfire medium bombers.
- About 30 percent of the air defense fighter regiments and air-surveillance radar units and 35 percent of the strategic surface-to-air missile battalions are located outside Russia

Depending on the precise nature of relations among the constituent states of the union, strategic nuclear policy and capabilities could be affected in significant ways. Sovereignty could:

 Restrict and disrupt the deployment and operation of strategic forces (except for the nuclear-powered ballistic missile submarine [SSBN] force).

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- Reduce strategic depth, warning, and engagement time for air and ballistic missile defenses. The likely loss of air defense bases in the Baltic states, combined with lessons learned from the Persian Gulf war about the difficulty of defending against massed air attacks that employ modern weapons, could lead to a fundamental reevaluation of the practicality of large-scale strategic air defenses.
- Hamper the union's ability to develop and produce strategic arms. Even
 if the facilities in Russia remain dedicated to this task, a loss of assets in
 other republics would at least complicate and could severely cripple the
 overall production and modernization of strategic forces.

We judge, therefore, that the members of the proposed new union will seek continued cooperation in national defense policy, particularly as it relates to strategic forces. For example, the military leadership will press to negotiate basing rights with key republics and the Baltic states. The emerging consensus on the need for drastic defense spending cuts and fundamental economic reform, augmented by republic steps to control defense enterprises within their boundaries, however, threatens to dismantle the once powerful defense industry.

There are a broad array of physical security and use-control measures that appear generally well-suited to prevent the seizure or unauthorized use of nuclear weapons, but we face major uncertainties about the circumstances that could cause a breakdown of nuclear controls. For example, a nationwide civil war would call into question the continued effectiveness of these controls.

Discussion

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Substantial deployments of strategic nuclear forces and their supporting infrastructure exist in republics outside of Russia (see table, figures 1 to 3, and annex for details). The disintegration of the Soviet Union will probably restrict and disrupt the deployment and operational practices of strategic forces and hamper the new union's ability to develop and produce strategic arms. The collapse of the Soviet Union also could disrupt central control over nuclear weapons and cause breaches of safety and security. Although it is unclear to what extent the control of strategic nuclear forces directly will involve republic governments, the General Staff will have to consult with republic leaders on strategic decisionmaking in peacetime and probably during a crisis or conflict

Nuclear Control, Security, and Safety. There are about 30,000 nuclear warheads in the USSR's inventory. About a third of these weapons are deployed on ICBMs and SLBMs. The rest are located in overstorage sites that serve forces in a particular area, in 28 large national stockpile sites, and in possibly as many as 270 strategic SAM sites.

Sovereignty for the republics raises the issue of whether the new union can maintain effective control of these nuclear weapons. Over the years, a broad array of physical security and use-control measures have been established that appear generally well-suited to prevent the seizure or unauthorized use of nuclear weapons. But, since the late 1980s, the military leadership has been increasingly concerned about potential internal threats. This has led the General Staff, which has the pivotal role in nuclear security, to take additional measures that we judge have included removing some warheads from storage sites in Armenia, Azerbaijan, Georgia, and the Baltic states

If the new union's domestic environment becomes even further destabilized, there may be particular dangers associated with efforts to consolidate nuclear holdings. Large or unplanned movements of weapons, especially by rail or road, would increase exposure to potential seizure or sabotage. These vulnerabilities could be heightened by unexpected bottlenecks in the rail net. In some instances, rail lines have been blockaded by disgruntled ethnic groups

example, a nationwide civil war would call into diestion the continued effectiveness of these controls. Because of the General Staff's crucial role in controlling nuclear weapons, the maintenance of its cohesion in these situations would be a key factor in determining whether a breakdown of nuclear controls would occur.

Deploying and Operating Strategic Forces. Republic sovereignty probably will complicate seriously the deployment and operational practices of strategic forces. Pressures for costly redeployments already are building. Such redeployments might require the conversion of 46 existing SS-19 launch silos in Russia to accommodate SS-24 Mod 2 missiles removed from Ukraine. Also, concerns about Kazakhstan's future reliability apparently led the Soviets to seek in START the right to build new SS-18 ICBM silos, presumably substitute siles in Russia. Currently. there are 74 SS-11 and 18 SS-13 Kazakhstan. An auguonar 12 SS-18 ilos are under conversion

If the road-mobile SS-25 divisions in Byelorussia were redeployed in Russia, all of the 72 launchers could remain in an operational status while former SS-20 bases were converted to accommodate the SS-25 force. Even if these weapons remain in Byelorussia, there could be domestic pressures to reduce or eliminate field operations and restrict the weapons to garrison

Redeployments of ICBMs from Ukraine and Byelorussia also might involve missile support infrastructure. For example, two large missile support rear

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Deployed Strategic Nuclear Weapons Outside Russia, 1 September 1991

	Complex	System	Launchers/ Aircraft	Warheads
Ukraine				
ICBMs a	Derazhnaya	SS-19 (silo-based)	90	540
	Pervomaysk	SS-19 (silo-based)	40	240
		SS-24 Mod 2 (silo-based)	46	460
	Total		176	1,240 (about 20 percent of total ICBM warheads)
Heavy bombers be	Uzin/Chepelevka	Bear H	21	126 c
	Priluki	Blackjack	17	204
	Total		38	330 (about 40 percent of total heavy bomber warheads)
Medium bombers (SAF) d e	Poltava	Backfire (AS-4)	19	57
	Stryy	Backfire (AS-16)	18	180
	Zhitomir	Blinder B	21	21
	Total		58	258 (about 20 percent of total medium bomber warheads
Byelorussia				medium comoer warneads
ICBMs a	Lida	SS-25 (road-mobile)	36	36
	Mozyr*	SS-25 (road-mobile)	36	36 .
	Total		72	72 (about 1 percent of total ICBM warheads)
Medium bombers (SAF) c	Balbasova	Backfire (AS-4)	20	60
	Bobruysk	Backfire (AS-16)	20	200 .
	Minsk	Blinder B	22	22
	Baranovichi	Blinder B	21	21
	Total		83	303 (about 25 percent of total medium bomber warheads)
Kazakhstan				moditani boliloti warneads)
ICBMs a	Zhangiztobe	SS-18	52	520
	Imeni Gastello	SS-18	22	220
		SS-18	12	120
		SS-18	12 .	120
		SS-18	6	6
Jacobs beautiful	Total		104	986 (about 15 percent of total ICBM warheads)
Heavy bombers be	Dolon'	Bear H	40	240 c
ICRM totals include a 1	Total		40	240 (about 30 percent of total heavy bomber warheads)

a ICBM totals include only operational launchers and deployed

This table is Score

rather than the Air Force (SAF)

The bomber warheads figures represent the average expected loadouts. Not all of these weapons are necessarily stored nearby.

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b Heavy and medium bomber totals include only operational air-craft and exclude aircraft in operational storage or at training, production, and flight-testing facilities.

c We judge that the Bear H is currently deployed with six AS-15 ALCMs

Operational loads will vary with aircraft mission.

There are about 40 Backfire bombers based in Ukraine that have a conventional, tactical role—they are subordinate to the Navy

Figure 1
Soviet Strategic Offensive Force Depolyment



depots might have to be replicated in Russia. These depots have missile maintenance, refurbishment, storage and destruction facilities

Alternatively, if the union chose to do so, it could keep all of the above missiles as spares and reduce the size of the deployed force

Republic sovereignty undoubtedly has heightened concern by defense planners over the potential loss of key strategic defense assets. For example, the loss of ballistic missile early warning radars in non-Russian republics would degrade Moscow's ability to obtain timely warning and detection of ballistic missile attack. Other assets, such as ABM radars based in

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Moscow, would not fully compensate for the loss of these early warning radars. If these radars had to be relocated, military planners would be faced with difficult resource decisions and may be forced to reconsider whether launch-on-tactical-warning is a viable nuclear attack option

Also, if status of force agreements are not reached, union strategic air defenses could be critically undermined. For example, the loss of bases in the Baltic states that protect the northwestern approach to the union would result in a loss of strategic depth and reduced warning and engagement time. The loss of

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Figure 2 Soviet ICBM Complexes in Non-Russian Republics and Baltic States

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Byelorussia Lida SS-25 36 Mozyr' SS-25 36 Postavy SS-25 0 Total launchers 72 Total deployed 72 warheads	(as of 1 September 1991) Ukraine Derazhnya SS-19 90 Pervomaysk SS-24 46 SS-19 40 Total launchers 176 Total deployed 1,240 warheads	Kazakhstan Imeni Gastello SS-18 52 Zhangiztohe SS-18 52 Total launchers 104 Total deployed 986 warheads
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Date: 0 2 FEB 2016

Figure 3 Soviet Heavy Bomber Bases in Non-Russian Republics



Heavy Bombers, by Republic (as of 1 September 1991)

Ukraine Kazakhstan Priluki Blackjack Dolon' Bear H Uzin/Chepelevka 40 Bear H Total heavy bombers Total heavy 38 bombers Estimated total of 240 deployed weapons Estimated total of 330 deployed weapons



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such bases, combined with lessons learned from the Gulf war about the difficulty of defending against massed air attacks that employ modern weapons, could lead to a fundamental reevaluation by the union of the practicality of large-scale strategic air defenses.

Building Strategic Forces. Russia contains a large majority of R&D and production facilities for strategic nuclear forces, but there are numerous crucial facilities—for weapons components, subcomponents, and testing—in other republics. Consequently, even if the facilities in Russia remain dedicated to military production, a loss of assets in other republics would at least complicate and could severely cripple overall defense production and the modernization of strategic forces. The effects would depend in part on whether the republics successfully worked out new arrangements—to continue to fulfill defense requirements.

Republics have taken various steps that suggest there will be difficulties maintaining the integrity of the defense industrial infrastructure that supports the strategic forces. All republics have passed sovereignty declarations that assert the primacy of republic laws over union laws and have adopted initiatives that bear on defense policy. Six republics have declared themselves nuclear-weapons-free states and a seventh,

Kazakhstan, has banned, with Russia's concurrence, any further nuclear testing. Kazakhastan also has demanded that it be consulted regarding the stationing of nuclear weapons. Other republics—most important the Russian Republic but also including Armenia and Georgia—have claimed Soviet military installations. How the republics will settle these claims is unclear.

Besides depending on the republics for defense bases and production facilities, military planners must have resources from them, especially Russia, to fund defense programs. The emerging consensus on the need for drastic defense spending cuts and fundamental economic reform, augmented by republic steps to control defense enterprises on their territories, however, threatens to dismantle the once powerful defense industry. The pace of downsizing will be tempered by the leaderships' concerns about evoiding worker dislocation and social unrest.

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Annex

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Strategic Nuclear Forces in the Republics

Strategic military forces and supporting facilities are located throughout the USSR. Until now, their disposition was not governed by the boundaries of individual republics but rather by considerations of strategic mission, geography, threat orientation, and survivability. (See table and figures 1 to 3.

Strategic offensive forces—equipped with long-range nuclear weapons—are generally based centrally to enhance their protection from attack. Many key facilities associated with strategic offensive forces, however, are located outside of the Russian Republic. Bombers and land-based ballistic missiles are generally based inland; SSBNs operate from ports located in the Russian Republic that provide ready access to remote territorial waters—the so-called bastions. Strategic defense forces are concentrated to provide barrier defenses (particularly along the European periphery of the USSR), area defenses of strategically—important zones, and point defense of key facilities.

Strategic and tactical nuclear weapons are operationally deployed or stored in several republics. Nuclear warheads for strategic offensive forces are located in Russia, Ukraine, Byelorussia, and Kazakhstan. All 28 national nuclear stockpile sites are located in these same republics; 22 of the 28 are in Russia. Although the General Staff has taken steps to tighten security at these sites, efforts by republics to achieve autonomy present additional security risks

Russia. The bulk of the military forces are in Russia. National-level commands for all forces as well as the Ministry of Defense and the General Staff Headquarters are located in Moscow. In addition, a large majority of strategic offensive facilities are located in Russia. These include 20 of the 26 ICBM divisions (about 4,100 warheads), all three rail-mobile ICBM divisions (360 warheads), seven of the nine operational road-mobile ICBM divisions (about 250 warheads), three of the seven heavy bomber regiments (about 280

weapons), about 45 percent of the medium bomber, weapons, two tanker aircraft regiments, and nuclear weapons storage and support facilities.

Russia possesses unconstrained access to the open sea and is home to most of the Navy. All the units of the Northern and Pacific Fleets, including all ballistic missile submarines, and a majority of Baltic Fleet units are based in this republic. The headquarters of three of the four fleets—Baltic. Northern, and Pacific—are located in Russia.

Russia also contains the majority of the union's strategic defense facilities and forces, including three large phased-array radars for ballistic missile detection and tracking at Olenegorsk, Pechora, and Mishelevka; two over-the-horizon radars at Nakhodka and Komsomol'sk; the Moscow ABM system currently equipped with 84 launchers; 47 air defense fighter-interceptor regiments (70 percent of the total); 625 strategic surface-to-air missile (SAM) battalions (65 percent of the total); and 45 air surveillance units (70 percent of the total)

Moreover, a large majority of defense industry enterprises are located in Russia. Ballistic missiles and their major components are manufactured at facilities in Biysk, Tver' (Kalinin), Kamensk-Shakhtinskiy, Kemerovo, Krasnoyarsk, Moscow, Perm', Petrokrepost', Safonovo, Volgograd, Votkinsk, Yurga, and Zlatoust. Most naval construction occurs at major Russian shipyards, including Nizhniy Novgorod (Gor'kiy), Kaliningrad, Khabarovsk, Komsomol'skna-Amure, St. Petersburg (Leningrad), and Severodvinsk (on the White Sea). Sea-launched cruise missile components are produced at Sverdlovsk-Kalinin. Aircraft plants are located at Gor'kiy, Irkutsk, Kazan', Kuybyshev, Komsomol'sk-na-Amure, Moscow,

² The headquarters of the Baltic Fleet is in the Kaliningrad Oblast, which is physically separated from the rest of Russia by Lithuania and Byelorussia

such bases, combined with lessons learned from the Gulf war about the difficulty of defending against massed air attacks that employ modern weapons, could lead to a fundamental reevaluation by the union of the practicality of large-scale strategic air defenses.

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Novosibirsk, and Taganrog. Numerous weapons component producers and design, development, and test facilities, including the Plesetsk and Kapustin Yar Missile and Space Test centers, are also located in the Russian Republic

Ukraine. Second only to Russia in terms of the number of strategic offensive facilities and forces, the Ukraine contains two silo-based ICBM divisions—one with SS-19s and one with both SS-19s and SS-24sfor a total of about 1,250 warheads; three former SS-20 divisions that could be converted to SS-25s; two long-range heavy bomber regiments; and 20 percent of the medium-range bomber weapons, deployed on Backfire and Blinder bombers. The heavy bomber base at Uzin/Chepelevka supports a Tu-95 Bear H regiment (about 125 weapons) colocated with an Il-78 Midas tanker regiment. The second heavy bomber regiment, forming at Priluki, as of 1 September consists of 17 Tu-160 Blackjack aircraft (about 200 weapons) and is projected to grow to a full regiment of 20 aircraft. Ukraine is also home to a number of important naval installations and headquarters, port facilities, and airfields of the Black Sea Fleet. However, none of these saval facilities has a strategic nuclear role

Major air defense headquarters at Kiev and three other cities in Ukraine control strategic air defense operations over the southwestern approach to the USSR. Strategic defense facilities and forces include the Mukachevo large phased-array radar, the Nikolayev over-the-horizon radar, eight air defense fighter-interceptor regiments (10 percent of the total), 148 strategic SAM battalions (15 percent of the total), and seven-air surveillance units (10 percent of the total).

Ukraine also is second only to Russia in the production of military weapons and equipment. Plants in Dnepropetrovsk and Pavlograd, for example, produce the SS-18 and SS-24, respectively. Several component and subsystem plants are also located in this republic. The test range in Feodosiya plays an important role in developing nayal and other aerodynamic weapon systems

Byelorussia. Byelorussia contains a substantial complement of forces and installations from each service of the armed forces. Strategic offensive forces located in Byelorussia consist of two of the nine operational SS-25 road-mobile ICBM divisions (about 70 warheads). Byelorussia also contains a heavy concentration of medium-range Backfire and Blinder bombers (about 25 percent of the medium bomber weapons).

Major air defense headquarters at Minsk and Baranovichi control strategic air defense operations over the western approach to the USSR. Strategic defense facilities and forces include the Baranovichi large phased-array radar (projected to be completed in the mid-1990s), three air defense fighter-interceptor regiments (5 percent of the total), 42 strategic SAM battalions (4 percent of the total), and two air surveillance units (3 percent of the total). Also, defense industry enterprises at Minsk and Gomel' manufacture missile-associated vehicles and military electronics. A key naval asset is located near Minsk—one of the five very-low-frequency radio transmitters used to communicate with submarines

The Baltic States. There are no bases for strategic intercontinental offensive forces in Estonia, Latvia, or Lithuania; nor do these states have strategic forces-related industrial facilities of significance. At Tartu in Estonia, however, there is a base for a regiment each of Badger and Backfire medium bombers

The Baltic states have a dense network of radars, fighter-interceptor bases, and SAM facilities that are used to provide for the strategic air defense of the northwestern approach to the USSR. In addition to major air defense headquarters at Tallinn and Riga, strategic defense facilities and forces in these republics include four air defense fighter-interceptor regiments (5 percent of the total), 88 strategic SAM battalions (9 percent of the total), two air surveillance units (3 percent of the total), an AWACS squadron equipped with Mainstay aircraft in Lithuania, and ballistic missile early warning radars at Skrunda in Latvia. (A large phased-array radar

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also is under construction at Skrunda). The Baltic states also provide naval facilities for the Baltic Fleet, but none of these facilities has a strategic nuclear role.

Moldova. There are no bases for strategic offensive forces nor any major defense industries in the Moldovan Republic. However, Moldova provides components and subsystems for military equipment produced elsewhere. For example, a Kishinev plant produces military electronics

Caucasian Republics. There are no bases for strategic offensive forces, nor are there any significant strategic forces-related industrial facilities in Georgia, Armenia, or Azerbaijan. However, an operational large phased-array radar is located at Lyaki in Azerbaijan. Also, Georgia has a major air defense headquarters at Tbilisi and fighter and SAM air defense forces.

Central Asian Republics. The only Central Asian republic hosting significant strategic offensive forces is Kazakhstan. This republic has two SS-18 ICBM divisions (about 1,000 warheads) and two Tu-95 Bear H heavy bomber regiments (about 240 weapons). Kazakhstan also has several vital R&D test facilities for developing strategic weapon systems. The facility at Tyuratam is used to launch spacecraft and to test liquid-propellant ICBMs. The center at Aktyubinsk is used to perform heavy bomber weapons system tests. Also, the test center at Saryshagan is a key facility for developing strategic air defense, ballistic missile defense, and advanced technology weapon systems.

A major air defense headquarters in Kazakhstan at Alma-Ata controls strategic air defense operations over the southern approach to the USSR. Strategic defense facilities and forces within Kazakhstan include the Saryshagan large phased-array radar, modified-Galosh and Gazelle ABM missiles located at the Saryshagan Missile Test Center, three air defense fighter-interceptor regiments (5 percent of the total), 25 strategic SAM battalions (3 percent of the total).

There are no strategic offensive forces in the Uzbek, Turkmen, Tajik, or Kirghiz Republics. However, a plant at Taboshar in Tajikistan produces large-class ballistic missile solid motors. Also, an aircraft plant at Tashkent in Uzbekistan produces the II-76 Candid transport, A-50 Mainstay AWACS, II-78 Midas tanker, as well as components for air-to-surface missiles. Major air defense headquarters at Tashkent and Samarkand in Uzbekistan and at Mary in Turkmeniya control strategic air defense operations by SAM and fighter units over the southern approach to the USSR

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