

Strategic Stability in the 21st Century

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Figure 1: Arms Control Treaties, Nuclear Weapons, and Military Expenditure 1945–2020 (Continued)

Year	Stockpile of nuclear weapons*		Military expenditure, % of GDP		Treaty
	USA	USSR/Russia	USA	USSR/ Russia**	
2015	4,760	4,500	3.5	4.9	
2016	4,670	4,500	3.4	5.5	
2017	4,480	4,300	3.3	4.2	
2018	4,000	4,350	3.3	3.7	
2019	3,800	4,490	3.4	3.9	
2020	3,800	4,310			

* Includes deployed and non-deployed strategic nuclear warheads. Retired warheads awaiting dismantlement are not included.

**1992–2012: Estimates by SIPRI

Sources: SIPRI Military Expenditure Database; <https://www.sipri.org/databases/milex>; Kristensen, H. M. & Norris, R. S. (2013): Global nuclear weapons inventories, 1945–2013 in: *Bulletin of the Atomic Scientist*, 69:5, S. 78; <https://doi.org/10.1177/0096340213501363>; Kristensen, H. M. & Norris, R. S. (2014): US nuclear forces, 2014 in: *Bulletin of the Atomic Scientists*, 70:1, S. 86; <https://doi.org/10.1177/0096340213516744>; Kristensen, H. M. & Norris, R. S. (2014): Russian nuclear forces, 2014 in: *Bulletin of the Atomic Scientists*, 70:2, S. 77; <https://doi.org/10.1177/0096340214523565>; Kristensen, H. M. & Norris, R. S. (2015): US nuclear forces, 2015 in: *Bulletin of the Atomic Scientists*, 71:2, S. 108; <https://doi.org/10.1177/0096340215571913>; Kristensen, H. M. & Norris, R. S. (2015): Russian nuclear forces, 2015 in: *Bulletin of the Atomic Scientists*, 71:3, S. 85; <https://doi.org/10.1177/0096340215581363>; Kristensen, H. M. & Norris, R. S. (2016): United States nuclear forces, 2016 in: *Bulletin of the Atomic Scientists*, 72:2, S. 64; <https://doi.org/10.1080/00963402.2016.1145901>; Kristensen, H. M. & Norris, R. S. (2016): Russian nuclear forces, 2016 in: *Bulletin of the Atomic Scientists*, 72:3, S. 126; <https://doi.org/10.1080/00963402.2016.1170359>; Kristensen, H. M. & Norris, R. S. (2017): United States nuclear forces, 2017 in: *Bulletin of the Atomic Scientists*, 73:1, S. 49; <https://doi.org/10.1080/00963402.2016.1264213>; Kristensen, H. M. & Norris, R. S. (2017): Russian nuclear forces, 2017 in: *Bulletin of the Atomic Scientists*, 73:2, S. 116; <https://doi.org/10.1080/00963402.2017.1290375>; Kristensen, H. M. & Norris, R. S. (2018): United States nuclear forces, 2018 in: *Bulletin of the Atomic Scientists*, 74:2, S. 121; <https://doi.org/10.1080/00963402.2018.1438219>; Kristensen, H. M. & Norris, R. S. (2018): Russian nuclear forces, 2018 in: *Bulletin of the Atomic Scientists*, 74:3, S. 186; <https://doi.org/10.1080/00963402.2018.1462912>; Kristensen, H. M. & Korda, M. (2019): United States nuclear forces, 2019 in: *Bulletin of the Atomic Scientists*, 75:3, S. 123; <https://doi.org/10.1080/00963402.2019.1606503>; Kristensen, H. M. & Korda, M. (2019): Russian nuclear forces, 2019 in: *Bulletin of the Atomic Scientists*, 75:2, S. 74; <https://doi.org/10.1080/00963402.2019.1580891>; Kristensen, H. M. & Korda, M. (2020): United States nuclear forces, 2020 in: *Bulletin of the Atomic Scientists*, 76:1, S. 47; <https://doi.org/10.1080/00963402.2019.1701286>; Kristensen, H. M. & Korda, M. (2020): Russian nuclear forces, 2020 in: *Bulletin of the Atomic Scientists*, 76:2, S. 104; <https://doi.org/10.1080/00963402.2020.1728985>

ANALYSIS

Strategic Stability in the 21st Century

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Abstract

Strategic Stability in the 21st Century needs to be rethought in order to involve all relevant actors and to meet new technological challenges. The USA, Russia, China, and Europe each have different definitions of and perspectives on Strategic Stability and related threat perceptions. In particular, the asymmetry between US and Russian capabilities, on the one hand, and Chinese capabilities, on the other, requires innovative arms control concepts. Germany could play an important role as a mediator between the major powers.

Introduction

Security and stability in the 21st century are seriously at risk. The erosion of existing arms control agreements and the growing rivalry between the United States, Russia, and China are increasing the threat of a new and global arms race. At the same time, all institutionalized forms of cooperation are in retreat. This development calls for innovative approaches in order to promote cooperation and dialog. Rethinking the concept of Strategic Stability could help to prevent competition from turning into open conflict.

Against this background, the Körber Foundation and the Institute for Peace Research and Security Policy at the University of Hamburg (IFSH) have founded the Körber Strategic Stability Initiative. The project brings together a group of experts from China, Russia, the USA, and Europe (specifically from France, the United Kingdom, and Germany) in order to develop novel approaches and solutions. This article presents a number of their preliminary findings.

Why Strategic Stability?

The classic definition of Strategic Stability is a situation in which nuclear weapons offer the advantage of deterrence without generating the incentive to strike first. Accordingly, policies of Strategic Stability have mainly focused on preserving the ability to carry out a second strike as well as reducing incentives to expand one's own nuclear arsenal, thereby contributing to arms race stability. The concept was first officially sanctioned in a joint declaration issued by the Soviet Union and the United States (1990) in conjunction with the START I Treaty. Back then, Strategic Stability aimed to prevent the outbreak of nuclear war and to further reduce nuclear arsenals.

As such, the concept mirrored the conditions of the late Cold War, which were based on the bilateralism of the two superpowers and an almost exclusive focus on nuclear weapons. Since then, there has been a realization that Strategic Stability in the 21st century must be rethought.

First, a greater number of actors must be included, above all China—despite the asymmetries between America and Russia, on the one hand, and China, on the other, in terms of their conventional and nuclear capabilities. While the nuclear arsenals of Russia and America are considerably larger than that of China, Beijing has the advantage when it comes to conventional ground-launched medium-range missiles. This asymmetry presents a great challenge to conceptualizing a new arms control architecture.

Second, the concept of Strategic Stability can no longer concentrate on nuclear weapons alone. It has to take into account other novel technologies that affect Strategic Stability. This includes hypersonic weapons as well as conventional precision-strike weapons of strategic ranges, missile defense, and certain cross-domain challenges. To this should be added the domains of space, cyber warfare, and AI. In effect, future arms control will no longer be mostly about quantity, but increasingly about the quality of the weapons, including in very different domains.

To that end, the traditional concept of Strategic Stability needs to be rethought. The participants in the Körber Strategic Stability Initiative agreed on a definition of Strategic Stability that describes a situation intended to minimize the risk of a potential deterrence failure, including strategic, technical, and human risks.

Regional Perspectives

The United States, Russia, China, and Europe each have different definitions of and perspectives on Strategic Stability—from narrow definitions that focus only on reducing the incentives for a first strike to broad definitions such as the absence of military conflicts and rivalries or the nonproliferation of nuclear weapons in general. There are also different emphases *within* the national and regional expert communities.

In the **United States**, Strategic Stability is often defined rather narrowly to mean reducing first strike and arms race incentives. However, the understanding of *how* Strategic Stability can be maintained in different international and military-technical contexts varies significantly from one administration to another. Under the Trump administration, much emphasis was put on China at (almost) any cost, including the possible non-extension of the New START Treaty.

In **Russia**, too, Strategic Stability is understood in terms of preventing nuclear war and arms racing—including securing a second strike capacity and minimizing incentives for a first strike. This definition of Strategic Stability has become a fundamental principle of Russian foreign policy and of how Russia views the international system. However, Russia takes a different stance to the US on how this goal should be achieved. From the perspective of Moscow, France and the United Kingdom must be included in nuclear arms control *before* any inclusion of China can be discussed. Furthermore, a number of Russian experts question whether the close connection between Strategic Stability and nuclear reductions, as during the Cold War, is still compelling and necessary in the 21st century. Experts such as Sergey Karaganov and Dmitry Suslov argue that Strategic Stability is not a synonym for nuclear disarmament.

In **China**, a broad understanding of Strategic Stability as a balance of power between the major powers dominates. It is characterized by the absence of crises, the recognition of peaceful coexistence, and respect for other actors' major security interests and spheres of influence. A narrower understanding of Strategic Stability is mainly confined to academic circles with direct connections to Western discourses. The latter do not wield any significant political influence. At the same time, China's classical foreign and security policy circles are extremely distrustful of U.S. calls to join the previously bilateral U.S.–Russian arms control architecture. From the Chinese perspective, Washington could try to use arms control as an instrument to contain China while simultaneously freeing itself from existing treaties and restrictions. In particular, the fear is that Washington's advantage in terms of verification expertise could be misused to trick China. This view is in line with Beijing's general skepticism toward arms control, which is seen as a way for powerful states to dominate weaker ones. The positive common experiences from the Cold War era that bind the United States and Russia are missing for China.

The discourse in **Europe** focuses mainly on questions of disarmament and nonproliferation, regularly neglecting other critical aspects, such as deterrence. At the same time, Europe's geopolitical position between the United States,

Russia, and China should give European countries even more reason to go beyond the role of mere U.S. allies protected by extended deterrence arrangements and to strengthen Europe’s voice in discussions about Strategic Stability. In the long term, Europe must find a common voice. The initiatives of French President Emmanuel Macron go in such a direction.

Threat Perceptions

What are the greatest threats to Strategic Stability today from the perspectives of the United States, Russia, China, and Europe? Here, one can see a significant overlap between Russian and Chinese threat perceptions, which, above all, are directly related to certain defensive and offensive U.S. capabilities. For Washington, it is predominantly the conventional regional capabilities of Russia and China in Europe and East Asia, which represent a threat to its allies in the regions. All actors view Europe as being on the negative—that is, receiving—end of any possible threat scenario.

From the **U.S. perspective**, the greatest challenge to Strategic Stability today comes in conjunction with regional power plays in Europe and East Asia that negatively affect its allies. More specifically, these challenges stem from Chinese and Russian conventional regional capabilities, which might exceed those of the United States, as well as from both states’ sub-strategic nuclear systems (i.e., systems with shorter ranges than strategic nuclear weapons). The influence of new technologies on nuclear escalation, possible misperceptions, and the lack of constructive dialog formats between Washington, Moscow, and Beijing were also mentioned. There was disagreement about whether the current crisis in arms control poses a threat to Strategic Stability from the U.S. perspective.

From the **Russian perspective**, the development and diversification of U.S. offensive and defensive capabilities, including its conventional capabilities, are considered a threat to Strategic Stability. This goes hand in hand with an unwillingness to reduce these capabilities or to agree on mutually accepted rules in times of increasing confrontation. A similar threat perception can be found on the **Chinese** side. The latter is based on dismissive U.S. attitudes toward the acceptance of mutual nuclear vulnerability as a principle governing U.S.–Chinese relations, along with the development of U.S. missile defense systems and additional strategic offensive capabilities.

For **Europe**, increasing rivalry between the major powers, including new arms races and the current arms control crisis, are discussed as challenges to Strategic Stability. However, the greatest threat from a European perspective is potential abandonment by Washington.

		Greatest threat to Strategic Stability for...			
		USA	Europe	Russia	China
From the perspective of...	US participants	<ul style="list-style-type: none"> China and Russia’s conventional regional capabilities, which could exceed those of the United States The impact of new technologies on potential nuclear escalation China and Russia’s sub-strategic nuclear systems Misperceptions in planning and disposition as well as a lack of constructive dialog formats between the United States, Russia, and China 	<ul style="list-style-type: none"> Being caught between the United States and China or being abandoned by the United States 	<ul style="list-style-type: none"> America’s pursuit of strategic invulnerability 	<ul style="list-style-type: none"> America’s pursuit of strategic invulnerability
	European participants	<ul style="list-style-type: none"> The risk of limited nuclear use against allies in a regional context 	<ul style="list-style-type: none"> Being abandoned by the United States 	<ul style="list-style-type: none"> U.S. conventional counterforce capabilities for offensive and defensive purposes 	<ul style="list-style-type: none"> U.S. conventional counterforce capabilities for offensive and defensive purposes
	Russian participants	<ul style="list-style-type: none"> China’s unwillingness to participate in arms control Anti-satellite weapons Russia’s destabilizing behavior 	<ul style="list-style-type: none"> Russian tactical nuclear weapons Aggressive Russian behavior in Europe, including cyber-attacks The demise of arms controls 	<ul style="list-style-type: none"> The constant development and diversification of U.S. offensive and defensive capabilities, including conventional capabilities Unwillingness to limit these capabilities or to agree on mutually accepted rules in times of increasing political confrontation 	<ul style="list-style-type: none"> U.S. containment policy toward China Increase in U.S. offensive weapons in Asia (including INF-range weapons) U.S. missile defense

Table continued overleaf

		Greatest threat to Strategic Stability for...			
		USA	Europe	Russia	China
From the perspective of...	Chinese participants	<ul style="list-style-type: none"> China's regional military advantage in the Asia-Pacific region, including new technologies such as AI for cross-domain deterrence 	<ul style="list-style-type: none"> Arms races between the major powers The demise of arms control treaties such as INF Unstable relationship with the United States 	<ul style="list-style-type: none"> U.S. missile defense Military capabilities in space Conventional attacks by United States/NATO 	<ul style="list-style-type: none"> U.S. rejection of the principle of mutual vulnerability Development of missile defense and other strategic offensive capabilities (sometimes in cooperation with allies)

Asymmetry as a Challenge to Strategic Stability

Strategic stability in the 21st century must include new actors, in particular China. At the same time, the asymmetry between U.S. and Russian nuclear arsenals and strategic conventional weapons, on the one hand, and Chinese ones, on the other, presents a challenge for conceptualizing future arms control agreements. In order to take into account the security needs of all countries and reflect these asymmetries, new, innovative arms control models are required. Such models could include bringing together conventional strategic weapons and nuclear arms into an integrated treaty—a combination of New START and INF measures—that might, for example, set new comprehensive upper limits for a combination of different systems. Different models are conceivable.

The development of such models could take place in a variety of formats. America, China, and Russia should be prepared to address asymmetries at different levels in bilateral, trilateral, or multilateral talks, depending on what is at stake and which actors are affected. Any future formats should be designed to address the content and not the other way around. In particular, the inclusion of China in trilateral arms control will be a long-term process that does not promise to lead to any concrete negotiations, not to mention reductions, in the short and medium term.

In the meantime, trust-building measures will play an important role. In the short term, “socializing” Chinese security experts with arms control concepts by means of dialog formats might be a promising way to generate shared perspectives on what arms controls can achieve, to exchange experiences and expertise, and to avoid security communities further drifting apart in times of heightened tensions. Such formats might focus on the utility and technical realization of certain verification measures.

In the long term, trilateral arms controls between Washington, Moscow, and Beijing could be built around less controversial topics, for example through declarations of intent not to launch cyber-attacks against each other's nuclear systems. It would also be advisable to start trilateral talks on conventional forces. An alternative to trilateral arms controls could be bilateral agreements between the United States and Russia, on the one hand, and between Washington and Beijing, on the other, as a means of addressing military asymmetries. Furthermore, asymmetrical arms control could prove to be a useful framework within which to integrate new technologies into future arms control treaties.

Conclusion

The possible extension or non-extension of New START will show whether a new arms control architecture based on the concept of Strategic Stability has to be designed from scratch or whether it can build on existing structures and treaties. If neither is possible, then we are faced with nothing less than a new nuclear arms race. In order to maintain Strategic Stability between the major powers in the 21st century, the United States, Russia, and China must operate from a joint understanding that strategic invulnerability cannot be pursued at the expense of other actors. Arms control is an important instrument for achieving Strategic Stability, but it cannot be abused in order to force other actors into making unilateral concessions. Willingness to compromise is the precondition for success.

Berlin can play an important role here as a trustworthy interlocutor and provide a platform for talks between the major powers—at the official and expert levels. Concrete and pragmatic arms control ideas are needed. For Germany, the task is also to exert pressure together with its European partners: a return to arms racing and nuclear instability is not in the interest of Europe and cannot be in the interest of the major powers.

About the Authors

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Please see overleaf for a short bibliography.

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STATISTICS

Russian, US and Chinese Nuclear Forces**Table 1: Russian, US and Chinese Nuclear Forces 2019**

	Russia	USA	China
Total defence spending	65 bln USD	732 bln USD	261 bln USD
Nuclear forces spending, 2016	11 bln USD	35 bln USD	Not known
Deployed strategic nuclear warheads	1,600	1,600	320
Intercontinental ballistic missiles (ICBM)	318 ICBM	400 ICBM	187 ground-launched missiles
Submarine-launched ballistic missiles	160	240	48
Heavy bombers	68	107	20
Non-strategic weapons	1,820	230	Not known

Source: Russell, Martin (2020): *Briefing Russia, arms control and non-proliferation*, p. 11, European Parliamentary Research Service; [https://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS_BRI\(2020\)652100](https://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS_BRI(2020)652100)