

Department of Political Science
Master in International Relations

Chair of International Organization
and Human Rights

US-Russian Nuclear Arms Control: the present situation and future prospects

SUPERVISOR

Professor Elena Sciso

CANDIDATE

Edoardo D'Alfonso
Student Reg. n. 630812

CO-SUPERVISORS

Professor Alexander I. Nikitin

Professor Maria Irene Papa

Academic year
2017/2018

Acknowledgment

I would first like to thank the LUISS University of Rome and the MGIMO University of Moscow for affording me the precious opportunity to take part in this double degree program. I will never forget this experience, it has been a period of professional and personal growth for me.

I would like to thank my Italian supervisor, Elena Sciso, and my Russian supervisor, Alexander I. Nikitin, for their valuable guidance. You have provided me the necessary tools to successfully complete my master thesis.

I would also, and most importantly, like to thank my parents for their kind support and counsel. Without your sacrifices I would not have been the person I am. In addition, I would like to thank my girlfriend, Stefania, your love has helped me to overcome difficult moments. You were always there for me.

Finally, I would like to thank all my friends and colleagues. You have always believed in me throughout this journey.

Table of contents

List of Abbreviations	2
Introduction	3
Chapter 1. US-Russian Nuclear Arms Control	6
1.1. Relevancy of bilateral treaties for the nuclear arms control	9
1.1.1 Interim Agreement on strategic offensive arms (SALT I)	10
1.1.2 Anti-Ballistic Missile Defense Treaty (ABM)	12
1.1.3 Strategic Arms Limitation Talks (SALT II)	15
1.1.4 Intermediate-Range Nuclear Forces Treaty (INF)	19
1.2. The success of START I and the failure of START II	29
1.3. The road to the New START Treaty	41
Chapter 2. Analysis of the START III Treaty	47
2.1. Structure of the START III Treaty	48
2.2. Obstacles, differences, problems within ratification	54
2.2.1. U.S. ratification process	55
2.2.2. Russian ratification process	62
2.3. Entry into force and implementation of the START III	65
Chapter 3. Future prospects for nuclear arms control	74
3.1. Challenges to US-Russian nuclear arms control	75
3.1.1. The American perspective	76
3.1.2. The Russian perspective	82
3.2. Modernization of nuclear arsenals	88
3.3. The successes and limits of the START III	94
Conclusion	102
Bibliography	106
Summary	116

List of Abbreviations

ABM: Anti-Ballistic Missile Defense Treaty
ASBM: Air-to-surface ballistic missile
BCC: Bilateral Consultative Commission
FBS: Forward based system
GLCM: Ground-launched cruise missiles
GLBM: Ground-launched ballistic missiles
HB: Heavy bomber
HGV: Hypersonic glide vehicle
ICBM: Inter-continental ballistic missile
INF: Intermediate-Range Nuclear Forces Treaty
IRBM: Intermediate-range ballistic missile
LBMMS: Land-based mobile missile systems
MIRV: Multiple independently targetable reentry vehicle
NNWS: Non-nuclear-weapons state
NPT: Nuclear Non-proliferation Treaty
NRRC: Nuclear Risk Reduction Center
NTM: National technical means of verification
NWS: Nuclear-weapon state
SALT: Strategic Armaments Limitations Talks
SLBM: Submarine-launched ballistic missile
SLCM: Sea-launched cruise missile
SNDV: Strategic nuclear delivery vehicles
SORT: Strategic Offensive Reduction Treaty
SRBM: Short-range ballistic missiles
START: Strategic Arms Reduction Treaty
TNF: Theatre nuclear forces
WMD: Weapons of mass destruction

Introduction

Nowadays, the proliferation of nuclear weapons can be considered one of the most relevant security issue, as the destructive nature of this military technology has the power to threaten world peace. In this context, it is evident that nuclear arms control plays an important role in the maintenance of international stability because through the restriction on the production, accumulation, and proliferation of this technology it is possible to minimize the risk of a nuclear conflict. Due to the fact that the United States and the Russian Federation own about 95% of nuclear warheads currently on Earth, it is evident that any attempts to regulate this subject should pass through these two actors. Therefore, the New START Treaty (START III) which is the latest bilateral treaty, signed in 2010 by US President Obama and Russian President Medvedev, is particularly relevant in the context of nuclear arms control, as it aims to reduce in a sensible way the arsenals of these two superpowers. For this reason, it appears worthwhile to examine in detail the main provisions of the START III, analyzing the present situation and the future prospects.

Considering the relevance of this topic, in order to provide a clear understanding of this issue, the author has elaborated the following research questions: what are the main treaties signed by the United States, Soviet Union, and Russian Federation in order to deal with the limitation of carriers, warheads, and proliferation of nuclear weapons? Are the START III Treaty provisions sufficient to regulate this subject? What are the future challenges that the US and Russia will face in the areas of nuclear arms control and proliferation?

Besides the research questions, the aim of this dissertation is to provide a general understanding of the US-Russian efforts in nuclear arms control, examining how the START III is affecting the present international framework and questioning its efficiency in the regulation of this subject. The object of this dissertation is the security relations between the United States and Russian Federation, while the research is focusing on the way in which the START III Treaty is affecting the

present international security framework. Nonetheless, in order to answer these questions, the present work is pursuing different objectives: First of all, to identify the most relevant bilateral treaties that were signed by the United States, the Soviet Union, and the Russian Federation to regulate the proliferation of nuclear weapons; Secondly, to analyze the structure and the main provisions of the START III, evaluating the way in which this treaty is affecting the arsenals of the United States and Russian Federation; Finally, to outline the central limits and the future prospects of the START III treaty, and a potential START IV Treaty, stressing, in particular, the future challenges for US-Russian nuclear arms control and all those issues related to the modernization of nuclear arsenals.

Bearing in mind that 2018 is an important year for nuclear arms control, not only for the fact that Parties of START III are required to comply with the limits laid out in the Treaty¹, but also for the recent events that have occurred in North Korea, Iran and, more in general, in the international environment, the author believes that it is the right moment to research this subject, as nuclear weapons are becoming an even more relevant security issue. Consequently, the author considers that the present work has a dual value, as, on the one hand, it provides historical knowledge of the US-Russian efforts in the reduction of nuclear weapons, while, on the other hand, it tries to define the potential challenges that these two actors may face in the future. For all these reasons, the practical importance of this work lies in the attempt to foresee the future prospects starting from the understanding of the past events, as only with comprehensive knowledge it would be possible to develop a deep understanding of this issue.

In order to achieve this ambitious objective, this research starts from the examination of the most relevant bilateral treaties that have been signed by the United States and Russian Federation, analyzing the main articles and investigating numerous official documents. Furthermore, textbooks, monographic works, and scientific articles

¹ START III Treaty, that entered into force on 5 February 2011, requires that the Parties have to comply with different deadlines. In fact, within seven years after the entry into force of the treaty, each party, no later than 5 February 2018, must reduce their arsenals to not exceed the number of 700 deployed launchers, 1,550 strategic warheads and 800 deployed and non- deployed launchers.

written by numerous prominent scholars are included in this research, since the analysis of a complex topic requires the integration of such works. In addition to a wide and balanced literature, with Russian, American, and international sources, the author uses the analysis of data and policies, and the quantitative research to provide a complete understanding of this subject. After defining the methodological and theoretical approach of this research, in order to provide a clear picture, it may be useful to illustrate the structure of the dissertation, which is composed by three main chapters.

Chapter 1 provides a general understanding of the US-Russian efforts in nuclear arms control, defining the most relevant treaties that have regulated this subject in the last decades. In particular, the author focuses on SALT, ABM, INF and START treaties, stressing how they have paved the way to the stipulation of the START III. Chapter 2 analyzes in detail the structure of the START III, underlining the main limits and the key provisions of the treaty and focusing on its effects on the US-Russian nuclear forces. Furthermore, the author examines all the problems and obstacles that were faced by Russia and the United States during the ratification process, highlighting, in the last part of the chapter, the implementation of START III.

Chapter 3 underlines the central limits of this treaty and the future prospect for the US-Russian nuclear arms control, focusing in particular on the modernization of nuclear arsenals. Moreover, in the last part, the author will try to stress if the START III Treaty can be considered sufficient or if it may be necessary to negotiate and sign a new treaty on nuclear weapons. Finally, in the Conclusion, the author sums up research results and proposes recommendations on the nuclear issue.

CHAPTER I

US-Russian Nuclear Arms Control

In order to provide a clear understanding of the dynamics that have led two conflicting nuclear superpowers to agree on the modalities of progressive disarmament, it will be necessary to define the context in which these agreements were stipulated. For this reason, it is essential to briefly define the historical and political background in which USSR and USA have acted, as the unique features of the decades following the Second World War have certainly affected the actions of these actors.

In those years, these two empires experienced radical changes, as technological progress had forced the reorganization of the internal structure of the state. The development of new means of production made the flexibility of labor and capital a necessary requirement for the survival of the state, while the growing speed of communication required the acceleration of the decision-making process². Additionally, the hypertrophic development of the military sector, the wide deployment of military personnel throughout the European continent and the dramatic increase in the volume of nuclear arsenals had contributed to further destabilization of the internal budgets of these two states.

Besides internal difficulties, the great instability of the international environment had certainly affected the development of the relations between these actors. In fact, while European countries were trying to rise from the ashes of the Second World War, the Soviet Union and the United States had seen in this situation a unique opportunity to expand their spheres of influence. This struggle for the supremacy over the European continent, in many cases, had resulted in the creation of a critical situation, bringing these two states to the edge of a new conflict. Consequently, in the aftermath of the Second World War, the Union of Soviet Socialist Republics and

² Di Nolfo E., *Dagli Imperi Militari agli Imperi Tecnologici, la Politica Internazionale da XX Secolo a Oggi*, GLF Editori Laterza, 2015, p. 346.

the United States of America started to invest an enormous amount of resources in the development of nuclear arsenals, as this military technology was perceived as a fundamental tool to ensure internal security and supremacy over the rest of the world.

Although the combination of internal and external elements may have resulted in a new war, with a possible escalation in a nuclear conflict, both USSR, and USA, being conscious of this peril, decided to move in the direction of a progressive distention. However, it is important to state that, this decision was not motivated by a unity of intent, but rather by a deep awareness of the effects of a nuclear war.

In the summer of 1945 in New Mexico, the first nuclear bomb in history was tested, and a short time later two more were detonated on the cities of Hiroshima and Nagasaki. The destruction caused by these weapons transformed the world and generated a sense of insecurity that reigned over the International Community for decades, putting "security" in the first place of the national agenda of every state. Nonetheless, it is important to observe that the United Nation Charter does not contain any explicit obligation concerning the disarmament and the non-proliferation of nuclear weapons, but it just states that the General Assembly and the Security Council, together with the Military Staff Committee, have to formulate proposals for the maintenance of international peace and security³. In fact, art. 11 of the Charter states "The General Assembly may consider the general principles of cooperation in the maintenance of international peace and security, including the principles governing disarmament and the regulation of armaments, and make recommendations with regard to such principles to the Members or to the Security Council or to both."⁴ while art. 26 affirms "the Security Council shall be responsible for formulating [...] plans to be submitted to the Members of the United Nations for the establishment of a system for the regulation of armaments"⁵. Despite these

³ Ronzitti N., *Introduzione al diritto internazionale*, Torino, G. Giappichelli Editore, 2013, p. 486.

⁴ "Charter of the United Nation and Statute of the International Court of Justice", San Francisco, 1945, <https://treaties.un.org/doc/publication/ctc/uncharter.pdf>

⁵ Ibid.

articles, the disarmament and the non-proliferation are not regulated by the United Nation Charter, since the Member States are the only ones entitled to stipulate agreements on these subjects.

Subsequently, one of the earliest efforts in nuclear arms control occurred in the period between 1959 and 1967 when numerous resolutions were adopted by the General Assembly, calling on the Conference of the Eighteen Nation Disarmament Committee (ENDC). This Committee was established by the USA and the USSR in order to create an international forum to discuss the issue of nuclear weapons, as the International Community believed that the negotiation of an international treaty was necessary to limit a broader proliferation of this technology⁶. However, the negotiations were particularly long and difficult and it was problematic to reach an agreement. In fact, in January 1964, during the ENDC based in Geneva, the Soviet Union refused the proposal of the United States for a freeze on the number of strategic nuclear offensive and defensive vehicles, as at that time there was a great asymmetry in their arsenals⁷. Besides this diplomatic impasse, the Parties continued to work actively, starting to discuss the possibility of limiting of both defensive and offensive weapons.

In this context, one of the most important steps that certainly facilitated the stipulation of future bilateral treaties was the signature of the Nuclear Non-Proliferation Treaty (NPT). The Soviet Union and the United States managed to reach an agreement on March 1968, submitting a joint draft of the treaty to the ENDC and then to the General Assembly. A few months later, on 12 June, the resolution 2373 (XXII)⁸ was adopted by the General Assembly and the NPT opened for signature and ratification, resulting in an important cornerstone in the history of

⁶ “Treaty on the Non-Proliferation of Nuclear Weapons” Audiovisual Library of International Law, <http://legal.un.org/avl/ha/tnpt/tnpt.html> Accessed 25 February 2018.

⁷ “Strategic Arms Limitation Talks (SALT I)” Nuclear Threat Initiative, 2011, <http://www.nti.org/learn/treaties-and-regimes/strategic-arms-limitation-talks-salt-i-salt-ii/> Accessed 26 February 2018.

⁸ “General Assembly resolution 2373 (XXII)” New York, USA, 12 June 1968. [http://www.un.org/ga/search/view_doc.asp?symbol=a/res/2373\(xxii\)&referer=/english/&Lang=E](http://www.un.org/ga/search/view_doc.asp?symbol=a/res/2373(xxii)&referer=/english/&Lang=E)

nuclear arms control. In fact, besides the legal and practical value of the treaty, it was especially important as it marked the beginning of a period of distention, paving the way for more efficient treaties on the limitation of nuclear weapons. Consequently, on 1 July 1968, during the signing of the NPT, American President Lyndon B. Johnson affirmed that: “Agreement has been reached between the Governments of the Union of Soviet Socialist Republics and the United States to enter in the nearest future into discussions on the limitation and the reduction of both offensive strategic nuclear weapons delivery systems and systems of defense against ballistic missiles⁹”, stressing the willingness of both Parties to reach an agreement on this critical issue. However, for a more substantive dialogue, it was necessary to wait until the end of 1969 because the Soviet Union and the United States, due to internal and external motivations, were not able to negotiate such agreement.

1.1. Relevancy of bilateral treaties for the nuclear arms control

In 1969 there was an important turning point, as the newly elected President Richard Nixon, conscious that the Soviet Union now matched the US nuclear capabilities, decided to move in the direction of “an era of negotiation¹⁰”, developing a more balanced approach to world crisis in order to avoid a major US-Soviet conflict. On the Soviet side, Leonid Brezhnev had many reasons to move in the same direction, since he was deeply concerned about China and its recent development of nuclear weapons. In fact, as the scholar William I. Hitchcock stated: “By 1969, the Soviet had placed twenty-five full-strength divisions on the border with China, and armed them with ballistic missile. Facing trouble on its far eastern border, the Soviet wanted to increase stability in the west¹¹”. This combination of events has

⁹ “Remarks at the Signing of the Nuclear Nonproliferation Treaty, July 1, 1968”, The American Presidency Project, <http://www.presidency.ucsb.edu/ws/index.php?pid=28970> Accessed on 27 February 2018.

¹⁰ “Address Accepting the Presidential Nomination at the Republican National Convention in Miami Beach, Florida, August 8, 1968” The American Presidency Project, <http://www.presidency.ucsb.edu/ws/?pid=25968> Accessed on 27 February 2018.

¹¹ Hitchcock W. I., *The Struggle for Europe: the turbulent history of a divided continent*, Anchor Books a division of Random House, Inc., New York, 2003, p. 296.

encouraged the US and the USSR to move in the same direction, motivating the two superpowers to begin the Strategic Arms Limitation Talks (SALT I) on 17 November 1969.

The negotiations were particularly long and complex since the Parties had to face two relevant deadlocks: the kind of strategic weapons that should be included and the scope of the future treaty. Concerning the first impasse, the USSR wanted to include the US forward based system (FBS) in the limitation of the treaty, while the United States believed that only nuclear weapons with long-range should be included. The problem was related to the concept of “strategic weapon” since for the Americans only the weapons with intercontinental range, therefore able to reach the US territory, should be part of the treaty, while the Soviets believed that also the missiles with short and intermediate-range, like the one located in the NATO bases in Europe, should be regulated¹². Relative to the second impasse, the United States considered the offensive systems an essential part of the discussion, whereas the Soviet Union strongly believed that only the defensive systems, the anti-ballistic missile system, should be at the center of the negotiations. Nevertheless, on 26 May 1972, after almost three long years of negotiation, Nixon and Brezhnev declared the conclusion of the talks and signed two documents: The Interim Agreement on strategic offensive arms and the Anti-Ballistic Missile Defense Treaty (ABM) on strategic defensive systems.

1.1.1 Interim Agreement on strategic offensive arms (SALT I)

Concerning the Interim Agreement, it is possible to state that the aim of the treaty was freezing, rather than reducing, nuclear arsenals, preventing these superpowers to have a further increase in the volume of offensive arms. Nonetheless, this agreement was not perceived as a final solution, but rather as a temporary tool to halt a dangerous arms race. In fact, in art. 7, it is clearly stated that “Interim Agreement shall remain in force for a period of five years unless replaced earlier by

¹² Millet S. M., *Forward-Based Nuclear Weapons and SALT I*, Political Science Quarterly Vol. 98, No. 1 (Spring, 1983), p. 79.

an agreement on more complete measures [...]”, stressing that “[...] It is the objective of the Parties to conduct active follow-on negotiations with the aim of concluding such an agreement as soon as possible¹³”.

Relative to the limitation of strategic offensive arms, in order to provide a clear understanding of its practical value, it would be useful to analyze some of the most important articles of the Interim Agreement. First of all, art. 1 states that “The Parties undertake not to start construction of additional land-based intercontinental ballistic missile (ICBM) launchers after July 1, 1972¹⁴”, limiting the possibility to increase their military power. Nevertheless, as specified in the “Agreed Statement B¹⁵” all those ICBM launchers that at the time of the signature were under active construction might be completed, providing in this way a certain degree of flexibility. Secondly, art. 2 prescribes not to convert older types of the land-based launcher or light ICBMs into launchers for heavy ICBMs deployed after 1964, as a massive conversion of launchers may have serious implications for the power relation of these actors. Thirdly, art. 3 limits the amount of modern ballistic missile submarines and submarine-launched ballistic missiles (SLBM) to the number operational and under construction on the date of the signature. Moreover, according to the Protocol, the United States cannot have more than 44 modern ballistic missile submarines with 710 SLBMs, while the Soviet Union no more than 62 submarines with 950 SLBMs¹⁶. However, besides these obligations, the Parties, as stated by art.4, reserved the right to develop their arsenals, modernizing and replacing their

¹³ “Interim Agreement between the United States of America and the Union of Soviet Socialist Republics on certain measures with respect to the Limitation of Strategic Offensive Arms (SALT I)”, Moscow, 26 May 1972. http://www.nti.org/media/pdfs/apsaltI.pdf?_=1316712383

¹⁴ Ibid.

¹⁵ “Agreed Statements, Common Understandings, and Unilateral Statements regarding the Interim Agreement between the United States of America and the Union of Soviet Socialist Republics on certain measures with respect to the Limitation of Strategic Offensive Arms (SALT I)”, Moscow, 26 May 1972. http://www.nti.org/media/pdfs/apsaltI.pdf?_=1316712383

¹⁶ “Protocol to the Interim Agreement between the United States of America and the Union of Soviet Socialist Republics on certain measures with respect to the Limitation of Strategic Offensive Arms (SALT I)”, Moscow, 26 May 1972. http://www.nti.org/media/pdfs/apsaltI.pdf?_=1316712383

old strategic offensive arms with a new one, with the sole condition of not significantly increasing¹⁷ the dimensions of ICBMs and launchers.

In brief, it is possible to state that the aim of these articles was to prevent the possibility of a radical increase in the volume of nuclear arsenals, as the main objective of the Interim Agreement was to stabilize the balance of power between these two superpowers. Conversely, it is important to notice that the Agreement has some weak points regarding the verification and compliance mechanisms. Regarding the verifications mechanism, the only way to verify if the provisions are implemented correctly is by the national technical means (NTM), which means that the Parties have to rely only on their own intelligence, satellites, and radars. Even though there is an obligation to not interfere with the NTM, it is not possible to exclude that, at that time, the United States and the Soviet Union had just a partial understanding of the real action carried out by the other Party.

For these reasons, it is essential to underline that the real importance of the Interim Agreement lied in its political value rather than in the strength of its provision, as both the Soviet Union and the United States were conscious that many obligations were clearly the result of compromises. Nevertheless, besides all its limits, it is important to remember that this Agreement was a fundamental step in the direction of nuclear arms control, especially if we consider that, in those years, the relation between these superpowers was particularly fragile and critical.

1.1.2 Anti-Ballistic Missile Defense Treaty (ABM)

After defining the main provisions and limits of the Interim Agreement, the present work analyses the Anti-Ballistic Missile Defense Treaty (ABM), as this document can be considered a milestone in the history of US-Russian nuclear arms control. In fact, this treaty, which lasted until June 2002, has become a central issue in the

¹⁷ In the Common Understandings, Soviet Union and United States agreed the term “significantly increased” means that the increase cannot be greater than 10-15% of the dimension of land-based ICBM silo launchers at the time of the signature of the Agreement.

present arms control debate, since the withdrawal of the United States has seriously affected the balance of power between the two superpowers.

Before analyzing the provisions of the ABM Treaty, it would be useful to comprehend the spirit of this document, as only through a deep understanding of its logic, it is possible to grasp its implications on the international environment. This Treaty constituted one of the two fundamental elements in the stabilization of the balance of power, as the regulation of both offensive and defensive systems was necessary to ensure the stability of the US-Russian relationship. In fact, as a specialist in national defense Amy F. Woolf stated “The limits on offenses and defenses were related because many analysts and government officials believed that neither side would be willing to limit or reduce its offensive forces if the other side deployed widespread defenses against those forces¹⁸”, reaffirming the necessity of a double approach to halt this offensive-defensive nuclear arms race. For all these reasons, it appears evident that when the US withdrew from the ABM Treaty, the delicate mechanism that stabilized their relations for almost thirty years irremediably broke down. However, in order to provide a clear picture, the author examines the obligations of the ABM Treaty, while its implications and consequences will be investigated in the next sections.

Concerning the main provisions of the ABM Treaty, the Parties agree to limit the deployment of ABM systems for the defense of their countries to two sites: one near the national capital and the other around ICBM silo launchers. Moreover, the Treaty obligated the Parties to deploy no more than 100 ABM launchers and 100 ABM interceptor missiles for each site, while the Agreed Statement C¹⁹ set the distance of thirteen hundred kilometers from one site to the other. In order to avoid the creation

¹⁸ Woolf A. F., *Anti-Ballistic Missile Treaty Demarcation and Succession Agreements: Background and Issues*, Congressional Research Service, April 27, 2000, p. 2.

¹⁹ “Agreed Statements, Common Understandings, and Unilateral Statements regarding the Treaty between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Anti-Ballistic Missile Systems (ABM Treaty), Moscow, 26 May 1972.
http://www.nti.org/media/pdfs/aptabm.pdf?_ =1316631917&_ =1316631917

of alternative defense systems, art. 5²⁰ prohibited the development, testing and deployment of sea-based, air-based, space-based or mobile land-based ABM systems, banning also automatic, semi-automatic or similar systems that were able to shoot more than one interceptor missile at the time. In addition, the Parties agreed to destroy or dismantle all the ABM systems or components in excess of the number prescribed by the Treaty, as well as not providing to other states materials, technical descriptions or blueprints for the development of such systems.

Relative to the verification and compliance mechanisms, the ABM Treaty prescribed to use the NTM to verify the compliance with the Treaty, while the Standing Consultative Commission (SCC) was established to coordinate the actions of the Parties. The SCC was necessary to promote the objectives and the proper implementation of the Treaty, providing a useful forum for the discussion of relevant matters in the context of arms control. Additionally, since 1972, the United States and the Soviet Union, and subsequently the Russian Federation, agreed to have a regular exchange of documents in order to prove their compliance with the provision of the ABM Treaty, stating also that no actions that were contrary to the Treaty had been carried out.

In brief, it is possible to state that the aim of the ABM Treaty was to reach a stable equilibrium in relations through the insurance of a mutual vulnerability since the threat of reciprocal destruction was the only way to ensure peace. Indeed, this idea of mutual vulnerability lasted for many decades, becoming a fundamental element in nuclear arms control. In fact, while numerous treaties on offensive arms were stipulated over time, the ABM Treaty has been the only treaty regulating strategic defensive systems for many decades, providing a certain degree of stability in the relation between these two superpowers. However, rather than analyzing all its implications just in this section, the present work is going to examine it throughout

²⁰ “Treaty between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Anti-Ballistic Missile Systems (ABM Treaty), Moscow, 26 May 1972. http://www.nti.org/media/pdfs/aptabm.pdf?_=1316631917&_=1316631917

the entire Chapter I, as the ABM Treaty has been the center of the nuclear arms control debate for decades.

1.1.2 Strategic Arms Limitation Talks (SALT II)

A few months after the ratification of SALT I, the United States and the Soviet Union started to work on a new treaty regulating strategic offensive arms. Consequently, in November 1972, the superpowers officially began the SALT II negotiations, increasingly curtailing the manufacture of strategic nuclear weapons. Indeed, the value of this document lies in the fact that, for the first time, the superpowers considered the possibility of a concrete reduction in strategic forces rather than prescribing simple limitations. However, the negotiations of such provisions were prolonged and complex, as the United States and the Soviet Union discussed for a long time, having different positions on many critical issues. The discussion between the Parties focused mainly on the characteristics of offensive arms systems, strategic nuclear delivery vehicles, bans on new arms systems and qualitative limits, since it was necessary to take into account many differences between the forces of the two sides.

Besides all these issues, in November 1974, during the Vladivostok meeting between General Secretary Brezhnev and President Ford, the Parties managed to agree on the basic framework of the SALT II. Consequently, in early 1975, the delegations of the United States and the Soviet Union had a meeting in Geneva, defining the obligations and preparing for the first time a Joint Draft of the treaty. During these negotiations, it appeared clear that the superpowers had a serious disagreement regarding two critical problems: the issue of the cruise missile and the inclusion of a new Soviet bomber, known by the US as Backfire²¹. However, even though these two issues remained unresolved, the Parties managed to have some progress in the negotiations.

²¹ “Treaty Between The United States of America and The Union of Soviet Socialist Republics on the Limitation of Strategic Offensive Arms (SALT II)”, U.S. Department of State, <https://www.state.gov/t/isn/5195.htm> Accessed 3 March 2018.

In January 1977, when Jimmy Carter succeeded Gerald Ford as President of the United States, the new Administration took office and a renewed emphasis was placed on the SALT II. In this context, negotiations continued on several levels and led to a meeting in Washington in September 1977 between the newly elected President Carter and the Soviet Foreign Minister Gromyko. Finally, after many others meeting in Moscow, Washington, and Geneva, President Carter and General Secretary Brezhnev met in Vienna and signed the SALT II on June 18, 1979. According to SALT II²², the Parties decided to include in the Treaty: an aggregate limit on strategic nuclear delivery vehicles (SNDV); an aggregate limit on multiple independently targetable re-entry vehicle (MIRV²³) systems; a prohibition on the construction of new land-based ICBM launchers; a limitation on the deployment of new types of strategic offensive arms.

The first obligation regards the delivery vehicles, limiting, as stated in art. 3²⁴, the aggregate number of ICBM launchers, SLBM launchers, heavy bomber and air-to-surface ballistic missiles (ASBM) to 2.400 units, and from 1 January 1981 to 2.250 units. Nonetheless, within this limit, due to the differences in their nuclear arsenals, the composition of these aggregates can be determined autonomously by the Parties, providing in this way a certain degree of flexibility.

The second obligation regulates the MIRV systems, since this technology, due to its highly destructive potential, was able to affect in a dramatic way the balance of power of these two actors. In fact, during those years, both United States and the Soviet Union invested a relevant amount of resources in the development of this technology, as this kind of arms system was more difficult to intercept and had a

²² “Strategic Arms Limitation Talks (SALT II)”, Nuclear Threat Initiative, 2011, <http://www.nti.org/learn/treaties-and-regimes/strategic-arms-limitation-talks-salt-ii/> Accessed 1 March 2018.

²³ A multiple independently targetable re-entry vehicle, also called MIRV, developed in the second half of the sixties, allowed a single ballistic missile to carry a variable number of nuclear warheads. This particular kind of arm system allowed to hit different targets simultaneously with just a single vector.

²⁴ “Treaty Between The United States of America and The Union of Soviet Socialist Republics on the Limitation of Strategic Offensive Arms, together with Agreed Statement and Common Understanding regarding the Treaty (SALT II), Vienna, 18 June 1979. <http://www.nti.org/media/pdfs/apsaltII.pdf>

dramatic destructive power. Consequently, the Parties decided to set another limit in addition to the obligation defined by art. 3, limiting heavy bomber equipped with cruise missile with a range superior of 600 km, ICBM, and SLBM equipped with MIRVs to a maximum of 1,320 units. In addition, there were also two sub-limits on the deployment of MIRVs: the first obligated the Parties not to deploy more than 1.200 MIRVs on ICBMs, SLBMs, ASBMs; the second defined a maximum of 820 units for ICBM launchers equipped with MIRV. Moreover, the Parties agreed not to test or deploy new types of SNDV that were capable of carrying more re-entry vehicles than the one tested on 1 May 1979. In fact, at the time of the signature of the Treaty the ICBM and ASBM were capable of carrying a maximum of ten re-entry vehicles while the SLBM a maximum of fourteen. This obligation was particularly important since a simple numerical limit on vehicles cannot be considered sufficient if there is the possibility to increase the number of re-entry vehicles deployed on a single vector, while with this comprehensive approach it is possible to stabilize the balance of power.

The third obligation, following the provisions of SALT I, prohibits the construction of additional fixed ICBM launchers, while limiting also their relocation. In addition, the conversion of light ICBM to heavy ICBM as well as the conversion of ICBM deployed prior to 1964 are forbidden by the Treaty. However, this Treaty allows the Parties to increase the volume of ICBM silo launchers to a maximum of 32% of the original size, while SALT I limited such possibility to a maximum of 10-15%, adapting in this way to the new technological changes. Besides all these obligations, this agreement allowed the Parties to modernize and replace the strategic offensive arms as stated in art. 9.

Concerning the verification mechanism, the SALT II adopted the same approach as the SALT I. In fact, in order to verify the compliance with the treaty, the Parties were entitled to use their national technical means of verification and they had an obligation not to use concealment measures that may impede the correct use of NTM of the other Party. Relative to the compliance mechanisms, like in the SALT I, this Treaty has not prescribed any concrete mechanisms to deal with all those situations

of non-compliance. Nonetheless, the Parties were able to withdraw from the treaty in case of extraordinary events that may jeopardize their national security or supreme interest, notifying six months before their intention to withdraw.

In brief, it is possible to affirm that SALT II constituted another important step in US-Russian nuclear arms control since, for the first time, it provided a real cut in their nuclear arsenals. However, due to the events that occurred in the international environment, it is important to state that the relations between the United States and the Soviet Union had a strong impact on the SALT II. In fact, in the next section of this work, the author is going to analyze the peculiar situation of this agreement, that even if it was designed to last until 1985, regulated their strategic arsenals until 1991 without being ratified by the United States.

On 22 June 1979, President Carter transmitted the Treaty to the Senate, where it encountered a considerable resistance during the ratification process. In fact, opinions on the agreement and protocol were not homogeneous, since many senators were particularly skeptical of the efficiency of the SALT II. Indeed, some of them considered nuclear arms control a necessary element in the normalization of the US-Russian relations, supporting this document and pushing toward a quick ratification, as in their view the regulation of nuclear weapons was necessary to ensure peace. Concerning those opposed to the treaty, they strongly believe that SALT II was not only sufficient to halt the nuclear arms race, but it also placed too many obligations on the United States, damaging their interests and jeopardizing national security²⁵. During the U.S Senate battle over ratification, at a certain point it appeared possible that the forces in support of ratification would have won, but when Senator Frank Church affirmed that the Soviet troops were stationing in Cuba and started to call for their withdrawal, the possibility for a quick ratification started to fade out²⁶. Furthermore, in December 1979, the Soviet troops started the invasion of

²⁵ “A Skeptical Senate Responds Cautiously to SALT II Appeal”, The Washington Post, 1979, https://www.washingtonpost.com/archive/politics/1979/06/19/a-skeptical-senate-responds-cautiously-to-salt-ii-appeal/163198e9-ddca-4368-bc3d-19d5621361e3/?utm_term=.19ddc5ba34d3 Accessed 7 March 2018.

²⁶ “The Second Round of Strategic Arms Limitation Talks (SALT II), 1979”, U.S. Department of State Archive, <https://2001-2009.state.gov/r/pa/ho/time/qfp/103736.htm> Accessed 7 March 2018.

Afghanistan, marking a critical turning point in the relations between these two superpowers. In fact, on 4 January 1980, U.S. President Jimmy Carter affirmed that “because of the Soviet aggression, I have asked the United States Senate to defer further consideration of the SALT II treaty so that the Congress and I can assess Soviet actions and intentions and devote our primary attention to the legislative and other measures required to respond to this crisis²⁷”, causing a further slowdown in the ratification process. Indeed, from the US perspective, the departure of Soviet troops from Cuba, as well as their withdrawal from Afghanistan, became essential prerequisites for the ratification of the SALT II, since these two political issues were perceived as unacceptable. Nonetheless, besides this diplomatic impasse, this agreement was too valuable, and for this reason the US President declared that the United States would have complied with the SALT II if the USSR would have done the same. Speaking of which, the Soviet counterpart, Soviet General Secretary Brezhnev made an analogous statement, proclaiming that the Soviet Union intended to respect the provisions of the agreement. Consequently, even though the agreement was never ratified, the superpowers decided to refrain from any actions which would have gone against the objectives and obligations defined by the SALT II.

1.1.3 Intermediate-Range Nuclear Forces Treaty (INF)

Besides the moderate success of the SALT II, the problems related to nuclear arms control were far from being solved, since the deployment of intermediate-range missiles in Europe had considerably worsened the US-Soviet relationship. In early 1977, the Soviet Union started to deploy a new type of intermediate-range ballistic missile (IRBM) in the Eastern part of Europe in response to the growing number of NATO bases. The Soviets decided to replace its aging SS-4 and SS-5 systems with the new SS-20 since the older type of offensive systems were not perceived as particularly dangerous by NATO and the United States. In fact, the SS-4 and SS-5

²⁷ “Address to the Nation on the Soviet Invasion of Afghanistan, January 4, 1980”, The American Presidency Project, <http://www.presidency.ucsb.edu/ws/?pid=32911> Accessed 8 March 2018.

carried only one warhead and were not extremely precise; moreover, the preparation for firing was quite long as the missiles were liquid-fueled and generally immobile²⁸. Conversely, the Soviet SS-20, that was an IRBM with three independently targetable re-entry vehicles, was capable of reaching all of Western Europe. Furthermore, due to the fact that they were installed on mobile transporters, they were particularly versatile and difficult to localize, having also better accuracy in comparison with the older types of IRBM.

Even though the deployment of SS-20 did not affect in a radical way the US-Soviet balance of power, due to the fact that the United States had the capabilities to intercept such systems, the threat that they posed over the whole of Europe was definitely real. In fact, in late 1977, the West German Chancellor Helmut Schmidt, being conscious that the Soviets had a strategic advantage in Europe, called on NATO to have a concrete response to this major issue²⁹. Consequently, NATO called on the United States to develop an effective response to deal with the Soviet threat, resulting in the so-called “dual-track” approach. Adopted on 12 December 1979, the dual-track decision pursued a double approach to the problem of the expansion and modernization of the theatre nuclear forces of the Soviet Union. On the one hand, the United States and NATO pushed toward negotiations for a mutual elimination of IRBM systems, while, on the other hand, they decided to prepare for the deployment of 464 ground-launched cruise missiles (GLCM), armed with a single warhead, and 108 Pershing II ballistic missiles, which would substitute the old US Pershing I-A³⁰. According to NATO, the 108 Pershing II would have been deployed in West Germany, and the 464 GLCM in the United Kingdom, Belgium, Netherland, and Italy. The logic of this approach lied in the fact that in case of a failure in the

²⁸ Bohlen A., Burns W., Pifer S., Woodworth J., *The Treaty on Intermediate-Range Nuclear Forces: History and Lessons Learned*, Brookings Institution, Washington, D.C., 9 December 2012, p. 7.

²⁹ “Warning over new missiles for NATO; Missiles”, *The New York Times*, <https://www.nytimes.com/1979/12/09/archives/warring-over-new-missiles-for-nato-missiles.html> Accessed 10 March 2018

³⁰ “Special Meeting of Foreign and Defence Ministers (The "Double-Track" Decision on Theatre Nuclear Forces)”, Brussels, 12 December 1979, https://www.nato.int/cps/en/natolive/official_texts_27040.htm

negotiations, NATO and the United States would have deployed a significant amount of offensive systems in order to counter the Soviet nuclear forces. Despite the worsening of US-Soviet relations, the superpowers decided to start the preliminary Intermediate-Range Nuclear Forces (INF) talks in October 1980, discussing the possibility of an agreement for the mutual ceiling on land-based theatre nuclear missile systems³¹. These talks were recessed in early 1981 coinciding with the end of US President Jimmy Carter's administration, and the arrival of the newly elected Ronald Reagan, marking in this way a new approach to nuclear arms control. In fact, the new US President was a conservative Republican and he had a harsher approach toward the Soviet Union, as he strongly believed that nuclear arsenals were necessary to ensure a strong American influence in the international environment³². In spite of these differences, formal negotiations started in Geneva on 30 November 1981, with the US delegation led by Ambassador Paul Nitze, a veteran of arms control that also took part in the SALT I negotiations, and the Soviet delegation led by Yuli Kvitsinsky, a high official that worked in West Germany at the Soviet embassy for several years. However, on 18 November 1981, a few days before the start of the official talks, US President Ronald Reagan made an unexpected proposal, calling for the so-called “Zero Option”, also known as the zero-zero proposal. The United States proposed to the Soviet Union to hold for the deployment of ground-launched cruise missiles and Pershing II ballistic missiles, in exchange for the complete elimination of all the SS-4, SS-5, and SS-20 Soviet missiles. Although this proposal had wide public appeal, especially in Europe, the chances for a concrete implementation were quite low, as the Soviet Union had already invested a substantial amount of resources in the deployment of SS-20s, while the United States would have started the deployment only in 1983. In fact, since the US proposal was extremely hard to accept, the Soviet Union considered

³¹ “Intermediate-Range Nuclear Forces [INF] Chronology”, Federation of American Scientists, <https://fas.org/nuke/control/inf/inf-chron.htm> Accessed on 11 March 2018.

³² Sabbatucci G., Vidotto V., *Storia Contemporanea, Il Novecento*, GLF Editori Laterza, 2008, p. 318.

the zero option inequitable and proposed a freeze of new deployments of IRBM systems, considering also the possibility of future cuts in existing forces.

In February 1982, the United States presented a first draft in which the zero-zero proposal was embodied in the Treaty, proposing to ban all INF missiles on a global level and imposing collateral constraints on all those missiles with a range between 500 and 1.000 km. Furthermore, the draft stated that the obligation of the treaty would be verified under a stringent verification regime, however, the official text of the draft did not provide any concrete examples of such verification measures. For all these reasons, the Soviet delegation rejected entirely the United States proposal, but they did not provide an alternative counter-draft immediately.

The US and Soviet delegations had a considerable amount of meetings during the first two years of negotiation, but they did not manage to make significant progress in the negotiation of the new treaty. In fact, in mid-1982, in order to bridge the differences and reach a mutual solution, the head of the two delegations, Ambassador Nitze and his counterpart Yuli Kvitsinsky, decided to have an informal meeting that became known as the “walk in the woods”. During this walk in the Jura Mountains, away from formal talks in Geneva, the head of the United States delegation discussed different issues with Kvitsinsky, trying to bypass the stringent bureaucracy and breaking this critical impasse. Ambassador Nitze proposed that the United States and the Soviet Union would have an equal level of INF launchers in Europe, setting the limit of 75 launchers for each Party and ensuring that the United States would deploy only the GLCMs. Furthermore, the US would forgo deployment of Pershing II systems, but they would gradually deploy more vulnerable offensive systems, while the Soviet Union would also have an additional obligation not to deploy more than 90 SS-20 in Asia³³.

In spite of this informal meeting, both Washington and Moscow did not completely support this initiative, since the US Office of the Secretary of Defense was against any agreement that would limit the possible deployment of ballistic missiles in

³³ Bohlen A., Burns W., Pifer S., Woodworth J., *The Treaty on Intermediate-Range Nuclear Forces: History and Lessons Learned*, cit., pp. 9-10.

Europe, while the Soviets continued to perceive such proposal as inadequate. In addition, due to the fact that the SS-20 was equipped with three warheads while the GLCM launchers carried four cruise missiles, it is important to notice that the United States would have had a numerical advantage over the Soviet Union, making it increasingly difficult for Moscow to accept such proposal. Consequently, this proposal was not included in the draft of the new treaty and was not even discussed during formal negotiations.

In early 1983, after consultations with NATO, the US negotiators understood that the Soviet Union would have never accepted the inclusion of the zero-zero proposal in the treaty, and for this reason, they decided to elaborate an alternative plan. The United States proposed to their counterpart to set equal rights and limits on the deployment of IRBMs, applying such obligations on a global level, but with the sole exception of not including France and the United Kingdom in this agreement. Conversely, the Soviet Union pushed toward a complete elimination of US INF arms in Europe, stressing the fact that countries such as France and the United Kingdom should have been included in the new agreement. Indeed, after numerous negotiating rounds, it appeared evident that both sides were not inclined to move from their positions because they had a radically different perception of the problem.

In late 1983, there was a critical turning point, because the United States and NATO announced their willingness to start the deployment of GLCMs and Pershing IIs in Europe, while the Soviet Union threatened to withdraw from the negotiations in case of an effective deployment of these offensive systems. Both superpowers kept their word, since in November 1983, the United States started to deploy the first Pershing II system in West Germany, and the Soviet Union decided to walk out of the negotiations. Consequently, the so-called “Euromissile Crisis” triggered a worsening in the US-Soviet relations, with the Soviet Union threatening NATO with taking analogous measures in response to their actions, and with the United States proceeding with the deployment of GLCMs and Pershing IIs in the European continent. In this context, even though the chances to reach an agreement on the regulation of INF systems were quite low, the United States offered to resume the

talks on this issue whenever the Soviets were willing to return, however, such discussion remained suspended until March 1985³⁴.

In order to better understand what motivated the two sides to move in the direction of a progressive distention, it may be useful to analyze the internal situation of these superpowers. Indeed, due to the reelection of President Reagan, the United States was facing a relatively stable political moment, while the Soviet Union was experiencing a time of deep changes. With the death of Brezhnev in November 1982, it opened a phase of transition in which the Communist Party of the Soviet Union became aware of the need to reform the system. Consequently, after the brief interlude of Andropov and Černenko, in March 1985, Michail S. Gorbačëv was chosen as secretary. The new Soviet Secretary inherited a critical situation since he had to reconcile the need for a reform of the Party, with the constant pressure of foreign policy. Besides internal difficulties, the Soviet Secretary had to face also a constant NATO pressure in Europe and a continuous competition with the United States. Furthermore, Gorbačëv had to deal with the American Strategic Defense Initiative (SDI) that proposed the construction of a "Space Shield", that was an anti-missile defense system capable of blocking any Soviet threat through the use of ground and space-based missiles, laser beams and other advanced weapons³⁵. Even though it is not entirely clear if the so-called "Space Shield" was a real project or just a simple political move, it is certainly true that President Reagan, knowing the political and economic difficulties of the USSR, proposed this initiative in order to challenge the Soviets. In fact, according to many experts, the US initiatives, ironically renamed "Star Wars", was just an extremely expensive, impractical and immature technology, rather than a real defensive system³⁶. However, since the internal situation of the Soviet Union started to be unbearable, the new Soviet

³⁴ Federation of American Scientists, "Intermediate-Range Nuclear Forces [INF] Chronology", cit.

³⁵ Sabbatucci G., Vidotto V., *Storia Contemporanea, Il Novecento*, cit., p. 318.

³⁶ "STUDY ASSAILS IDEA OF MISSILE DEFENSE", The New York Times, 1984, <https://www.nytimes.com/1984/03/22/us/study-assails-idea-of-missile-defense.html> Accessed on 15 March 2018.

Secretary Michail S. Gorbačëv decided to use a less harsh approach and to move toward distention with the United States.

Although the talks resumed on 7 January 1985 with the meeting between Soviet Foreign Minister Andrei Gromyko and U.S. Secretary of State George Shultz, in order to have some real progress it would be necessary to wait until the Gorbačëv's secretariat. With the new Soviet Secretary there was a complete change in the Soviet approach toward nuclear arms control, since, on 15 January 1986, he had even proposed an ambitious plan to ban all nuclear weapons by the year 2000 and also the US and Soviet INF systems. After this important turning point, the two sides had a series of high-level discussions that brought US President Reagan and General Secretary Gorbačëv to meet in Reykjavik, where the two superpowers agreed on the basic framework of the INF Treaty. Several months later, after the United States presented a draft of the agreement on March 1987, the Parties agreed to limit not only the IRBM but also the missiles with shorter range, extending such obligation on the global level. In this climate of progressive distention, Chancellor Kohl made a unilateral statement, affirming that the Federal Republic of Germany would have eliminated its 72 Pershing IA missiles, without replacing them with more modern systems, if the two superpowers would have managed to sign this agreement. In conclusion, after many years of negotiations, the two leaders had a summit in Washington and finally signed the INF Treaty on 8 December 1987.

Concerning the obligations of the INF Treaty, as stated in art. 1, the Parties have to eliminate their short-range and intermediate-range missiles and launchers. Art. 2 clarifies different terms that are contained in the Treaty, affirming that a "short-range missile" is a GLBM or GLCM with a range capability between 500 and 1.000 km, while an "intermediate-range missile" is a missile with a range capability between 1.000 and 5.500 km. After defining the range of such missiles, art. 3 lists the existing types of weapons that are going to be eliminated, identifying the Pershing II, Pershing IA and BGM-109G for the United States, and SS-20, SS-4, SS-5, SS-12 and SS-23 for the Soviet Union. Finally, after defining the range and the types of missiles, art. 4 clearly states that: "Each Party shall eliminate all its intermediate-

range missiles and launchers of such missiles, and all support structures and support equipment of the categories listed [...]” adding that “[...]no later than three years after entry into force of this Treaty and thereafter no such missiles, launchers, support structures or support equipment shall be possessed by either Party³⁷”. Furthermore, it is important to notice that the INF Treaty obligations regard all land-based offensive systems irrespective of their equipment. In fact, a special clarification elaborated in 1988 during the ratification process, declared that the category of missiles falling under the provision of the treaty had to be eliminated, whether they were equipped with a conventional or nuclear warhead, banning in this way an entire category of offensive arms systems³⁸.

Besides the elimination of such missiles, this Treaty also bans the production, development, and flight-testing of any intermediate-range or short-range ballistic missiles and launchers, with the sole exception of booster systems that are used exclusively for research and development purposes. Furthermore, the Parties agreed to keep all these offensive systems just in some specific places defined by the Treaty, without the possibility of changing such areas. In addition to this obligation, the elimination of SRBM and IRBM should be carried out at the designated elimination facilities that were specified in the Memorandum of Understanding, providing in this way a certain degree of transparency. However, it is important to notice that after three years, together with the missiles and launchers, the Parties are obliged to eliminate missile support facilities, operating bases, and deployment areas, removing not only these offensive systems but also their production and development facilities.

³⁷ “Treaty Between The United States Of America And The Union Of Soviet Socialist Republics On The Elimination Of Their Intermediate-Range And Shorter-Range Missiles (INF Treaty)”, Washington, 8 December 1987. <https://www.state.gov/t/avc/trty/102360.htm#text>

³⁸ “Treaty Between The United States Of America And The Union Of Soviet Socialist Republics On The Elimination Of Their Intermediate-Range And Shorter-Range Missiles (INF Treaty)”, Nuclear Threat Initiative, 2017, <http://www.nti.org/learn/treaties-and-regimes/treaty-between-the-united-states-of-america-and-the-union-of-soviet-socialist-republics-on-the-elimination-of-their-intermediate-range-and-shorter-range-missiles/> Accessed on 18 March 2018

Concerning the verification mechanisms, for the first time in nuclear arms control, a specific set of measures and procedures were established in order to verify the compliance of the other Party. Indeed, while the previous agreements relied mainly on the NTM, the INF Treaty defines additional mechanisms, which are: Nuclear Risk Reduction Center and on-site inspections. The Nuclear Risk Reduction Center provides a useful platform for the exchange of notifications and data, since the Parties are obliged to exchange any information, or relevant changes, to prove that they are moving toward a correct implementation of the Treaty.

Regarding inspections, art. 11 affirms that the Parties are entitled to conduct on-site inspections in order to verify compliance with the INF Treaty. This article defines different kinds of inspections: the baseline inspection aims to verify the truthfulness of data provided by the other Party; the closeout inspection aims to confirm that all the activities related to the INF Treaty are terminated; the elimination inspection aims to confirm the effective destruction of launcher, missiles and all the associated equipment. However, par. 5 of art. 11 affirms that the right to conduct short-notice inspections is valid for thirteen years after the entry into force of the Treaty, setting the possibility to do 20 inspections per year for the first three years, then 15 for the subsequent five years, and just 10 for the last five years³⁹. In addition, in order to ensure that prohibited offensive arms systems are not being produced, the INF Treaty prescribes the possibility to have a continuous portal monitoring inspection for the duration of thirteen years. Nonetheless, this right is limited to only two locations: Votkinsk, Russian Federation, in a final assembly facility of SS-20 and Magna, Utah, in a Pershing II production facility.

As stated before, except for the inspections and the Nuclear Risk Reduction Center, the NTM continued to play an important role in this Treaty, since the use of radars, monitoring techniques, and satellite photography is still the core of the verification mechanism. In fact, on 31 May 2001, the right of the Parties to conduct on-site

³⁹ “Treaty Between The United States Of America And The Union Of Soviet Socialist Republics On The Elimination Of Their Intermediate-Range And Shorter-Range Missiles (INF Treaty)”, 1987.

inspection definitively ended, making the employment of surveillance satellites particularly important in the verification of the data exchanged by the sides. In addition to all these measures, in order to promote the implementation and the objectives of the INF Treaty, the Parties agreed to establish the Special Verification Commission. This organism was created to provide a forum in which the two sides may discuss issues related to compliance, verifying the correct implementation of the obligations and debating all those measures necessary to increase the effectiveness and viability of the Treaty.

In brief, at the time of its signature, the verification regime defined by this agreement was the most complete and detailed in the history of nuclear arms control, because it was designed to ban the use and the possession of INF systems as well as to dismantle all the existing IRBM and SRBM. Furthermore, it has contributed to the creation of a continuous exchange of information that has certainly affected the relations of these superpowers in a positive way, fostering the development of diplomatic relations and strengthening the collaboration on the issue of nuclear weapons. Besides all these positive effects, it is important to notice that the INF Treaty has affected in a tangible way the nuclear arsenals of these superpowers, since, by 26 April 1990, the USSR had already dismantled 1.590 out of 1.846 missiles and the US had destroyed all 480 missiles in its possession⁴⁰. Subsequently, in mid-1991, both the United States and the Soviet Union completed the elimination of their IRBM and SRBM, as well as the complete cancellation of the programs related to this kind of technology. However, even though the Treaty has brought just a 3-4% cut to the US and Soviet nuclear arsenals, it is important to notice that it has contributed to the distention of relations between these two superpowers, paving the way for a series of successive agreements⁴¹. For all the aforementioned reasons, due to its provisions and modern structure, it is possible to state that the INF Treaty is

⁴⁰ Nuclear Threat Initiative, "Treaty Between The United States Of America And The Union Of Soviet Socialist Republics On The Elimination Of Their Intermediate-Range And Shorter-Range Missiles (INF Treaty)", cit.

⁴¹ Di Nolfo E., *Dagli Imperi Militari agli Imperi Tecnologici, la Politica Internazionale da XX Secolo a Oggi*, cit., p. 369.

certainly one of the most relevant treaties in US-Russian nuclear arms control, since it has managed to ban an entire category of offensive arms systems, reducing in a sensible way the pressure over the European continent.

1.2. The success of START I and the failure of START II

Although the idea of a treaty on offensive arms was designed in early 1982, due to the Euromissile Crisis, it was not possible to reach such agreement. In fact, the Strategic Arms Reduction Treaty (START) proposal was announced for the first time on 9 May 1982 at Eureka College in Illinois, where Ronald Reagan declared that its negotiating team was ready to “propose to their Soviet counterparts a practical, phased reduction plan⁴²” affirming that “The focus of our efforts will be to reduce significantly the most destabilizing systems, the ballistic missiles, the number of warheads they carry, and their overall destructive potential⁴³”. Nonetheless, as shown in the previous part of this work, due to the NATO deployment of theatre missiles in Western Europe, the Soviet Union decided to suspend the talks on offensive arms, walking out of the negotiations and leaving the issue of strategic nuclear weapons unsolved.

Even though the real turning point occurred with the elimination of theatre missiles in Europe, already in 1985 the superpowers decided to resume the START talks. On 21 November 1985, during the Geneva Summit, US President Ronald Reagan and General Secretary Michail Gorbačëv issued a joint statement after two days of extremely complex negotiations, affirming their willingness to reduce their nuclear arsenals by 50%. Subsequently, in October 1986, the project for a treaty on strategic offensive weapons received a significant boost during the Reykjavik Summit, where US President Ronald Reagan and General Secretary Michail Gorbačëv debated on the framework of the START Treaty, managing to agree on some basic obligations. However, in order to have some progress on this issue, it was necessary to wait for

⁴² “Address at Commencement Exercises at Eureka College in Illinois, May 9, 1982” The American Presidency Project, <http://www.presidency.ucsb.edu/ws/index.php?pid=42501> Accessed on 20 March 2018.

⁴³ Ibid.

the INF Treaty in December 1987, since only after the resolution of the Euromissile Crisis, the two superpowers moved toward the reduction of nuclear strategic weapons.

Notably, during the Washington Summit in December 1987, the leaders affirmed that their negotiators should have worked on all those areas that were already agreed upon in the joint draft developed in Geneva, including: a limit of 1.600 delivery vehicles armed with 6.000 warheads; a ceiling of 154 heavy missiles with 1.540 warheads; a 50% reduction in ballistic missile throw-weight; a sublimit of 4.900 for the total number of ballistic missile warheads⁴⁴. Furthermore, they discussed and defined the guidelines for an effective verification regime, adopting verification mechanisms similar to those prescribed by the INF Treaty. Indeed, between 1987 and 1990, the United States and the Soviet Union worked actively in order to reach an agreement, proposing alternative drafts of the treaty and having many high-level meetings in both Washington and Moscow. However, in spite of this progress, in order to overcome the START negotiations, it was necessary to wait until the fall of the Berlin Wall, since at that time Gorbačëv understood that the end of the Soviet empire was approaching, forcing the Soviet leader to move toward a quick resolution of the offensive arms issue.

While the Warsaw Pact and the Soviet Union were moving in the direction of a definitive crisis, in America the second term of Reagan ended, leaving the office to the new US President George H. Bush. In this context, during a summit in Washington in mid-1990, the two leaders managed to sign the Joint Statement on the Treaty on Strategic Offensive Arms, recapitulating the already agreed upon provisions and including an additional sublimit of 1.100 on mobile ICBM warheads. Moreover, the United States and the Soviet Union defined the schedules for the implementation of the START Treaty, planning to reduce their arsenals in three phases over seven years. Finally, on 31 July 1991, US President George H. Bush and General Secretary Michail Gorbačëv had a meeting in Moscow, where they

⁴⁴ “Strategic Arms Reduction Treaty (START I) Chronology”, Federation of American Scientists, <https://fas.org/nuke/control/start1/chron.htm> Accessed on 20 March 2018.

signed the Treaty on the Reduction and Limitation of Strategic Offensive Arms, better known as START I.

In spite of this success, this agreement entered into force only on 5 December 1994, as the collapse of the USSR had brought several issues concerning this treaty. Firstly, the dissolution of the Soviet Union had raised a serious legal problem, the “Succession of States” issue. This term refers to the situation in which a state ceases to exist or it loses the sovereignty over its territory, and a new state, the so-called “Successor State”, assumes the control over the territory that has been lost by the previous state. In this case, it is important to identify the successor state that acquires the international legal personality of the state that ceased to exist, since it will inherit not only its rights but also its obligations. Secondly, when the Soviet Union broke up, 70% of its arsenal was located in Russia, while the other 30% was deployed in Belarus, Ukraine, and Kazakhstan, raising many questions on the future of these nuclear weapons⁴⁵. In this context, it appeared clear that it was necessary to make an arrangement in order to regulate this unexpected situation, since the presence of an additional protocol was essential for the implementation of the START I. For all these reasons, on 23 May 1992, the four post-Soviet states and the United States had a meeting in Portugal, where they signed the Lisbon Protocol to the START Treaty in order to solve these issues.

According to art. 1 of the Lisbon Protocol, all five countries became effectively part of the Treaty, and the post-Soviet states were recognized as the successor states of the Soviet Union⁴⁶. Consequently, the leaders of Belarus, Ukraine and Kazakhstan agreed to act in a concrete way in order to eliminate all the nuclear weapons present on their territory within seven years, reaffirming their commitment to the START I obligations. Moreover, to verify the information, these successor states also inherited the right to conduct the inspections, effectively becoming a part of this

⁴⁵ Woolf A. F., Kerr P. K., Nikitin M. B. D., *Arms Control and Nonproliferation: A Catalog of Treaties and Agreements*, Congressional Research Service, April 13, 2016, p.8

⁴⁶ “Protocol to the Treaty between the United States of America and the Union of Soviet Socialist Republics on the Reduction and Limitation of Strategic Offensive Arms”, Lisbon, 23 May 1992. <https://www.state.gov/documents/organization/27389.pdf>

agreement. Finally, as stated in art. 5, these three states also agreed to “adhere to the Treaty on the Non-Proliferation of Nuclear Weapons of July 1, 1968, as non-nuclear weapon states Parties in the shortest possible time⁴⁷”, since only the Russian Federation inherited the status of Nuclear-Weapon State (NWS). In conclusion, even though the START I was ratified by five states, it is possible to state, as the scholar Elena Sciso has affirmed, that the START I “remains in the structure and in substance a bilateral treaty⁴⁸”.

Relative to the ratification process, the United States Senate provided its consent for the ratification of the START I in October 1992, while the Russian Parliament gave its consent in November 1992. However, the Russian Federation stated clearly that they would not exchange the instrument of ratification until Belarus, Ukraine and Kazakhstan had adhered to the NPT, because they feared that these post-Soviet states would have developed such technology while they were reducing their nuclear arsenals. In spite of this situation, whereas Kazakhstan and Belarus decided to ratify START I and quickly joined the NPT, Ukraine faced many internal oppositions during the ratification process. There were many intense domestic debates concerning the future of the Soviet nuclear arsenal since many political forces inside the Ukrainian Parliament wanted to keep these weapons as an insurance against future attacks. Subsequently, in early 1994, the United States and Russia agreed to provide to Ukraine security assurance and compensation in exchange for the nuclear weapons located on its territory, but the Ukrainian Parliament considered these measures not sufficient for its adherence to the NPT⁴⁹. In fact, the turning point occurred in November 1994, when Ukraine insisted and managed to receive additional assurances from the United States, Russian Federation and Great Britain. Finally, with the adherence of Ukraine to the NPT, after three long years, all the five states exchanged the instrument of ratification and the START I officially entered

⁴⁷ Ibid.

⁴⁸ Sciso E., *Dissoluzione di Stati e problemi di successione nei trattati*, in "La Comunità internazionale", 1994, p.80.

⁴⁹ “Ukrainian Parliament Edges Closer to Atomic Disarmament”, The New York Times, 1994, <https://www.nytimes.com/1994/02/04/world/ukrainian-parliament-edges-closer-to-atomic-disarmament.html> Accessed on 22 March 2018.

into force on 5 December 1994. In this regard, it is important to remember that START I superseded the old SALT II, that even if it was designed to last until 1985, continued to regulate strategic offensive weapons for more than fifteen years. Indeed, the START I had a more modern approach to this issue, establishing further stringent limits and defining a more efficient verification regime in comparison with the previous treaty.

Concerning the obligations, as stated in art. 2, the START I defined an aggregate limit of 6.000 warheads and 1.600 delivery vehicles for each side. Furthermore, it established three additional sublimits: 4.900 warheads for ICBMs and SLBMs; 154 heavy ICBMs⁵⁰ with no more than 1.540 warheads; 1.100 warheads for mobile ICBMs⁵¹. However, it is important to notice that the last two sublimits had a deep effect only on Russia since the United States had not developed a great number of heavy and mobile ICBMs⁵². Besides this difference in their nuclear arsenals, the Treaty, that was designed to last for fifteen years, imposed on the Parties to meet such limits no later than seven years after the entry into force, prescribing also an additional obligation to maintain those limits for the next eight years. In order to implement its provisions, the Treaty defined three phases: Firstly, within 36 months, not to exceed the aggregate number of 2.100 delivery vehicles, 9.150 warheads attributed to ICBMs, SLBMs and heavy bombers, and 8.050 warheads for ICBMs and SLBMs; Secondly, within 60 months, not to exceed the aggregate number of 1.900 delivery vehicles, 7.950 warheads attributed to ICBMs, SLBMs and heavy bombers, and 6.750 warheads for ICBMs and SLBMs; Finally, within 84 months, not to exceed the final aggregate number defined by art. 2. In addition, the START

⁵⁰ According to START I, an “Heavy ICBM” is defined as a particular kind of inter-continental ballistic missile having a throw-weight greater than 4,350gg or a launch weight greater than 106t.

⁵¹ “Treaty between the United States of America and the Union of Soviet Socialist Republics on further Reduction and Limitation of Strategic Offensive Arms (START I)”, Moscow, 31 July 1991, http://www.nti.org/media/pdfs/START_I_1.pdf

⁵² “Treaty between the United States of America and the Union of Soviet Socialist Republics on Further Reductions (START I)”, Nuclear Threat Initiative, 2011, <http://www.nti.org/learn/treaties-and-regimes/treaties-between-united-states-america-and-union-soviet-socialist-republics-strategic-offensive-reductions-start-i-start-ii/> Accessed on 23 March 2018.

I banned the construction of new types of heavy ICBMs and SLBMs, as well as banning the development of ballistic missiles equipped with more than ten warheads. Despite these limits, art. 5 allows the Parties to modernize and replace strategic offensive arms that are not prohibited by the provisions of the treaty. However, it is important to notice that START I did not obligate the Parties to eliminate the missiles that exceeded the aggregate limit, as they had to destroy only the launchers in excess of the permitted total. In fact, as the specialists Woolf, Nikitin and Kerr noticed: “in most cases, missiles could be placed in storage and warheads could either be stored or reused on missiles remaining in the force⁵³”.

Relative to the verification, it is possible to state that the START I adopted a verification regime similar to the one established by the INF Treaty, defining extensive mechanisms and provisions for verification. Firstly, together with an explicit ban on all those actions that may impair the NTM of the other Party, the Treaty relied on NTM as a tool to verify the information received. Secondly, according to the Memorandum of Understanding, it prescribed to the Parties to exchange a wide set of data every six months, including location and number of delivery vehicles, the position of bases, storage and production facilities, diagrams, etc. Furthermore, there was an obligation to notify the other Party of any relevant change in data as quickly as possible, since the START I aimed to establish a continuous flow of information. Thirdly, the Parties had the right to verify the accuracy of data with on-site inspections, having the possibility to carry out short-notice inspections in addition to the planned ones. In this regard, it is important to stress that the Parties have done an extensive amount of on-site inspections, because, during the first seven years, the United States conducted 335 inspections, and Russia 243⁵⁴. Fourthly, there was the possibility of portal and perimeter monitoring of all those facilities that were necessary for the construction of mobile ICBMs, allowing the Parties to verify that such plants were not employed for purposes that were

⁵³ Woolf A. F., Kerr P. K., Nikitin M. B. D., *Arms Control and Nonproliferation: A Catalog of Treaties and Agreements*, cit., p. 9.

⁵⁴ Ibid.

against the Treaty. Nonetheless, due to the fact that the United States decided to forgo the deployment of mobile ICBMs, the portal monitoring was employed only in the Russian Votkinsk plant, that was already monitored because of the INF Treaty. Finally, the START I imposed an exchange of the telemetry information related to the test of the ballistic missiles, as well as a ban on encryption of such information. Concerning the compliance mechanism, the START I relied on the Joint Compliance and Inspection Commission and the Nuclear Risk Reduction Center. The first was established in order to create a useful forum to discuss any issue related to nuclear weapons, as, during the session of the Commission, the sides had the possibility to raise questions concerning the effective compliance with the obligations of the other Party⁵⁵. The second, which was created in 1987, aimed to create a supplementary channel of communication, providing a continuous flow of information in order to prevent an accidental outbreak of nuclear conflict.

In brief, it is possible to state that the START I was a success and one of the most important treaties on nuclear arms control because it managed to reduce in a considerable way the arsenals of these superpowers. In fact, by the end of 2001, this agreement managed to reduce the number of US warheads from 11.602 to 8.592, while the Soviet Union, and consequently the Russian Federation, from 10.877 to 6.949, contributing substantially to the reduction of these offensive systems⁵⁶. Furthermore, the strict verification regime and the continuous exchange of data had a positive impact on the US-Russian relationship, since the superpowers collaborated in many different fields and strengthened their diplomatic relations. In addition, due to the Lisbon Protocol, Belarus, Ukraine, and Kazakhstan have adhered to the NPT and officially became non-nuclear-weapons states (NNWS), renouncing in this way to develop their own nuclear arsenal. Finally, the START I

⁵⁵ “Protocol on the Joint Compliance and Inspection Commission relating to the Treaty between the United States of America and the Union of Soviet Socialist Republics on the Reduction and Limitation of Strategic Offensive Arms” Moscow, 31 July 1991, <https://www.state.gov/documents/organization/27387.pdf>

⁵⁶ “START I: twenty years upon signing”, Russian International Affairs Council, 2011, <http://russiancouncil.ru/en/analytics-and-comments/analytics/start-i-twenty-years-upon-signing/> Accessed on 25 March 2018.

managed to limit the “vertical⁵⁷” and “horizontal⁵⁸” proliferation of nuclear weapons⁵⁹, since it reduced the volume of nuclear arsenals of the United States and Russia Federation and prevented three new states from acquiring such technology. The period following the signing of START I was characterized by a slight optimism because after many years of harsh confrontation between the United States and the Soviet Union, there was the perception that it was the moment to further reduce nuclear arsenals. In fact, on 28 January 1992, in the State of the Union address, US President Bush affirmed that it was possible to further cut nuclear offensive systems, since the collapse of the Soviet Union had made such change possible and necessary⁶⁰. The following day, Russian President Boris Yeltsin made a special televised statement in Moscow, suggesting to have a further limitation of warheads and the complete de-MIRVing of both SLBMs and ICBMs. In addition, President Yeltsin declared also that the production of the heavy bombers Tu-160 and Tu-95M was terminated, and the number of submarines on patrol equipped with SLBMs was reduced by half, sending a clear signal to the United States⁶¹. Consequently, on 17 June 1992, the two Presidents had a meeting in Washington, signing the Joint Understanding that constituted the base for the START II. In the next months after this important step, the sides had continuous consultations and meetings in which they discussed the obligations of the new treaty, exchanging drafts and negotiating its provisions. Finally, on 3 January 1993, US President Bush and Russian president Yeltsin managed to sign the START II during a meeting in Moscow.

⁵⁷ The term “vertical proliferation” refers to an increase in the volume of the nuclear arsenals of a NWS.

⁵⁸ The term “horizontal proliferation” refers to an increase in the number of states that possess nuclear weapons.

⁵⁹ Carnegie Moscow Center, Ed. By Arbatov A., Dvorkin V., *Nuclear Weapons After the Cold War*, R. Elinin Publishing House, Moscow, 2008, p. 27.

⁶⁰ “STATE OF THE UNION; Transcript of President Bush's Address on the State of the Union”, The New York Times, 1992, <https://www.nytimes.com/1992/01/29/us/state-union-transcript-president-bush-s-address-state-union.html> Accessed on 25 March 2018.

⁶¹ “Treaty between the United States of America and the Union of Soviet Socialist Republics on Strategic Offensive Reductions (START II), Nuclear Threat Initiative, 2011, <http://www.nti.org/learn/treaties-and-regimes/treaty-between-united-states-america-and-union-soviet-socialist-republics-strategic-offensive-reductions-start-ii/> Accessed on 25 March 2018.

Concerning this agreement, the United States and Russia agreed to further reduce their strategic offensive arms in two phases, calling for the complete elimination of ICBMs equipped with MIRV and defining a new limit on nuclear warheads. By the end of phase I, as stated in art. 1, the superpowers agreed to reduce the total amount of deployed strategic warheads to 3.800-4.250, including a sub-limit of 2.160 warhead deployed on SLBMs, 1.200 on ICBMs and 650 on heavy ICBMs. Concerning the end of phase II, no later than 1st January 2003 the Parties should not exceed the total number of 3.000-3.500 warheads, setting the limit of 1.700-1.750 warheads deployed on SLBMs and prescribing the complete elimination of heavy and MIRVed ICBMs⁶². Indeed, it is important to notice that the ban of MIRVed systems applied only to ICBMs, while it was still possible to deploy this technology on SLBMs.

Relative to the verification and compliance mechanism, START II relied on provisions that were particularly similar to the one defined by the START I. In fact, in order to verify the compliance, the Parties were entitled to use their NTM and on-site inspections. However, due to the differences with the START I in counting the warheads deployed on heavy bombers⁶³, the Treaty provided a greater number of inspections for each side. Moreover, in order to observe the technical differences of heavy bombers and their actual capacity of carrying nuclear warhead, the START II prescribed the possibility to carry out inspections and exhibitions. In addition, according to art. 4, 180 days after the entry into force of this Treaty each side had to exhibit one heavy bomber for every type or variant, as they have to demonstrate the truthfulness of the technical information provided. Finally, concerning the compliance mechanism, the START II established the Bilateral Implementation Commission in order to create a forum to discuss issues related to compliance,

⁶² “Treaty between the United States of America and the Russian Federation on further Reduction and Limitation of Strategic Offensive Arms (START II)”, Moscow, 3 January 1993, http://www.nti.org/media/pdfs/START_II_1.pdf?_id=1316646919

⁶³ In START I every heavy bomber count as one warhead, while START II counts the exact number of warheads that every heavy bomber is actually capable of carrying, defining a more accurate counting procedure.

providing also the possibility to agree upon new provisions to enhance the effectiveness and viability of the Treaty.

Besides these obligations, it is necessary to state that START II was designed as a complementary agreement to START I rather than a substitutive one, since, on this wave of optimism, the superpowers decided to further cut their arsenals. Nonetheless, even though the United States and Russia managed to negotiate and sign this agreement in a short period of time, the START II, due to many critical situations, never entered into force. In spite of the fact that the US Senate managed to ratify this agreement on 26 January 1996, the Russian Duma decided to delay the ratification of the START II due to a series of problems.

Indeed, it is important to notice that the deadlines defined by START II for the implementation of the provisions defined by art. 2 were extended with the “Joint Statement on Parameters on Future Reductions in Nuclear Forces” agreed by the Presidents Yeltsin and Clinton on 21 March 1997⁶⁴. This statement led to the signing of the protocol on 27 September 1997, prolonging the duration of the treaty, since it extended the implementation of Phase I to 31 December 2004, and for Phase II to 31 December 2007. Although the fixed implementation deadline is not a widespread practice in the treaties for disarmament, the parties were forced to act in this way due to different factors. Firstly, the Russian Federation was going through a period of economic difficulty, as at that time the country did not have the necessary resources to ensure the conversion or elimination of these offensive systems. Secondly, the NATO interventions in Yugoslavia in 1999 further contributed to undermining trust between Russia and America. Thirdly, the United States planned to build a national defense missile system, which, according to the Russian perspective, was against the Anti-Ballistic Missile-ABM⁶⁵.

⁶⁴ “Joint Statement on Parameters on Future Reductions in Nuclear Forces”, Helsinki, 21st March 1997, <https://fas.org/nuke/control/start2/text/helsinkistate.htm>

⁶⁵ Woolf A. F., Kerr P. K., Nikitin M. B. D., *Arms Control and Nonproliferation: A Catalog of Treaties and Agreements*, cit., p. 11.

For all the aforementioned reasons, the ratification process of the START II was extremely complex, furthermore, the issues related to the ABM Treaty put an end to this agreement. In fact, even though the new elected President Putin pushed towards a quick ratification of the START II, pressing the Russian Duma to adopt such documents, he clearly stated that the Russian Federation would withdraw if the US withdrew from the ABM treaty. In addition, the Russian Duma affirmed that the START II could not enter into force until the US Senate had ratified the START II extension protocol and the 1997 ABM Demarcation Agreement, remarking the importance of the 1972 ABM Treaty in the US-Russian nuclear arms control. However, neither were these documents ever submitted to the US Senate, nor did the new elected President George W. Bush affirm the United States willingness to withdraw from the ABM Treaty. In fact, many members of the US Congress questioned whether this Treaty was really serving the United States security interests, since they started to perceive it as a limitation rather than a valuable tool to ensure the US-Russian balance of power⁶⁶. Even though the Russian President Putin affirmed that it was a “mistake” and remarked on the importance of this agreement, on 13 December 2001, President Bush announced that the United States would withdraw from the ABM Treaty within six months⁶⁷. Consequently, on 13 June 2002, the United States officially withdrew from this treaty and the next day the Russian Federation announced its withdrawal from the START II.

According to the United States perspective, all the radical changes that occurred in the international environment have forced the US to withdraw from the ABM Treaty, because this treaty was signed at a time in which only the USSR had the capabilities to threaten its national security. In fact, the day in which President Bush announced the Americas’ willingness to withdraw, the United States sent a note to Russia, Belarus, Kazakhstan, and Ukraine, affirming that “Since the Treaty entered into

⁶⁶ Woolf A. F., *Anti-Ballistic Missile Treaty Demarcation and Succession Agreements: Background and Issues*, cit, p. 1.

⁶⁷ “Bush Pulls Out of ABM Treaty; Putin Calls Move a Mistake”, *The New York Times*, 2001, <https://www.nytimes.com/2001/12/13/international/bush-pulls-out-of-abm-treaty-putin-calls-move-a-mistake.html> Accessed on 27 March 2018.

force in 1972, a number of state and non-state entities have acquired or are actively seeking to acquire weapons of mass destruction. It is clear, and has recently been demonstrated, that some of these entities are prepared to employ these weapons against the United States” adding that “As a result, the United States has concluded that it must develop, test, and deploy anti-ballistic missile systems for the defense of its national territory, of its forces outside the United States, and of its friends and allies⁶⁸”. However, even though if it was true that the international environment radically changed from the signing of the ABM Treaty, it is still true that this decision marked an important turning point in nuclear arms control. As the principle of the “mutual assured destruction (MAD)⁶⁹” was no longer valid, opening the way to unexpected and dangerous scenarios.

In conclusion, it is possible to affirm that the failure of the START II and the end of the ABM Treaty had a deep impact on US-Russia relations, as for the first time, after the end of the Cold War, the superpowers had to face a time of distrust and crisis. Moreover, one of the consequences of the failure of START II was that the project to conclude a START III, discussed by the Presidents Clinton and Yeltsin, was no longer valid since the entry into force of the first one was one of the conditions for the success of the second. In addition, the US withdrawal from the ABM Treaty caused a radical change in the balance of power, because the United States’ decision of building a national defense system frustrated many decades of efforts in nuclear arms control. However, if it is true that the START II resulted in a failure, the START I resulted in a great success since on 2001 all the five countries announced that they have met the obligations defined by this agreement, accomplishing the largest arms control reduction in the entire history.

⁶⁸ “Text of Diplomatic Notes to Russia, Belarus, Kazakhstan, and Ukraine, December 13, 2001”, U.S. Department of State, <https://2001-2009.state.gov/r/pa/prs/ps/2001/6859.htm> Accessed on 28 March 2018.

⁶⁹ The “mutual assured destruction” principle is part of the military doctrine and it is inspired by the theory of deterrence. According to this principle, it is possible to achieve peace by ensuring the mutual destruction of both side in case of a military confrontation. In fact, if the cost-benefit relation is not favorable, it is possible that both sides are discouraged to attack.

1.3. The road to the New START Treaty

In spite of the events that occurred in early 2000, the United States and the Russian Federation continued to work actively on the strategic offensive systems issue. During the G-8 Summit in Genoa in 2001, President Putin and President Bush met and considered the available option concerning nuclear arms control, affirming that: “We will shortly begin intensive consultations on the interrelated subjects of offensive and defensive systems⁷⁰”. Consequently, on November 2001, a few months before the US withdrew from the ABM Treaty, the two leaders had a series of meeting in which they discussed the future of US-Russian nuclear arms control, proposing different solutions and considering the possibility of a new treaty.

During the summit, the US President unilaterally affirmed that the United States would have reduced its nuclear arsenals from 7.000 to 1.700-2.000 deployed warhead within ten years, while the Russian President pledged to cut the nuclear arsenal by two-thirds, reducing it from 6.000 to 2.000⁷¹. Indeed, the two leaders had a different approach on how to pursue nuclear arms control, as on the one hand the US President Bush wanted to act unilaterally without subscribing a formal agreement, while on the other hand, the Russian President Putin favored the stipulation of a formal one in order to make their relations more transparent and predictable⁷². Nevertheless, within the Bush Administration, there were some important personalities, like the Secretary of State Colin Powell, that supported the conclusion of a legally binding agreement, since they believed that it was the only way to reach an agreement with the Russian Federation⁷³, while many members of the Congress were against it, because they wanted to maintain flexibility in structuring their nuclear forces. Despite these differences, even though they did not

⁷⁰ “Joint Statement by U.S. President George W. Bush and President of the Russian Federation Vladimir V. Putin on Upcoming Consultations on Strategic Issues”, U.S. Department of State, <https://www.state.gov/t/avc/trty/127129.htm> Accessed on 28 March 2018.

⁷¹ “Bush-Putin Summit, November 2001”, Nuclear Threat Initiative, 2001, <http://www.nti.org/analysis/articles/bush-putin-summit/> Accessed on 28 March 2018.

⁷² “The Strategic Offensive Reductions Treaty (SORT) At a Glance”, Arms Control Association, <https://www.armscontrol.org/factsheets/sort-glance> Accessed on 28 March 2018.

⁷³ Woolf A. F., Kerr P. K., Nikitin M. B. D., *Arms Control and Nonproliferation: A Catalog of Treaties and Agreements*, cit., p. 16.

manage to reach an agreement on the ABM Treaty, they laid the foundation for the Strategic Offensive Reduction Treaty (SORT). In fact, on 24 May 2002, the two leaders had a summit in Moscow where they signed the SORT, also known as the Treaty of Moscow. Consequently, the SORT was ratified by the US Senate on 6 March 2003 and by the Russian Duma on 14th May 2003, finally entering into force on 1st June 2003.

Concerning the obligations, this agreement, as stated in art. 1, defined a general obligation to reduce “strategic nuclear warheads” to an aggregate number between 1.700 and 2.200 by 31 December 2012⁷⁴, adding that each Party has the right to determine for itself the composition of its strategic offensive arms. Moreover, besides agreeing that START I shall remain in force, the Parties committed to have a meeting twice a year in order to discuss the progress in the implementation of the Treaty. Relative to the verification mechanisms, the text of the SORT does not contain any provision concerning the confirmation of the data exchanged by the Parties nor defines any concrete implementation measures. Nonetheless, the Joint Declaration of the United States of America and the Russian Federation affirmed that the two superpowers have already gathered information about strategic nuclear forces since the use of NTM and on-site inspections under the START I regime have defined a clear picture of their strategic nuclear forces⁷⁵.

Relative to this agreement, it is important to notice that the SORT was composed of just five articles and many of its provisions were quite vague and unclear. Firstly, the SORT text does not provide a unique definition of the term “strategic nuclear warheads”, therefore it is not entirely clear if it refers just to the deployed warhead, to the underplayed or to all those warheads regulated by the START I. Secondly, it does not even specify the counting procedures nor outline a concrete implementation plan, providing the Parties with excessive freedom. In fact, during the ratification

⁷⁴ “Treaty between the United States of America and the Russian Federation on Strategic Offensive Reduction (SORT/ Treaty of Moscow), Moscow, 24 May 2002.

<http://www.nti.org/media/pdfs/SORT.pdf>

⁷⁵ “Strategic Offensive Reduction Treaty (SORT)”, Nuclear Threat Initiative, 2011,

<http://www.nti.org/learn/treaties-and-regimes/strategic-offensive-reductions-treaty-sort/>

Accessed on 29 March 2018.

process for the SORT, many questions were raised on how the Parties could effectively comply with the agreement, but President Bush guaranteed that the Russian Federation and the United States would have exchanged continuous information regarding the status of their strategic relationship and nuclear forces. However, just a few talks occurred and the Bilateral Implementation Commission did not meet often since the provisions of the Treaty of Moscow were not clear and not many questions were raised regarding its concrete implementation⁷⁶. Thirdly, some Russian and American analysts noticed that in the SORT there was an absence of obligations concerning the elimination of nuclear warheads and delivery vehicles. In fact, some Russian experts claimed that this would affect the Russian Federation in a negative way, because Russia would have to eliminate its strategic offensive systems due to the lack of resources that were necessary for the maintenance of these weapons, while the United States would have the possibility to maintain, or redeploy, additional warheads or SNDV⁷⁷. Fourthly, there is a complete lack of obligations for the regulation of non-strategic nuclear weapons, because this agreement did not affect in any way these offensive systems. Finally, it is important to notice that with the end of the START II the issue of the MIRVed ICBMs was not addressed in the Treaty of Moscow, leaving these offensive systems without any effective regulation. For all these reasons, it is possible to state that, due to the lack of real enforcement mechanisms, this treaty was destined to be a symbol rather than a definitive solution, as it represented the willingness of the Parties to return to dialogue after all the political complications that occurred at the end of the millennium.

Besides the evident critical points of the SORT, this treaty and START I continued to regulate the nuclear weapons of the United States and Russian Federation for many years. Indeed, these two agreements managed to reduce the nuclear arsenals

⁷⁶ Woolf A. F., *Nuclear Arms Control: The Strategic Offensive Reductions Treaty*, Congressional Research Service, February 7, 2011, p. 19.

⁷⁷ “Needless Obligations, Why Does Russia Want A Treaty With No Substance?”, Center for Arms Control, Energy and Environmental Studies, 2002, <https://www.armscontrol.ru/start/publications/izv031802.htm> Accessed on 30 March 2018.

of these superpowers in a considerable way. This was because the two sides fulfilled the requirement of START I on 5 December 2001⁷⁸, while they met the obligations of SORT in 2009⁷⁹. However, due to the fact that START I was going to expire in 2009, the United States and Russia began to discuss their options for arms control in mid-2006. Even though they had the possibility to extend the START I for five years, both sides decided not to move in this direction, since this agreement was interfering with their military programs. In fact, on July 2007, during an informal meeting in Kennebunkport, Maine, the US President George W. Bush and Russian President Vladimir Putin expressed their support for the replacement of the START I, as it appeared clear that the chances for the extension of this agreement were quite low. Moreover, even during a meeting in the Joint Compliance and Implementation Commission in October 2008, both superpowers, along with the representatives of Kazakhstan, Belarus, and Ukraine, reaffirmed the impossibility to reach any agreement on the extension of START I, marking officially the end of this treaty. Notably, all the events that occurred in 2008 had a negative impact on the negotiations of the new treaty. The United States and Russia had a series of diplomatic crisis due to the Russo-Georgia War, as the Bush Administration strongly condemned the Russian military actions. In addition, the fact that NATO was expanding near the Russian borders contributed to the deterioration of the US-Russia relations, leading to a diplomatic crisis that affected their ability to cooperate in the field of nuclear arms control. In spite of these difficulties, the superpowers were aware of the importance of this agreement, as they were conscious that the SORT provisions were not sufficient to regulate the nuclear arms issue. Consequently, they decided to work actively in order to reach an agreement before the expiration of the START I, but they acknowledged that the negotiations would have to be left to the new administration.

⁷⁸ Nuclear Threat Initiative, "Treaty between the United States of America and the Union of Soviet Socialist Republics on Strategic Offensive Reductions (START I), cit.

⁷⁹ Nuclear Threat Initiative, "Strategic Offensive Reduction Treaty (SORT)", cit.

The sides began to hold talks during the first months of the Obama Administration as initially the new US President had had a less harsh approach towards the Russian Federation. In fact, during the Munich Security Conference on February 2009, Vice President Joseph Biden, speaking on the relationship with the Russian Federation, affirmed that “it's time to press the reset button and to revisit the many areas where we can and should be working together with Russia” and stressed the necessity “to negotiate deeper cuts in both our arsenals⁸⁰”. Therefore, just a few months before the expiration of the START I, Russian Foreign Minister Lavrov and his counterpart Secretary of State Clinton had a meeting in Geneva where they expressed their willingness to restore the US-Russian relations, affirming that they would try to reach a new agreement before the end of 2009. During this summit, the Russian Foreign Minister welcomed such declarations and affirmed “I think we can manage to arrive at a common view both in the context of strategic offensive weapons and the missile defenses⁸¹”, marking in this way a new phase in the US-Russian nuclear arms control. Following these declarations, a series of high-level consultations took place throughout 2009, with President Medvedev and Obama expressing their willingness to conclude the new agreement in the shortest time possible, since both leaders emphasized the need to regulate both strategic offensive arms and delivery vehicles.

These talks were conducted by the Director of Security and Disarmament Department at the Russian Ministry of Foreign Affairs, Anatoly Antonov, and his counterpart U.S. State Department Assistant Secretary Rose Gottemoeller, which had many meetings during the year. Notably, eight rounds of talks were necessary before reaching an agreement on the new treaty, as the two delegations had a different view concerning the obligations and verification mechanisms. Despite these differences, on 6 July 2009, Russian President Medvedev and US President

⁸⁰ “Remarks by the Vice President at the 45th Munich Conference on Security Policy, February 7, 2009”, The American Presidency Project,

<http://www.presidency.ucsb.edu/ws/index.php?pid=123108> Accessed on 1 April 2018.

⁸¹ “Remarks With Russian Foreign Minister Sergey Lavrov”, U.S. Department of State, <https://2009-2017.state.gov/secretary/20092013clinton/rm/2009a/03/120124.htm> Accessed on 1 April 2018.

Obama signed the Joint Understanding on Further Reduction and Limitation of Strategic Offensive Arms to guide the negotiations, agreeing to reduce their SNDV to 500-1.100 and their nuclear warheads to 1.500-1.675 and including clear verification mechanisms similar to the one defined by START I. Even though the two leaders did not manage to sign the new agreement before the expiration of START I, after a phone call on 4 December 2009, they released a Joint Statement affirming their willingness to work actively in order to conclude it as soon as possible⁸². In fact, a few months later, after formally announcing that they have reached the agreement on March, US President Obama and the Russian President Medvedev met in Prague and finally signed the New START Treaty on 8 April 2010.

⁸² “Treaty between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms (New START)”, Nuclear Threat Initiative, 2017, <http://www.nti.org/learn/treaties-and-regimes/treaty-between-the-united-states-of-america-and-the-russian-federation-on-measures-for-the-further-reduction-and-limitation-of-strategic-offensive-arms/> Accessed on 2 April 2018.

CHAPTER II

Analysis of the START III Treaty

After examining the most relevant bilateral treaties in the context of the US-Russian nuclear arms control, this section analyzes the New START Treaty in details, also known as START III. This agreement can be considered particularly important since, after years of harsh confrontation, it represents the willingness of both the United States and Russia to collaborate again on the issue of strategic offensive systems. Indeed, START III continues the process of regulations and verification defined by its predecessor, reaffirming a clear set of rules after the failure of START II and the evident limits of the SORT. Moreover, in a way, it has also strengthened the ties between the two superpowers, as continuous diplomatic relations and the exchange of information has promoted confidence building.

Notably, the author believes that this is the right time to examine this agreement and to draw some important conclusions. 2018 is an important year for the START III, as seven years after the entry into force the Parties are required to meet its obligations. However, before analyzing the present situation and future prospects, the author examines the structure of the START III, highlighting its obligations, verification, and compliance mechanisms, stressing all those central limits and key provisions that are contained in this treaty. Subsequently, the present work focuses on the ratification of the START III, highlighting all those issues and difficulties that the Russian Duma and the US Senate had to face during this process since many questions concerning this treaty were raised by both American and Russian political personalities. In the last part of this chapter, the author addresses the entry into force and the implementation of the START III, focusing on the way in which it has affected the nuclear arsenals of these superpowers and their balance of power.

2.1. Structure of the START III Treaty

Even though the START III pursues the same objectives of the START I, it should not be considered as an extension of the previous agreement, since its provisions are clearly the product of a different era. It is important to remember that the START I was negotiated during the last years of the Cold War, when these two superpowers were still suspicious of the intention of the other, while the START III was signed at a totally different time. Indeed, all those changes that occurred in US-Russia relations had a deep impact on the provisions of the START III, as both sides agreed to define less stringent obligations in comparison with the one established by the START I⁸³. Consequently, many cumbersome and costly elements that were present in the previous agreement were abandoned, and they were replaced by more flexible provisions. Nonetheless, the goals of the new treaty remained almost the same, since the sides still wanted to define a clear set of rules in order to ensure the transparency in their nuclear forces and the predictability of their future intentions.

In order to reduce the strategic nuclear arsenals of these superpowers, the START III has a duration of ten years and contains a series of provisions that define in detail the limits and the counting rules for nuclear warheads and delivery vehicles. In fact, art. 2 establishes specific quantitative limits, while art. 3 prescribes the counting rules. According to art. 2 par. 1, within seven years after the entry into force, the Parties have to meet three central limits⁸⁴. Firstly, each side cannot deploy more than 1.550 nuclear warheads on deployed ICBMs, SLBMs, and heavy bombers. Secondly, the agreement set an aggregate limit of 800 deployed and non-deployed heavy bombers, ICBM and SLBM launchers. Thirdly, within that aggregate limits, each side can deploy a maximum of 700 deployed heavy bombers, ICBM and SLBM launchers. Regarding these three limits, it is important to notice that the START III makes a distinction, both for nuclear warheads and for carriers, between deployed

⁸³ Lavrov S., *the "New START Treaty in the Global Security Matrix: The Political Dimension"*, Journal *Mezhdunarodnaya Zhizn*, No. 7, July 2010.

⁸⁴ "Treaty between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms (New START)", Prague, 8 April 2010, http://www.nti.org/media/documents/new_start.pdf

and non-deployed. In fact, in the New START's Protocol, there is a long list of definitions concerning every single case in which a launcher can be considered as deployed or non-deployed. In simple terms, it is possible to state that launchers can be considered as "deployed" when it is armed with a nuclear warhead and it is not intended for training or testing, while it is considered as "non-deployed" when it is not armed or it requires some kind of adjustment before being used⁸⁵.

Besides these three limits, art. 2 par. 2 affirms that "Each Party shall have the right to determine for itself the composition and structure of its strategic offensive arms". This provision has been added to make the implementation of this treaty less cumbersome and to simplify the verification operations. Undeniably the excessive presence of restrictions would not bring any real advantage to the Parties. Indeed, while START I contained many sub-limits due to the great differences in the size and composition of their nuclear arsenals, START III does not have such provisions since at present their arsenals are more similar, making any additional obligations just costly and unnecessary. Moreover, this provision also reflects America's desire to have a major degree of flexibility in the determination of its own nuclear arsenal, because many political and military American personalities considered this an essential condition. Nonetheless, it is important to notice that also the Russian Federation was in favor of a greater flexibility because in part it shared their point of view.

In order to calculate the number of warheads and SNDVs, the START III adopt a series of definitions and counting rules defined by art. 3. While in the START I the Parties did not actually count the deployed warheads, since they just count the launchers and then they multiply this number by the number of "attributed⁸⁶" warhead to each launcher, in START III they do not use such a rule. In fact, art. 3 states "For ICBMs and SLBMs, the number of warheads shall be the number of

⁸⁵ "Protocol to the Treaty between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms (New START)", Prague, 8 April 2010, <https://www.state.gov/documents/organization/140047.pdf>

⁸⁶ In START I this attributed number was equal to the maximum number of warheads that have ever been tested with each type of ICBM or SLBM. In fact, this treaty assumed that each SNDV was fully armed and did not recognize differences in loadings.

reentry vehicles emplaced on deployed ICBMs and on deployed SLBMs⁸⁷”, counting the effective number of warheads deployed in each delivery vehicle. In this way, the Parties are allowed to change the actual number of warheads that are deployed in each missile, with the sole condition of providing notification every six months during the life of the treaty. Concerning heavy bombers, the art. 3 affirms that “Each deployed heavy bomber shall be count as one⁸⁸”, assigning in this way a fixed number of warheads for each bomber irrespective of the actual number of missiles it carries. However, due to the fact that a heavy bomber located in a military base is not armed with nuclear weapons, it is probable that this provision has been included in order to count these offensive systems that otherwise would have been excluded. In addition, in a real scenario the possibilities that one of these aircrafts could constitute a real threat are quite low, since modern offensive systems make the heavy bombers, from a strategic point of view, progressively less effective.

Relative to the conversion and elimination procedures, which are defined by art. 6 and Part Three of the Protocol, the START III has far less strict provisions in comparison with the START I, as it provides a major degree of flexibility in the way in which the Parties can achieve the elimination or conversion of SNDVs. While the START I prescribed detailed and expensive measures, the START III allows the two sides to develop alternative procedures for the elimination in addition to the one established by the previous treaty. In fact, even though they have to demonstrate that these alternative elimination procedures have been carried out in a proper way, the other Party has no right to reject or dispute this alternative method⁸⁹. Probably this provision has been included in the new treaty because many elimination and conversion procedures, that were inherited by the START I, were too costly and they were perceived as no longer necessary by the Parties.

⁸⁷ “Treaty between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms (New START)”, 2010.

⁸⁸ Ibid.

⁸⁹ Woolf A. F., *The New START Treaty: Central Limits and Key Provisions*, Congressional Research Service, February 5, 2018, p. 6.

In the international environment, transparency and data exchange have always played a key role in the field of disarmament, as they are necessary tools to reduce insecurity and foster the development of mutual trust between states. In fact, already with the START I, a vast monitoring and verification regime was established to ensure the transparency and the predictability of the other side. Actually, the previous treaty called for an extensive exchange of information regarding location and numbers of strategic offensive systems, as well as relying on NTM, exhibition, and on-site inspections in order to verify the data provided by the other Party. Indeed, the START III inherited many of the START I procedures, since its verification regime has many points in common with the previous agreement. However, the provisions of the new treaty have been adjusted to the present context, adapting the verification procedures and the monitoring measures to the current status of the US-Russia relations.

Regarding the exchange of information, the art. 7 imposes that the Parties establish a common database according to the rules defined in Part Two and Four of the START III Protocol, as well as using the Nuclear Risk Reduction Center (NRRC) to receive and provide notifications⁹⁰. In fact, within 45 days from the entry into force of the treaty, the Parties have to exchange data regarding the location of silo launchers, site diagrams, and water diagrams for each facility. Moreover, every heavy bomber, SLBM, and ICBM shall have a unique identifier in order to be easily tracked. In addition, every Party has to notify any relevant change by notification, updating the other Party constantly on the location, status, characteristic of any strategic offensive systems subject to the provisions of the START III. Indeed, the NRRC plays an important role, since it translates, prepares, and coordinates all the incoming and outgoing messages and notifications, allowing the Parties to maintain regular contact and to transfer a constant flow of information in order to reduce the possibility of misunderstandings. However, despite the collective database and the

⁹⁰ “Treaty between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms (New START)”, 2010.

NRRC, both the United States and Russia continue to rely on their NTM in order to verify the information provided by the other Party, because satellites and radars continue to be an essential instrument of control. In fact, the art. 10 reaffirms the obligations that were already present in the previous treaties, as on the one hand, it entitles the sides to use the NTM at their disposal, while on the other hand it states that they cannot interfere with the verification measures of the other Party or use concealment measures.

In order to confirm the accuracy of the information collected, the START III provides for the possibility to conduct two types of inspections, which are governed by art. 11 and by Part Five of the Protocol. According to this article, the Parties have the right to conduct eighteen short-notice on-site inspections a year, which are divided as follows: ten of the "Type One" and eight of the "Type Two".

The "Type One" inspections are regulated by art. 11 par. 2, which specifies the object and purpose of these controls, since it states that these can be conducted at the ICBM bases, submarine bases, and air bases in order to “confirm the accuracy of the data declared on the number and type of deployed and not deployed strategic offensive arms⁹¹” and to verify the number of warheads deployed on ICBM, SLBM, and heavy bomber carriers. The Party that wants to conduct the inspection will, at first, use the database to receive information about the aggregate number of warheads present in the military base and then will receive a document containing the precise number of nuclear warheads deployed on each missile. Once the Party receives the document, the party conducting the inspection will have the right to inspect one ICBM or one SLBM, in order to count the deployed warheads and to confirm the information received. Therefore, due to the short notice, this type of inspection is necessary to verify if the other side is correctly implementing the obligations defined by the treaty, as it verifies if the limits imposed by the art. 2 of the START III are respected and if the information received is incorrect.

⁹¹ Ibid.

The "Type Two" inspections, which are defined by art. 11 par. 3, can be conducted to verify that strategic offensive systems have been converted or eliminated according to the provisions of the Treaty. Furthermore, this type of inspection allows the inspecting team to have the possibility of examining a series of structures, such as buildings for storage, maintenance or construction of ICBMs or SLBMs, in order to confirm that these facilities are not used for purposes that are not consistent with this Treaty. This second type of inspection integrates the Type One inspection, because it allows the Parties to examine all those structures that host non-deployed warhead and launchers or that are necessary for the elimination of these offensive systems. In addition, the art 11 par. 4 affirms that both sides have to conduct exhibitions and are allowed to participate in exhibitions conducted by the other Party, since "The purpose of such exhibitions shall be to demonstrate distinguishing features and to confirm technical characteristics of new types, and to demonstrate the results of conversion of the first item of each type of strategic offensive arms subject to this Treaty⁹²". In brief, it is possible to state that these two types of inspections and the exhibitions are essential elements of the verification mechanism defined by the START III because they allow the Parties to check if the information received is correct.

Besides these verification mechanisms, in order to promote the objective of the START III and to implement its provisions in a correct way, this agreement relies on the Bilateral Consultative Commission. According to art. 12 and to Part Six of the protocol, the Commission holds a biannual meeting in Geneva and serves as a forum for the discussion of all those issues related to the implementation of the treaty. Moreover, during the session of the Commission, the parties can agree on additional measures that are considered necessary for the viability and effectiveness of this agreement, because the development of a new kind of offensive arms systems may require supplementary actions⁹³. In fact, since the art. 5 par. 1 states that the

⁹² Ibid.

⁹³ "Protocol to the Treaty between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms (New START), 2010.

“modernization and replacement of strategic arms may be carried out”, it is evident that, in a long-term perspective, the Bilateral Consultative Commission can be considered as an important tool, as many questions may arise from the development of new offensive systems.

Nevertheless, it is important to notice that the START III also contains an article that regulates the right to withdraw from the treaty. In fact, art. 14 par. 3 affirms that “Each Party shall, in exercising its national sovereignty, have the right to withdraw from this Treaty if it decides that extraordinary events related to the subject matter of this Treaty have jeopardized its supreme interests⁹⁴”. The sole condition for exercising this right is that a Party has to notify the other Party of this decision, clarifying the reasons and the events that have motivated his withdrawal. Consequently, the treaty terminates three months following the date of receipt of the notification.

2.2. Obstacles, differences, problems within ratification

Even though the START III was signed on 8 April 2010 and was considered by many experts a milestone in nuclear arms control, it entered into force only on 5 February 2011, since many legislators expressed numerous concerns on the effects of this agreement. In fact, many questions were raised concerning this treaty by both the United States and Russia, because on the one hand many members of the US Congress believed that the START III would have affected the United States national security in a dramatic way, while on the other hand many Russian experts were worried by the American plan of developing a ballistic missile defense system. Moreover, the discussion about the possible ratification of this treaty took place on many different levels, as, especially in the United States, the debate occurred during the 2010 midterm elections, becoming in this way the core of many political and public disputes. Consequently, due to these internal issues, the ratification of the

⁹⁴ Ibid.

START III was one of the most relevant obstacles that would have prevented it from entering into force.

After defining the most important articles of the START III, the present section of the work focuses on all those differences and problems that occurred during the ratification process, highlighting all those issues that affected, and still affect, the US-Russian nuclear arms control debate. For all the aforementioned reasons, this part is divided in the following way: firstly, it examines the United States perspective, stressing all the internal and political obstacles that the START III had to face during the ratification process; secondly, it analyzes the Russian point of view, focusing in particular on the concerns of both houses of the Russian Parliament.

2.2.1 U.S. Ratification Process

Concerning the United States, as mentioned before, the debate on the ratification of the START III occurred in a time characterized by political changes, as it took place in 2010 during the midterm elections and the lame-duck session of Congress. Indeed, while the previous Administration showed many doubts concerning this new agreement, President Obama pushed toward a quick ratification, submitting all the documents related to the START III to the US Senate on 13 May 2010. Besides presenting the START III text, the Annexes, and the Protocol, the US President submitted to the Senate a detailed Article-by-Article analysis that was prepared by his Administration, as well as the 1251 report that contained information and future plans for US nuclear weapons⁹⁵. In addition, these documents also contained the three unilateral statements that were issued by both the United States and Russian Federation at the time of signature.

Relative to the content of these unilateral statements⁹⁶, it is important to notice that the Russia Federation issued just one statement on the US missile defense system,

⁹⁵ Woolf A. F., *The New START Treaty: Central Limits and Key Provisions*, cit., p. 22.

⁹⁶ “New START Treaty Fact Sheet: Unilateral Statements”, U.S. Department of State, <https://2009-2017.state.gov/t/avc/rls/141837.htm> Accessed on 9 April 2018.

affirming that “the Treaty may be effective and viable only in conditions where there is no qualitative and quantitative build-up in the missile defense system capabilities of the United States”. With this declaration, the Russian Federation affirmed that, according to art. 14 of the START III, they are entitled to withdraw from the treaty if “extraordinary events” that threaten their strategic nuclear forces potential will occur in the future, reasserting that the build-up of the US strategic defense system can be considered as a valid reason for their withdrawal from the new treaty. In response to the Russian declaration, the United States issued two unilateral statements. Firstly, they declared that “missile defense systems are not intended to affect the strategic balance with Russia”, adding that this missile defense system “would be employed to defend the United States against limited missile launches, and to defend its deployed forces, allies and partners against regional threats”. Secondly, the United States issued a unilateral statement on Trident I SLBMs declaring that they are not SLBMs of an existing type for purposes of the Treaty, since “the launchers that were at one time capable of launching Trident I SLBMs have all been converted and are now incapable of launching Trident I ballistic missiles” and that the remaining Trident I “will not be used for purposes inconsistent with the Treaty.”

After receiving all these documents, many committees continued to work actively in order to guide the debate on the START III in the US Senate. In this context, the Senate Foreign Relations Committee played an important role, as it held twelve hearings on the treaty and received numerous testimonies from more than twenty experts from both outside and inside the Obama Administration. In fact, many senior officials from the Defense Department, the Department of State, the Department of Energy, and also from former officials from past Administrations expressed their opinion, contributing to the preparation of the debate in the US Senate.

On 18 May 2010, the Senate Foreign Relations Committee heard statements from Secretary of Defense Gates, Secretary of State Clinton and Chairman of the Joint Chiefs of Staff Admiral Mullen on the effects of this treaty. Notably, Secretary of State Hillary Clinton expressed her support for the START III, since on the one

hand, she affirmed that “It is a treaty that, if ratified, will provide stability, transparency, and predictability for the two countries with more than 90 percent of the world’s nuclear weapons.⁹⁷”, while on the other hand she stressed that this agreement “does not infringe upon the flexibility we need to maintain our forces, including the bombers, submarines, and missiles, in a way that best serves our national security interest. The treaty does not constrain our plans for missile defense efforts.⁹⁸”. On 25 May 2010, the former Secretary of State Henry Kissinger also expressed his support for the new treaty before the Senate Foreign Relations Committee, as he stated that the consequences of non-ratification would have been disastrous for US-Russian relations, reaffirming in this way the importance of a quick ratification of the START III⁹⁹.

On 28 May 2010, while the US Senators and experts debated on START III, President Medvedev submitted all the documents for the ratification to the Russian Duma. However, in order to ensure that the Russian Federation would have not commit to an agreement that is unable to gain support in the US Senate, the Russian President included a request that called for a simultaneous ratification of the START III by the United States and the Russian Federation, because at that time there were many doubts concerning the possibility of a quick ratification. In fact, even though many hearings occurred within the American Committees, many Republican Senators and experts continued to be sceptical about the START III. Actually, the most relevant issue continued to be the construction of the missile defense system, as, after the American withdrawal from the ABM Treaty, it has become a

⁹⁷ “Testimony, Hillary Rodham Clinton, Secretary of State, Opening Remarks Before the Senate Committee on Foreign Relations, Washington, DC, May 18, 2010”, U.S. Department of State Archive, <https://2009-2017.state.gov/secretary/20092013clinton/rm/2010/05/141960.htm> Accessed on 14 April 2018.

⁹⁸ Ibid.

⁹⁹ “Dr. Henry Kissinger testifies before Senate Foreign Relations Committee urging for ratification of the New START Treaty, May 25, 2010”, United States Senate Foreign Relations Committee, <https://www.foreign.senate.gov/press/chair/release/dr-henry-kissinger-testifies-before-senate-foreign-relations-committee-urging-for-ratification-of-the-new-start-treaty> Accessed on 15 May 2018.

fundamental priority for the United States and the main source of concerns for the Russian Federation.

Besides the request of the Russian President, the Senate Foreign Relations Committee continued to conduct hearings throughout the summer, gathering numerous statements and testimonies from many experts. Moreover, the Senate Armed Service Committee and the Intelligence Committee played an important role since they prepared numerous briefings and heard many testimonies. In June 2010, Admiral Mullen, Secretary of Energy Chu, Secretary of Defense Gates, and Secretary of State Clinton testified before the Armed Service Committee, expressing once again their support for the new treaty. In fact, Secretary of Energy Chu affirmed that the START III “will serve the interests of the United States without jeopardizing our ability to sustain the safety, security and effectiveness of the U.S. nuclear weapons stockpile¹⁰⁰”. Also Secretary of Defense Gates moved in the same direction, emphasizing that “The U.S. is better off with this treaty than without it [...] It increases stability and predictability, allows us to sustain a strong nuclear triad, and preserves our flexibility to deploy the nuclear and non-nuclear capabilities needed for effective deterrence and defense¹⁰¹”.

Despite all these statements in favor of the ratification, on 4 August 2010, Senate Foreign Relations Committee Chairman John Kerry declared that the vote on the new agreement would be postponed in order to allow the START III supporters to gain additional Republican support. Actually, at the time of this announcement, only Republican Senator Lugar openly supported this treaty, while the other Republican members of the Senate Foreign Relations Committee were not in favor. In early September, John Kerry proposed a first draft resolution to the Committee for the ratification of the START III, but this was subsequently substituted by a new version submitted by Senator Lugar. The new resolution that contained fifteen new

¹⁰⁰ “Secretary Chu Testimony to Senate Armed Services Committee, June 17, 2010” U.S. Department of Energy, <https://www.energy.gov/articles/secretary-chu-testimony-senate-armed-services-committee> Accessed on 15 May 2018.

¹⁰¹ “Remarks as Delivered by Secretary of Defense Robert M. Gates, U.S. Capitol, Thursday, June 17, 2010”, U.S. Department of Defense, <http://archive.defense.gov/speeches/speech.aspx?speechid=1489> Accessed on 16 May 2018.

amendments was modified in order to have different language and a greater emphasis on the missile defense systems, as it was issued in the hope of assuring the support of the Republican Senators. Consequently, Lugar's draft had a positive impact and, after many months of work, by a vote of 14 to 4 the Senate Foreign Relations Committee approved the resolution on 16 September 2010 and sent the resolution to the full Senate¹⁰². However, the US Senate decided not to address the ratification of the treaty before the November election, since many Senators suggested that they would not have time for the debate during the lame-duck session and affirmed their willingness to wait until 2011.

Besides the institutional discussions on the START III, it is important to underline that, especially before the November election, this issue became an integral part of the US public debate and was also addressed by numerous non-governmental organizations. In fact, during late 2010, these organizations had an active role in guiding the public debate on this issue, because they released many documents and articles in regard to this agreement. However, the opinions were not homogeneous, as on the one hand there were numerous scientists that openly supported the ratification of the START III, while on the other hand there were many political personalities that strongly opposed it.

On one side, there were organizations such as the Arms Control Association and the Federation of American Scientists that supported the new agreement and led efforts to rally political support, affirming that this treaty would have reestablished a clear set of rules after the expiration of the START I. In some cases, they also strongly criticized the statements that were made by many US Senators, affirming that their speeches were often biased. For instance, the Federation of the American Scientists openly criticized the speech that was held in the Senate by Republican Senator Kit Bond, as after having denied the contents of his speech they claimed that "Senator Bond's objections are not simply politically motivated hysteria but his objections

¹⁰² "Senate committee approves New START treaty amid concerns over Russian cheating; DeMint a no-show for vote", Foreign Policy, 2010, <http://foreignpolicy.com/2010/09/16/senate-committee-approves-new-start-treaty-amid-concerns-over-russian-cheating-demint-a-no-show-for-vote/> Accessed on 16 April 2018.

have been addressed and met. The treaty will reduce the nuclear threat and the verification is carefully tailored to meet the provisions of the treaty. Ratify.¹⁰³”. Also the Executive Director of Physicians for Social Responsibility Peter Wilk, after defining the Republican Senator Jon Kyl and his supporters as “a group of nuclear dinosaurs”, underlined that “This is a crucial moment in our history. Other senators must now step up to their responsibility to protect national security and the public's health and vote for ratification before the Senate adjourns for the year.¹⁰⁴”. In addition, some Republican and Neoconservative personalities, like George H. W. Bush and Robert Kagan, supported the treaty, as they considered the obligations defined by the START III “not a threat to U.S. security¹⁰⁵” and relatively modest in comparison with the previous START I, pushing in this way for a quick ratification¹⁰⁶.

Nonetheless, on the other side, there were also several associations and experts that were against the ratification of the new treaty, claiming that it would have affected in a negative way the United States while advantaging the Russian Federation. Notably, the conservative public policy think tank Heritage Foundation took the lead in opposing the START III. According to the President of the Foundation Ed Feulner, this new agreement would have made the United States more vulnerable due to the weakness of its obligations. In fact, besides establishing an inadequate verification regime, they believed that the new treaty ignored the issue of tactical nuclear weapons and defined “unacceptable limits to missile defense”, resulting in

¹⁰³ “Responding to Senator Bond on New START”, Federation of the American Scientists, 2010, <https://fas.org/blogs/security/2010/11/responding-to-senator-bond-on-new-start/> Accessed on 16 April 2018.

¹⁰⁴ “Don't play politics with new START treaty”, CNN, 2010, <http://edition.cnn.com/2010/OPINION/11/19/wilk.new.start.treaty/index.html> Accessed on 16 April 2018.

¹⁰⁵ “Why Senate Republicans should pass the New START treaty”, The Washington Post, 2010, <http://www.washingtonpost.com/wp-dyn/content/article/2010/11/10/AR2010111003708.html> Accessed on 17 April 2018.

¹⁰⁶ “START has support of at least one George Bush”, The Washington Post, 2010, <http://www.washingtonpost.com/wp-dyn/content/article/2010/12/08/AR2010120807094.html> Accessed on 17 April 2018.

a “great deal for Russia¹⁰⁷”. In addition, Heritage Action for America, the lobbying arm of the Heritage Foundation, pressured many Republican Senators in order to persuade them to vote against the treaty¹⁰⁸. Also Former CIA Director James Woolsey was extremely sceptical on the START III, as, in an article published in The Wall Street Journal, he affirmed that the United States made too many concessions to the Russian demands, resulting in a treaty that should not be ratified without “guarantees that the administration will modernize weapons and improve missile defense¹⁰⁹”.

In spite of all these institutional and public debates, the discussion for the ratification of the START III began in the US Senate on 16 December 2010. During the debate, several Senators criticized the language related to the missile defense system and pushed to add provisions on tactical nuclear weapons, presenting numerous amendments to the treaty. Due to the fact that they would have required Russian approval, in order not to reopen the negotiations with the Russian Federation the majority of the amendments proposed were eliminated. Nonetheless, the Senate accepted the amendments to the Resolution of Ratification, committing to deploy the ballistic missile defense system and to modernize its nuclear arsenals. Furthermore, the US Senate received a letter issued by President Obama in which on the one hand he reaffirmed that the START III does not pose any limits to the deployment of missile defense system in Europe, reassuring the Republican Senators, while on the other hand, he stressed that this system would not threaten the balance of power with the Russian Federation¹¹⁰. Finally, on 22 December 2010,

¹⁰⁷ “New START is a Bad Deal at Any Time”, The Heritage Foundation, 2010, <https://www.heritage.org/arms-control/commentary/new-start-bad-deal-any-time> Accessed on 17 April 2018.

¹⁰⁸ “Heritage targets Republican senators who might favor New START”, Foreign Policy, 2010, <http://foreignpolicy.com/2010/11/04/heritage-targets-republican-senators-who-might-favor-new-start/> Accessed on 17 April 2018.

¹⁰⁹ “Old Problems With New Start”, The Wall Street Journal, 2010, <https://www.wsj.com/articles/SB10001424052748703514904575602992172574172> Accessed on 17 April 2018.

¹¹⁰ “In letter to Senate, Obama promises that New START treaty won't limit missile defense”, The Washington Post, 2010, <http://www.washingtonpost.com/wp-dyn/content/article/2010/12/18/AR2010121802999.html> Accessed on 17 April 2018.

after numerous hearings and consultations, the US Senate gave its consent to the ratification of the START III, approving the Resolution of Ratification by a vote of 71 to 26.

2.2.2 Russian ratification process

As mentioned before, on 28 May 2010, President Medvedev submitted to the Russian Parliament the START III documents, starting in this way the ratification process. However, it is important to notice that while in the United States the ratification of international agreements is the prerogative of the Senate, in the Russian Federation, before being signed by the President, an agreement must be approved by both the Duma and the Federation Council.

Subsequently, on 6 July 2010, the Duma held parliamentary hearings on the START III, which were attended by representatives from both the Foreign Ministry and the Defense Ministry. During the parliamentary hearings, the Deputy Foreign Minister Sergei Ryabkov stated that the START III “is a solid document that meets the relations of Russia and the United States in the near future” and also noted that it was “balanced in itself”, providing in this way his support to the new treaty¹¹¹. Similarly, the Duma Committee on Defense moved in the same direction since it recommended to the Chamber to ratify the START III in a shorter period of time. However, even though the Foreign Affairs Committee of the Duma initially supported the new treaty, on November 2010 the Head of the Committee Konstantin Kosachev stated the present agreement was unlikely to be ratified in the spring session. In fact, due to the US Senate delay in the ratification process and to the conditions proposed by the Senate Foreign Relations Committee, the Duma decided to study the document carefully before determining its position¹¹². In addition,

¹¹¹ “МИД РФ призывает комитеты Госдумы ратифицировать новый договор по СНВ”, РИА Новости, Россия сегодня, 2010, <https://ria.ru/politics/20100706/252513175.html> Accessed on 18 April 2018.

¹¹² “Косачев предложил вернуть обсуждение договора СНВ-3 в думские комитеты”, РИА Новости, Россия сегодня, 2010, https://ria.ru/defense_safety/20101029/290568432.html Accessed on 18 April 2018.

Federation Council speaker Sergei Mironov affirmed that “If there was any delay in the U.S. Congress on the ratification of the START, Russia, respectively, will closely monitor this process”, proposing not to rush with amendments and wait before voting on the new treaty¹¹³.

With the ratification of the START III by the US Senate on 22 December 2010, there was a radical change in the political context. Reassured by this success, the Head of the Committee on Foreign Affairs of the Federation Council Mikhail Margelov affirmed that if the State Duma will do its part without delay, the Federation Council will ratify the START III before the end of the year, affirming his willingness to bust this process¹¹⁴. Two days after the US ratification, the Duma discussed and voted on the Draft Law on Ratification of the START III. In fact, with a vote of 350 deputies in favor, 58 against, and no abstentions, the document was officially adopted by the Russian Duma in the first reading. During the vote, the Foreign Relations Committee stated that the START III would have made possible, not only to preserve the existing group of strategic nuclear forces of the Russian Federation, but also its modernization and development in accordance with the objectives of ensuring national security. Furthermore, the Duma Committee on Defense gave a positive response as it believed that the new agreement fully met Russia's interests in the framework of national security¹¹⁵. However, due to the fact that the US Senate released various unilateral statements and understandings regarding the interpretation of the START III, the Russian Federation decided to delay the final vote to the new year.

On 6 January 2011, the Russian Duma presented five amendments and two statement on the Law on Ratification, since they wanted to clarify the relationship between the

¹¹³ “Россия не будет форсировать ратификацию договора СНВ, заявил Миронов”, РИА Новости, Россия сегодня, 2010, <https://ria.ru/politics/20101119/298271612.html> Accessed on 18 April 2018.

¹¹⁴ “Сенат США определился с СНВ, ход за Россией”, РИА Новости, Россия сегодня, 2010, <https://ria.ru/world/20101223/312298999.html> Accessed on 18 April 2018.

¹¹⁵ “ГД приняла в первом чтении законопроект о ратификации договора СНВ”, РИА Новости, Россия сегодня, 2010, https://ria.ru/defense_safety/20101224/312963802.html Accessed on 20 April 2018.

START III and the US missile defense system, stressing all the conditions for their withdrawal from the new treaty. Consequently, on 15 January, they approved a bill during the second reading, adopting a number of statements which became a *de facto* response of the Russian Duma to the Resolution adopted by the US Senate in December. In fact, according to this document, the Russian Federation would withdraw from the agreement in two cases: first, in the case of a violation of the START III provisions by the United States; second, in the case of a radical change in the balance of power and national security due to the development of the US missile defense system¹¹⁶. Finally, on 25 January, the third and final reading of the Federal Law on Ratification took place, and it was approved with a vote of 350 in favor and 96 against, and one abstention. Although the ratification bill was approved, the deputies adopted two statements in this document. Firstly, they stressed that “The State Duma believes that maintaining the potential of nuclear deterrence in the necessary degree of readiness is one of the main objectives of the military policy of the Russian Federation¹¹⁷”, reaffirming in this way the need to accelerate the renewal of nuclear forces in order to ensure national security. Secondly, the Russian Duma proposed to monitor the deployment of the US missile defense system in Europe and stressed the need for US tactical nuclear weapons withdrawal from the continent. In fact, they considered the deployment of US non-strategic nuclear weapons in the European continent “unjustified and not corresponding to the nature of modern relations in the Euro-Atlantic area¹¹⁸”.

Following the Duma approval of the ratification bill on the START III, on 26 January 2011, the upper chamber of Russia’s Parliament also voted on the ratification of the treaty. Consequently, the Federation Council unanimously approved the ratification of the START III and adopted a statement, affirming that

¹¹⁶ “ГД приняла во II чтении законопроект о ратификации договора СНВ”, РИА Новости, Россия сегодня, 2011, https://ria.ru/defense_safety/20110114/321623473.html Accessed on 20 April 2018.

¹¹⁷ “Госдума ратифицировала российско-американский договор СНВ”, РИА Новости, 2011, Россия сегодня, <https://ria.ru/politics/20110125/326160280.html> Accessed on 22 April 2018.

¹¹⁸ Ibid.

“The Federation Council considers extremely important the provision of the new treaty, which establishes the interconnection between strategic offensive weapons and strategic defensive weapons¹¹⁹”. Furthermore, in this statement, the deputies also underlined that, while complying with the new treaty and pursuing its objectives, the Russian Federation must undertake a series of military, economic, and political steps in order to secure “the reliability and efficiency of Russia’s strategic potential”. In addition, Defense Minister Anatoly Serdyukov commented in a positive way on the ratification of the START III because he stressed that the new treaty will not limit future Russian plans, affirming that “we do not limit ourselves in any way. As for our missile defense, we have developed it, and we will continue to develop it¹²⁰”. Consequently, after the approval of the State Duma and the Federation Council, the Russian President Medvedev signed the instrument of ratification on 28 January 2011, announcing this success in front of the Members of the Security Council¹²¹.

2.3 Entry into force and implementation of the START III

A few days after the approval of the Russian Parliament and the US Senate, the United States and the Russian Federation finally managed to bring the new treaty into force. In fact, during the annual Munich Security Conference that took place from 4 to 6 February 2011, Foreign Minister Sergei Lavrov and Secretary of State Hillary Clinton exchanged the instrument of ratification, starting the clock on all those activities outlined by the START III¹²². However, in order to provide a clear

¹¹⁹ “Russia’s upper house adopts New START ratification bill”, Russia Today, 2011, <https://www.rt.com/politics/upper-house-start-ratification/> Accessed on 22 April 2018.

¹²⁰ “Совет Федерации единогласно ратифицировал договор по СНВ”, 5 родной новости, 2011, <https://www.5-tv.ru/news/36059/> Accessed on 22 April 2018.

¹²¹ “Медведев подписал ратификационный документ по договору СНВ”, РИА Новости, 2011, Россия сегодня, <https://ria.ru/politics/20110128/327440185.html> Accessed on 23 April 2018.

¹²² “MSC 2011”, Munich Security Conference Foundation, 2011, <https://www.securityconference.de/en/activities/munich-security-conference/msc-2011/> Accessed on 24 April 2018.

picture of the START III effects, it may be useful to briefly examine the numbers and characteristics of the nuclear arsenals of the two superpowers.

Concerning the US nuclear forces, in January 2011 it was estimated that its nuclear arsenal comprises a total stockpile of about 8.500 warheads. At that time, the United States maintained an estimated number of 1.950 operational warheads, 200 tactical warheads deployed in the European continent, and also 2.850 warheads in reserve¹²³. In addition, many experts believed that the United States had also roughly 3.500 warheads that were retired from the military stockpile in order to be dismantled.

Relative to the Russian nuclear forces, in March 2011, the Federation of the Atomic Scientists estimated that the Russian Federation had a total stockpile of nearly 11.000 nuclear warheads. Regarding this number, it is important to notice that the majority of the Russian arsenal was composed of tactical weapons that were built during the Soviet Union and were stored in facilities around the country. In fact, the scholars Hans M. Kristensen and Robert S. Norris estimated that the Russian Federation had roughly 2.430 operational strategic nuclear warheads deployed on ICBMs, SLBMs, and heavy bombers, while the remaining arsenal was composed of 3.700-5.400 non-strategic warheads, plus 3.000 warheads that awaited dismantlement¹²⁴.

After defining the volume of the US-Russian nuclear forces, the present work analyzes the different phases that occurred during the implementation of the START III, stressing the way in which it affected the nuclear arsenals of these two superpowers. On 25 March 2011, forty-five days after the entry into force of the treaty, the United States and the Russian Federation started to exchange information regarding the status of their arsenals, including data on warheads, missiles, launchers and heavy bombers. Subsequently, from 28 March to 8 April, they had the first meeting of the Bilateral Consultative Commission (BCC) in Geneva, where they discussed and defined the procedures for on-site inspections, as sixty days after the

¹²³ Kristensen H. M., Norris R. S., *US nuclear forces, 2011*, Bulletin of the Atomic Scientists, Volume 67:2, 66-76, 27 November 2015.

¹²⁴ Kristensen H. M., Norris R. S., *Russian nuclear forces, 2011*, Bulletin of the Atomic Scientists, Volume 67:3, 67-74, 27 November 2015.

entry into force of the START III the right to conduct inspection began. Consequently, a few days after this meeting, the US State Department announced that the American inspectors arrived in the Russian Federation and were ready to conduct the first on-site inspections of the country's nuclear facilities.

Following the first phase, the superpowers began to work actively in order to reduce their nuclear arsenals. By September 2011, as drawn by the data exchanges, the United States possessed 1.790 strategic warheads on 822 deployed SNDVs. These deployed launchers were within a total of 1.043 deployed and non-deployed ICBMs, SLBMs, and heavy bombers¹²⁵. According to this data exchange, the Russian Federation affirmed to possess 1.556 strategic warheads that were deployed on 516 deployed ICBMs, SLBMs, and heavy bombers, within a total of 871 deployed and non-deployed launchers¹²⁶. However, at the time of this report, many American experts and analysts were surprised, since according to this data, the Russian Federation was already below the limits prescribed by the START III. Some American critics affirmed that this agreement was unnecessary since they believed that, at the time of the signature, Russia already planned to reduce its nuclear arsenal. Moreover, others noted that this data reflected the Russian plan to replace old Soviet warheads with more modern types, because the majority of these weapons and launchers were produced in the previous decades and started to become obsolete¹²⁷. By the end of the first year of implementation, the Russian Federation and the United States had used in an extensive way the verification mechanisms defined by the START III. In fact, they exchanged over 1.800 notifications and had conducted all of the eighteen permitted on-site inspections in military bases, storage, conversion and elimination facilities. In addition, in order to show some important technical characteristics, they had also conducted the three exhibitions prescribed by the START III, with the United States exhibiting the B-1 and B-2 bombers, and Russia

¹²⁵ Woolf A. F., *The New START Treaty: Central Limits and Key Provisions*, cit., pp. 25-26.

¹²⁶ Ivi, p. 27.

¹²⁷ "Breaking Down the First New START Data Exchange", The Center for Arms Control and Non-Proliferation, 2011, <https://armscontrolcenter.org/breaking-down-the-first-new-start-data-exchange/> Accessed on 27 April 2018.

exhibiting the RS-24 missile and its launcher. From 24 January to 7 February 2012, the third session of the Bilateral Consultative Commission took place, and the delegations of the United States and Russian Federation discussed political issues related to the treaty implementation. During this session, the delegations managed to sign an agreement that regulated the exchange of telemetric information, agreeing to share information related to all those SLBM and ICBM launches that occurred during 2011 and defining a set of procedures for the future data exchanges.

During the second year of implementation, as shown by a data exchange that occurred on 1 March 2012, both the United States and Russia started to reduce their nuclear arsenals. According to this data, the United States possessed 1.737 strategic warheads, 812 deployed SNDVs, and 1.040 deployed and non-deployed ICBMs, SLBMs, and heavy bombers, while the Russian Federation possessed 1.492 warheads, 494 deployed SNDVs, and 881 deployed and non-deployed SNDVs¹²⁸. By comparing the September 2011 data with that released on March 2012, it is possible to notice that both superpowers had cut their nuclear forces, since the number of strategic warheads and deployed launchers had slightly decreased. However, even though the Russian Federation had reduced the number of strategic warheads and deployed launchers, the amount of deployed and non-deployed SNDVs had increased from 871 to 881 units. Probably these changes in the Russian nuclear force are due to the elimination of the older type of deployed ICBMs and the entrance into service of the new mobile RS-24 Yars launchers¹²⁹.

Besides these cuts, throughout 2012 and 2013, the superpowers continued to have continuous diplomatic relations and exchanged a constant flow of information. In fact, both sides confirmed their commitment to the implementation of the START III, as on 21 June 2012, Russian President Putin and US President Obama issued a joint statement, reaffirming their willingness to cooperate in the field of nuclear arms

¹²⁸ Nuclear Threat Initiative, “Treaty Between The United States Of America And The Union Of Soviet Socialist Republics On The Elimination Of Their Intermediate-Range And Shorter-Range Missiles (INF Treaty)”, cit.

¹²⁹ “March 2012 New START data released”, Russian strategic nuclear forces, 2012, http://russianforces.org/blog/2012/04/march_2012_new_start_data_rele.shtml Accessed on 29 April 2018.

control¹³⁰. Also Rose Gottemoeller, Acting Under Secretary for Arms Control and International Security, praised the verification mechanisms established by this treaty, since she affirmed that “The New START Treaty’s robust verification regime is providing the predictability and mutual confidence that will be essential to any future nuclear reduction plans¹³¹”. Moreover, President Barack Obama delivered a speech at Brandenburg Gate, Germany on 19 June 2013, where he announced that the United States would unilaterally reduce its nuclear arsenal by cutting it by one-third. In addition, the American President called for the reduction of US-Russian tactical nuclear weapons in Europe, reaffirming his willingness to cooperate with NATO allies in order to achieve this objective¹³².

Despite these years of relative optimism, in 2014 there were a series of events that worsened in a considerable way US-Russian relations, threatening the future of the START III. Firstly, on 11 February 2014, the United States decided to deploy the USS Donald Cook, a multi-mission Missile Defense-capable Aegis Destroyer, to the Spanish Naval Base of Rota, since they wanted to support the NATO missile defense initiative¹³³. Consequently, due to the deployment of this warship, Russian Foreign Minister Mikhail Ulyanov threatened Russia’s withdrawal from the START III, because the Russian Federation considered this action a concrete threat to its national security. Secondly, on 20 February 2014, the annexation of Crimea by the Russian Federation had a series of dramatic implications, as the European Union and the

¹³⁰ “Joint Statement by the President of the United States of America Barack Obama and the President of the Russian Federation Vladimir Putin, June 18, 2012”, The White House, Office of the Press Secretary, <https://obamawhitehouse.archives.gov/the-press-office/2012/06/18/joint-statement-president-united-states-america-barack-obama-and-preside> Accessed on 29 April 2018.

¹³¹ “U.S. Strategic Command 2012 Deterrence Symposium: Remarks of Rose Gottemoeller, Acting Under Secretary for Arms Control and International Security”, Homeland Security Digital Library, 2012, <https://www.hsdl.org/?abstract&did=720162> Accessed on 29 April 2018.

¹³² “Remarks by President Obama at the Brandenburg Gate -- Berlin, Germany”, The White House, Office of the Press Secretary, 2013, <https://obamawhitehouse.archives.gov/the-press-office/2013/06/19/remarks-president-obama-brandenburg-gate-berlin-germany> Accessed on 29 April 2018.

¹³³ “First of four US Navy ships to support NATO Ballistic Missile Defense arrives in Spain”, North Atlantic Treaty Organization, 2014, https://www.nato.int/cps/en/natohq/news_106997.htm Accessed on 29 April 2018.

United States decided to adopt a series of economic sanctions against Russia. In this context, many political figures and experts feared a serious escalation of violence and a definitive US-Russian crisis, as both superpowers adopted various countermeasures against each other. On the one hand, on 22 May 2014, the US Houses decided to propose an amendment in order to block the funds of the Department of Defense for the implementation of the treaty, while on the other hand numerous members of the Russian Duma called for the suspension of the START III and the Russia-NATO agreement for the Afghan transit as a response to the sanctions against Russia¹³⁴.

Despite this diplomatic crisis, the superpowers continued to share data regarding their nuclear forces, as on 1 January 2015 the United States released information relative to the data exchange that occurred on 1 September 2014. According to this data, the United States indicated possession of 1.642 strategic warheads on 794 deployed SNDVs, and 912 deployed and non-deployed ICBMs, SLBMs and heavy bombers, while the Russian Federation possessed 1.643 warheads on 528 deployed launchers, within a total of 911 deployed and non-deployed SNDVs. By comparing these numbers with the ones released on 1 March 2014, it is possible to notice that both the United States and the Russian Federation increased the volume of their strategic nuclear weapons and deployed launchers. In fact, the United States increased the number of strategic warheads from 1.585 to 1.642, and the deployed SNDVs from 778 to 794, while the Russian Federation increased its warheads from 1.512 to 1.643 and its launchers from 498 to 528 units. Relative to the deployed and non-deployed SNDVs, the trend was different, because the US reduced it from 952 to 912, while Russia increased it from 906 to 911¹³⁵. In brief, it is probable that all the political events that occurred throughout 2014 directly affected the nuclear arsenals of both superpowers, since the instability in their relations had caused an increase in the volume of their nuclear forces.

¹³⁴ “Russian lawmakers propose to suspend New START Treaty”, TASS Russian News Agency, 2014, <http://tass.com/world/741087> Accessed on 29 April 2018.

¹³⁵ Woolf A. F., *The New START Treaty: Central Limits and Key Provisions*, cit., pp. 26-27.

Between 2015 and 2016, the superpowers experienced two different trends, because on one side the United States continued to reduce its nuclear arsenal, while on the other side Russia constantly increased it. Throughout 2015, the Russian Federation modernized and expanded its nuclear force by replacing numerous old Soviet offensive systems, whereas the US decided to decrease its strategic warheads and to convert several B-52H bombers from nuclear to conventional-only capability. In fact, as shown by a date exchange that occurred on 1 October 2015, the number of US deployed warheads dropped below the limits defined by the START III, as the United States converted some heavy bombers and completely de-MIRVed its ICBMs by reducing the number of warheads on each Minuteman III to one. Conversely, the Russian Federation continued to add new ICBMs, SLBMs, and heavy bombers to its arsenals, as well as increasing the number of deployed strategic nuclear weapons. Nonetheless, in order to have a change in this trend it was necessary to wait until October 2016, when, even with a slight increase in Russian nuclear weapons stockpile, both nations started to decrease the number of their strategic delivery vehicles¹³⁶.

Considering the fact that seven years after the entry into force of the treaty both nations had to reduce their nuclear arsenals within the limits defined by the START III, it appears evident that 2017 was a key year for its implementation. In early 2017, even though the United States and the Russian Federation reaffirmed their willingness to comply with these obligations, there were still a series of complications that threatened the future of the START III. Firstly, newly elected President Trump had shown some concerns regarding the future of this treaty, as, during his first phone call with President Putin, he affirmed that the START III was just a bad deal negotiated by the Obama Administration¹³⁷. Secondly, the Syrian crisis contributed to making US-Russian relations even tenser, as Washington and

¹³⁶ “New START Data Shows Russian Warhead Increase Before Expected Decrease”, Federation of American Scientists, 2016, <https://fas.org/blogs/security/2016/10/new-start-data-2016/> Accessed on 30 April 2018.

¹³⁷ “Exclusive: In call with Putin, Trump denounced Obama-era nuclear arms treaty – sources”, Reuters, 2017, <https://www.reuters.com/article/us-usa-trump-putin-idUSKBN1502A5> Accessed on 30 April 2018.

Moscow had a different view regarding the future of the Syrian President Bashar Al-Assad and the Middle East in general. Thirdly, the deployment of the NATO ballistic missile defense system in Europe constituted another critical point in the nuclear arms control talks between Russia and the United States. However, in spite of the aforementioned difficulties, as shown by the data exchange of March and September 2017, the superpowers acted in a concrete way in order to meet the obligations of the START III before the February 2018 deadline. Actually, from March to September, the Russian Federation reduced its deployed warheads from 1.765 to 1.561, its deployed launchers from 523 to 503, and maintained 816 deployed and non-deployed ICBMs, SLBMs and heavy bombers¹³⁸. Concerning the US arsenal, the United States reduced its nuclear weapons stockpile from 1.411 to 1.393, its deployed SNDVs from 673 to 660, and its deployed and non-deployed launchers from 820 to 800¹³⁹.

Besides all the diplomatic difficulties, international crises, and obstacles to the implementation that occurred during these seven years, both the United States and the Russian Federation managed to meet the limits defined by the START III. Consequently, on 5 February 2018, the Ministry of the Foreign Affairs of the Russian Federation and the U.S. Department of State released information related to the aggregate numbers of their strategic offensive arms. According to this data, the United States possessed 1.350 strategic warheads deployed on 652 deployed launchers, within a total of 800 deployed and non-deployed SNDVs¹⁴⁰, while the Russian Federation possessed 1.444 nuclear warheads deployed on 527 deployed SNDVs, and 799 deployed and non-deployed ICBMs, SLBMs, and heavy bombers¹⁴¹. Regarding the verification regime, it is important to notice that since the entry into force of the START III on 5 February 2011, the Russian Federation and

¹³⁸ Woolf A. F., *The New START Treaty: Central Limits and Key Provisions*, cit., p. 28

¹³⁹ Ivi, p. 26.

¹⁴⁰ “New START Treaty Aggregate Numbers of Strategic Offensive Arms”, U.S. Department of State, 2018, <https://www.state.gov/t/avc/newstart/278775.htm> Accessed on 1 May 2018.

¹⁴¹ “Foreign Ministry statement”, Ministry of the Foreign Affairs of the Russian Federation, 2018, http://www.mid.ru/en/web/guest/maps/us/-/asset_publisher/unVXBbj4Z6e8/content/id/3054864 Accessed on 1 May 2018.

the United States have used in an intensive way the verification mechanisms defined by the treaty. In fact, the U.S. Department of State released a document on 5 February 2018, affirming that the United States and Russia have: exchanged more than 14.600 notifications related to the location, movement, and disposition of strategic warheads and launchers through their respective NRRCs; performed 14 data exchanges on the status of their nuclear forces; conducted a total of 252 Type One and Type Two on-site inspections; carried out 14 exhibitions of their strategic offensive systems; convened 14 meetings of the BCC¹⁴². In conclusion, it is possible to state that the START III has certainly achieved some positive results, since on the one hand it has reduced the US-Russian strategic offensive arsenals, while on the other hand it has established an efficient and reliable verification regime. Nonetheless, in the next part of the present works, the author is going to show that this agreement cannot be considered as a final solution to the nuclear arms control issue, as there are still some relevant problems that need to be addressed in the future.

¹⁴² “Key Facts About New START Treaty Implementation”, U.S. Department of State, 2018, <https://www.state.gov/r/pa/prs/ps/2018/02/277889.htm> Accessed on 1 May 2018.

CHAPTER III

Future prospects for nuclear arms control

After analyzing the main provisions of the START III and showing all the difficulties that occurred after its entry into force, the conclusive chapter focuses on all those elements that may affect US-Russian nuclear arms control in the near future. In fact, even though the United States and the Russian Federation have managed to reduce their arsenals within the treaty's limits, there are still numerous concerns regarding the post-START III agenda.

Since the conclusion of the START III, there has been insufficient progress toward further reduction of the US-Russian nuclear forces. Furthermore, due to a deterioration in their relations, it is not entirely clear if the superpowers will call for an extension of the treaty or they will start the negotiations for a new one, because international crises and political clashes are making this debate even more complex. In addition, the different perceptions of the international environment and the incompatibility of their national interests is preventing them from establishing common goals and reaching new agreements. In this context, it appears evident that this uncertainty concerning the future of nuclear arms control is not only harmful to the US-Russian relationship, but also for the International Community in general, because the potential absence of a strict and clear regulation may cause a new arms race.

For all the aforementioned reasons, in order to provide a clear picture of the future prospects for the United States and Russia, this section addresses three different issues. Firstly, it examines the present challenges to nuclear arms control, stressing all those priorities and differences in the US-Russian agenda that may affect the future of the START III. Secondly, it addresses modernization of nuclear arsenals, highlighting the way in which the development of new technologies is challenging the present framework. Finally, it assesses the effects of the START III, questioning if it can be considered sufficient for the regulation of nuclear arsenals or if it will be necessary to stipulate a new treaty.

3.1. Challenges to US-Russian nuclear arms control

In spite of their long diplomatic tradition, the United States and the Russian Federation have frequently shown a different approach toward international relations and global issues. In fact, due to economic and geopolitical reasons, both superpowers have shaped their priorities in a dissimilar way, pursuing in some cases incompatible objectives. Nonetheless, in the last decades, they have often managed to overcome these differences, developing a sort of selective cooperation in all those fields that they considered particularly relevant. Obviously, nuclear arms control is one of these fields, as the proliferation of this technology constitutes a concrete threat to their national security and to international stability.

Nowadays, despite all their past efforts, there are still numerous challenges that are threatening the future of US-Russian nuclear arms control, as the end of the unipolar world has made the international framework even more complex. The rise of new regional actors, the definition of different spheres of influence, the interdependent nature of our world, and the rise of global challenges have certainly influenced the relations between the United States and the Russian Federation, reshaping the already consolidated relation of power. Furthermore, since both superpowers are trying to have a leading role in the International Community, the areas of confrontation between them are increasing exponentially. Consequently, in this new and complex environment, it appears evident that the future of the START III is strongly interconnected to many other global issues, as their relationship is undeniably influenced by new actors and external factors.

For all these reasons, the author believes that in order to understand the prospects of US-Russian nuclear arms control it is necessary to comprehend their current objectives, since only with a clear understanding of the present situation would it be possible to formulate hypotheses on the future. In fact, in order to achieve this ambitious goal, the next sections of this work analyze the points of view of Washington and Moscow, stressing the way in which they perceive each other and the international environment.

3.1.1. The American perspective

Over the past decades, the main aim of U.S. nuclear arms control has been to promote a progressive reduction of nuclear offensive systems in order to stabilize the relationship with the Soviet Union and the Russian Federation. Despite the fact that the START III has reduced the nuclear arsenals of the superpowers to the lowest level since the early 1960s, it does not mean that the United States is pursuing a complete elimination of its nuclear forces. In fact, even though the continuous reduction of nuclear arms is in the American interest, it is important to notice that the United States still considers “deterrence” the principal tool for the stabilization of US-Russian relations.

From the analysis of the US Nuclear Posture Review (NPR), released on 2 February 2018, it is evident that the United States considers the nuclear offensive systems an essential element for the protection of its national security and interests. In the Secretary’s Preface to the Nuclear Posture Review, it is clearly stated that “nuclear weapons have and will continue to play a critical role in deterring nuclear attack and in preventing large-scale conventional warfare between nuclear-armed states for the foreseeable future¹⁴³”, reaffirming in this way the importance of these arms in the present and future US military strategy. Relative to the concept of deterrence, US Secretary of Defense Mattis has clarified this idea, affirming that “a safe, secure, and effective nuclear deterrent is there to ensure a war that can never be won, is never fought¹⁴⁴”. Furthermore, the NPR introduces the concept of “tailored deterrence”, which is the ability to adapt a military strategy to the unique features of a specific actor. Concerning the tailored strategy for Russia, in this document it is affirmed that, even though the Russian Federation is increasing and modernizing its nuclear arsenal, the United States will continue to defend its partners and NATO allies, claiming that any acts of aggression will “trigger incalculable and intolerable

¹⁴³ “Nuclear Posture Review”, U.S. Department of Defense, February 2018.
<https://media.defense.gov/2018/Feb/02/2001872886/-1/-1/1/2018-NUCLEAR-POSTURE-REVIEW-FINAL-REPORT.PDF>

¹⁴⁴ Ivi. p.16

cost for Moscow¹⁴⁵”. However, it is important to notice that these words should not be considered as a direct threat to the Russian Federation, but rather as a psychological and political tool that aims to dissuade the adversary from carrying out military actions.

Besides the US policies and political considerations toward nuclear weapons, the United States is still willing to comply to the START III, because they continue to consider this agreement an essential element for US-Russian nuclear arms control. In fact, the United States considers the verification regime defined by this treaty particularly important for the stabilization of the relationship with the Russian Federation, because it is ensuring a certain degree of transparency and predictability of the adversary’s actions. Nevertheless, from Washington’s point of view there are still several issues that are threatening the future of this treaty, notably, the United States considers the Russian violations of the INF treaty and the regulation of the non-strategic nuclear arsenals critical elements for the future of the START III.

Concerning the INF Treaty, Washington has repeatedly claimed that the Russian Federation is violating in a consistent way the obligation defined by this agreement, since they strongly believe that Russia is building and developing intermediate-range offensive systems. Already in July 2014, in the document *Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments*, the U.S. Department of State has affirmed that “Russian Federation is in violation of its obligations under the INF Treaty not to possess, produce, or flight-test a ground-launched cruise missile [...], or to possess or produce launchers of such missiles¹⁴⁶”. Even though in this document there are no specific indications of the violations, also in 2015 and 2016 the Obama Administration reaffirmed its concerns about Russia. Notably, in September 2015, US Undersecretary for Arms Control and International Security Rose Gottemoeller clarified the American position, stressing that “this violation is not a technicality or

¹⁴⁵ Ivi. p.30

¹⁴⁶ “Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments”, U.S. Department of State, July 2014, p.8.
<https://www.state.gov/documents/organization/230108.pdf>

a mistake as some have suggested. We are talking about a missile that has been flight-tested as a ground-launched cruise-missile system to these ranges that are banned under this treaty¹⁴⁷”. Also in 2016 the United States repeatedly accused Russia, and also this time they have not provided any precise details regarding such violations, giving rise to many doubts for Russia on the truthfulness of these allegations¹⁴⁸. Consequently, in the 2017 version of the State Department Compliance Report, the United States rejected the Russian accusations of lack of evidence, asserting that during bilateral and multilateral meetings they have provided sufficient information on this issue. In fact, according to this report, the United States affirmed to possess data “pertaining to the missile and the launcher, including Russia’s internal designator for the mobile launcher chassis and the names of the companies involved in developing and producing the missile and launcher” and “Information on the violating GLCM’s test history, including coordinates of the tests and Russia’s attempts to obfuscate the nature of the program¹⁴⁹”, rejecting in this way the Russian allegations. Finally, in the 2018 version of this report, the United States affirmed that the missile that is violating the INF Treaty is identified by the Russian military as the 9M729¹⁵⁰, which is probably a ground-based version of the sea-launched cruise missile Kaliber¹⁵¹.

¹⁴⁷ “Impasse Over U.S.-Russia Nuclear Treaty Hardens As Washington Threatens ‘Countermeasures’”, Radio Free Europe/Radio Liberty, 2015, <https://www.rferl.org/a/russia-nuclear-treaty-us-threatens-countermeasures/27250064.html> Accessed on 9 May 2018.

¹⁴⁸ “Russia Is Moving Ahead With Missile Program That Violates Treaty, U.S. Officials Say”, The New York Times, 2016, <https://www.nytimes.com/2016/10/20/world/europe/russia-missiles-inf-treaty.html> Accessed on 9 May 2018.

¹⁴⁹ “Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments”, U.S. Department of State, April 2017, p. 14. <https://www.state.gov/documents/organization/270603.pdf>

¹⁵⁰ “Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments”, U.S. Department of State, April 2018, <https://www.state.gov/documents/organization/280774.pdf>

¹⁵¹ Relative to this new missile, the American experts believe that the 9M729 is violating the articles 1 and 2 of the INF Treaty because it is a ground-launched cruise missile with an estimated range between 300 and 3.400 miles. For additional information see also “9M729 - SSC-8”, Global Security, 2018, <https://www.globalsecurity.org/wmd/world/russia/ssc-8.htm> Accessed on 9 May 2018.

From the American perspective, the importance of the INF Treaty lies in the fact that its violation may pose a concrete threat to their NATO allies rather than to US national security, since the intermediate-range offensive arms are not capable of reaching the American continent. However, due to their interests in Europe and to the US role in the NATO alliance, the United States cannot allow the Russian Federation not to comply with this agreement. Relative to the US interests in Europe, General Paul J. Selva, Vice Chairman of the Joint Chiefs of Staff, expressed his concerns in front of Congress in March 2017, stressing that the Russian violation of the INF Treaty “presents a risk to most of our facilities in Europe¹⁵²”. Moreover, NATO’s Supreme Allied Commander General Scaparrotti considered the INF violation extremely dangerous, as the development of these offensive systems “creates a mismatch in escalatory options with the West¹⁵³”, advantaging considerably the Russian Federation in future military scenarios.

For all the aforementioned reasons, from Washington’s point of view, Russian compliance to the INF Treaty is certainly a priority in the agenda, as they consider the European continent a fundamental element in their grand strategy. Furthermore, as long as the United States will continue to pursue the “extended deterrence” doctrine toward NATO and Europe, it is probable that they would not accept a violation of the INF Treaty, since such violations may seriously affect the balance of power in the continent. In conclusion, the INF Treaty constitutes a concrete challenge to the present US-Russian arms control debate and to the future of the START III, because if the superpowers do not manage to resolve these issues, it is unlikely to believe that they will start the negotiations for further reduction of nuclear forces¹⁵⁴.

¹⁵² “The Uncertain Future of the INF Treaty”, Council on Foreign Relations, 2018, <https://www.cfr.org/background/uncertain-future-inf-treaty> Accessed on 10 May 2018.

¹⁵³ “Statement of General Curtis M. Scaparrotti”, House Committee on Armed Services, 2017, <https://docs.house.gov/meetings/AS/AS00/20170328/105780/HHRG-115-AS00-Wstate-ScaparrottiC-20170328.pdf> Accessed on 10 May 2018.

¹⁵⁴ Woolf A. F., *Russian Compliance with the Intermediate Range Nuclear Forces (INF) Treaty: Background and Issues for Congress*, Congressional Research Service, April 25, 2018, p. 34.

Besides the INF Treaty issues, the United States has often expressed concern about Russia's tactical arsenal, because, while the superpowers have a similar number of strategic offensive arms, the Russian Federation has a significant advantage in tactical nuclear forces. As mentioned in the previous parts of this work, Russia has not invested resources in the development of these weapons but it has inherited this old arsenal from the Soviet Union. Although it is true that the majority of these offensive systems are not particularly relevant in modern warfare, it is certainly true that they may provide a slight advantage over a potential adversary.

In the previous decades, little has been done to regulate the non-strategic nuclear forces, since the differences in the volume of the US-Russian arsenals were too wide. In 2018, according to nuclear experts Hans M. Kristensen and Robert S. Norris, the United States possesses roughly 500 tactical warheads of which 150 are deployed in Europe¹⁵⁵, while the Russian Federation has an estimated arsenal of 1.800-2.000 non-strategic warheads¹⁵⁶. Consequently, due to this disparity, it is unlikely that the superpowers will stipulate a new treaty on non-strategic arms because it would require a unilateral reduction of these weapons by the Russian Federation. However, the United States, being conscious of this disadvantage, considers this issue a key element for future nuclear arms control debates.

Although these differences in their nuclear arsenals still persist, the United States is developing a series of plans in order to stabilize the balance of power. In the NPR released by the Trump Administration, the United States has formulated a strategy in order to fill this gap, enhancing deterrence with non-strategic nuclear capabilities. Notably, they consider the development of new tactical offensive systems a necessary step in order to ensure the extended deterrence in Europe, as numerous US military officials believe that, in the case of an armed conflict, the Russia Federation would have a slight tactical advantage over NATO and the European allies. In order to fill this gap, the NPR affirms that the United States "will modify a

¹⁵⁵ Kristensen H. M., Norris R. S., *United States nuclear forces, 2018*, Bulletin of the Atomic Scientists, Volume 74:2, 120-131, 5 March 2018.

¹⁵⁶ Kristensen H. M., Norris R. S., *Russian nuclear forces, 2018*, Bulletin of the Atomic Scientists, Volume 74:3, 185-195, 30 April 2018.

small number of existing SLBM warheads to provide a low-yield option, and in the longer term, pursue a modern nuclear-armed sea-launched cruise missile (SLCM)¹⁵⁷”, acquiring in this way a wider set of nuclear options to counterbalance the Russian nuclear force. Definitely, from the American perspective, if Russia refuses to stipulate a new agreement on these weapons, the only available solution is the development and modernization of its non-strategic nuclear arsenal.

Concerning the US modernization plan, it is important to notice that in the NPR it is clearly stated that “If Russia returns to compliance with its arms control obligations, reduces its non-strategic nuclear arsenal, and corrects its other destabilizing behaviors, the United States may reconsider the pursuit of a SLCM¹⁵⁸”. Furthermore, this document clarifies that “U.S. pursuit of a SLCM may provide the necessary incentive for Russia to negotiate seriously a reduction of its non-strategic nuclear weapons¹⁵⁹”. In fact, from Washington’s perspective, the development of the tactical arsenal is just a countermeasure rather than a real priority, as the threat of the development of these offensive arms is used to persuade the Russian Federation to reduce its non-strategic arsenal.

In conclusion, the author believes that the issue of non-strategic nuclear weapons is challenging the future of US-Russian nuclear arms control because it constitutes another element of disagreement between the United States and the Russian Federation. Furthermore, many experts believe that the regulation of tactical arsenals will constitute a critical element in the near future, as it is probable that the United States will raise this issue during the debate on the extension of the START III. Undeniably, in the absence of a strict and clear regulation, it is highly probable that the superpowers may decide to invest resources in the development and modernization of these non-strategic offensive systems, triggering in this way a new arms race that may have dramatic consequences on the international environment. For all the aforementioned reasons, as shown by the present work, it is possible to

¹⁵⁷ Nuclear Posture Review, 2018, cit. p. 54

¹⁵⁸ *Ivi.* p. 55

¹⁵⁹ *Ibid.*

state that the regulation of the non-strategic nuclear arsenals and the issues related to the INF Treaty are the most concrete challenges to the future of the START III and to US-Russian arms control in general.

3.1.2. The Russian perspective

Even though the Russian Federation has stipulated several arms control treaties with the United States after the collapse of the Soviet Union, in recent years, Moscow has shown a greater interest in the modernization of its nuclear arsenals rather than in further nuclear reduction. Due to the fact that numerous offensive nuclear systems are starting to become obsolete, the Russian Federation is replacing its old nuclear forces with newer systems in order to maintain a credible nuclear deterrent. Despite this modernization process, Moscow has reaffirmed the importance of the START III several times as like the United States, they consider the verification regime defined by this treaty particularly important. However, as mentioned in the previous sections of this work, the Russian Federation and the United States had numerous harsh disputes over different issues, because during the last decades they have developed different objectives and priorities in their agenda. In fact, from the Russian perspective, there are several issues that are threatening the future of the START III, challenging the balance of power with the United States and international stability. Notably, according to Moscow, the development of the US missile defense systems in Europe and all those issues related to the INF Treaty, and the proliferation of offensive nuclear systems in Asia are challenging in a considerable way the future of the US-Russian nuclear arms control.

Relative to the US deployment of the missile defense system in Europe, it is possible to state that it actually constitutes the most relevant issue for the Russian Federation. From Russia's point of view, when the United States decided to withdraw from the ABM Treaty in 2002, the consolidated balance of power was destabilized dramatically, since they believe that only through a simultaneous regulation of both offensive and defensive systems it is possible to ensure the strategic balance. Consequently, from the Russian perspective, the US withdrawal from the ABM

Treaty has caused a series of irreparable cleavages in the US-Russian relations, paving the way to unpredictable and perilous scenarios. On 29 April 2017, the Russian Ministry of Foreign Affairs, replying to the US Annual Report on *Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments report*, clearly affirmed that “Since that time [US withdrawal from the ABM Treaty] this reckless effort to develop the US missile defense system has had a most adverse impact on the system of international security [...] and has become one of the most serious obstacles to further stage-by-stage nuclear disarmament, creating dangerous grounds for the resumption of nuclear arms race.¹⁶⁰”. In fact, the deployment of the missile defense system in Europe is considered particularly dangerous not only from the strategic point of view, but also for its psychological implications, as it “may lead to the pernicious illusion of invulnerability and impunity, thus tempting the "hotheads" in Washington to take new and dangerous unilateral steps to address global and regional problems¹⁶¹”.

Even though the United States has repeatedly affirmed that this defense system does not pose a direct threat to the national security of the Russian Federation, President Putin has always been particularly skeptical with regard to these statements, claiming that it aims to reduce the Russian nuclear potential. Moreover, due to the fact that an interceptor missile can be replaced with a nuclear warhead with just a few adjustments, Russia believes that the ABM system can be easily converted into an offensive system. Consequently, during the 2007 Munich Conference on Security Policy, Putin stressed that the Russian Federation, being conscious of this peril, was planning to develop an asymmetrical answer to the US missile defense system. Indeed, aware that Russia did not have sufficient resources for the development of an adequate defensive system, the Russian President stated that they would have

¹⁶⁰ “Comment by the MFA of Russia on the U.S. Department of State's Annual Report on Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments”, The Ministry of Foreign Affairs of the Russian Federation, 2017, http://www.mid.ru/en/foreign_policy/news/-/asset_publisher/cKNonkJE02Bw/content/id/2740264 Accessed on 13 May 2018.

¹⁶¹ Ibid.

developed new offensive arms that are capable of overcoming the US defensive system¹⁶². Since that day many years have passed, but both United States and Russia have kept their word as they have started the implementation of these new systems. Actually, on the one hand, the United States began the deployment of anti-ballistic defense systems in Europe, while on the other hand the Russian Federation has developed a new hypersonic ballistic missile in order to bypass the NATO defenses, destabilizing in a considerable way their relations and the international environment. Concerning the missile defense system in Europe, in 2016 the United States announced that they have successfully deployed anti-ballistic systems in the Deveselu site in Romania. In this military base, a battery of Standard Missile-3 (SM-3) Block IB interceptor missiles, an Aegis SPY-1 radar, and an operational control center have been installed¹⁶³. This site will be officially integrated into the NATO network and together with the Aegis Ballistic Missile Defense System, which will be deployed on several warships, constituting an ABM defense capable of intercepting short and medium-range ballistic missiles. Furthermore, in 2018 these systems will also be deployed in Poland as part of the US-NATO umbrella, extending in the NATO defensive capabilities significantly. In addition, in March 2018, Poland also signed the largest arms deal in its history, buying Patriot air defense systems, PAC-3 missiles, and radar systems for \$4.75 billion. Finally, it is probable that in the near future the North-Atlantic Alliance will continue to expand toward the East, causing a further deterioration of US-Russia relations.

In spite of America's plans, the Russian Federation has acted in a concrete way in order to counterbalance this ABM system. According to the Russian military officials, they have developed a new nuclear offensive system that is capable of bypassing the US-NATO defenses. In fact, in Putin's State of the Nation address in 2018, the Russian President confirmed that the Russian Federation successfully

¹⁶² "Speech and the Following Discussion at the Munich Conference on Security Policy", President of Russia, 2007, <http://en.kremlin.ru/events/president/transcripts/24034> Accessed on 13 May 2018.

¹⁶³ "Romania Missile Defense Site Activated", Arms Control Association, 2016, https://www.armscontrol.org/ACT/2016_06/News/Romania-Missile-Defense-Site-Activated Accessed on 14 May 2018.

tested a new hypersonic boost-glide warhead called “Avangard”. President Putin has affirmed that this new system can be deployed on the RS-28 Sarmat, possessing practically no range restriction and being “capable of intercontinental flight at supersonic speeds in excess of Mach 20¹⁶⁴”. Moreover, he stressed that “[the Avangard] in moving to its target, the missile’s gliding cruise bloc engages in intensive manoeuvring – both lateral (by several thousand km) and vertical. This is what makes it absolutely invulnerable to any air or missile defence system¹⁶⁵”. Many experts believe that this new weapon could provide the Russian Federation with the possibility of carrying out a second retaliatory strike, dissuading any adversary from potential military action. In fact, it is highly improbable that an actor will attack another one if he has the perception that the costs will exceed the benefits.

For these reasons, even though the details of this hypersonic glide vehicle (HGV) are still unknown, it seems that the Russian Federation has managed to develop and test a new offensive system that may affect the future of the nuclear arms control in a substantial way, since such weapons may open new and unexpected scenarios. However, it is plausible that the Russian Federation may decide to stop the production of these missiles if the United States will halt the deployment of the ABM system in Europe since it seems that Russia is developing this offensive system just to ensure a credible nuclear deterrent. In conclusion, the author believes that the superpowers should discuss the issue of offensive and defensive arms systems because the development of new technologies is challenging not only the present START III Treaty but also the future of the US-Russian arms control.

Relative to the INF Treaty concerns, as mentioned in the previous section of this thesis, the Russian Federation is not only rejecting US accusations, but it is also affirming that the United States are violating the INF Treaty in a consistent way. According to the Russian Ministry of Foreign Affairs, there are three major violations of this agreement. Firstly, they have affirmed that “The U.S. deployed a

¹⁶⁴ “Presidential Address to the Federal Assembly”, President of Russia, 2018, <http://en.kremlin.ru/events/president/news/56957> Accessed on 14 May 2018.

¹⁶⁵ Ibid.

land-based Aegis Ashore missile defense system at its military base in Romania and plan to place another one at a similar base in Poland. The system includes a vertical launching system, similar to the universal Mk-41 VLS, capable of launching Tomahawk medium-range missiles¹⁶⁶. Indeed, if this accusation is true, it means that the United States can easily replace the RIM-161 SM-3 interceptor missiles with an offensive cruise missile like the Tomahawk, violating the obligations defined by the INF Treaty. Secondly, even though the United States affirm that they are developing “target missiles” in order to test the ABM system, the Russian Ministry of Foreign Affairs strongly believes that these target missiles are at least Intermediate-range ballistic missile prototypes, if not authentic IRBMs. In fact, it is important to remember that the INF Treaty bans the production, development, and flight-testing of any intermediate-range or short-range ballistic missiles and launchers. Thirdly, they affirmed that the US unmanned aerial vehicles (UAV) should be limited by the INF Treaty, because “These vehicles potentially fit for delivery of weapons of mass destruction clearly fall under the Treaty definition of land-based cruise missiles¹⁶⁷”.

In spite of these three accusations, the Russian Federation has always expressed concerns regarding the INF Treaty, because in their opinion this agreement is favouring the United States while limiting the Russian nuclear potential. In Russia’s perspective, the fact that this treaty limits only the ground-launched missiles but it does not apply to ship-based and air-launched missiles, which are essential components of the US arsenal, constitutes a great source of concerns, because it is affecting one side more than the other. Furthermore, it has been noted that while the Russian Federation is surrounded by countries that possess nuclear offensive systems the United States does not have any neighbor country with these nuclear capabilities. Indeed, it is not possible to exclude that in future the Russian territory may be threatened by potential adversaries like India, Pakistan, North Korea, Iran

¹⁶⁶ The Ministry of Foreign Affairs of the Russian Federation, “Comment by the MFA of Russia on the U.S. Department of State's Annual Report on Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments”, cit.

¹⁶⁷ Ibid.

and China because all these countries are developing the SRBMs and IRBMs. Notably, the experts of the Russian International Affairs Council have affirmed that “China is the world’s undisputed leader in the missiles of INF-prohibited classes — its weapons include IRBM of DF-21 class and DF-26 class and land-based mobile missile systems (LBMMS) with DF-10 cruise missiles. With DF-26 systems deployed in western China, their range covers the greater part of Russia’s European territory¹⁶⁸”, reaffirming the reality of Russia’s concerns. However, even though some experts may argue that at present the Russian Federation has a positive relationship with these actors, it is still plausible that in the near future radical changes will occur in Asia, destabilizing the Russian strategic balance. For the aforementioned reasons, the Russian Federation has repeatedly called for a multilateralization of the arms control treaties, since they strongly believe that all these changes in the international environment will require alternative solutions and new agreements.

In conclusion, it is possible to state that the Russian Federation considers the US ABM system, the INF Treaty, and the proliferation of offensive nuclear systems in Asia, the main challenges to the future of the nuclear arms control. Since these three issues may affect Russian national security and strategic balance in a radical way. Consequently, during future debates on the extension of the START III, it is probable that Russia may raise numerous concerns, calling for adequate and concrete solutions. Undeniably, from the Russian perspective, the future of the START III is strongly related to the resolution of these problems because it is highly improbable that they will negotiate a further reduction to their strategic arsenal in the absence of a clear regulation of these issues.

¹⁶⁸ “The INF Treaty Is Under Attack. Down a Road Paved with Good Intentions”, Russian International Affairs Council, 2017, http://russiancouncil.ru/en/analytics-and-comments/analytics/The-INF-Treaty-Is-Under-Attack/?sphrase_id=78993 Accessed on 15 May 2018.

3.2. Modernization of nuclear arsenals

Although the majority of the nuclear weapons states, including the Russian Federation and the United States, have repeatedly affirmed their commitment to nuclear disarmament, none of them is ready to renounce to its nuclear arsenal. In fact, as long as nuclear forces constitute a key element in their military arsenal, it is highly probable that they will keep refurbishing their nuclear offensive systems, developing new technologies that, in some cases, may challenge the strategic balance and international security. Furthermore, due to the fact that the rising tensions and the diplomatic crisis are causing a greater sense of insecurity, both United States and Russia are expected to invest a relevant amount of resources in the modernization of their nuclear arsenals, challenging the present treaties and the future of the US-Russian nuclear arms control. Nonetheless, before analyzing the US-Russian modernization plans, it would be useful to examine the factors that are motivating the superpowers to modernize their nuclear arsenals.

According to the scholar Eugene Miasnikov, it is possible to identify four main elements that are pushing the United States and the Russian Federation toward progressive nuclear modernization¹⁶⁹. Firstly, he affirms that the United States and the Russian Federation have always developed new technologies in order to make the nuclear offensive systems not only more efficient but also safer, because the improvement of their destructive potential and the security of the nuclear stockpile are key elements in achieving a reliable nuclear arsenal. Secondly, the scholar stresses that the development of disruptive technologies by one side may force the other side to develop alternative countermeasures, making the modernization of the arsenals the only available solution in order to counterbalance the adversary's actions. In fact, Miasnikov noted that "air and missile defenses, antisubmarine warfare, and offensive long-range high- precision arms¹⁷⁰" are certainly examples of disruptive technologies that have pushed the other nations to modernize and develop

¹⁶⁹ Miasnikov E., *How to approach nuclear modernization? A Russian response*, Bulletin of the Atomic Scientists, Volume 71:3, 12-15, 2015, p. 13.

¹⁷⁰ Ibid.

their offensive nuclear systems. Thirdly, he states that, since the end of the Cold War, the nuclear weapons states have had “a desire to broaden the functional capabilities of delivery systems originally designed for nuclear missions exclusively¹⁷¹” by deploying conventional arms on strategic delivery systems. Indeed, due to the fact that the superpowers are aware that nuclear weapons cannot be easily employed during a conflict, they have decided to develop an alternative way to use this technology. Actually, this is the case of the Prompt Global Strike program, which is the US plan to replace the nuclear warhead from the ICBM with conventional warheads in order to make these systems more usable. Fourthly, he affirms that the modernization of the nuclear arsenals is obviously a necessary step for the life extension of the existing systems, since these arms may require some maintenance and adjustments during their life. In addition to Miasnikov’s arguments, it is important to remember that the START III does not pose any concrete limits on the modernization of the nuclear forces, as the art. 5, par. 1 states that “Subject to the provisions of this Treaty, modernization and replacement of strategic offensive arms may be carried out¹⁷²”, making it highly probable that both sides will continue to refurbish their arsenals in the near future. For the latter reasons, after examining the superpowers’ motives, it is possible to focus on the US-Russian modernization plans for the near future.

Concerning the United States, many relevant experts had envisioned an expenditure of \$355 billion for the modernization of the US nuclear forces between 2014 and 2023, stressing that in the subsequent decades these expenses are going to further increase¹⁷³. In fact, according to the *SIPRI Yearbook 2017*, the total cost of the US modernization program will be “approximately \$400 billion over the 10-year period 2017-26 – \$52 billion more than the [US Congressional Budget Office] CBO’s

¹⁷¹ Ibid.

¹⁷² “Treaty between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms (New START)”, 2010.

¹⁷³ Kroenig M., *How to approach nuclear modernization? A US response*, Bulletin of the Atomic Scientists, Volume 71:3, 16-18, 2015, p. 16.

previous estimate for the period 2015-24¹⁷⁴”. Moreover, in the 2018 Nuclear Posture Review, the Trump Administration has reaffirmed its willingness to provide additional funds for the modernization of the US nuclear forces, modernizing the strategic nuclear triad¹⁷⁵ and all those infrastructures related to nuclear weapons. Relative to the nuclear triad, the United States plans to extend the life of the already existing SNDVs as well as developing new kinds of offensive systems. Firstly, they are planning to extend the service life of their fourteen ballistic missile submarines Trident Ohio-class and to develop a new submarine class, the Columbia, that will replace its predecessor in the next decade¹⁷⁶. Secondly, the heavy bombers B-2 and B-52H will be upgraded in order to be more efficient and flexible, as the United States plans to increase the potential of the U.S. Air Force. In addition, the U.S. Air Force is developing a new subsonic, stealthy cruise missile, the Long-Range Standoff Weapon (LRSO), that will be capable of carrying a nuclear warhead and will replace the present AGM-86 ALCMs¹⁷⁷. Thirdly, the United States is planning to rebuild the Trident II SLBM and the Minuteman III ICBM, extending their life and modifying these strategic offensive systems¹⁷⁸. In fact, the specialist in nuclear weapons policy, Amy F. Woolf affirmed that “The Navy’s budget for [Fiscal Year] FY2019 includes a request for \$1.1 billion for this program. Within this total, \$576.5 million is allocated to the life extension program and \$502 million is allocated to operating and support costs”, adding that “The Navy plans to spend \$4.9 billion on Trident II modifications between FY2020 and 2023¹⁷⁹”. Fourthly, the National Nuclear Security Administration (NNSA) is working in a concrete way to extend the

¹⁷⁴ SIPRI, *SIPRI Yearbook 2017: Armaments, Disarmament and International Security*, Oxford University Press, 2018, p. 413.

¹⁷⁵ The “Strategic Nuclear Triad” is composed by: land-based ICBMs, heavy bombers armed with air-launched cruise missile (ALCM) and gravity bomb, and nuclear submarines armed with submarine-launched ballistic missile (SLBM).

¹⁷⁶ “Report to Congress on Columbia-class Submarine Program”, U.S. Naval Institute, 2018, <https://news.usni.org/2018/01/23/report-congress-columbia-class-submarine-program-4> Accessed on 21 May 2018.

¹⁷⁷ “U.S. Nuclear Modernization Programs”, Arms Control Association, 2018, <https://www.armscontrol.org/factsheets/USNuclearModernization> Accessed on 21 May 2018.

¹⁷⁸ Ibid.

¹⁷⁹ Woolf A. F., *U.S. Strategic Nuclear Forces: Background, Developments, and Issues*, Congressional Research Service, March 6, 2018, p. 24.

service life by twenty years of the old non-strategic nuclear warheads B61, which are mainly deployed in Europe as this Life Extension Program is necessary in order to address “all age-related issues of the bomb, and enhance its reliability, field maintenance, safety, and use control¹⁸⁰”, reaffirming in this way the importance of these tactical offensive systems in the US arsenal.

Concerning the modernization of all those infrastructures related to nuclear weapons, the United States is planning to improve its entire nuclear, command, control, and communication¹⁸¹ (NC3) system in the near future. Because of all the technological changes that have occurred over the last decades, the United States is actually facing new kinds of challenges that may have a deep impact on its national security. Notably, as stated in the Nuclear Posture Review, the modernization of the NC3 is necessary in order to overcome cyber and space threats, as well as improving communication links and support technologies for all those activities related to nuclear weapons¹⁸². However, due to the fact that the NC3 is composed of “warning satellites and radars; communications satellites, aircraft, and ground stations; fixed and mobile command posts; and the control centers for nuclear systems¹⁸³”, it appears evident that its modernization will require a great number of resources and time. In fact, the U.S. Defense Department is actually planning to spend \$40.5 billion between 2017 and 2026 for the development of these systems, undertaking the most ambitious modernization program in US history¹⁸⁴. In addition to the NC3 modernization, the United States is also planning to boost its nuclear weapons production complex by building new facilities, like the Oak Ridge Uranium

¹⁸⁰ “B61-12 Life Extension Program”, National Nuclear Security Administration, <https://www.energy.gov/sites/prod/files/2018/02/f48/B61-12%20LEP%20factsheet.pdf> Accessed on 21 April 2018.

¹⁸¹ In the document *Air Force Instruction 13-550, Air Force Nuclear Command, Control and Communication (NC3)*, accessible on <http://govdocs.rutgers.edu/mil/af/AFI13-550.pdf>, the NC3 is defined as “The collection of activities, processes, and procedures performed by appropriate commanders and support personnel who, through the chain of command, allow for decisions to be made based on relevant information, and allow those decisions to be communicated to forces for execution. NC3 is a system of systems, stretching across services, combatant commands, and other Department of Defense (DoD) entities”

¹⁸² Nuclear Posture Review, 2018, cit. pp. 57-58.

¹⁸³ Ivi, cit., p. 56

¹⁸⁴ Arms Control Association, “U.S. Nuclear Modernization Programs”, cit.

Processing Facility in Tennessee, enhancing its capabilities of producing nuclear offensive systems considerably¹⁸⁵.

As mentioned in the previous sections of this thesis, the Russian nuclear arsenal is in the middle of a period of transition, as the entire nuclear triad and the nuclear command and control architecture are going through progressive modernization. Indeed, even though Russia has lower economic resources in comparison with the United States, Moscow still consider the upgrade of the already existing nuclear offensive systems and the development of new nuclear arms a real priority, as they believe that only through a credible and efficient nuclear deterrent it will be possible to ensure national security.

Concerning Russia's plans, it is possible to state that this process is affecting almost every component of the Russian nuclear triad, as Moscow is modernizing its nuclear force in order to face present and future challenges. Firstly, the Russia Federation is boosting its land-based nuclear forces, upgrading both mobile and fixed-silo ICBMs. According to the SIPRI experts, the Russian Federation is modernizing its RS-24 Yars, which is a version of the RS-12 that can be armed with multiple warheads and is also developing a lighter version of this system that has been identified as the RS-26¹⁸⁶. Furthermore, they are developing the RS-28, also known as Sarmat or SS-30, that will be a new silo-based heavy ICBM that is capable of carrying different types of warheads. According to Lieutenant-General Alexander Ponomarenko, which is Russia's Strategic Missile Force (SMF) Chief of Staff, the Sarmat can "reportedly carry ten heavy or 15 lighter warheads" and it can "also be fitted with a new hypersonic glide vehicle (HGV)¹⁸⁷". Secondly, the Russian Government is upgrading its Tu-160s and Tu-95s strategic bombers in order to maintain its air force, which is composed of roughly 60 aircraft with a maximum capacity of 600 nuclear

¹⁸⁵ Ibid.

¹⁸⁶ SIPRI, *SIPRI Yearbook 2017: Armaments, Disarmament and International Security*, cit., p. 421.

¹⁸⁷ "Russia Inducted 80 New ICBMs in Last 5 Years", *The Diplomat*, 2018, <https://thediplomat.com/2018/01/russia-inducted-80-new-icbms-in-last-5-years/> Accessed on 23 May 2018.

warheads¹⁸⁸. Moreover, Yuri Borisov, the Russian Deputy Minister of Defense, has also announced that the production of 50 additional Tu-160M2 bombers will start in 2023, enhancing the volume of the Russian SNDVs in the next decade¹⁸⁹. Thirdly, the Russian fleet will be upgraded since additional SLBMs and nuclear-powered submarines will enter into service. In fact, while “102 submarine-launched ballistic missiles and three Borei nuclear-powered ballistic missile submarines¹⁹⁰” have already been deployed, five more Borei class are expected to join the Russian Navy between 2018 and 2020¹⁹¹.

Concerning the Russian non-strategic nuclear arsenal, it is more difficult to identify the future modernization plans since the Russian Government does not release such information publicly. Despite the great uncertainty about the size, technical characteristics, and location of this tactical arsenal, many experts believe that also these systems are in the middle of the modernization process. Nevertheless, the fact that Russia is modernizing its non-strategic nuclear systems it does not necessarily mean that it is also increasing the volume of its arsenal. In this regard, due to the fact that these systems have a less relevant role in the present strategic context, some argue that building tactical warheads would be completely illogical, resulting in a waste of money. In fact, because of Russia’s economic constraints, it is more probable that these resources will be employed for the maintenance of these systems rather than for the construction of additional ones, as the volume of the Russian tactical arsenal is already ample.

In conclusion, from the analysis of the present and future US-Russian modernization plans, it is evident that the superpowers are in the middle of a process that will probably lead to the development of new and modern offensive systems.

¹⁸⁸ SIPRI, *SIPRI Yearbook 2017: Armaments, Disarmament and International Security*, cit., p. 421.

¹⁸⁹ “Серийное производство бомбардировщика Ту-160М2 стартует в 2023 году”, РИА Новости, Россия сегодня, 2015, https://ria.ru/defense_safety/20150717/1133988052.html Accessed on 23 May 2018.

¹⁹⁰ President of Russia, “Presidential Address to the Federal Assembly”, cit.

¹⁹¹ SIPRI, *SIPRI Yearbook 2017: Armaments, Disarmament and International Security*, cit., p. 424.

Undeniably, the main problem is that these technological changes are threatening not only the future of the nuclear arms control treaties but also international stability, as the present agreements are no longer capable of regulating this matter. In this context, even though some may argue that the modernization of nuclear arsenal, conflicts with the disarmament goal because it seems counterintuitive to dismantle the old nuclear systems just to replace them with more efficient ones. However, it is hard to believe that the United States and Russia will reverse this trend. In fact, as long as they will consider deterrence the only available tool for ensuring peace, the controversial search for a reliable and credible nuclear deterrent will never stop.

3.3. The successes and limits of the START III

As shown in the previous sections of this thesis, the rising tensions in the US-Russian relationship, the differences in the perception of the international environment, and the development of new technologies actually constitutes the main threats to the START III. Moreover, due to the fact that the international environment is changing and the United States and Russia are entering into a new phase of their relationship, there is great uncertainty concerning the future prospects of the US-Russian nuclear arms control. In this context, the author believes that this is the right moment to draw some conclusions as, without the Parties' will to extend its duration, the START III is going to expire in 2021, resulting in a dangerous legal vacuum that may pave the way to unexpected scenarios. For all the aforementioned reasons, the aim of the present section is to underline both positive and negative elements of this treaty, stressing if the START III can be considered sufficient for the regulation of the US-Russian nuclear arsenals or if it will be necessary to stipulate a new treaty in order to face future challenges.

Concerning the positive effects of the START III, it is undeniable that this agreement has constituted a milestone in the history of US-Russian nuclear arms control because it has provided a valuable set of rules for the regulation of the superpowers' strategic nuclear arsenals. It is important to remember that before the START III the entire structure of the arms control treaties was unstable, as the consequences of US

withdrawal from the 1972 ABM Treaty, the political tensions, and the international crisis have affected, and probably still affect, the US-Russian strategic balance in a radical way. Consequently, from 2002 to 2011, their relationship has been characterized by a major degree of instability, because the failure of the START II and the evident limits of the SORT have not managed to regulate their arsenals. In this context, the stipulation of the START III has certainly affected the relationship between the United States and the Russian Federation positively, reaffirming their commitment to a progressive reduction in the strategic offensive systems and ensuring a certain degree of transparency. In fact, it is possible to state that the START III has achieved three main successes: the reduction of the US-Russian strategic nuclear arsenals; the establishment of a reliable verification regime; the continuation of the nuclear arms control debate.

Relative to the effects of the START III on the US-Russian nuclear forces, it is undeniable that the volume of their arsenals has decreased, as the number of both deployed warheads and deployed and non-deployed strategic nuclear delivery vehicles have been reduced. As the scholar Hans M. Kristensen has affirmed, by comparing the numbers of the combined US-Russian strategic nuclear forces in 2011 with the one released on 2018, it is possible to notice that “the two countries have reduced their combined strategic forces by: 543 deployed strategic warheads, 224 deployed strategic launchers, and 186 non-deployed strategic launchers¹⁹²”. Although some critics may argue that these reductions are quite modest, since the deployed warheads have been reduced by 16%, the deployed launchers by 16%, and the non-deployed launchers by 32%, it is still undeniable that the START III has generated some positive results in managing to reduce the volume of the US-Russian strategic nuclear arsenals. Finally, the author believes that without the START III both United States and Russia would have probably increased their nuclear strategic forces, starting in this way a new arms race.

¹⁹² “After Seven Years of Implementation, New START Treaty Enters Into Effect”, Federation of American Scientists, 2018, <https://fas.org/blogs/security/2018/02/newstart-ineffect/> Accessed on 25 May 2018.

Regarding the verification regime, both superpowers have repeatedly affirmed the importance of the verification mechanisms defined by the START III. Firstly, thanks to this agreement, the United States and the Russian Federation have reduced the uncertainty concerning the adversary's nuclear force structure, limiting in this way the risk of dangerous misperceptions. In fact, in the nuclear arms control, "transparency" plays a fundamental role because only by making the opponent's actions more predictable it is possible to reduce the probability of a conflict. Secondly, the continuous exchange of information imposed by the START III is particularly relevant in order to enhance the confidence between the sides. Indeed, these constant flows of information are exceptionally important because by sending, receiving and verifying the truthfulness of the data provided it is possible to establish a trust-based relationship. In addition, from a psychological point of view, the implications of these interactions are certainly positive as they reassure the sides of the rival's intentions. Thirdly, by sharing technical details, locations, and numbers of their strategic offensive systems, the superpowers have acquired a deeper knowledge of the adversary's nuclear forces, acting in a concrete way to stabilize the strategic balance. Undeniably, this is particularly important because as long as the balance of power is stable and the superpowers have the perception that a conflict may cause the mutual destruction, it is highly improbable that they will solve their disputes with use of the force. Conversely, they are more likely to employ peaceful solutions for the resolution of their problems.

The last, and probably most important, success of the START III lies in the fact that it has reaffirmed the importance of the nuclear arms control in the agenda of both United States and Russia. In fact, despite the political crisis and rising international tensions, they managed to meet the START III obligations before the 2018 deadline, confirming that the regulation of their nuclear arsenals still constitutes a top priority. Moreover, through the stipulation of this agreement, the superpowers have proved their commitment toward a progressive disarmament and have opened to the possibility of further reduction of their nuclear forces. In brief, as long as the United States and the Russian Federation commit to the START III obligations, choosing

to use the dialogue rather than the force, there will be fewer possibilities of a new arms race or armed conflicts.

Despite the successes achieved by the START III, it is still important to notice that there are a series of elements that are challenging the future of the US-Russian nuclear arms control and that will require adequate regulation in the near future. As mentioned in the previous sections of this work, the changes in the international environment, the risk of a further proliferation of nuclear offensive systems, the issue of the tactical nuclear arsenals, and the development of new technologies actually constitute the sources of numerous concerns. Consequently, many experts are raising doubts about the START III ability to face all these challenges, wondering if it will be necessary to stipulate a new agreement. For these reasons, in order to provide a clear picture of the prospects of the US-Russian nuclear arms control, the author believes that it is particularly important to underline all those elements that are challenging the present treaties and that should be addressed in the following years.

First of all, the lack of regulation of non-strategic nuclear weapons is an issue that should not be ignored in future, as the number of these offensive systems is still particularly relevant. Although the development of new and destructive strategic offensive systems has made tactical nuclear weapons progressively less relevant in modern scenarios, the existence of these weapons cannot be forgotten because it still constitutes a threat for international security. Furthermore, due to the fact that there is little information regarding their location, status and technical characteristics it is not possible to ensure that they are completely safe and secure. In fact, as long as a great number of these weapons exist it is more difficult to ensure that serious incidents will not happen or that terrorist organizations will acquire this technology in future.

Numerous experts have expressed concerns regarding the possibility of a nuclear terrorist attack, stressing that the possibility of such an event happening is strongly related to the volume of nuclear arsenals, as larger numbers of nuclear weapons mean greater chances of security breaches. Already in early 2000, Warren Buffet,

talking about the statistical chance of a nuclear terrorist attack, has affirmed that “If the chance of a weapon of mass destruction being used in a given year is 10 percent and the same probability persists for 50 years, the probability of the event happening at least once during that 50 years is 99.5 percent¹⁹³”, confirming the reality of this threat. Obviously, these numbers do not necessarily prove that these events will happen but they serve as a “wake-up call” for both United States and Russia, since without effective regulation they may pay unsustainable costs.

For all these reasons, the author believes that the superpowers should discuss the possibility of including these weapons in the next arms control treaty, as actually there are no legal tools for the limitations of these offensive systems. However, even though it appears evident that, due to the differences in the volume of the US-Russian arsenals, the negotiations of a new agreement will be extremely difficult, it is undeniable that these non-strategic offensive systems should not stay in a legal vacuum. In fact, the United States and Russia should reach a compromise in order to reduce these weapons, as in the absence of strict controls and regulations it will be highly difficult to prevent future catastrophes.

The second element that is challenging the US-Russian nuclear arms control treaties is constituted by all the technological changes that are affecting strategic balance. In the last decade, the development of new and disruptive technologies has threatened the consolidated structure of the arms control treaties as cyber and space dimensions have become new areas of confrontation. The problem is that the present agreements were stipulated at a time in which the cyber vulnerabilities were not taken into serious consideration because these technologies were in their infancy. Conversely, the digitalization of the NC3 and the greater importance of the cyber dimension have caused an expansion of the nuclear arsenals’ vulnerabilities. Consequently, the nuclear forces are actually exposed to a wide range of threats like cyberattack,

¹⁹³ “Sam Nunn, Co-Chairman, Nuclear Threat Initiative World Affairs Council of Washington, D.C., October 22, 2002”, Nuclear Threat Initiative, 2002, http://www.nti.org/media/pdfs/speech_samnunn_102202.pdf?_id=1316466791 Accessed on 27 May 2018.

system vulnerabilities, computer failures, as well as human errors that may have disastrous consequences.

On January 2018, the security experts of Chatham House, in the research paper *Cybersecurity of Nuclear Weapons Systems: Threats, Vulnerabilities and Consequences*, have affirmed that there is a wide range of elements that can be targeted by cyberattacks. They have stressed that the communications between command centers and nuclear systems, laboratories and assembly facilities, targeting systems, satellites and robotic autonomous systems are particularly vulnerable to these threats as the majority of them rely on digital technology¹⁹⁴. Moreover, this report also stresses that “Cyberattacks on private sector IT systems may result in the theft of nuclear weapons design information in order to sell or pass on to interested parties, including non-state actors¹⁹⁵”, allowing in this way terrorist groups or malicious actors to potentially build nuclear weapons. In addition, because the space dimension is strongly interconnected with cybersecurity and that the majority of the communications employ satellite technology, it is not possible to exclude that satellites may be targeted by cyberattacks in the near future, opening the way to new war scenarios¹⁹⁶.

For all the aforementioned reasons, in order to safeguard the nuclear arsenals, it is also necessary to ensure the cyber and space security, as these systems are particularly vulnerable to cyberattacks. However, due to the fact that the present arms control treaties are not addressing, or even taking in consideration, these issues, the author believes that the superpowers and the International Community should find a way to regulate these new areas in the near future. Undeniably, as long as these problems are addressed on a national level, rather than through a multi-level approach, it will not be possible to assure international security.

¹⁹⁴ Unal B., Lewis P., *Cybersecurity of Nuclear Weapons Systems: Threats, Vulnerabilities and Consequences*, Chatham House, the Royal Institute of International Affairs, January 2018, pp. 5-9.

¹⁹⁵ *Ivi.*, cit., p. 14.

¹⁹⁶ Livingstone D., Lewis P., *Space, the Final Frontier for Cybersecurity?*, Chatham House, the Royal Institute of International Affairs, September 2016, p. 8.

The final element that should be taken into consideration concerns the rising need for the multilateralization of the nuclear arms control treaties. Indeed, while during the Cold War the world was characterized by a bipolar system, with the rise of new regional actors the consolidated balance of power has come to the end. Consequently, new states have joined the “Nuclear Club” and have started to develop their own nuclear arsenal, challenging the strategic balance and the structure of the modern arms control treaties. In fact, even though states like China, India, Pakistan, and North Korea have tested and developed nuclear offensive systems, they have often refused to discuss the possibility of regulating their nuclear forces. Furthermore, little is known about the real nuclear capabilities of these states as their Governments have always provided just a little information about the structure and characteristics of their nuclear forces¹⁹⁷. However, the scholars Shannon N. Kile and Hans M. Kristensen have affirmed that these NWS have developed efficient nuclear offensive systems, estimating that on January 2017: China possesses a total inventory of roughly 270 nuclear warheads, India 120-130 warheads, Pakistan 130-140 warheads, and North Korea 10-20 warheads¹⁹⁸.

In this context, since other states have concrete nuclear capabilities, it appears evident that the nuclear arms control treaties should not solely limit the US-Russian nuclear forces. In fact, the author believes that several Russian concerns are definitely well-founded as the strategic balance in the Eurasian continent is certainly influenced also by these states. In addition, it is important to remember that while the United States and the Russian Federation have developed a long tradition of nuclear diplomacy through the decades, states like India, Pakistan, and China have not developed this tradition yet. Undeniably, while it is very unlikely that the United States and Russia will use a nuclear weapon in the next decades, it is not possible to exclude that other states will use these arms. For instance, the rising tension between India and Pakistan in the Kashmir region are extremely dangerous, as the lack of

¹⁹⁷ SIPRI, *SIPRI Yearbook 2017: Armaments, Disarmament and International Security*, cit., p. 411.

¹⁹⁸ SIPRI, *SIPRI Yearbook 2017: Armaments, Disarmament and International Security*, cit., p. 412.

diplomatic tradition may cause an escalation of violence with unpredictable consequences. For these reasons, the author believes that in order to ensure international stability and prevent potential nuclear conflicts, also the other NWS should become part of the present arms control treaties, as their nuclear arsenals are not regulated in any significant way by the present agreements.

After analyzing the successes and limits of the START III, it is possible to state that this agreement has constituted a milestone in the US-Russian nuclear arms control history, managing to reduce the superpowers' strategic arsenals and defining a reliable verification regime. Nevertheless, due to the rapid technological development and to the changes in the international strategic balance, it seems that the present treaty is unable to face the following challenges, making the stipulation of a new multilateral arms control treaty necessary. Probably, the reason for this inability lies in the fact that the structure of the START III reflects the fears and priorities of a different time, a time in which the superpowers were pursuing a quick stabilization of their relationship rather than a final solution to the nuclear issue, a time in which nobody could have imagined what we are witnessing today.

Conclusion

As has been shown throughout the preceding chapters, the US-Russian nuclear arms control is certainly affecting the international framework as these two superpowers have the ability to influence the global strategic balance. Since the middle of the XX century, the United States and the Russian Federation have shown to possess the characteristics of a “Great Power”, acting not only to pursue their national interests but also in order to orient world politics. It appears evident that their nuclear forces have played a key role in the last century since their military supremacy has allowed them to shape the evolution of the international environment. However, because of the differences in their perceptions and priorities, these two superpowers have often clashed on many issues, bringing the world to the edge of a new and perilous conflict. Undeniably, the nuclear arms control treaties have played a fundamental role in preventing this possibility since they have promoted dialogue rather than the use of the force. In fact, by agreeing on the mutual limitation of their nuclear arsenals, the United States, the Soviet Union, and its successor state the Russian Federation have successfully managed to reduce their nuclear forces, establishing a clear set of rules and reaffirming the importance of the nuclear arms control debate. Due to the relevance and complexity of this topic, the author has elaborated three main research questions and has tried to provide a clear picture of this issue through a historical and legal analysis of the US-Russian nuclear arms control. However, before drawing conclusions, it is important to stress that there are many other questions that could have been raised during this thesis, but the choice of addressing just some specific elements has been motivated by the need of providing a general but clear understanding of this issue.

In Chapter I, the author has tried to answer the following question: what are the main treaties signed by the United States, Soviet Union, and Russian Federation in order to deal with the limitation of carriers, warheads, and proliferation of nuclear weapons? The answer has been provided through a historical and legal analysis of the nuclear arms control issue, examining in detail the most relevant bilateral treaties

that were stipulated by the superpowers. Firstly, this thesis highlights the importance of the SALT I and SALT II agreements, as they have constituted the first step in the direction of a progressive limitation of the US-Soviet nuclear arsenals, paving the way to the modern START treaties. Secondly, the author has stressed the importance of the ABM Treaty and INF Treaty, as these agreements can be considered two of the most important bilateral agreements in the US-Russian nuclear arms control history. In fact, the ABM Treaty has stabilized the superpowers' relationship for forty years, ensuring peace through mutual vulnerability, while the INF Treaty has managed to completely eliminate two categories of offensive systems, the SRBMs, and IRBMs, preventing the development of new ground-launched strategic missiles. Thirdly, it has examined the dissolution of the Soviet Union and its effects on the US-Russian nuclear arms control treaties, stressing the "Succession of States" issue and the importance of the Lisbon Protocol. Finally, in order to provide a clear understanding, the author has examined in detail all the treaties that have preceded the START III, addressing the successes of the START I and the failures of the START II and SORT. In conclusion, the importance of Chapter I lie in the fact that it has provided a clear picture of the US-Russian nuclear arms control treaties, as only through the understanding of the past events it is possible to comprehend the present situation and the future prospects.

In Chapter II and III, the author has addressed the following question: Are the START III Treaty provisions sufficient to regulate this subject? In order to provide a clear answer, at first, it was necessary to analyze in detail the main obligations defined by the START III, examining the central limits, the verification regime, and the compliance mechanisms of this agreement. After studying the START III text and the most important articles, the present work has also addressed all the obstacles that have occurred during the ratification and implementation process, providing in this way a well-defined picture of the situation. After clarifying the context, the author has affirmed that the START III has managed to limit the vertical proliferation of the US-Russian nuclear arsenals for many years as it has defined a clear and reliable structure of rules. Moreover, after the failure of the START II and

SORT, the present agreement has certainly achieved some positive results and has reaffirmed the importance of the nuclear arms control debate in the present agenda of both United States and Russia.

Despite these successes, it has been underlined that the START III has some evident limits as there are a wide range of issue that are threatening the future of this treaty. Indeed, the international crisis, the political tensions, and the INF treaty concerns have destabilized the superpowers' relationship, casting many doubts on the possibility of the extension of the START III. Furthermore, the issue of non-strategic nuclear weapons, the modernization of the nuclear arsenals and the development of new nuclear offensive systems have shown the inability of the START III in addressing these problems. For all the aforementioned reasons, the author believes that although the present agreement has certainly constituted a milestone in nuclear arms control history, it cannot be considered as a final solution to the nuclear weapons issue because it is addressing only part of the problem. Undeniably, in spite of its limits, it is important to remember that the START III still constitutes the most effective tool for the regulation of the superpowers' arsenals, making its extension highly desirable.

In the final part of this work, the author has formulated different hypothesis concerning all those problems that may affect the US-Russian nuclear arms control debate in the following years, addressing the question: What are the future challenges that the US and Russia will face in the areas of nuclear arms control and proliferation? From the analysis of numerous official documents and academic articles, at least three challenges have been identified. Firstly, the regulation of the non-strategic nuclear arsenal is certainly an issue that will require an adequate solution in the near future as these offensive systems are in a legal vacuum. As mentioned in the preceding sections, the great uncertainty concerning the numbers, status, and locations of these nuclear arms is not only affecting the US-Russian strategic balance, but it is also threatening international stability. In fact, because of the risk of potential accidents or security breaches, the sole existence of these nuclear arms currently constitutes a concrete threat to the international environment.

Moreover, it is undeniable that the risk of nuclear terrorism is one of the most important challenges to national and international security because if a malicious actor manages to acquire this technology there will be dramatic consequences. Secondly, it is possible to state that quick technological development is challenging the consolidated architecture of the arms control treaties, creating new areas of confrontation and paving the way to unexpected scenarios. Indeed, the modernization of nuclear offensive systems is creating new and dangerous weapons that are not regulated by the provisions of the present treaties, while the digitalization of the nuclear command and control systems are resulting in new vulnerabilities, enhancing the value of the cyber and space dimension. Thirdly, this thesis has shown that the changes in the international environment and the rise of new regional actors are making the multilateralization of the agreements a necessary step. In fact, the bilateral nature of the present arms control treaties is no longer sufficient to prevent the proliferation of nuclear weapons nor for the control of the nuclear arsenals. Notably, due to the fact that states like India, Pakistan, North Korea, and, particularly, China are investing a great number of resources in the development of their nuclear forces, the stipulation of multilateral arms control treaties has become a main priority in order to ensure international stability.

In conclusion, from the study of the past treaties and the present situation of the START III, it is possible to state that there is great uncertainty about the future of the US-Russian nuclear arms control as the changes in the strategic balance, the rise of regional actors, and rapid technological development are challenging the international framework. However, if on the one hand it is true that the present situation may seem extremely unstable, on the other hand it is certainly true that only at a time of crisis it is possible to find new and creative solutions. For all the reasons highlighted throughout this thesis, the author believes that both the United States and Russia should work on all the areas in which cooperation is possible rather than focusing on their differences since only through a conciliatory stance it will be possible to find solutions to present problems and future challenges.

Bibliography

Official documents

“Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments”, U.S. Department of State, July 2014.

<https://www.state.gov/documents/organization/230108.pdf>

“Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments”, U.S. Department of State, April 2017.

<https://www.state.gov/documents/organization/270603.pdf>

“Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments”, U.S. Department of State, April 2018,

<https://www.state.gov/documents/organization/280774.pdf>

“Agreed Statements, Common Understandings, and Unilateral Statements regarding the Interim Agreement between the United States of America and the Union of Soviet Socialist Republics on certain measures with respect to the Limitation of Strategic Offensive Arms (SALT I)”, Moscow, 26 May 1972. http://www.nti.org/media/pdfs/aptsaltI.pdf?_ =1316712383

“Agreed Statements, Common Understandings, and Unilateral Statements regarding the Treaty between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Anti-Ballistic Missile Systems (ABM Treaty)”, Moscow, 26 May 1972.

http://www.nti.org/media/pdfs/aptabm.pdf?_ =1316631917&_ =1316631917

“Charter of the United Nation and Statute of the International Court of Justice”, San Francisco, 1945, <https://treaties.un.org/doc/publication/ctc/uncharter.pdf>

“General Assembly resolution 2373 (XXII)” New York, USA, 12 June 1968.

[http://www.un.org/ga/search/view_doc.asp?symbol=a/res/2373\(xxii\)&referer=/english/&Lang=E](http://www.un.org/ga/search/view_doc.asp?symbol=a/res/2373(xxii)&referer=/english/&Lang=E)

“Interim Agreement between the United States of America and the Union of Soviet Socialist Republics on certain measures with respect to the Limitation of Strategic Offensive Arms (SALT I)”, Moscow, 26 May 1972. http://www.nti.org/media/pdfs/aptsaltI.pdf?_ =1316712383

“Joint Statement on Parameters on Future Reductions in Nuclear Forces”, Helsinki, 21 March 1997, <https://fas.org/nuke/control/start2/text/helsinkistate.htm>

“Nuclear Posture Review”, U.S. Department of Defense, February 2018.

<https://media.defense.gov/2018/Feb/02/2001872886/-1/-1/1/2018-NUCLEAR-POSTURE-REVIEW-FINAL-REPORT.PDF>

“Protocol on the Joint Compliance and Inspection Commission relating to the Treaty between the United States of America and the Union of Soviet Socialist Republics on the Reduction and Limitation of Strategic Offensive Arms” Moscow, 31 July 1991,

<https://www.state.gov/documents/organization/27387.pdf>

“Protocol to the Interim Agreement between the United States of America and the Union of Soviet Socialist Republics on certain measures with respect to the Limitation of Strategic

Offensive Arms (SALT I)", Moscow, 26 May 1972.

http://www.nti.org/media/pdfs/aptsaltI.pdf?_id=1316712383

"Protocol to the Treaty between the United States of America and the Union of Soviet Socialist Republics on the Reduction and Limitation of Strategic Offensive Arms", Lisbon, 23 May 1992.

<https://www.state.gov/documents/organization/27389.pdf>

"Protocol to the Treaty between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms (New START)", Prague, 8 April 2010, <https://www.state.gov/documents/organization/140047.pdf>

"Special Meeting of Foreign and Defence Ministers (The "Double-Track" Decision on Theatre Nuclear Forces)", Brussels, 12 December 1979,

https://www.nato.int/cps/en/natolive/official_texts_27040.htm

"Treaty between the United States of America and the Russian Federation on Further Reduction and Limitation of Strategic Offensive Arms (START II)", Moscow, 3 January 1993,

http://www.nti.org/media/pdfs/START_II_1.pdf?_id=1316646919

"Treaty between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms (New START)", Prague, 8 April 2010, http://www.nti.org/media/documents/new_start.pdf

"Treaty between the United States of America and the Russian Federation on Strategic Offensive Reduction (SORT/ Treaty of Moscow), Moscow, 24 May 2002.

<http://www.nti.org/media/pdfs/SORT.pdf>

"Treaty between the United States of America and the Union of Soviet Socialist Republics on further Reduction and Limitation of Strategic Offensive Arms (START I)", Moscow, 31 July 1991, http://www.nti.org/media/pdfs/START_I_1.pdf

"Treaty Between The United States Of America And The Union Of Soviet Socialist Republics On The Elimination Of Their Intermediate-Range And Shorter-Range Missiles (INF Treaty)", Washington, 8 December 1987. <https://www.state.gov/t/avc/trty/102360.htm#text>

"Treaty between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Anti-Ballistic Missile Systems (ABM Treaty), Moscow, 26 May 1972.

http://www.nti.org/media/pdfs/aptabm.pdf?_id=1316631917&_id=1316631917

"Treaty Between The United States of America and The Union of Soviet Socialist Republics on the Limitation of Strategic Offensive Arms, together with Agreed Statement and Common Understanding regarding the Treaty (SALT II), Vienna, 18 June 1979.

<http://www.nti.org/media/pdfs/aptsaltII.pdf>

"Nuclear Posture Review", U.S. Department of Defense, 2 February 2018,

<https://media.defense.gov/2018/Feb/02/2001872886/-1/-1/1/2018-NUCLEAR-POSTURE-REVIEW-FINAL-REPORT.PDF>

Books and Scientific Articles

Bohlen A., Burns W., Pifer S., Woodworth J., *The Treaty on Intermediate-Range Nuclear Forces: History and Lessons Learned*, Brookings Institution, Washington, D.C., 9 December 2012.

- Carnegie Moscow Center, Ed. By Arbatov A., Dvorkin V., *Nuclear Weapons After the Cold War*, R. Elinin Publishing House, Moscow, 2008.
- Di Nolfo E., *Dagli Imperi Militari agli Imperi Tecnologici, la Politica Internazionale da XX Secolo a Oggi*, GLF Editori Laterza, 2015.
- Hitchcock W. I., *The Struggle for Europe: the turbulent history of a divided continent*, Anchor Books a division of Random House, Inc., New York, 2003.
- Kristensen H. M., Norris R. S., *Russian nuclear forces, 2011*, Bulletin of the Atomic Scientists, Volume 67:3, 67-74, 27 November 2015.
- Kristensen H. M., Norris R. S., *Russian nuclear forces, 2018*, Bulletin of the Atomic Scientists, Volume 74:3, 185-195, 30 April 2018.
- Kristensen H. M., Norris R. S., *United States nuclear forces, 2018*, Bulletin of the Atomic Scientists, Volume 74:2, 120-131, 5 March 2018.
- Kristensen H. M., Norris R. S., *US nuclear forces, 2011*, Bulletin of the Atomic Scientists, Volume 67:2, 66-76, 27 November 2015.
- Kroenig M., *How to approach nuclear modernization? A US response*, Bulletin of the Atomic Scientists, Volume 71:3, 16-18, 2015.
- Lavrov S., *the "New START Treaty in the Global Security Matrix: The Political Dimension"*, Journal Mezhdunarodnaya Zhizn, No. 7, July 2010.
- Livingstone D., Lewis P., *Space, the Final Frontier for Cybersecurity?*, Chatham House, the Royal Institute of International Affairs, September 2016.
- Miasnikov E., *How to approach nuclear modernization? A Russian response*, Bulletin of the Atomic Scientists, Volume 71:3, 12-15, 2015.
- Millet S. M., *Forward-Based Nuclear Weapons and SALT I*, Political Science Quarterly Vol. 98, No. 1 (Spring, 1983).
- Ronzitti N., *Introduzione al diritto internazionale*, Torino, G. Giappichelli Editore, 2013.
- Sabbatucci G., Vidotto V., *Storia Contemporanea, Il Novecento*, GLF Editori Laterza, 2008.
- Sciso E., *Dissoluzione di Stati e problemi di successione nei trattati*, in "La Comunità internazionale", 1994.
- SIPRI, *SIPRI Yearbook 2017: Armaments, Disarmament and International Security*, Oxford University Press, 2018.
- Unal B., Lewis P., *Cybersecurity of Nuclear Weapons Systems: Threats, Vulnerabilities and Consequences*, Chatham House, the Royal Institute of International Affairs, January 2018.
- Woolf A. F., *Anti-Ballistic Missile Treaty Demarcation and Succession Agreements: Background and Issues*, Congressional Research Service, April 27, 2000.

Woolf A. F., *Nuclear Arms Control: The Strategic Offensive Reductions Treaty*, Congressional Research Service, February 7, 2011.

Woolf A. F., *Russian Compliance with the Intermediate Range Nuclear Forces (INF) Treaty: Background and Issues for Congress*, Congressional Research Service, April 25, 2018

Woolf A. F., *The New START Treaty: Central Limits and Key Provisions*, Congressional Research Service, February 5, 2018.

Woolf A. F., *U.S. Strategic Nuclear Forces: Background, Developments, and Issues*, Congressional Research Service, March 6, 2018.

Woolf A. F., Kerr P. K., Nikitin M. B. D., *Arms Control and Nonproliferation: A Catalog of Treaties and Agreements*, Congressional Research Service, April 13, 2016.

Web sources

“Address at Commencement Exercises at Eureka College in Illinois, May 9, 1982” The American Presidency Project, <http://www.presidency.ucsb.edu/ws/index.php?pid=42501> Accessed on 20 March 2018.

“Address to the Nation on the Soviet Invasion of Afghanistan, January 4, 1980”, The American Presidency Project, <http://www.presidency.ucsb.edu/ws/?pid=32911> Accessed 8 March 2018.

“After Seven Years of Implementation, New START Treaty Enters Into Effect”, Federation of American Scientists, 2018, <https://fas.org/blogs/security/2018/02/newstart-ineffect/> Accessed on 25 May 2018.

“A Skeptical Senate Responds Cautiously to SALT II Appeal”, The Washington Post, 1979, https://www.washingtonpost.com/archive/politics/1979/06/19/a-skeptical-senate-responds-cautiously-to-salt-ii-appeal/163198e9-ddca-4368-bc3d-19d5621361e3/?utm_term=.19ddc5ba34d3 Accessed 7 March 2018.

“Breaking Down the First New START Data Exchange”, The Center for Arms Control and Non-Proliferation, 2011, <https://armscontrolcenter.org/breaking-down-the-first-new-start-data-exchange/> Accessed on 27 April 2018.

“Bush Pulls Out of ABM Treaty; Putin Calls Move a Mistake”, The New York Times, 2001, <https://www.nytimes.com/2001/12/13/international/bush-pulls-out-of-abm-treaty-putin-calls-move-a-mistake.html> Accessed on 27 March 2018.

“B61-12 Life Extension Program”, National Nuclear Security Administration, <https://www.energy.gov/sites/prod/files/2018/02/f48/B61-12%20LEP%20factsheet.pdf> Accessed on 21 April 2018.

“Comment by the MFA of Russia on the U.S. Department of State's Annual Report on Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments”, The Ministry of Foreign Affairs of the Russian Federation, 2017, http://www.mid.ru/en/foreign_policy/news/-/asset_publisher/cKNonkJE02Bw/content/id/2740264 Accessed on 13 May 2018.

“Don't play politics with new START treaty”, CNN, 2010, <http://edition.cnn.com/2010/OPINION/11/19/wilk.new.start.treaty/index.html> Accessed on 16 April 2018.

“Dr. Henry Kissinger testifies before Senate Foreign Relations Committee urging for ratification of the New START Treaty, May 25, 2010”, United States Senate Foreign Relations Committee, <https://www.foreign.senate.gov/press/chair/release/dr-henry-kissinger-testifies-before-senate-foreign-relations-committee-urging-for-ratification-of-the-new-start-treaty> Accessed on 15 May 2018.

“Exclusive: In call with Putin, Trump denounced Obama-era nuclear arms treaty – sources”, Reuters, 2017, <https://www.reuters.com/article/us-usa-trump-putin-idUSKBN15O2A5> Accessed on 30 April 2018.

“First of four US Navy ships to support NATO Ballistic Missile Defense arrives in Spain”, North Atlantic Treaty Organization, 2014, https://www.nato.int/cps/en/natohq/news_106997.htm Accessed on 29 April 2018.

“Foreign Ministry statement”, Ministry of the Foreign Affairs of the Russian Federation, 2018, http://www.mid.ru/en/web/guest/maps/us/-/asset_publisher/unVXBbj4Z6e8/content/id/3054864 Accessed on 1 May 2018.

“ГД приняла в первом чтении законопроект о ратификации договора СНВ”, РИА Новости, Россия сегодня, 2010, https://ria.ru/defense_safety/20101224/312963802.html Accessed on 20 April 2018.

“Госдума ратифицировала российско-американский договор СНВ”, РИА Новости, Россия сегодня, 2011, <https://ria.ru/politics/20110125/326160280.html> Accessed on 22 April 2018.

“Heritage targets Republican senators who might favor New START”, Foreign Policy, 2010, <http://foreignpolicy.com/2010/11/04/heritage-targets-republican-senators-who-might-favor-new-start/> Accessed on 17 April 2018.

“In letter to Senate, Obama promises that New START treaty won't limit missile defense”, The Washington Post, 2010, <http://www.washingtonpost.com/wp-dyn/content/article/2010/12/18/AR2010121802999.html> Accessed on 17 April 2018.

“Impasse Over U.S.-Russia Nuclear Treaty Hardens As Washington Threatens 'Countermeasures'”, Radio Free Europe/Radio Liberty, 2015, <https://www.rferl.org/a/russia-nuclear-treaty-us-threatens-countermeasures/27250064.html> Accessed on 9 May 2018.

“Intermediate-Range Nuclear Forces [INF] Chronology”, Federation of American Scientists, <https://fas.org/nuke/control/inf/inf-chron.htm> Accessed on 11 March 2018.

“Joint Statement by the President of the United States of America Barack Obama and the President of the Russian Federation Vladimir Putin, June 18, 2012”, The White House, Office of the Press Secretary, <https://obamawhitehouse.archives.gov/the-press-office/2012/06/18/joint-statement-president-united-states-america-barack-obama-and-preside> Accessed on 29 April 2018.

“Joint Statement by U.S. President George W. Bush and President of the Russian Federation Vladimir V. Putin on Upcoming Consultations on Strategic Issues”, U.S. Department of State, <https://www.state.gov/t/avc/trty/127129.htm> Accessed on 28 March 2018.

“Key Facts About New START Treaty Implementation”, U.S. Department of State, 2018, <https://www.state.gov/r/pa/prs/ps/2018/02/277889.htm> Accessed on 1 May 2018.

“Косачев предложил вернуть обсуждение договора СНВ-3 в думские комитеты”, РИА Новости, Россия сегодня, 2010, https://ria.ru/defense_safety/20101029/290568432.html Accessed on 18 April 2018.

“March 2012 New START data released”, Russian strategic nuclear forces, 2012, http://russianforces.org/blog/2012/04/march_2012_new_start_data_rele.shtml Accessed on 29 April 2018.

“Медведев подписал ратификационный документ по договору СНВ”, РИА Новости, Россия сегодня, 2011, <https://ria.ru/politics/20110128/327440185.html> Accessed on 23 April 2018.

“МИД РФ призывает комитеты Госдумы ратифицировать новый договор по СНВ”, РИА Новости, Россия сегодня, 2010, <https://ria.ru/politics/20100706/252513175.html> Accessed on 18 April 2018.

“MSC 2011”, Munich Security Conference Foundation, 2011, <https://www.securityconference.de/en/activities/munich-security-conference/msc-2011/> Accessed on 24 April 2018.

“Needless Obligations, Why Does Russia Want A Treaty With No Substance?”, Center for Arms Control, Energy and Environmental Studies, 2002, <https://www.armscontrol.ru/start/publications/izv031802.htm> Accessed on 30 March 2018.

“New START Treaty Aggregate Numbers of Strategic Offensive Arms”, U.S. Department of State, 2018, <https://www.state.gov/t/avc/newstart/278775.htm> Accessed on 1 May 2018.

“New START Data Shows Russian Warhead Increase Before Expected Decrease”, Federation of American Scientists, 2016, <https://fas.org/blogs/security/2016/10/new-start-data-2016/> Accessed on 30 April 2018.

“New START is a Bad Deal at Any Time”, The Heritage Foundation, 2010, <https://www.heritage.org/arms-control/commentary/new-start-bad-deal-any-time> Accessed on 17 April 2018.

“New START Treaty Fact Sheet: Unilateral Statements”, U.S. Department of State Archive, <https://2009-2017.state.gov/t/avc/rls/141837.htm> Accessed on 9 April 2018.

“Old Problems With New Start”, The Wall Street Journal, 2010, <https://www.wsj.com/articles/SB10001424052748703514904575602992172574172> Accessed on 17 April 2018.

“Remarks as Delivered by Secretary of Defense Robert M. Gates, U.S. Capitol, Thursday, June 17, 2010”, U.S. Department of Defense, <http://archive.defense.gov/speeches/speech.aspx?speechid=1489> Accessed on 16 May 2018.

“Remarks at the Signing of the Nuclear Nonproliferation Treaty, July 1, 1968”, The American Presidency Project, <http://www.presidency.ucsb.edu/ws/index.php?pid=28970> Accessed on 27 February 2018.

“Remarks by President Obama at the Brandenburg Gate -- Berlin, Germany”, The White House, Office of the Press Secretary, 2013, <https://obamawhitehouse.archives.gov/the-press-office/2013/06/19/remarks-president-obama-brandenburg-gate-berlin-germany> Accessed on 29 April 2018.

“Remarks by the Vice President at the 45th Munich Conference on Security Policy, February 7, 2009”, The American Presidency Project, <http://www.presidency.ucsb.edu/ws/index.php?pid=123108> Accessed on 1 April 2018.

“Remarks With Russian Foreign Minister Sergey Lavrov”, U.S. Department of State, <https://2009-2017.state.gov/secretary/20092013clinton/rm/2009a/03/120124.htm> Accessed on 1 April 2018.

“Report to Congress on Columbia-class Submarine Program”, U.S. Naval Institute, 2018, <https://news.usni.org/2018/01/23/report-congress-columbia-class-submarine-program-4> Accessed on 21 May 2018.

“Responding to Senator Bond on New START”, Federation of the American Scientists, 2010, <https://fas.org/blogs/security/2010/11/responding-to-senator-bond-on-new-start/> Accessed on 16 April 2018.

“Romania Missile Defense Site Activated”, Arms Control Association, 2016, https://www.armscontrol.org/ACT/2016_06/News/Romania-Missile-Defense-Site-Activated Accessed on 14 May 2018.

“Россия не будет форсировать ратификацию договора СНВ, заявил Миронов”, РИА Новости, Россия сегодня, 2010, <https://ria.ru/politics/20101119/298271612.html> Accessed on 18 April 2018.

“Russia Inducted 80 New ICBMs in Last 5 Years”, The Diplomat, 2018, <https://thediplomat.com/2018/01/russia-inducted-80-new-icbms-in-last-5-years/> Accessed on 23 May 2018.

“Russia Is Moving Ahead With Missile Program That Violates Treaty, U.S. Officials Say”, The New York Times, 2016, <https://www.nytimes.com/2016/10/20/world/europe/russia-missiles-inf-treaty.html> Accessed on 9 May 2018.

“Russian lawmakers propose to suspend New START Treaty”, TASS Russian News Agency, 2014, <http://tass.com/world/741087> Accessed on 29 April 2018.

“Sam Nunn, Co-Chairman, Nuclear Threat Initiative World Affairs Council of Washington, D.C., October 22, 2002”, Nuclear Threat Initiative, 2002, http://www.nti.org/media/pdfs/speech_samnunn_102202.pdf?_=1316466791 Accessed on 27 May 2018.

“Secretary Chu Testimony to Senate Armed Services Committee, June 17, 2010” U.S. Department of Energy, <https://www.energy.gov/articles/secretary-chu-testimony-senate-armed-services-committee> Accessed on 15 May 2018.

“Senate committee approves New START treaty amid concerns over Russian cheating; DeMint a no-show for vote”, Foreign Policy, 2010, <http://foreignpolicy.com/2010/09/16/senate-committee-approves-new-start-treaty-amid-concerns-over-russian-cheating-demint-a-no-show-for-vote/> Accessed on 16 April 2018.

“Сенат США определился с СНВ, ход за Россией”, РИА Новости, Россия сегодня, 2010, <https://ria.ru/world/20101223/312298999.html> Accessed on 18 April 2018.

“Серийное производство бомбардировщика Ту-160М2 стартует в 2023 году”, РИА Новости, Россия сегодня, 2015, https://ria.ru/defense_safety/20150717/1133988052.html Accessed on 23 May 2018.

“Speech and the Following Discussion at the Munich Conference on Security Policy”, President of Russia, 2007, <http://en.kremlin.ru/events/president/transcripts/24034> Accessed on 13 May 2018.

“START has support of at least one George Bush”, The Washington Post, 2010, <http://www.washingtonpost.com/wp-dyn/content/article/2010/12/08/AR2010120807094.html> Accessed on 17 April 2018.

“START I: twenty years upon signing”, Russian International Affairs Council, 2011, <http://russiancouncil.ru/en/analytics-and-comments/analytics/start-i-twenty-years-upon-signing/> Accessed on 25 March 2018.

“Statement of General Curtis M. Scaparrotti”, House Committee on Armed Services, 2017, <https://docs.house.gov/meetings/AS/AS00/20170328/105780/HHRG-115-AS00-Wstate-ScaparrottiC-20170328.pdf> Accessed on 10 May 2018.

“Strategic Arms Limitation Talks (SALT I)”, Nuclear Threat Initiative, 2011, <http://www.nti.org/learn/treaties-and-regimes/strategic-arms-limitation-talks-salt-i-salt-ii/> Accessed 26 February 2018.

“Strategic Arms Limitation Talks (SALT II)”, Nuclear Threat Initiative, <http://www.nti.org/learn/treaties-and-regimes/strategic-arms-limitation-talks-salt-ii/> Accessed 1 March 2018.

“Strategic Arms Reduction Treaty (START I) Chronology”, Federation of American Scientists, <https://fas.org/nuke/control/start1/chron.htm> Accessed on 20 March 2018.

“Strategic Offensive Reduction Treaty (SORT)”, Nuclear Threat Initiative, 2011, <http://www.nti.org/learn/treaties-and-regimes/strategic-offensive-reductions-treaty-sort/> Accessed on 29 March 2018.

“STUDY ASSAILS IDEA OF MISSILE DEFENSE”, The New York Times, 1984, <https://www.nytimes.com/1984/03/22/us/study-assails-idea-of-missile-defense.html> Accessed on 15 March 2018.

“Text of Diplomatic Notes to Russia, Belarus, Kazakhstan, and Ukraine, December 13, 2001”, U.S. Department of State, <https://2001-2009.state.gov/r/pa/prs/ps/2001/6859.htm> Accessed on 28 March 2018.

“The INF Treaty Is Under Attack. Down a Road Paved with Good Intentions”, Russian International Affairs Council, 2017, http://russiancouncil.ru/en/analytics-and-comments/analytics/The-INF-Treaty-Is-Under-Attack/?sphrase_id=78993 Accessed on 15 May 2018.

“The Second Round of Strategic Arms Limitation Talks (SALT II), 1979”, U.S. Department of State Archive, <https://2001-2009.state.gov/r/pa/ho/time/qfp/103736.htm> Accessed 7 March 2018.

“The Strategic Offensive Reductions Treaty (SORT) At a Glance”, Arms Control Association, 2006, <https://www.armscontrol.org/factsheets/sort-glance> Accessed on 28 March 2018.

“The Uncertain Future of the INF Treaty”, Council on Foreign Relations, 2018, <https://www.cfr.org/background/uncertain-future-inf-treaty> Accessed on 10 May 2018.

“Treaty between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms (New START)”, Nuclear Threat Initiative, 2017, <http://www.nti.org/learn/treaties-and-regimes/treaty-between-the-united-states-of-america-and-the-russian-federation-on-measures-for-the-further-reduction-and-limitation-of-strategic-offensive-arms/> Accessed on 2 April 2018.

“Treaty Between The United States Of America And The Union Of Soviet Socialist Republics On The Elimination Of Their Intermediate-Range And Shorter-Range Missiles (INF Treaty)”, Nuclear Threat Initiative, 2017, <http://www.nti.org/learn/treaties-and-regimes/treaty-between-the-united-states-of-america-and-the-union-of-soviet-socialist-republics-on-the-elimination-of-their-intermediate-range-and-shorter-range-missiles/> Accessed on 18 March 2018.

“Treaty Between The United States of America and The Union of Soviet Socialist Republics on the Limitation of Strategic Offensive Arms (SALT II)”, U.S. Department of State, <https://www.state.gov/t/isn/5195.htm> Accessed 3 March 2018.

“Treaty between the United States of America and the Union of Soviet Socialist Republics on Strategic Offensive Reductions (START I)”, Nuclear Threat Initiative, 2011, <http://www.nti.org/learn/treaties-and-regimes/treaties-between-united-states-america-and-union-soviet-socialist-republics-strategic-offensive-reductions-start-i-start-ii/> Accessed on 23 March 2018.

“Treaty between the United States of America and the Union of Soviet Socialist Republics on Strategic Offensive Reductions (START II), Nuclear Threat Initiative, 2011, <http://www.nti.org/learn/treaties-and-regimes/treaty-between-united-states-america-and-union-soviet-socialist-republics-strategic-offensive-reductions-start-ii/> Accessed on 25 March 2018.

“Treaty on the Non-Proliferation of Nuclear Weapons” Audiovisual Library of International Law, <http://legal.un.org/avl/ha/tnpt/tnpt.html> Accessed 27 February 2018.

“Ukrainian Parliament Edges Closer to Atomic Disarmament”, The New York Times, 1994, <https://www.nytimes.com/1994/02/04/world/ukrainian-parliament-edges-closer-to-atomic-disarmament.html> Accessed on 22 March 2018.

“U.S. Nuclear Modernization Programs”, Arms Control Association, 2018, <https://www.armscontrol.org/factsheets/USNuclearModernization> Accessed on 21 May 2018.

“U.S. Strategic Command 2012 Deterrence Symposium: Remarks of Rose Gottemoeller, Acting Under Secretary for Arms Control and International Security”, Homeland Security Digital Library, 2012, <https://www.hsdl.org/?abstract&did=720162> Accessed on 28 April 2018.

“Warning over new missiles for NATO; Missiles”, The New York Times, 1979, <https://www.nytimes.com/1979/12/09/archives/warring-over-new-missiles-for-nato-missiles.html> Accessed 10 March 2018.

“Why Senate Republicans should pass the New START treaty”, The Washington Post, 2010, <http://www.washingtonpost.com/wp-dyn/content/article/2010/11/10/AR2010111003708.html> Accessed on 17 April 2018.

“9M729 - SSC-8”, Global Security, 2018, <https://www.globalsecurity.org/wmd/world/russia/ssc-8.htm> Accessed on 9 May 2018.

Summary

Nowadays, the proliferation of nuclear weapons can be considered one of the most relevant security issues, as the destructive nature of this military technology has the power to threaten world peace. In this context, it is evident that nuclear arms control plays an important role in the maintenance of international stability because through the restriction on the production, accumulation, and proliferation of this technology it is possible to minimize the risk of a nuclear conflict. However, due to the fact that the United States and the Russian Federation own about 95% of nuclear warheads currently on Earth, it is evident that any attempts to regulate this subject should pass through these two actors. Therefore, it appears worthwhile to examine in detail the main provisions of the START III, which is the latest bilateral treaty that has been signed by the superpowers, examining the present situation and the future prospects for US-Russian nuclear arms control.

For all the aforementioned reasons, in order to provide a clear understanding of this issue, the author has elaborated the following research questions: what are the main treaties signed by the United States, the Soviet Union, and the Russian Federation in order to deal with the limitation of carriers, warheads, and proliferation of nuclear weapons? Are the START III Treaty provisions sufficient to regulate this subject? What are the future challenges that US and Russia will face in the areas of nuclear arms control and proliferation? Consequently, in order to answer these questions, the present work is pursuing different objectives: First of all, to identify the most relevant bilateral treaties that were signed by the United States, the Soviet Union, and the Russian Federation to regulate the proliferation of nuclear weapons; Secondly, to analyze the structure and the main provisions of the START III, evaluating the way in which this treaty is affecting the arsenals of the United States and the Russian Federation; Thirdly, to outline the central limits and the future prospects of the START III Treaty, and a potential START IV Treaty, stressing, in particular, the future challenges for US-Russian nuclear arms control and all those issues related to the modernization of nuclear arsenals.

Chapter 1 provides a general understanding of the US-Russian efforts in nuclear arms control as it defines the most relevant treaties that have regulated this subject in the last decades, focusing on SALT, ABM, INF and START treaties and stressing the way in which they have paved the way to the stipulation of the START III. Before analyzing these bilateral treaties, to provide a clear understanding of the dynamics that have led two conflicting nuclear superpowers to agree on the modalities of progressive disarmament, it is essential to briefly define the historical and political background in which the USSR and the USA have acted.

It is possible to state that, in those years, these two empires experienced a wide range of changes, as the technological progress and international tensions had strongly influenced the internal structure of the state. In fact, the development of new means of production made the flexibility of labor and capital a necessary requirement for the survival of the state, while the growing speed of communications required the acceleration of the decision-making process. Moreover, the hypertrophic development of the military sector, the wide deployment of military personnel throughout the European continent and the dramatic increase in the volume of nuclear arsenals had contributed to further destabilization of the internal budgets. Finally, the great instability of the international environment has certainly affected the development of the relations between these actors, because while the European countries were trying to rise from the ashes of the Second World War, the Soviet Union and the United States had seen in this situation a unique opportunity to expand their spheres of influence.

Although the combination of internal and external elements may have resulted in a new war, the superpowers decided to move in the direction of a progressive distention as they were aware of the dramatic effects of a nuclear conflict. In fact, both the United States and the Soviet Union had witnessed the destructive nature of this technology as, in the summer of 1945, the first nuclear bomb in history was tested, and a short time later two more were detonated on the cities of Hiroshima and Nagasaki. As a result, the destruction caused by these weapons transformed the world and generated a sense of insecurity that reigned over the International

Community for decades, putting "security" in the first place of the national agenda of every state.

In this context, one of the most important steps that certainly facilitated the stipulation of future bilateral treaties was the signature of the Nuclear Non-Proliferation Treaty (NPT) since it paved the way to several nuclear arms control treaties. Indeed, being conscious of this peril, the superpowers started to discuss the possibility of a bilateral limitation of these weapons, deciding to begin the Strategic Arms Limitation Talks (SALT I) on 17 November 1969. Even though the negotiations were particularly long and complex since the Parties had to face numerous diplomatic impasse, on 26 May 1972, they managed to sign the Interim Agreement on strategic offensive arms and the Anti-Ballistic Missile Defense Treaty (ABM) on strategic defensive systems.

Concerning the Interim Agreement, it is possible to state that the aim of the treaty was freezing, rather than reducing, nuclear arsenals, preventing these superpowers to have a further increase in the volume of offensive arms. The aim of its obligations was to prevent the possibility of a radical increase in the volume of nuclear arsenals, as the main objective of the Interim Agreement was to stabilize the balance of power between these two superpowers rather than reduce their nuclear forces. Consequently, the real importance of this agreement lied in its political value rather than in the strength of its provision, as both the Soviet Union and the United States were conscious that many obligations were clearly the result of compromises. Nevertheless, it is important to remember that the Interim Agreement was a fundamental step in the direction of a progressive nuclear arms reduction, especially if we consider that, in those years, the relationship between these superpowers was particularly fragile and critical.

Relative to the Anti-Ballistic Missile Defense Treaty (ABM), the superpowers agreed to limit the deployment of ABM systems for the defense of their countries to two sites: one near the national capital and the other around ICBM silo launchers. Notably, the aim of the ABM Treaty was to reach a stable equilibrium in relations through the insurance of a mutual vulnerability since the threat of reciprocal

destruction was the only way to ensure peace. Notably, this idea of mutual vulnerability lasted for many decades and became a fundamental element in nuclear arms control as, while numerous treaties on offensive arms were stipulated over time, the ABM Treaty has been the only treaty regulating strategic defensive systems, providing a certain degree of stability in the US-Russian relationship.

A few months after the ratification of SALT I, the United States and the Soviet Union started to work on a new treaty regulating strategic offensive arms, beginning the official SALT II negotiations in November 1972. However, due to diplomatic impasse and political tensions, the negotiation process was extremely long and complex as the United States and the Soviet Union managed to sign this document only on 18 June 1979. Besides these difficulties, it is important to stress that the value of this document lies in the fact that, for the first time, the superpowers considered the possibility for a concrete reduction in strategic forces rather than prescribing simple limitation.

According to SALT II, the superpowers decided to include in the Treaty: an aggregate limit on strategic nuclear delivery vehicles (SNDV); an aggregate limit on multiple independently targetable re-entry vehicle (MIRV) systems; a prohibition on the construction of new land-based ICBM launchers; a limitation on the deployment of new types of strategic offensive arms. Nevertheless, it is important to notice that this agreement, even though it was designed to last until 1985, had regulated the US-Russian strategic arsenals until 1991 without being ratified by the United States.

Besides the moderate success of the SALT II, the problems related to nuclear arms control were far from being solved, since the deployment of intermediate-range missiles in Europe had considerably worsened the US-Soviet relation. In early 1977, the Soviet Union started to deploy a new type of intermediate-range ballistic missile (IRBM) in the Eastern part of Europe in response to the growing number of NATO bases, opening new areas of confrontation with the United States. However, despite the worsening of US-Soviet relations, the superpowers decided to start the preliminary Intermediate-Range Nuclear Forces (INF) talks in October 1980,

discussing the possibility of an agreement for the mutual ceiling on land-based theatre nuclear missile systems. Although the talks resumed on 7 January 1985 with the meeting between Soviet Foreign Minister Andrei Gromyko and US Secretary of State George Shultz, in order to have some real progress it would be necessary to wait until the Gorbachev's secretariat as only on 8 December 1987 the superpowers managed to sign the INF Treaty.

Concerning the obligations of the INF Treaty, the superpowers agreed to eliminate their short-range and intermediate-range missiles and launchers, solving in this way the so-called Euromissile Crisis. Furthermore, besides the elimination of such missiles, this treaty also bans the production, development, and flight-testing of any intermediate-range or short-range ballistic missiles and launchers, eliminating an entire category of nuclear offensive systems. In addition, this agreement has also contributed to the creation of a continuous exchange of information that has certainly affected the relations of these superpowers in a positive way, fostering the development of diplomatic relations and strengthening their collaboration. For all the aforementioned reasons, due to its provisions and modern structure, it is possible to state that the INF Treaty is certainly one of the most relevant treaties in US-Russian nuclear arms control, since it has managed to ban an entire category of offensive arms systems, reducing in a sensible way the pressure over the European continent.

After the resolution of the Euromissile Crisis, the United States and the Russian Federation had the possibility to start the negotiations of the Treaty on the Reduction and Limitation of Strategic Offensive Arms, better known as START I. However, in order to overcome the negotiations, it was necessary to wait until the fall of the Berlin Wall, since at that time Gorbachev understood that the end of the Soviet empire was approaching, forcing the Soviet leader to move toward a quick resolution of the offensive arms issue. Finally, after a long series of meetings and debates, the two leaders managed to sign the START I on 31 July 1991, opening a new phase in US-Russian nuclear arms control.

In spite of this success, this agreement entered into forces only on 5 December 1994, as the collapse of the USSR had brought several issues concerning this treaty. Firstly, the collapse of the Soviet Union had raised a serious legal problem, the “Succession of States” issue. In fact, at that time, it was important to identify the successor state that would have acquired the international legal personality of the Soviet Union, since this new state would have inherited not only its rights but also its international obligations. Secondly, when the Soviet Union broke up, 70% of its arsenal was located in Russia, while the other 30% was deployed in Belarus, Ukraine, and Kazakhstan, raising many questions on the future of these nuclear weapons. For these reasons, it appeared clear that it was essential to make an arrangement in order to regulate this unexpected situation, since the presence of an additional protocol was necessary to ensure the effective implementation of the START I. Consequently, on 23 May 1992, the four post-Soviet states and the United States had a meeting in Portugal, where they signed the Lisbon Protocol to the START Treaty in order to solve these issues.

Concerning the START I, it is possible to state that this agreement was one of the most important treaties on nuclear arms control because it managed to reduce in a considerable way the arsenals of these superpowers. In fact, by the end of 2001, this agreement managed to reduce the number of US warheads from 11.602 to 8.592, while the Soviet Union, and consequently the Russian Federation, from 10.877 to 6.949. Moreover, the strict verification regime and the continuous exchange of data had a positive impact on the US-Russian relationship, since the superpowers collaborated in many different fields and strengthened their diplomatic relations. In addition, due to the Lisbon Protocol, Belarus, Ukraine, and Kazakhstan have adhered to the NPT and officially became non-nuclear-weapons states (NNWS), renouncing in this way to develop their own nuclear arsenal.

The period following the signing of START I was characterized by a slight optimism because after many years of harsh confrontations between the United States and the Soviet Union, there was the perception that it was the moment to further reduce nuclear arsenals. Consequently, on 17 June 1992, the two leaders had a meeting in

Washington, signing the Joint Understanding that constituted the base for the START II. Concerning this agreement, the United States and Russia agreed to further reduce their strategic offensive arms in two phases, calling for the complete elimination of ICBMs equipped with MIRV and defining a new limit on nuclear warheads. However, even though the United States and Russia managed to negotiate and sign this agreement in a short period of time, the START II never entered into force due to a series of events. Firstly, the Russian Federation was going through a period of economic difficulties, as at that time the country did not have the necessary resources to ensure the conversion or elimination of these offensive systems. Secondly, the NATO interventions in Yugoslavia in 1999 further contributed to undermining trust between Russia and America. Thirdly, the United States planned to build a national defense missile system, which, according to the Russian perspective, was against the ABM Treaty, giving the final blow to this agreement. In this context, despite the events that occurred in early 2000, the United States and the Russian Federation continued to work actively on the strategic offensive systems issue. In fact, even though they did not manage to reach an agreement on the ABM Treaty, they laid the foundation for the Strategic Offensive Reduction Treaty (SORT). Consequently, in 2002, the two leaders had a summit in Moscow where they signed the SORT, also known as the Treaty of Moscow, that was subsequently ratified by the US Senate and the Russian Duma in 2003.

Relative to this agreement, it is important to notice that the SORT was composed of just five articles and many of its provisions were quite vague and not clear. Firstly, the SORT text does not provide a unique definition of the term “strategic nuclear warheads”, therefore it is not entirely clear if it refers just to the deployed warheads, to the underplayed or to all those warheads regulated by the START I. Secondly, it does not even specify the counting procedures nor outline a concrete implementation plan, providing the Parties with excessive freedom. Thirdly, some Russian and American analysts noticed that in the SORT there was an absence of obligations concerning the elimination of nuclear warheads and delivery vehicles. Fourthly, there is a complete lack of obligation for the regulation of non-strategic nuclear

weapons, because this agreement did not affect in any way these offensive systems. For all these reasons, due to the lack of enforcement mechanisms, it is possible to state that this treaty was destined to be a symbol rather than a solution, as it represented the willingness of the Parties to return to dialogue after all the political complications that occurred at the end of the millennium.

Nevertheless, due to the fact that START I was going to expire in 2009, the United States and Russia began to discuss their options for arms control in mid-2006. Even though they had the possibility to extend the START I for five years, both sides decided not to move in this direction, since this agreement was interfering with their military programs. Moreover, during a meeting in the Joint Compliance and Implementation Commission in October 2008, both superpowers, along with the representatives of Kazakhstan, Belarus, and Ukraine, reaffirmed the impossibility to reach any agreement on the extension of START I, marking officially the end of this treaty.

The expiration of START I created a legal vacuum that forced the superpowers to start the works for a new agreement that would have replaced the SORT. Although both parties were aware of the need to sign this new agreement, the negotiations and the ratification process were extremely complicated, because the US and Russia had different views on the nature of the new treaty. Actually, the Russian Federation was willing to enter into a treaty with strong ties and strong control mechanisms, while the United States preferred an agreement with less stringent limits. Moreover, all the events that occurred in 2008 had a negative impact on the negotiations of the new treaty, as the Russo-Georgia War and the NATO expansion toward the East negatively affected the US-Russian relationship. However, in spite of these problems, US President Obama and Russian President Medvedev had a meeting in Prague, where they finally signed the New START Treaty on 8 April 2010.

After examining the most relevant bilateral treaties in the context of US-Russian nuclear arms control, Chapter II analyzes in detail the New START Treaty, also known as START III. This agreement can be considered particularly important since, after years of harsh confrontations, it represented the willingness of both the

United States and Russia to collaborate again on the issue of strategic offensive systems. Indeed, START III continues the process of regulation and verification defined by its predecessor, reaffirming a clear set of rules after the failure of START II and the evident limits of the SORT. Moreover, it has also strengthened the ties between the two superpowers, as the continuous diplomatic relations and the exchange of information has promoted confidence building.

In order to reduce strategic arsenals, the START III Treaty includes a series of provisions that define the limits and counting rules in detail. These constraints are contained in articles 2 and 3: the first provides that within seven years after the entry into force of the treaty, each party must reduce their arsenals to not exceed the number of 700 deployed launchers, 1.550 strategic warheads and 800 deployed and non-deployed launchers; the second contains a detailed set of definitions and counting rules, which allow the Parties to correctly calculate the volume of its arsenal. Moreover, the START III states that each party has the right to determine for itself the composition and structure of its strategic offensive arsenal. This provision was added to make application of this Treaty less burdensome and to simplify the verification operations, as an excessive presence of constraints would not have brought any real benefit to the parties.

The START III comprises also a double verification mechanism, because on the one hand art. 7 provides for the establishment of a common database for the exchange of data, while on the other hand art. 10 refers to the national technical means of verification to ensure the correct implementation of the treaty. Furthermore, this agreement states that each party shall use the Nuclear Risk Reduction Center (NRRC) to send and receive information. The NRRC, which is always active, translates, prepares and coordinates all incoming and outgoing messages of the parties, to allow them to be in regular contact and to transfer a constant flow of information, in order to reduce the possibility of misunderstandings. In addition, to confirm the accuracy of the information collected, it provides the possibility for each party to use two kinds of inspections, which are governed by art. 11 and Part Five of the Protocol. The Treaty states that each Party has the right to conduct eighteen

inspections a year, ten of “Type One” and eight of “Type Two”. The Type One inspection can be conducted at ICBM bases, submarine bases, and air bases, to confirm the accuracy of the declared data and to verify the number of warheads on deployed ICBMs, SLBMs, and heavy bombers. The Type Two inspection can be conducted to confirm the accuracy of the declared data on the numbers and types of non-deployed strategic offensive arms and to check that these have been converted or eliminated in accordance with the provisions of the treaty. In brief, in order to ensure greater transparency, the monitoring system of the New START Treaty allows parties to gain and exchange a huge amount of data and information, which will be verified through inspections and exhibitions.

Concerning the ratification process, the present work has shown that the ratification of the START III was one of the most relevant obstacles that would have prevented it from entering into force, as the United States and the Russian Federation had to overcome numerous obstacles and problems during this process. In fact, many questions were raised concerning this treaty by both the United States and Russia, because on the one hand many members of the US Congress believed that the START III would have affected the United States’ national security in a dramatic way, while on the other hand many Russian experts were worried about the American plan of developing a ballistic missile defense system. Consequently, even though the START III was signed on 8 April 2010 and was considered by many experts a milestone in nuclear arms control, it entered into force only on 5 February 2011, since many legislators expressed numerous concerns about the effects of this agreement.

Relative to its entry into force and implementation, besides all the diplomatic difficulties, international crises, and obstacles to the implementation that occurred during these seven years, both the United States and the Russian Federation managed to meet the limits defined by the START III. Actually, on 5 February 2018, the Ministry of the Foreign Affairs of the Russian Federation and the US Department of State released information related to the aggregate numbers of their strategic offensive arms. According to this data, the United States possessed 1.350 strategic

warheads deployed on 652 deployed launchers, within a total of 800 deployed and non-deployed SNDVs, while the Russian Federation possessed 1.444 nuclear warheads deployed on 527 deployed SNDVs, and 799 deployed and non-deployed ICBMs, SLBMs, and heavy bombers. Regarding the verification regime, it is important to notice that since its entry into force of the START III on 5 February 2011, the Russian Federation and the United States have used in an intensive way the verification mechanisms defined by the treaty. In fact, the Parties have: exchanged more than 14.600 notifications; performed 14 data exchanges on the status of their nuclear forces; conducted a total of 252 Type One and Type Two on-site inspections; carried out 14 exhibitions of their strategic offensive systems; convened 14 meetings of the BCC. For all the aforementioned reasons, it is possible to state that the START III has certainly achieved some positive results, since on the one hand it has reduced the US-Russian strategic offensive arsenals, while on the other hand it has established an efficient and reliable verification regime.

After analyzing the main provisions of the START III and showing all the difficulties that occurred after its entry into force, the conclusive chapter focuses on all those elements that may affect US-Russian nuclear arms control in the near future. Subsequently, in order to provide a clear picture of the future prospects for the United States and Russia, this section addresses three different issues. Firstly, it examines the present challenges to nuclear arms control, stressing all those priorities and differences in the US-Russian agenda that may affect the future of the START III. Secondly, it addresses modernization of nuclear arsenals, highlighting the way in which the development of new technologies is challenging the present framework. Finally, it assesses the effects of the START III, questioning if it can be considered sufficient for the regulation of nuclear arsenals or if it will be necessary to stipulate a new treaty.

Relative to the present challenges to US-Russian nuclear arms control, the author believes that in order to understand its prospects it is necessary to comprehend their current objectives, since only with a clear understanding of the present situation it would be possible to formulate the hypothesis on the future. In fact, this work

analyzes the points of view of Washington and Moscow, stressing the way in which they perceive each other and the international environment.

According to the American perspective, it is possible to state that the United States is still willing to comply to the START III, because they continue to consider this agreement an essential element for US-Russian nuclear arms control. In fact, the United States considers the verification regime defined by this treaty particularly important for the stabilization of the relationship with the Russian Federation, because it ensures a certain degree of transparency and predictability of the adversary's actions. Nevertheless, from Washington's point of view there are still several issues that are threatening the future of this treaty, as the United States considers the Russian violations of the INF treaty and the regulation of the non-strategic nuclear arsenals critical elements for the future of the START III.

According to the Russian perspective, it is undeniable that Moscow has reaffirmed several times the importance of the START III, since, like the United States, they consider the verification regime defined by this treaty particularly important. However, as mentioned in the previous sections of this work, the Russian Federation and the United States had numerous harsh disputes over different issues, because in the last decades they have developed different objectives and priorities in their agenda. However, from the Russian perspective, there are several issues that are threatening the future of the START III, challenging the balance of power with the United States and international stability. Notably, the development of the US missile defense systems in Europe, the issues related to the INF Treaty, and the proliferation of offensive nuclear systems in Asia are challenging in a considerable way the future of US-Russian nuclear arms control.

Relative to the modernization of their nuclear arsenals, the author believes that, although the majority of the nuclear weapons states have repeatedly affirmed their commitment to nuclear disarmament, none of them is ready to renounce its nuclear arsenal. Undeniably, as long as nuclear forces constitute a key element in their military arsenal, it is highly probable that they will keep refurbishing their nuclear offensive systems, developing new technologies that, in some cases, may challenge

the strategic balance and international security. Furthermore, due to the fact that the rising tensions and the diplomatic crises are causing a greater sense of insecurity, in the near future both the United States and Russia are expected to invest a significant amount of resources in the modernization of their nuclear arsenals, challenging the present treaties and the future of US-Russian nuclear arms control.

From the analysis of the present and future US-Russian modernization plans, it is evident that the superpowers are in the middle of a process that will probably lead to the development of new and modern offensive systems. Notably, the main problem is that these technological changes are threatening not only the future of the nuclear arms control treaties but also international stability, as the present agreements are no longer capable of regulating this subject. In this context, it is hard to believe that the United States and Russia will reverse this trend because, as long as they will consider deterrence the only available tool for ensuring peace, the dangerous search for a reliable and credible nuclear deterrent will never stop.

Concerning the positive effects of the START III, it is undeniable that this agreement has constituted a milestone in the history of US-Russian nuclear arms control because it has provided a valuable set of rules for the regulation of the superpowers' strategic nuclear arsenals. It is important to remember that before the START III the entire structure of the arms control treaties was unstable, as the consequences of US withdrawal from the 1972 ABM Treaty, the political tensions, and the international crisis have affected, and probably still affect, the US-Russian strategic balance in a radical way. In this context, the stipulation of the START III has certainly affected in a positive way the relationship between the United States and the Russian Federation, reaffirming their commitment to a progressive reduction of the strategic offensive systems and ensuring a certain degree of transparency. In fact, it is possible to state that the START III has achieved three main successes: the reduction of the US-Russian strategic nuclear arsenals; the establishment of a reliable verification regime; the continuation of the nuclear arms control debate.

From the analysis of numerous official documents and academic articles, at least three challenges have been identified for the future of US-Russian nuclear arms

control. Firstly, the regulation of the non-strategic nuclear arsenals is certainly an issue that will require an adequate solution in the near future as these offensive systems are in a legal vacuum. In fact, because of the risk of potential accidents or security breaches, the sole existence of these nuclear arms currently constitutes a concrete threat to the international environment. Moreover, it is undeniable that the risk of nuclear terrorism is one of the most important challenges to national and international security because if a malicious actor manages to acquire this technology there will be dramatic consequences.

Secondly, it is possible to state that the quick technological development is challenging the consolidated architecture of the arms control treaties, creating new areas of confrontation and paving the way to unexpected scenarios. Indeed, the modernization of nuclear offensive systems is creating new and dangerous weapons that are not regulated by the provisions of the present treaties, while the digitalization of the nuclear command and control systems is creating new vulnerabilities, enhancing the value of the cyber and space dimension.

Thirdly, the present work has shown that the changes in the international environment and the rise of new regional actors are making the multilateralization of the agreements a necessary step. In fact, the bilateral nature of the present arms control treaties is neither sufficient to prevent the proliferation of nuclear weapons nor control the nuclear arsenals. Notably, due to the fact that states like India, Pakistan, North Korea, and, in a particular way, China are investing a great number of resources in the development of their nuclear forces, the stipulation of multilateral arms control treaties has become a main priority in order to ensure international stability.

In conclusion, from the study of the past treaties and the present situation of the START III, it is possible to state that there is a great uncertainty about the future of US-Russian nuclear arms control as the changes in the strategic balance, the rise of regional actors, and rapid technological development are challenging the international framework. However, if on the one hand it is true that the present situation may seem extremely unstable, on the other hand it is also true that only in

time of crisis is it possible to find new and creative solutions. For all the reasons highlighted throughout this work, the author believes that both the United States and Russia should work on all those areas in which cooperation is possible rather than focusing on their differences, since only through a conciliatory stance it will be possible to find solutions to present problems and future challenges.