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Norman Cigar

To cite this article: Norman Cigar (2017) Missiles, Money, and Power Politics: The Riyadh–Moscow–Kiev Triangle, The Journal of Slavic Military Studies, 30:2, 187-209, DOI: [10.1080/13518046.2017.1307023](https://doi.org/10.1080/13518046.2017.1307023)

To link to this article: <http://dx.doi.org/10.1080/13518046.2017.1307023>



Published online: 27 Apr 2017.



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Missiles, Money, and Power Politics: The Riyadh–Moscow–Kiev Triangle

Norman Cigar

Marine Corps University

ABSTRACT

This study examines the triangular political-military relationship revolving around missile sales involving Russia, Ukraine, and Saudi Arabia. Its principal thesis is that this development, if it comes to pass, could weaken further, and perhaps fatally, the Missile Technology Control Regime, which has always been a fragile instrument to control missile proliferation. A second thesis is that such a missile sale is a complex process, with political, economic, and psychological factors often as important as technical ones, and that all of these aspects must be taken into consideration in any analysis.

Introduction and terms of reference

Missile proliferation continues to be an issue of concern for the international community, especially when zones of high tension and potential conflict are involved. If anything, with a ready market and a growing number of potential providers, the problem of monitoring, much less preventing, such proliferation has increased over the years. Not surprisingly, some of the successor states of the former Soviet Union and, in particular, Russia and Ukraine, have figured prominently in the field of missile development over the years, and this study assesses their relationship with a potential client, Saudi Arabia, for missile systems and the attendant implications. The thesis of this study is that this evolving political-military relationship could contribute to weaken further, and perhaps fatally, the Missile Technology Control Regime (MTCR), which has always been a fragile international instrument to control missile proliferation. A sub-thesis is that such proliferation relationships can be complex and that in order to understand the issue adequately one has to appreciate an intertwining set of multiple considerations beyond the simply military-technical ones, to include economic, political, and psychological factors.

The focus of this study is the engagement that has occurred around the tactical-operational missile systems that Russia and Ukraine have developed, respectively the Iskander (SS-26 STONE in NATO terminology) and the

Grom-2, both because these systems have been a centerpiece of each country's dealings with Saudi Arabia and — given the political as well as military impact of missile systems — because of the potential significance of the transfer of such a weapon system for security and stability both in the Middle East and Eastern Europe, two zones of continuing tension.

This study will approach Saudi bilateral relations at all levels with each of Russia and Ukraine, although these Saudi relationships also have to be seen within the context of Russian-Ukrainian relations in order to appreciate how the missile issue fits in. To a great extent, the involvement of Saudi Arabia, Ukraine, and Russia has followed a triangular pattern. In fact, the relationship is reminiscent of the classic three-body problem of astronomy, as each actor has been subject to mutual interaction with the others, with Riyadh as a customer interacting with Moscow and Kiev as rocket producers competing with each other but also with separate associations with Riyadh, and with all three countries seeking to achieve shared or mutually exclusive political and security objectives.

Saudi Arabia, which acquired a surface-to-surface missile (SSM) force by purchase of the DF-3 (CSS-2 in NATO terminology) from China in the 1980s, has viewed this capability as both a deterrent and a potential war fighting tool.¹ Although the focus of attention on the threat has evolved over time and has included Iraq, Israel, and, currently, Iran, Riyadh has sought consistently to expand and improve the capabilities in its missile arsenal over the years to achieve greater flexibility and redundancy for a second-strike capability.² In addition to their conventional role, Saudi Arabia — which some believe would also go nuclear (which would also have to be by purchase) in case of an Iranian nuclear breakout — has increasingly seen missiles as a key potential delivery system should the nuclear option materialize.³ The Saudis would most likely integrate any new SSMs they acquire into their Strategic Rocket Force.

The sources available for this study are relatively restricted, as each government has only disclosed limited information intended to further specific ends, especially in view of the sensitivity of the issue at hand. The Ukrainian government has had the greatest interest among the countries involved in distributing information about cooperation with Saudi Arabia in the missile field in order to highlight the fact that there would be funding to develop Ukraine's own missile capability as part of a deterrence policy. In the

¹For background on Saudi Arabia's missile sector, see N. Cigar, *Saudi Arabia's Strategic Rocket Force: The Silent Service*, Middle East Studies, No. 6, Marine Corps University, Quantico, VA, September 2014, (hereafter N. Cigar, 2014, *Saudi Arabia's Strategic Rocket Force*); A. Alrababah and J. Lewis, *Saudi Rattles Its Saber*, Nuclear Threat Initiative, Washington, DC, December 2014, <http://nti.org/3489A>.

²Riyadh in recent years may have acquired the DF-21 (CSS-5) from China and perhaps the Shaheen II from Pakistan: N. Cigar, 2014, *Saudi Arabia's Strategic Rocket Force*, pp. 18–20.

³See N. Cigar, *Saudi Arabia and Nuclear Weapons: How Do Countries Think about the Bomb?*, Routledge, Abingdon, UK, 2016 (hereafter N. Cigar, 2016, *Saudi Arabia and Nuclear Weapons*), and N. Cigar, 2014, *Saudi Arabia's Strategic Rocket Force*, pp. 22–28.

case of Russia, nowadays there is no longer the luxury of assuming that everything in the media reflects official policy, although clearly official statements and media close to the government do so. Saudi Arabia's officials and media, as is routine for anything dealing with missiles, have been fairly tight-lipped, although one can assume that anything addressing security and foreign policy in the country's tightly controlled media does reflect official views.

The Missile Technology Control Regime (MTCR) is a key reference benchmark applicable to decisions addressed in this study. It is a multilateral agreement intended to prevent the export of missile systems and critical technologies in order to control missile proliferation. The focus is on vehicles with a range of 300 km or more, and/or capable of carrying a 500 kg warhead. It was inaugurated in 1987; Russia acceded in 1995, and Ukraine in 1998. Since compliance is voluntary, it is an exporting country that is responsible for deciding whether an item is in conformity with MTCR guidelines. The MTCR specifies no penalties for the transfer of controlled items, although at times the United States has issued warnings or imposed sanctions on violators.⁴

Riyadh and Moscow: The potential and limits of cooperation

For Saudi Arabia, the collapse of the former Soviet Union made it much easier to consider arms deals with Russia and the other successor states than it would have been earlier. Following the end of the Cold War, prospects for bilateral Saudi-Russian cooperation increased significantly, despite a continuing solid relationship with the United States, including in terms of seeking weapons systems and of using the relationship with Moscow for leverage to pressure Washington indirectly. For Riyadh, it had probably been the Soviet Union's activities, alliances, and ambitions in the Middle East more so than its espousal of Communism that had represented an obstacle for envisioning a security relationship. After all, a pragmatic Riyadh had had an ongoing security relation since the 1980s with China, despite the latter's Communist orientation. Moreover, due to recent unease, whether justified or misplaced, about the US commitment to defend Saudi Arabia — in particular with respect to Iran — Riyadh has been increasingly willing to at least consider a diversification of the sources of its armaments. In particular, although most of Saudi Arabia's military arsenal originates in the United States and other Western countries, these countries have not always been forthcoming on such clearly offensive systems as SSMs, and, as noted, Riyadh has readily turned elsewhere in that case over the years.

⁴Arms Control Association (Washington, DC), 'The Missile Technology Control Regime at a Glance', 15 August 2016, <https://www.armscontrol.org/factsheets/mtcr>.

Riyadh focuses on surface-to-surface missiles

According to the Russian media, in July 2013, Prince Bandar, at the time Director of Saudi Arabia's Intelligence, had met with President Vladimir Putin, offering an arms deal worth \$15 billion and a guarantee of security from attacks by Chechnya rebels for the impending Olympic games at Sochi in exchange for an end to Russian support for the embattled Bashar Asad regime in Syria, which Riyadh had committed to topple. However, Moscow reportedly had refused.⁵ According to what a leftist Beirut newspaper claimed were the leaked minutes of the meeting, Prince Bandar had also asked for medium-range SSMs on behalf of Egypt, for which Saudi Arabia and the United Arab Emirates would pay.⁶ As it would have made little sense in military terms for Egypt to field such missiles, it is possible that such a deal might have been a cover to transfer surreptitiously the missiles or their technology to Saudi Arabia. In the event, Putin reportedly had refused, arguing that exporting the missiles that Riyadh wanted was banned by the MTCR but, probably more importantly, claiming that the real intent was to use the missiles against Iran, with whom Moscow shared a number of significant regional interests. The issue of the range of the missile in the refusal would indicate that what was involved may have been the Iskander-M intended for Russian forces, rather than the Iskander-E export version with its shorter range. Saudi contacts with Russia were said to have continued in late 2014 and early 2015, with a Saudi offer to Moscow to cut its own oil production to end the price slide that had hurt badly the Russian economy, expecting in return Russian flexibility on Syria and on Iran, but nothing concrete materialized at the time.⁷

The context of a Saudi-Russian rapprochement

What was to distinguish the Russian-Saudi relationship after the advent of a new Saudi monarch, King Salman, in January 2015, was an agreement for the sale of the Iskander SSM to Riyadh. This development at this juncture, of course, has to be understood within a broader political context. Under the new leadership team in Riyadh, the Russian-Saudi relationship seemed to take a markedly positive new direction when the new Saudi Minister of Defense and Deputy Crown Prince (and increasingly the country's de facto ruler) Muhammad bin Salman visited Russia in June 2015. To a significant

⁵ 'Moscow "Rejects" Saudi "Offer" to Drop Assad for Rich Arms Deal', RT in English (Moscow), 8 August 2013, <https://www.rt.com/news/saudi-russia-arms-putin-239>.

⁶ H. Ayyub, 'Putin li-Bandar: Tatlubun sawarikh balistiya ila Misr li-darb Iran!' [Putin to Bandar: You Are Requesting Ballistic Missiles for Egypt in Order to Strike Iran!], *Al-Safir* (Beirut), 22 January 2014, www.assaafir.com.

⁷ T. Saqr, 'Al-Nawawi al-irani wa'l-kayd al-saudi' [The Iranian Nuke and the Saudi Stratagem], *Al-Bina'* (Beirut), 24 November 2014, <http://al-binaa.com/albinaa/?article=21251>; M. Mazzetti, E. Schmitt, and D. C. Kirkpatrick, 'Saudi Oil Seen as Lever to Pry Russian Support from Syria's Assad', *New York Times*, 3 February 2015, www.nytimes.com. There is also the Iskander-K, a cruise missile version, but that was never under consideration.

extent, one can attribute the attempt to build a closer relationship with Russia at this time to Riyadh's desperate campaign to rally support to derail the impending Nuclear Agreement then in the final stages of negotiation between Iran and the so-called 5+1 Group (members of the UN Security Council plus Germany), since the Saudis viewed Iran as their country's principal regional threat and competitor and feared that the ensuing lifting of international sanctions on Tehran would mean a free hand for the latter in the region.⁸ As Russian analysts realized, Riyadh also still hoped to convince Moscow to reduce the latter's support for the Asad regime.⁹ Conversely, Moscow hoped to convince Riyadh to reduce its support for anti-Asad rebels in Syria. The situation seemed opportune for Riyadh, according to Saudi analysts, for a more amenable Russia, hard-hit by the plummeting oil prices on the international market and isolated by Western sanctions in the wake of its aggressiveness against Ukraine, and in need of new economic partners.¹⁰ In that vein, as Sergei Belyakov, Chairman of the St Petersburg International Economic Forum, a Russian government activity, also noted of the Saudi visit,

If [our] country's political leadership at the highest level decides to discuss an agenda of cooperation and potential investments, that is proof that we are not just hypothetically interested but that we are genuinely interested in concrete economic cooperation, including in the field of energy.¹¹

A retired senior Saudi officer reputed to be close to the palace who has often acted as an unofficial spokesman, in fact, now looked forward to 'a new direction' and 'a turning point' in the relationship and predicted a positive effect on Russian policy toward Syria, Iran, and Yemen in conjunction with the visit.¹² In particular, as another Saudi analyst stressed, Riyadh needed to diversify its weapons providers beyond those in the West and look elsewhere specifically for systems such as surface-to-surface missiles, which it could not obtain in the West.¹³ In addition, Riyadh may have wanted to send a message to Washington that it could not be taken for granted in the latter's regional

⁸N. Cigar, 2016, *Saudi Arabia and Nuclear Weapons*, pp. 163–165.

⁹For example, K. Makienko, of the Center for the Analysis of Strategy and Technology, quoted in A. Nikol'skii, 'K vizitu korolya Saudovskoi Aravii gotovyyat oruzheinye kontrakty' [They Are Preparing Arms Contracts for the King of Saudi Arabia's Visit], *Vedomosti* (Moscow), 10 November 2015, www.vedomosti.ru/politics/articles/2015/11/11/616329-vizitu-korolya-saudovskoi-aravii-gotovyyat-oruzheinie-kontrakty (hereafter A. Nikol'skii, 2015, 'K vizitu korolya Saudovskoi Aravii').

¹⁰A. Al-Anazi, 'Al-Saudiya wa-Rusiya wa'l-masalih al-mushtaraka' [Saudi Arabia and Russia and Shared Interests], *Al-Hayat* (London, Saudi edition), 27 June 2015, <http://alhayat.com/Opinion/Ali-Al-Anzi/96559284> (hereafter Al-Anazi, 2015, 'Al-Saudiya wa-Rusiya').

¹¹A. Naumov, 'Saudovskaya Araviya razglyadela v Rossii partnera' [Saudi Arabia Looks at Russia as a Partner], *Nezavisimaya Gazeta* (Moscow), 19 June 2015, www.ng.ru/world/2015-06-19/8_saudi.html.

¹²Major General (Ret) A. Ishqi quoted in A. A. Al-Umari, 'Siyasiyun wa-askariyun li-ziyarat wali wali al-ahd li-Rusiya "munatafijabi"' [Political and Military Figures on the Deputy Crown Prince's Visit to Russia: 'A Positive Turning Point'], *Al-Yawm* (Dammam), 20 June 2015, www.alyaum.com/article/4074229 (hereafter A. A. Al-Umari, 2015, 'Siyasiyun wa-askariyun').

¹³A. Al-Anazi, 2015, 'Al-Saudiya wa-Rusiya'.

policy making, with the same Saudi spokesman noting that Saudi Arabia's renewed interest in Russia signaled a Saudi desire to have 'a diversified policy' in the region rather than dealing with 'a single hegemonic state, even if that state is a friendly one such as America'.¹⁴ As Saudi journalists stressed, Riyadh also intended to signal and put pressure on the United States in terms of the latter's policies in the Middle East and specifically of its position on the nuclear talks with Iran then still in progress.¹⁵ One influential Saudi commentator even suggested that the closer ties with Moscow were in response to the United States' allegedly having 'stabbed the Saudis in the back' with its surprise rapprochement with Iran and that the expected nuclear agreement — which was eventually concluded in mid-July 2015 — constituted 'an important political turning point' in the new Iranian-US relationship.¹⁶ At the very least, Riyadh also hoped to give the impression that its visible willingness to deal with Russia 'might have raised some questions with the Americans about losing traditional allies in the Gulf region' and believed it had succeeded in making the United States more anxious to retain Saudi Arabia's friendship.¹⁷

Russia, for its part, may have hoped to develop a closer relationship with Saudi Arabia and the other the Gulf states, sensing Saudi disappointment and friction with the United States over Washington's rapprochement with Iran and hesitant policy on Syria, and perhaps hoped to convince Riyadh to reduce its oil production to steady oil prices as an analyst with Russia's state-run Strategic Studies Institute posited.¹⁸

Iran, on the other hand, did not seem overly concerned about any potential Saudi-Russian rapprochement at its expense, whether on Syria, Yemen, arms sales — including the Iskander — or pressure on the international nuclear agreement then being negotiated. As one Iranian analysis concluded in June 2015,

Nuclear and military cooperation between Riyadh and Moscow, as in the past, will be conditioned by the [arms] deliveries provided to Saudi Arabia by the Western countries, and especially by America, and therefore [Saudi-Russian] cooperation will not see any significant growth in the future.¹⁹

¹⁴Major General (Ret) A. Ishqi quoted in A. Shibaru, 'Muhallilan rusi wa-saudi yatahaddathan li'l-Nahar an al-taqarub bayn al-baladayn' [Two Analysts, One Russian the Other a Saudi, Talk to *Al-Nahar* about the Rapprochement Between the Two Countries], *Al-Nahar* (Beirut), 19 June 2015, www.annahar.com/article/246247 (hereafter A. Shibaru, 2015, 'Muhallilan rusi wa-saudi').

¹⁵M. Al Al-Shaykh, 'Luhmat al-khalijiyyin wa-Camp David' [The Link Between Those From the Gulf and Camp David], *Al-Jazira* (Riyadh), 10 May 2015, www.al-jazirah.com/2015/20150510/lp4.htm; A. Al-Anazi, 2015, 'Al-Saudiya wa-Rusiya'.

¹⁶A. A. Al-Rashid, 'Al-Rus qadimun ila Al-Saudiya' [The Russians Are Coming to Saudi Arabia], *Al-Sharq Al-Awsat* (London), 20 June 2015, <http://aawsat.com/node/387946>.

¹⁷Y. Al-Kuwaylit, 'Al-Itar wa'l-mana fi ziyarat al-malik Salman li-Amrika' [The Framework and Meaning of King Salman's Visit to America], *Al-Yawm*, 12 September 2015, <http://www.alyaum.com/article/4088551>; A. A. Hilal, 'Waqfa ma sadiq' [Sitting Down With a Friend], *Ukaz* (Jeddah), 7 September 2015, <http://okaz.co/bw1kNduW8>.

¹⁸E. Suponina quoted in A. Shibaru, 2015, 'Muhallilan rusi wa-saudi'.

¹⁹'Al-Saudiya wa-Rusiya: alaqt ghayr mustaqirra wa-muarrada li'l-inhiyar' [Saudi Arabia and Russia: Unstable Relations Vulnerable to a Collapse], *Al-Waqt* (Tehran), 30 June 2015, <http://alwaght.com/ar/News/12870>.

In concrete terms, however, Prince Muhammad's June 2015 visit did result in a package of announced measures, including a huge arms buy, Saudi investment in Russia potentially totaling USD 10 billion, and an agreement to have Russia build 16 of Saudi Arabia's 20 projected nuclear reactors, as well as an agreement by Saudi Arabia to review its oil production levels.²⁰

Riyadh focuses on the Iskander

Significantly, a key component that emerged in this new phase of the Saudi-Russian relationship was the Iskander missile system. Although Saudi representatives almost assuredly would have had an opportunity to observe the Iskander at the military exposition in neighboring Abu Dhabi in February 2015, it was only when a Saudi delegation attended the 'Armiya-2015' arms exposition near Moscow in June 2015 that it revealed publicly that it had come to evaluate the Iskander.²¹ That same month, Saudi Arabia's Foreign Minister Adil Al-Jubeir also confirmed that his country was interested in acquiring the Iskander.²² The following month, Russia also made it public that it was willing to provide the system to Saudi Arabia.²³ The semi-official *Rossiiskaya Gazeta* confirmed in August 2015 that Saudi Arabia would indeed be buying the Iskander.²⁴ According to the Iskander's designer, Oleg Mamalyga, the original intent had been to produce the missile for export. This was to be the model 'E'. Given that countries in the Middle East were seen as a prime market, the name Iskander — Arabic for Alexander the Great — had been chosen on the assumption that that would appeal to local buyers.²⁵ This export model with a range of 280 km/174 miles had already been displayed at an arms show in 1999, but it apparently was a difficult sell, with buyers hesitant, since Russia's own forces had not fielded the system.²⁶ Subsequently, the 'M' model with a 500-km/311-mile range and

²⁰M. bin Yahya Al-Fal, 'Al-Ziyara al-tarikhiya li-waliy waliy al-ahd ila Rusiya: Al-Tanmiya al-rabih al-akbar' [The Deputy Crown Prince's Historic Visit to Russia: Development Is the Biggest Winner], *Al-Jazira*, 2 July 2015, www.al-jazirah.com/2015/20150702/ar5.htm; 'Russia, Saudi Arabia Sign Nuclear Energy Cooperation Deal', *Moscow Times*, 19 June 2015, <https://themoscowtimes.com/articles/russia-saudi-arabia-sign-nuclear-energy-cooperation-deal-47525>.

²¹Istochnik: Saudovskaya Araviya zainteresovana v priobretenii Iskanderov" [A Source: Saudi Arabia Is Interested in Buying the Iskander], TASS (Moscow), 16 June 2015, <http://tass.ru/armiya-i-opk/2045136>.

²²Ziyarat waliy waliy al-ahd li-Musku' [The Deputy Crown Prince's Visit to Moscow], *Al-Riyadh*, 20 June 2015, www.alriyadh.com/1058324.

²³'Rossiya gotova postavlyat' Saudovskoi Aravii Iskandery' [Russia Is Prepared to Provide the Iskander to Saudi Arabia], TASS, 3 July 2015, www.ng.ru/news/509147.html?print=Y.

²⁴'MID Saudovskoi Aravii: Er-Riyad planiruet polupku kompleksov Iskander' [Saudi Arabia's Minister of Foreign Affairs: Riyadh Plans to Buy the Iskander System], *Rossiiskaya Gazeta* (Moscow), 11 August 2015, <http://rg.ru/2015/08/11/iskander-site-anons.html>.

²⁵Interview with O. Mamalyga by O. Klochov, 'Sekrety novogo Iskandera' [Secrets about the New Iskander], *Nezavisimoe Voennoe Obozrenie* (Moscow), 5 November 2004, http://nvo.ng.ru/armament/2004-11-05/1_iskander.html; V. Litovkin, 'Reinkarnatsiya Iskandera' [The Reincarnation of the Iskander], RIA Novosti (Moscow), 20 December 2006, <https://ria.ru/ruharakter/20061220/57352502.html>.

²⁶Ibid.

additional capabilities was developed for domestic use and added to the Russian military's order of battle by 2007.

Why the Iskander?

The Iskander is a formidable weapon (see the Appendix). However, in strictly military terms, it made little sense for Saudi Arabia to acquire the Iskander-E export version, whether earlier through Egypt or now directly. The limited range of the Iskander-E that Moscow seemed willing to offer to Saudi Arabia put it beyond most Iranian targets, apart from those along part of the coast. Nor was there much need for it in Saudi Arabia's war in Yemen, given the latter's lack of air defense against manned Saudi aircraft and the paucity of significant military targets requiring missile strikes. The Russian media, for its part, suggested openly that what was in play in talks with Saudi Arabia was the Iskander-M model fielded with Russia's own armed forces, identifying not only the model by name but also its specifications, including its 500-km range and ability to carry a nuclear warhead.²⁷ The Saudi media, for its part, gave some, though limited, coverage to the Iskander issue, usually simply repeating Russian reports on the system's capabilities, although one local Saudi electronic newspaper did dwell on the missile's 500-km range and on the fact that it was nuclear-capable, which may be indicative of Riyadh's real interest in acquiring such a missile.²⁸

Moreover, specifically in terms of the Iskander, one of Riyadh's motives very likely was to save face politically at home and in the region by keeping pace with the missile capabilities that Iran had been developing domestically. And such a high-visibility arms system was very likely meant to also attract US attention and be an unmistakable sign of Saudi displeasure with American policy and goad the United States into firmer commitments by showing that Saudi Arabia had alternative sources for even major weapons systems. An active-duty Saudi general, in fact, openly interpreted this visit to Russia against the background of Riyadh's relationship with the United States, warning that 'there is no permanent enmity or permanent friendship, just mutual interests'. And he added that a particular interest was '[our] country's requirements for weaponry. . . . We must not throw ourselves into the embrace of any single player or country in order to avoid having them then control the Umma', that is, the community of Islamic countries.²⁹

²⁷'Li-madha tughrib Al-Saudiya fi imtilak sawarikh Iskander al-fattaka?' [Why Does Saudi Arabia Want to Acquire the Deadly Iskander Missiles?], Sputnik TV in Arabic (Moscow), 15 August 2015, https://arabic.sputniknews.com/arab_world/201508151015316816 (hereafter 'Li-madha tughrib')

²⁸K. Ali, 'Li-madha tusirr Al-Saudiya ala imtilak aslihat Iskander al-fattaka?' [Why Does Saudi Arabia Insist on Acquiring the Lethal Iskander Weapon?], *Sabq* (Riyadh), 15 August 2015, <https://sabq.org/unEgde>; F. Matuq, 'Al-Saudiya tuazziz manzhumatha al-askariya bi-sawarikh Iskander al-rusiya' [Saudi Arabia Bolsters Its Military Order of Battle with the Russian Iskander Missiles], *Al-Riyadh Post*, 10 October 2015, <http://riyadhpst.live/3179>; Tuadil qunbula nawawiya: Al-Saudiya tasa li-shira' sawarikh Iskander' [It Is Equivalent to an Atom Bomb: Saudi Arabia Is Seeking to Buy the Iskander Missile], *Al-Khalij* (Riyadh), 16 August 2015, <http://alkhaleejonline.net/articles/1439720972622834000>.

²⁹Major General A. bin Said Al-Harithi quoted in A. A. Al-Umari, 2015, 'Siyasiyun wa-askariyun'.

A fading Iskander deal

Admittedly, some Russian observers were skeptical at the time about Riyadh's sincerity, and one analysis cautioned not to expect 'a breakthrough in bilateral relations'.³⁰ Likewise, the head of Russia's Institute of Religion and Politics noted that Saudi Arabia often used offers of arms purchases merely as an inducement to improve relations with other countries, even if it did not really intend to buy the weapon systems in question.³¹ As another Russian analyst likewise maintained, Riyadh had dangled the prospect of arms deals—which he termed 'carrots'—before, simply to influence Russian policy, and identified in this case specifically as the goal to diminish Moscow's support for the Asad regime. In fact, he noted that years earlier the Saudis had expressed an interest in buying an array of Russian arms and had even conducted a full range of tests on helicopters, the BMP-3, and on the T-90, but, as it turned out, Riyadh's real intent apparently had only been to convince Moscow not to sell certain systems to Iran. And when in 2010 Moscow had announced that it would not be selling the S-300 air defense system to Tehran at that time in any event, Saudi interest in a Russian arms deal had evaporated.³² Reportedly, officials at Rosoboronexport, Russia's trading agency for defense-related equipment and services, were also doubtful at the time that Saudi Arabia was serious about the Iskander deal, based on past history.³³

Moreover, there were also early indications from the Russian side that a delivery of the Iskander would have to be delayed, even if a deal materialized. First, there was the question of the missile's limited production run and priority to equip Russia's armed forces but also competing commitments to provide the system to Armenia and Kazakhstan.³⁴ Beyond such factors of supply, there were also growing political misgivings on Moscow's side. For example, the Chief of the Main Staff of Russia's Strategic Rocket Force noted that Riyadh probably intended to acquire the Iskander in order to confront Iran, a country with which Moscow shared numerous regional interests and to whom it was planning to deliver the competing S-300 air defense system in the near future.³⁵

³⁰Arabskie skazki: Stoit li verit' v sbliizhenie Rossii i Saudovskoi Aravii' [Arab Fairy Tales: Should One Believe in a Rapprochement between Russia and Saudi Arabia], Lenta.Ru (Moscow), 1 July 2015, <https://lenta.ru/articles/2015/06/30/saudits>. The fact that the analysis was repeated by the official RIA Novosti agency suggests that official circles shared in the wariness.

³¹A. Ignatenko quoted in A. Braterskii, 'Saudovskaya Araviya khochet Iskandery' [Saudi Arabia Wants the Iskander], *Gazeta.ru* (Moscow), 11 August 2015, https://www.gazeta.ru/politics/2015/08/11_a_7682665.shtml.

³²A. Nikol'skii, 2015, 'K vizitu korolya Saudovskoi Aravii'. The fact that RIA, Russia's official news agency, repeated this story suggests that the Russian government agreed with such views.

³³Ibid.

³⁴'Saudovskaya Araviya zakupit kompleksy Iskander' [Saudi Arabia Is Buying the Iskander System], *Rossiiskaya gazeta*, 3 July 2015, www.rg.ru/2015/07/03/iskander2-site.html; Y. Zaishanev and A. Rezchikov, 'Saudovskaya Araviya Iskandery srazu ne poluchit' [Saudi Arabia Will Not Receive the Iskander Immediately], *Vzglyad* (Moscow), 11 August 2015, <http://vz.ru/politics/2015/8/11760678.html>.

³⁵Ibid.

In the event, it became increasingly evident that any hope for leverage resulting from Riyadh's courting of Russia had been misplaced in light of Moscow's continuing — and even increasing — military and political support for the Asad regime. And, by mid-July 2015, the Nuclear Agreement with Iran (formally the Joint Comprehensive Plan of Action) had been reached. Riyadh's realization that it still needed US security assurances, as well as American logistic and intelligence support — whether by the US military or US contractors — for the war that Saudi Arabia had launched in Yemen beginning in March 2015, confirmed by King Salman's high-profile visit to the United States in September 2015 and followed by the Nuclear Agreement's ratification by the US Congress that same month, rendered Saudi efforts to gain Russian support to prevent such Saudi political overtures less relevant.

In fact, Riyadh came to openly question the utility of its rapprochement with Moscow with the Saudi media by September 2015 asking, 'Is there any benefit for the Arabs to continue their policy of opening to Moscow?'³⁶ To be sure, Saudi Arabia's state-controlled media appeared to still harbor hopes that a second visit by Prince Muhammad bin Salman would be able to initiate 'a new relationship' with Russia focused on opposition to Iran, which would overshadow the recently concluded Nuclear Agreement, then being viewed in the region as a political defeat for Riyadh.³⁷ Instead, this visit too failed to budge Russian policy in the Middle East. And, although King Salman and Putin reportedly spoke at the G-20 conference in Turkey in November 2015, the King's planned visit to Russia never materialized. Along with Riyadh's disappointment in its Russian gambit, the Iskander deal also evaporated for good. By November 2015, Sergei Chemezov, the Director General of the Russian state company manufacturing the Iskander, was willing to confirm that there were no ongoing negotiations for the sale of the Iskander.³⁸

Russia's support for the Asad regime and direct military involvement in Syria to the detriment of the rebels that included Saudi-supported groups throughout 2016 only hardened Saudi criticism of Moscow. And while the threat from the Islamic State (ISIS) had looked imminent in 2015 with the latter's unexpected successes in Iraq and Syria, encouraging Riyadh to look to Moscow as a potential co-belligerent, by 2016 that threat had receded. Although this cooler relationship did not mean that mutually beneficial agreements could not be reached between Moscow and Riyadh, such as the one on oil production cuts in November 2016 designed to shore up the low

³⁶H. A. Hashim, 'Safaqat iraniya rusiya ghamida' [Murky Iranian-Russian Deals], *Al-Riyadh*, 16 September 2015, www.alriyadh.com/1082092.

³⁷I. A. Allah, 'Al-Taqarub al-saudi al-rusi yuthir makhawif Amrika' [The Saudi-Russian Rapprochement Arouses America's Fears], *Al-Watan* (Abha, Saudi Arabia), 29 October 2015, www.alwatan.com.sa/Politics/News_Detail.aspx?ArticleID=240234.

³⁸'Chemezov oproverg fakt peregovorov po Iskanderam s Saudovskoi Araviei' [Chemezov Denied That There Are Negotiations about the Iskander with Saudi Arabia], *Voennye Novosti* (Moscow), 9 November 2015, <https://voen-news.ru/chemezov-proverg-fakt-peregovorov-po-iskanderam-s-saudovkoiy-araviei>.

prices that had hurt all producers, agreements on such sensitive items as missile purchases had become increasingly doubtful.³⁹ Even though in the summer of 2016 Riyadh was to again offer economic incentives if Moscow would drop its support for Assad, this time the Iskander was not on the table.⁴⁰ And by 2016, most observers did not expect any breakthrough in relations, given the enduring differences in regional interests.⁴¹ In fact, in June 2016, Sergei Chemezov would declare openly that it was 'extremely unlikely' that Russia would provide the Iskander to Saudi Arabia.⁴²

Saudi Arabia's parallel relationship with Ukraine

Saudi Arabia's approach to the Iskander was also conditioned by its parallel relationship with Ukraine, and a full understanding of the fate of the Iskander in Russian-Saudi relations also requires an appreciation of the role that Ukraine has played in Saudi defense thinking.

Ukraine's Grom/Grim (Thunder)-2: An alternative for Riyadh?

Significantly, there are indications that even while Russia and Saudi Arabia were engaged in discussions about the Iskander, Riyadh at the same time had also been conducting a parallel effort with Ukraine related to an equivalent missile system. In fact, according to Ukrainian media reports, Saudi Arabia had already become involved in 2014 after the ouster of President Viktor Yanukovych in February of that year as part of the populist 'Orange Revolution', when Riyadh had initiated an approach to Ukraine's missile industry.⁴³ And this time there was to be a greater degree of military, political, and economic bilateral convergence than had been true in the Russian-Saudi case.

Ukraine has had a long history with the design and manufacturing of missiles dating back to the days when it was still part of the Soviet Union.⁴⁴

³⁹R. El Gamal, P. Hafezi, and D. Zhdannikov, 'How Putin, Khamenei and Saudi Prince Got OPEC Deal Done,' Reuters, 1 December 2016, www.reuters.com/article/us-opec-meeting-idUSKBN13Q4WG.

⁴⁰'Saudi Arabia Offers Russia Economic Incentives to Drop Assad', *Moscow Times*, 22 July 2016, <https://themoscowtimes.com/news/saudi-arabia-to-make-russia-more-powerful-than-ussr-to-end-assad-support-54705>.

⁴¹For example, D. Trenin, 'Russia in the Middle East: Moscow's Objectives, Priorities, and Policy Drivers', Carnegie Moscow Center Task Force White Paper, 5 April 2016, <http://carnegie.ru/2016/04/05/russia-in-middle-east-moscow-s-objectives-priorities-and-policy-drivers-pub-63244>; E. H. Mikail and C. E. Aytekin, 'Russia-Saudi Arabia Relations: Geopolitical Rivalry and the Conditions of Pragmatic Rapprochement', *China-USA Business Review*, xv (9) (2016), pp. 453–458; M. N. Katz, 'Russia's Regional Ties Grow at Saudi Expense', The Arab Gulf States Institute in Washington, 19 August 2016, <http://www.agsi.w.org/russias-regional-ties-grow-at-saudi-expense>.

⁴²Interview with S. Chemezov by I. Safronov, 'Ne bylo ni odnogo goda, kogda ob'emy padali, vseгда nablyudalsya rost' [There Was Not a Single Year That Output Fell; It Always Increased], *Kommersant* (Moscow), 6 June 2016, <http://kommersant.ru/doc/2996060>.

⁴³Y. Podolyaka, 'Otvét Iskanderu: Ukraina udarit Gromom po ambitsiyam Saudovskoi Aravii' [Reply to the Iskander: Ukraine Strikes with the Grom Thanks to Saudi Arabia's Ambitions], Kha'rkov Novostnoe Aгенstvo, 15 November 2016, <http://nahnews.org/962962-otvet-iskanderu-ukraina-udarit-gromom-po-ambiciyam-saudovskoj-aravii> (hereafter Y. Podolyaka, 2016, 'Otvét Iskanderu').

⁴⁴For an overview of this issues, see 'Ukraine: Missile', James Martin Center for Nonproliferation Studies, Nuclear Threat Initiative, Washington, DC, January 2015, www.nti.org/learn/countries/ukraine/delivery-systems.

Research and development had continued, albeit at a much reduced pace, after the latter's dissolution in 1991, not least in order retain the many jobs that were connected to this branch of the country's industry. The Yuzhmash conglomerate has had the lead for missile production, but there was also always participation by numerous other firms. As an indication of the significance of the missile sector for the country's economy, in the case of the Sapsan missile, 70 firms had been involved.⁴⁵

Soon after independence, Ukraine had begun its quest to replace the obsolescent Soviet-era Tochka (SS-21 SCARAB) and Scud-B in its arsenal, which it had committed to destroy, and although Ukraine's missile projects and prototypes have featured a succession of names over the years — Borysfen, Grom, Sapsan — the process consisted of an evolution and refinement of basically the same system, albeit with additional capabilities in successive iterations. However, no project ever seemed to come to fruition, at least in terms of full production, as money proved to be a major hurdle all along, not surprising in light of Ukraine's overall economic woes, accompanied by faltering interest under the increasingly authoritarian and pro-Moscow regime of President Yanukovich. Thus, the Sapsan missile project, initiated in 2007, languished until Yanukovich's Minister of Defense, Pavel Lebedev, cut funding in 2013 and 'suspended' the project.⁴⁶ Although the project for a follow-on system, eventually known as the Grom-2, was said to have been begun in 2013, nothing had come of that by the time Yanukovich was ousted.⁴⁷ By then, Ukraine had only a single missile brigade, down from six in 1991.⁴⁸

Of significance, the large defense sector that Ukraine had inherited — including the missile-related sector — was closely intertwined with that in Russia in terms of materials, components, and markets. This relationship was put in jeopardy in the wake of Moscow's invasion of Crimea and support for separatists in Eastern Ukraine beginning in 2014, and Ukraine's defense contracts with Russia and prospects for further development suffered accordingly.⁴⁹ Moreover, while Ukraine's missile industry had been buffered

⁴⁵'Ministr oborony podtverdil otkaz Ukrainy ot raketnogo kompleksa Sapsan: 200 mln grn potratili neeffektivno' [The Minister of Defense Confirmed That Ukraine Had Abandoned the Sapsan System: 200 Million Grivnyas Spent Ineffectively], *ZN,UA* (Kiev), 23 June 2013, http://zn.ua/UKRAINE/ministr-oborony-podtverdil-otkaz-ukrainy-ot-raketnogo-kompleksa-sapsan-200-mln-grn-potratili-neeftivno-124683_.html.

⁴⁶Ibid.

⁴⁷'Ukraina i Saudovskaya Araviya sovместno ispytayut novyi raketnyi kompleks Grom-2' [Ukraine and Saudi Arabia Jointly Test the New Grom-2 Missile System], *Izvestiya* (Kharkov), 4 November 2016, <http://izvestia.kharkov.ua/online/20/1225222.html> (hereafter 'Ukraina i Saudovskaya Araviya sovместno ispytayut').

⁴⁸D. Mikhailova, 'Dva slova o novoi ukrainskoi rakete: ognevaya pokazukha' [A Couple of Words about Ukraine's New Missile: A Fiery Showpiece], *RIA Novosti Ukraina* (Kiev), 25 March 2016, <http://rian.com.ua/columnist/20160325/1007275515.html> (hereafter D. Mikhailova, 2016, 'Dva slova o novoi ukrainskoi rakete').

⁴⁹'Yuzhmash poteryaet 80% vyruchki iz-za otkaza Rossii ot Zenitov' [Yuzhmash Loses 80 Per Cent of Its Orders Due to Russia's Repudiation of the Zenit], *LB* (Kiev), 2 February 2015, http://lb.ua/economics/2015/02/02/294177_yuzhmash_poteryaet-8-viruchki-izza.html. Also see the insightful study by A. McLees and E. Rumer, 'Saving Ukraine's Defense Industry', Carnegie Endowment for International Peace, Washington, DC, 30 July 2014, <http://carnegieendowment.org/2014/07/30/saving-ukraine-s-defense-industry>.

to a certain extent thanks to the collaboration for almost a decade with the Brazilian Space Agency, centering on Ukraine's Cyclone space-launch vehicle system, Brazil's own financial difficulties had led the latter to end the project definitively by 2015, further jeopardizing the jobs of many rocket experts in Ukraine.⁵⁰

Yet, at the same time, no doubt motivated by the mounting threat from Russia and the deteriorating military situation and despite its financial woes, Ukraine felt a renewed need for a missile system that would be effective as a deterrent and as a war-fighting tool. Fortuitously, this time a solution appeared in the form of a foreign funding source, as a confluence of interests with Saudi Arabia was to reinvigorate what came to be known as the Grom-2 project. In effect, Riyadh reportedly contributed a crucial USD 40 million needed to cover initial production costs and expressed its willingness to become a customer for the new missile.⁵¹ Significantly, already in March 2015 Ukraine's President Petr Poroshenko had alluded to the prospect of a new defense contract for Yuzhmash — which, as subsequent events turned out, could only have been a reference to Saudi Arabia. At the time, he remarked coyly that he could not provide additional details because defense contracts are 'top secret' but added that 'you can guess about what kind of product we are talking' and was able to give some of the back pay owed to the enterprise's workers.⁵² Ukrainian commentators viewed this financial input as a solid Saudi commitment to buy the system, with one military affairs analyst noting that 'This is not charity. Saudi Arabia intends to buy this operational-tactical system in Ukraine, and its finance, obviously, is a down-payment or some other form of mutually beneficial provision'.⁵³ As Ukrainians recognized, Riyadh's financial input, despite its modest size, had come at a crucial juncture, enabling the country's defense industry to survive and be in a position for expansion.⁵⁴ Otherwise, with the loss of Russian markets and severe financial difficulties at home, it was possible that Ukraine's defense industry as a whole might have collapsed, with hard-to-replace experts moving permanently to other sectors or abroad. Moreover, for Ukraine, supplanting Russia as Saudi Arabia's supplier for a new missile

⁵⁰P. B. de Selding, 'Brazil Pulling Out of Ukrainian Launcher Project,' *Space News*, Alexandria, VA, 16 April 2015, <http://spacenews.com/brazil-pulling-out-of-ukrainian-launcher-project>.

⁵¹A. Gor, 'Nad Rossiei gryanet Grom: Ukraina razrabatyvaet moshchyi raketniy kompleks' [Grom Thunders Over Russia: Ukraine Builds a Powerful Missile System], *Apostrof* (Kiev), 5 November 2016, <http://apostrophe.ua/article/business/industries/2016-11-05/nad-rossiei-gryanet-grom-ukraina-razrabatyvaet-moshchnyi-raketniy-kompleks/8172> (hereafter A. Gor, 2016, 'Nad Rossiei gryanet Grom').

⁵²Y. Markin, 'Poroshenko obnadezhil Yuzhmash sekretnym zakazom' [Poroshenko Gave Hope to Yuzhmash with a Secret Contract], *Vesti* (Kiev), 30 March 2015, <http://vesti-ukr.com/nauka-i-tehnologii/94251-poroshenko-obnadezhil-yuzhmash-sekretnym-zakazom>.

⁵³O. Ivanyuk interviewed by A. Ganus, 'A teper davaite pogovorymo' [Now, Let Us Talk], *Ekspres* (Kiev), 25 September 2016, <http://ekspres.ua/main/2016/09/25/204577-davayte-pogovorymo>.

⁵⁴A. Starostin, 'Kto podnimaet ukrainskii OPK' [Who Is Revitalizing the Ukrainian Military-Industrial Complex], *Delovaya stolitsa* (Kiev), 8 February 2016, www.dsnews.ua/economics/kto-podnimet-ukrainskii-opk-07022016193000.

system would be a political victory, stealing a march on the country posing the greatest threat. However, even after production of the Grom-2 prototype, without funding from Saudi purchases Ukraine would be hard put to afford a significant production run, and some Ukrainians were concerned that the United States might pressure Riyadh to hold off on a follow-on deal.⁵⁵

The centerpiece of Ukraine's new missile effort, the Grom/Grim-2 (Thunder), is a linear development of its predecessors and was intended as a replacement for the Tochka. Basically, it is an equivalent of Russia's Iskander, not surprising as they both have the same lineage. Like the Iskander, it is road-mobile, can be used against air and sea, as well as ground, targets, and the two missiles carried on the carrier vehicle can be launched nearly simultaneously against independent targets.⁵⁶ The CEP is said to be at 'international standards', and the 480 kg/1058 lb warhead has destructive power over 10,000 square meters, or 2–3 hectares using cluster munitions and standard high-explosive charges, while with selected munitions the Grom-2 can also serve as a 'bunker-buster' against heavily fortified positions. It can be fired either ballistically or in a cruise mode, and the continuously adjustable trajectory of the warhead enables it to evade virtually any currently fielded air defense system. And Ukraine claimed that producing this system did not have to rely on Russia, as it was built using only locally procured components.⁵⁷ The declared range of the Grom-2 is 280–300 km, but as the Ukrainian media, including that of the Ukrainian armed forces, has often pointed out, that may be a 'legal formality' intended to comply with the MTCR, while what the media routinely terms as the 'real range' may be 500 km/311 miles.⁵⁸ Ukraine and Saudi Arabia were reported to have tested the Grom-2 jointly in November 2016.⁵⁹

For Riyadh, the Grom-2 would have all the same essential characteristics it could have expected from the Iskander. As a road-mobile missile, the Grom-2 would be less vulnerable than the systems currently in the Saudi arsenal, while its optical guidance could defeat Iran's S-300 air defense system recently acquired from Russia. One would expect, as had probably been true for the Iskander, that

⁵⁵Y. Podolyaka, 2016, 'Otvety Iskanderu'.

⁵⁶O. Katkov, 'Grom i Korshun dlya armii Ukrainy: noveishie rakety kak otvet na agressiyu Kremlya' [Grom and Korshun for the Army of Ukraine: The Most Recent Missiles as a Response to the Kremlin's Aggression], *Obozrevatel'* (Kiev), 29 January 2016, <http://obozrevatel.com/crime/47365-olha-i-neptun-armiya-ukrainyi-polu-chit-sverhmoschnyye-raketyi-dlya-zaschityi-ot-kremlya.htm> (hereafter O. Katkov, 2016, 'Grom i Korshun').

⁵⁷D. Mikhailova, 2016, 'Dva slova o novoi ukrainskoi rakete'.

⁵⁸For example, A. Lisenko, 'Grom ukhilyaet'sya vid protyraket protyvniku' [Grom Evades the Enemy's Anti-Missile Missiles], *Narodna armiya* (Kiev), 28 September 2016, <http://na.mil.gov.ua/37777-grom-uhilyayetsya-vid-protyraket-protyvnyka>; O. Katkov, 2016, 'Grom i Korshun', 'V KB Yuzhnoe pristupili k sborke raketnogo kompleksa Grom-2' [In the Yuzhnoe Design Bureau They Have Begun Assembling the Grom-2 Missile System], *Auto-Consulting* (Kiev), 30 August 2016, www.autoconsulting.com.ua/article.php?sid=36909 (hereafter 'V KB Yuzhnoe pristupili k sborke'); R. Rudoms'kii, 'Raketnyi kompleks Grom-2: Ukraina smozhet obstrelivat' Moskvu' [The Grom-2 Missile System: Ukraine Will Be Able to Strike Moscow], *Depo* (Kiev), 1 September 2016, www.depo.ua/rus/war/ukrayina-rozroblyae-raketnyi-kompleks-zdatniy-vrazhati-tsili-01092016113000.

⁵⁹'Ukraina i Saudovskaya Araviya sovместno ispytuyut'.

Riyadh would seek to acquire the longer-range export version of the Grom-2, as a shorter-range model would be of little military use. Its potential 500-km range, on the other hand, is sufficient to reach the Iranian heartland and numerous strategic targets, as well as beyond Baghdad in Iraq, adding significantly to Riyadh's deterrence and war-fighting posture. While Saudi Arabia may not be able to attain optimal effectiveness from the Grom-2, given its limited reconnaissance assets and capabilities, in many ways what is more important for Riyadh than the war-fighting impact of a weapon system is the image it projects, in this case that of a formidable weapon with a high degree of lethality and survivability. And moreover, this would add another vehicle able to deliver a nuclear warhead should the country acquire nuclear weapons in response to an Iranian breakout in the future.

Acquiring the Grom-2 from Ukraine rather than the Iskander from Russia would offer a number of advantages for Saudi Arabia, not least of which would be avoiding an inevitable Russian advisory presence to man and maintain the system had Riyadh chosen the Iskander, which would likely have been accompanied by an aggressive intelligence collection and recruitment effort. Ukrainian advisers, on the contrary, would be seen as having no detrimental political impact and would not pose a security threat. Ukraine, moreover, does not promote a rival regional policy on such contentious issues as Syria or Iran, much less engage in active military involvement in support of Riyadh's regional adversaries. In addition, a relationship with Kiev would avoid discord with the United States. Despite periodic friction between Washington and Riyadh, the latter realizes that the United States — not Russia — is the only country that could defend Saudi Arabia from Iran if it came to that and that the United States is the best source for the technology and investment that Saudi Arabia needs if its highly ambitious Vision 2030 economic plan is to succeed. In fact, the United States may actually view with equanimity cooperation with Ukraine funded by Riyadh, as this may improve Ukraine's defense posture without an additional Western input that Moscow might view as provocative.

Of note, Saudi Arabia devoted no publicity to the Grom-2 in its domestic press, avoiding even secondhand reports drawn from the foreign media, unlike its earlier coverage of the Iskander, and despite the fact that the basic news was widely available in the media of other Arab countries relying on both Ukrainian and Russian sources. Perhaps in a situation of confirmation by silence, the absence of such public information was an indication that Riyadh was more serious about the Grom-2 than it had been about the Iskander. If so, this would be in line with Saudi practice when it goes about actually acquiring a controversial system — such as an SSM — rather than just publicizing the possibility of such an acquisition for the purpose of pressuring the United States, as may have been the case with the Iskander.

Conversely, as one might expect, Ukrainians saw the missile development made possible by Saudi cooperation through the prism of their country's relationship with Russia. Ukrainian military figures, such as a past Chief of Staff of the country's Armed Forces, General-Lieutenant Igor' Romanenko, for example, viewed the

Grom-2 as a response to ‘increasing Russian aggression’.⁶⁰ And Romanenko stressed that ‘We need systems capable of striking significant Russian objectives. I believe that in comparison with the Russian Iskander, [the Grom-2] at a minimum, is on the same level’.⁶¹ The Ukrainian media, in fact, depicted Grom-2 as changing the theater balance with Russia, as well as serving as an effective deterrent able to ‘increase the cost of aggression exponentially’ and suggested repeatedly that the missile could reach Moscow and other key targets.⁶² At the same time, its minimum range of 50 km/31 miles also would make it a viable war-fighting tool at the tactical level in Eastern Ukraine. In many ways, this new capability was as important psychologically and politically as it was militarily for Ukraine.

Clearly, for Ukraine, the Saudi relationship entails significant benefits. While a provision for US security assistance in the amount of USD 350 million passed in Congress in December 2016, this was made, in part, conditional on implementing anti-corruption measures. Moreover, although US assistance with lethal weaponry is authorized, it is unlikely that this would extend to financing clearly offensive systems such as the Grom-2.⁶³ Also, it remains to be seen how US security assistance policy will evolve under the new Administration that could be less inclined to Ukraine.⁶⁴ Moreover, the Grom-2 relationship with Riyadh has been part of a larger bilateral ongoing relationship. In tangible terms, by May 2015, Saudi Arabia’s state-owned TAQNIYA Aeronautics conglomerate had signed a deal with Ukraine to assemble An-132 transport aircraft in Saudi Arabia and agreed to buy 30 of the newer and larger An-178 model, providing a substantial boost to Ukraine’s aircraft industry.⁶⁵ Likewise, there were prospects for expanding the range of other military and civilian exports to Saudi Arabia, including reports of an envisioned investment of USD 10.5 billion in Ukraine’s agricultural sector.⁶⁶ While one cannot prove a direct correlation with commercial deals, the more favorable

⁶⁰Quoted in A. Gor, 2016, ‘Nad Rossiei gryanet Grom’.

⁶¹Quoted in I. Berchak, ‘Grim proti Iskandera’ [Grom Versus the Iskander], *L’vyvs’ka Poshta* (Lviv), 12 November 2016, <http://lvivpost.net/ukraine/n/37996>.

⁶²A. Gor, 2016, ‘Nad Rossiei gryanet Grom’; ‘V KB Yuzhnoe pristupili k sborke’.

⁶³M. Eckel, ‘US Congress Passes Massive Defense Bill, Including Global Magnitsky Rights Measure’, Radio Free Europe (Prague), 8 December 2016, www.rferl.org/a/congress-russia-global-magnitsky-bill-passed/28164350.html; ‘The US Congress Passes NDAA, 2017 Boosting US Security Assistance to Ukraine to USD 350 mln’, Ministry of Foreign Affairs of Ukraine, 9 December 2016, www.kmu.gov.ua/control/publish/article?art_id=249572395.

⁶⁴J. Rogin, ‘Trump Campaign Guts GOP’s Anti-Russia Stance on Ukraine’, *The Washington Post* 18 July 2016, https://www.washingtonpost.com/opinions/global-opinions/trump-campaign-guts-gops-anti-russia-stance-on-ukraine/2016/07/18/98adb3b0-4cf3-11e6-a7d8-13d06b37f256_story.html?utm_term=.fda32804caff.

⁶⁵‘Antonov al-ukraniya tunshi’ awwal masna li’l-ta’irat fi Al-Mamlaka’ [The Antonov Firm to Establish the First Aircraft Factory in the Kingdom], *Al-Riyadh*, 4 May 2015, www.alriyadh.com/1044962. It was in Kiev, however, that the first joint An-132 aircraft was built in December 2016.

⁶⁶I. A. Zayid, ‘Al-Saudiya min istirad al-silah ila al-tasni al-harbi’ [Saudi Arabia: From Importing Arms to Military Manufacturing], *Al-Sharq Al-Awsat*, 1 April 2016, <https://aawsat.com/node/606106>; ‘Ukraina i Saudovskaya Araviya aktiviziruyut ekonomicheskoe sotrudnichestvo’ [Ukraine and Saudi Arabia Activate Economic Cooperation], *Utro* (Kiev), 8 April 2016, www.utro.ua; ‘Saudiv’s’ka Araviya mozhe investuvaty ponad 10 mlrd dol. u sil’s’ke gospodarstvo Ukrayini’ [Saudi Arabia May Invest More Than \$10 Billion in Ukraine’s Agricultural Sector], *112.ua* (Kiev), 6 February 2016, <https://ua.112.ua/ekonomika/saudivska-araviya-mozhe-investuvaty-ponad-10-mlrd-dol-u-sil’ske-hospodarstvo-ukrainy-290064-print.html>.

atmosphere and impact on economic relations created by such high-impact missile sales cannot be discounted.

Moscow's reaction

Russia has always been sensitive about potential missile sales abroad by Ukraine, which would strengthen the latter, and Russia's Ministry of Foreign Affairs, somewhat sanctimoniously, had warned the post-Yanukovich government in Ukraine preemptively against violating the MTCR by any foreign missile sales.⁶⁷ Moscow, not surprisingly, was irritated when it became public that Saudi Arabia was supporting Ukraine's missile industry. For Russia, the major economic deal with Riyadh that it had publicized at home and abroad, highlighted by a high-visibility item such as the Iskander, would have been a political as well as an economic victory over the sanctions imposed due to its policies against Ukraine and would have been especially significant with Saudi Arabia, one of the United States' long-standing allies. The Saudi-Ukrainian deal effectively scuttled in a highly visible manner any chance for a Russian missile sale to Riyadh in the future, which must have been embarrassing for Moscow. Perhaps as a way to counter the perception that it was the Saudis who had jilted Russia, Sergei Chemezov, the director of the state firm producing the Iskander, in June 2016 went out of his way to make the case that it was Russia who had decided not to sell the system to Saudi Arabia because 'this is a major offensive weapon, capable of carrying nuclear munitions' and claimed that the Saudis were still interested but that the Iskander was not for export.⁶⁸ Such new-found qualms conveniently ignored the fact that Chemezov earlier had assured that the system had been cleared for export to Saudi Arabia or the fact that the system was being exported to Armenia.⁶⁹

Perhaps more importantly, Saudi intervention also enhanced Ukraine's military capability and political image by enabling the development and production of the new Grom-2 system, something that would otherwise have been impossible due to Ukraine's weak economy. Russia's state-run media made it a point to stress that financial obstacles had prevented Ukraine from fielding a Grom-2-type missile since 2003, and that it was now able to do so only thanks to Saudi support, but still sought to cast doubt about the program's viability.⁷⁰ Moscow's irritation with the

⁶⁷MID: Rossiya nadeetsya, shto Ukraina ne narushit obyazatel'stva po OМУ' [The Ministry of Foreign Affairs: Russia Hopes That Ukraine Will Not Violate Its Obligations under the MCTR], RIA Novosti (Moscow), 7 April 2014, <https://ria.ru/world/20140407/1002912857.html>.

⁶⁸S. Chemezov quoted in 'Chemezov: raketnye komplekсы Iskander ne poidut na eksport' [Chemezov: The Iskander Rocket System Is Not Going to Be Exported], TASS, 6 June 2016, <https://tass.ru/armiya-i-opk/3342756>.

⁶⁹'Li-madha tughrib'.

⁷⁰'Saudis Revealed as Possible Secret Buyer of Ukraine's Grom Missile System', Sputnik TV in English, 28 August 2016, <https://sputniknews.com/military/201608281044719156-ukraine-saudi-grom-missile-system>.

benefit to Ukraine was clear, as it wondered openly why Saudi Arabia had not gone instead to China or Pakistan for such a system.⁷¹ Some in Russia even accused Saudi Arabia and Ukraine of forming a new anti-Russian alliance, of which the projected Grom-2 sale was a part.⁷² In fact, Riyadh was accused of seeking the Grom-2 in order to use it as a delivery vehicle for nuclear weapons it would acquire in the future.⁷³ And Moscow even suggested the far-fetched possibility that Saudi Arabia wanted to acquire the Grom-2 in order to be in a position to strike Russia from Ukrainian territory because Moscow was hindering Riyadh's control of the Middle East.⁷⁴

Even as late as September 2016, Russia hoped that financial difficulties and the loss of access to Russian components would thwart actual production of the Grom-2, as an official at a Russia's Institute for Strategic Research posited.⁷⁵ Not coincidentally, that same official, in a veiled warning, suggested that Saudi Arabia would not — i.e., should not — help Kiev because of 'political agreements with Russia' and that Turkey too would not support the project and thereby seek the 'very dangerous' Grom-2, as Turkey was 'more interested in maintaining its relations with Russia'.⁷⁶ Taking an aggrieved self-righteous position, that same source warned that if Ukraine produced a missile system with a range exceeding that allowed by the MTCR, then the range of Russia's Iskander could also be raised and that Moscow would then have the right to withdraw from the MTCR.⁷⁷

And there could be second-order negative implications for Moscow from a Saudi-supported revived Ukrainian missile industry. Ukraine might now even compete with Russia for foreign missile sales, resulting in Moscow not only losing markets but also in seeing the political gains that a seller can achieve through its arms deliveries neutralized by Ukraine's sales to a buyer's rival. For example, when Russia transferred the Iskander to Armenia, the latter's rival neighbor, Azerbaijan, as a counter, entered into negotiations toward buying the Grom-2 from Ukraine.⁷⁸ And Ukraine

⁷¹Ibid.

⁷²E. Satanovskii and S. Korneevskii, 'Saudovskaya Araviya nas pobaivaetsya' [Saudi Arabia Fears Us], *Vesti FM* (Moscow), 15 November 2016, https://radiovesti.ru/episode/show/episode_id/42369.

⁷³Ibid.

⁷⁴Sawarikh Al-Rad: Hal tughrib Al-Saudiya fi tawjih darba sarukhiya "kawniya" li-Rusiya min Ukraniya? [The Grom Missile: Will It Entice Saudi Arabia Into Launching a Missile Attack on Russia from Ukraine?], *Sputnik TV in Arabic*, 16 November 2016, <https://arabic.sputniknews.com/military/201611161020840785>.

⁷⁵Reported in Dimitrii Sikorskii, 'Ukrainskii Grom-2: Iskander, kotoryi udarit po Kievu' [The Ukrainian Grom-2 Is an Iskander That Will Strike Kiev], *Ekonomika Segodnya* (Moscow), 13 September 2016, <https://rueconomics.ru/195979-ukrainskii-grom-2-iskander-kotoryi-udarit-po-kievu>.

⁷⁶Ibid.

⁷⁷Ibid.

⁷⁸'Azerbaidzhan nameren zakupat' v Ukraine OTRK Grom-2' [Azerbaijan Intends to Buy the Grom-2 Operational-Tactical Missile System in Ukraine], *Glavnoe* (Kiev), 2 October 2016, <http://glavnoe.ua/news/n285180> (hereafter *Glavnoe*, 2016, 'Azerbaidzhan nameren zakupat'); 'Azerbaidzhan planiruet zakupat' v Ukraine rateknye komplekisy Grom-2' [Azerbaijan Plans on Buying the Grom-2 Missile System in Ukraine], *Khvilya* (Kiev), 2 October 2016, <http://hvylya.net/reviews/panorama/azerbaydzhn-planiruet-zakupat-v-ukraine-otrk-grom-2.html>.

could now offer the Grom-2 also to Russia's European neighbors. Thus, Belarus expressed an interest in buying the Grom-2, while in Poland's case the latter now planned 'cooperation in the field of missile technology' with Ukraine.⁷⁹ Such transfers of the Grom-2 or its technology could reduce Moscow's potential for leverage over neighbors such as Poland and Belarus, which have felt increasingly threatened by Russia.

However, in a potential twist, in late January 2017 Russia's Sputnik TV announced that Saudi Arabia had backed out of its assumed deal with Ukraine and that, as a result, the Grom-2 program as a whole had stalled.⁸⁰ Neither Ukraine nor Saudi Arabia has commented up to now. If this report is true, one could attribute Riyadh's withdrawal to the latter's mounting financial difficulties. Or Riyadh may have viewed this gambit as leverage on Moscow's policy on Syria or Iran and, once that proved unsuccessful, lost interest in the missile project. Or one can speculate that there could also have been quiet political pressure on Riyadh to desist by the United States as well as by Moscow — for different reasons — whether to avoid undermining the MCTR for the former or to avoid strengthening Ukraine or threatening Moscow's ally Iran for the latter. Nevertheless, suggesting that the Grom-2 program was continuing, in March 2017 the Ukrainian Defense Minister announced that his country had successfully tested unspecified 'Ukrainian rockets' which, given their description as 'powerful rocket weaponry, capable of fulfilling multiple missions,' could only have referred to the Grom-2.⁸¹ Even if this deal now were never to materialize, its potential nevertheless will have served as a significant case study illuminating the impact of missiles on regional security and stability.

Conclusions

One can draw several conclusions from this study. First, the acquisition of a major arms system, such as a missile, is often a complex proposition, where political and economic considerations can be as important as purely military-technical ones. In this case, decision making for all three countries revolved around an array of broader interests that all played a role in determining policy. And the repercussions of such missile dealings can also be complex. Thus, if the transfer of Grom-2 to Saudi Arabia does go through, this will mark another phase in the regional arms escalation, especially with respect to the Saudi-Iranian confrontation. However, paradoxically, this deal may at the same time also stabilize somewhat the Russia-

⁷⁹*Glavnoe*, 2016, 'Azerbaidzhan nameren zakupat; O. Stanishevskaya, 'Ukraina i Pol'sha budut vmeste delat' rakety' [Ukraine and Poland Will Build Missiles Together in the Future], *Chas Pik* (Kiev), 3 December 2016, <http://vchaspi.ua/print/409659>.

⁸⁰'Saudis Bow Out of Contract to Develop Ukraine's Grom Missile System', Sputnik TV in English, 21 January 2017, <https://sputniknews.com/military/2017012211049857809-saudis-stop-funding-grom-srbm>.

⁸¹'Ukraina provela uspeshnyi ispitatel'nyi zapusk raket—Turchinov' [Ukraine Carried Out a Successful Test Firing of Rockets—Turchinov], *Segodnya* (Kiev) (21 March 2017) www.segodnya.ua/politics/pnews/ukraina-provela-uspeshnyy-zapusk-raket-turchinov-1005365.html.

Ukrainian balance thanks to the increased funds that Kiev would have available for expanding its own deterrence arsenal.

Second, this case study underlines the difficulty that the international community has in monitoring or preventing missile proliferation technology. In a country such as Saudi Arabia with a closed system and strict operational security, it can be hard to be sure even what model of a system is being delivered in the first place, what modifications are made to it thereafter, or how its embedded technology is used. For example, the Saudis, with the help of foreign experts, as noted, might be able to modify parameters to extend the range of the Grom-2 (if it is not already the full-range model) or make it nuclear-capable, or adapt a system's technology for other purposes, or pass it on to other parties. There may even be an understanding between supplier and recipient to perform such modifications covertly in order to avoid challenging international opinion and any resulting sanctions. In particular, there have long been calls in Saudi Arabia for developing an SSM production capability domestically, although that is beyond the country's technological capacity for the foreseeable future. However, a senior Saudi officer suggested a more realistic objective — namely, to acquire foreign missile technology, claiming that due to the proliferation of suppliers it is now easy to not only buy such systems — to modify SSMs and that it is relatively easy to perform such modifications.⁸² Indeed, Prince Bandar, former Saudi Ambassador in Washington, had claimed that the original accuracy of Saudi Arabia's CSS-2 SSMs had subsequently 'been improved by indigenous modifications'.⁸³

The Ukrainians have apparently also been proceeding on the assumption that Saudi Arabia was seeking licensing right to missile manufacturing as part of the Grom-2 deal.⁸⁴ As a result of the work on the joint AN-132 aircraft assembly venture with Ukraine, the project could provide a cover for the presence of Ukrainian aerospace technicians in-country who could work instead on rocket-related activities, whether modifying Ukrainian products such as the Grom-2 or those originating in other countries, or serve as a conduit for the covert transfer of additional missile-related technology. In fact, a concern within Russia's Ministry of Defense about possible reverse engineering of its Iskander missile system was said to have been a contributing factor to Moscow's ultimate

⁸²Staff Brigadier Z. bin Muhammad Al-Umari, 'Dawafi imtilak al-qudrat al-istratijiya al-sarukhiya al-fada'iya wa'l-nawawiya' [The Incentives for Acquiring Strategic Rocket, Space, and Nuclear Capabilities], *Majallat Quwwat Al-Difa Al-Jawwi Al-Malaki Al-Saudi*, December 2010, pp. 13, 15. This is the professional journal of the Saudi Air Defense Forces and the Strategic Rocket Forces.

⁸³Prince Bandar quoted in W. Simpson, *The Prince: The Secret Story of the World's Most Intriguing Royal*, Prince Bandar Bin Sultan, Regan, New York, 2006, p. 166. This work is a semi-official biography based largely on interviews with Prince Bandar.

⁸⁴A. Starostin, 'Kto meshaet Ukraïne sozdat' voennoe raketostroenie' [Who Is Preventing Ukraine from Establishing Military Missile Production], *Rezonans* (Kiev), 9 September 2016, <http://resonance.in.ua/kto-meshaet-ukraïne-sozdat-voennoe-raketostroenie>.

decision not to transfer even the export model to Saudi Arabia.⁸⁵ This process is further complicated by the crossover in technologies between SSMs and space-related launch vehicles that makes it difficult to identify a distinction, if there is one. Ukraine and Saudi Arabia have already had a long-standing if intermittent relationship in the field of space rocketry, earlier in partnership with Russia. In fact, according to the Ukrainian press, in 2009 the United States had reprimanded Kiev for allegedly intending to share with Riyadh 'Category 1' missile technology that could be used for SSMs as well as for space launch systems.⁸⁶ Such concerns have to be seen within the context of Saudi Arabia's interest in technology transfer, including in the missile sector.

Finally, this case may highlight the fragility of the MTCR and the prospects for the further erosion of its credibility. The MTCR has always depended on a significant degree of self-constraint. At times, the political will to monitor and to follow with sanctions stemming from the transfer of systems in potential violation of a country's commitments may be absent from the international community for ulterior motives. For example, technically, Saudi Arabia (and its British supplier) would already have been in violation of the MTCR with acquisition of the nuclear-capable air-launched Storm Shadow missile, with a potential range of 400 km/250 miles, which can be fired from the Tornado aircraft in the Saudi air order of battle.⁸⁷ This system may already have been in Saudi Arabia's arsenal for a number of years when the country acknowledged its acquisition in 2010, although it claimed that its maximum range was only 240 km.⁸⁸ Russia had also been identified as having transferred missile technology illegally to Iran in the past.⁸⁹ Ukraine has also been involved in the past in questionable missile technology transfers, such as the covert sale of AS-15 cruise missiles to Iran and China by a previous government in 2001, although cruise missiles do not come under the purview of the MTCR.⁹⁰

⁸⁵A. Mardasov, 'Iskandery ne pustili za granitsu' [They Did Not Permit the Iskander to Go Abroad], *Russkaya Vesna* (Moscow), 8 June 2016, http://rusvesna.su/recent_opinions/1465358899.

⁸⁶'Ukraina vyvazalas' v skandal s raketami dlya Saudovskoi Aravii' [Ukraine Implicated in Scandal with Missiles for Saudi Arabia], *Segodnya*, 8 December 2010, www.segodnya.ua; 'Yak nas rozzbroyuyut' SShA' [How the United States Disarms Us], *Teksti* (Kiev), 21 December 2010, <http://texty.org.ua>; 'Yaderny pitaniya' [Nuclear Issues], Ukrainian Radiation Protection Society Web site (Kiev), 1 October 2010, <http://urps-notice.blogspot.com/2011/01/wikileaks.html>.

⁸⁷J. Lewis, 'Storm Shadow, Saudi & the MTCR', Arms Control Wonk blog, 31 May 2011, www.armscontrolwonk.com/archive/204051/saudi-arabia-storm-shadow-the-mtcr.

⁸⁸J. Al-Maini, 'Al-Saudiya tuzawwid ta'irat Al-Tornado bi-sawarikh Shabh Al-Asifa' [Saudi Arabia Arms the Tornado Aircraft with Storm Shadow Missiles], *Jazan News*, 17 May 2010, <http://jazannews.org/news.php?action=show&id=2698>.

⁸⁹S. D. Goldman, K. Katzman, R. D. Shuey, and C. E. Behrens, *Russian Missile Technology and Nuclear Reactor Transfers to Iran*, Congressional Research Service, Washington, DC, December 1998, <http://congressionalresearch.com/98-299/document.php>; Central Intelligence Agency, 'Statement for the Record to the International Security, Proliferation and Federal Services Subcommittee of the Senate Governmental Affairs Committee by Robert D. Walpole, National Intelligence Officer for Strategic and Nuclear Programs', 21 September 2000, https://www.cia.gov/news-information/speeches-testimony/2000/walpole_missile_092200.htm; M. Dobbs, 'Collapse of Soviet Union Proved Boon to Iranian Missile Program', *The Washington Post*, 13 January 2002, p. A19.

⁹⁰P. Mendenhall and R. Windrem, 'Ukraine Leader Confirms Missile Sales to Iran', NBC News, 31 March 2005, www.nbcnews.com/id/7349303/ns/world_news/t/ukraine-leader-confirms-missile-sales-iran.

To be sure, the MTCR did succeed in slowing down missile proliferation in the past.⁹¹ The realistic utility of the MTCR may be, as Aaron Karp notes perceptively, in ‘reducing tensions where it can and buying time where it cannot’.⁹² And the international community must be willing to pressure suppliers as well as recipients. Admittedly, in this case, both producing countries seemed anxious to preserve the appearance of wishing to comply with the guidelines of the MTCR and avoiding brazen challenges with respect to such parameters as the range and payload of missile systems being considered for export, although valid questions could be raised about the substance of such assurances. Nevertheless, with an increasing number of potential suppliers and a growing demand, the task of the MTCR will become that much more difficult.

Notes on contributor

Norman Cigar retired as Director of Regional Studies from the Marine Corps University, Quantico, Virginia.

⁹¹D. Mistry, *Containing Missile Proliferation*, University of Washington Press, Seattle, 2003, pp. 154–156.

⁹²A. Karp, ‘Stemming the Spread of Missiles: Hits, Misses, and Hard Cases,’ Arms Control Association, 3 April 2012, <https://www.armscontrol.org/print/5298>.

Appendix

The Iskander and Grom-2

	Iskander	Grom-2
Range		
minimum	50 km/31 miles	50 km/31 miles
maximum		
export model	280 km/174 miles	280-300 km/174–186 miles
domestic model	500 km/311 miles	500 km/311 miles
Warhead	480 kg/1058 lb	480 kg/1058 lb
Warhead type	high explosive (HE), cluster, fuel air explosive, HE penetration	high explosive, cluster, fuel air explosive, HE penetration
Nuclear capable?	Yes	Yes
Circular Error Probable (CEP)	2–7 meters (claimed)	'international standards'
Area of effect	not available	10,000+ square meters, or 2–3 hectares
Guidance	maneuverable warhead, claims can evade most air defense	maneuverable warhead, claims can evade most air defense
Targets	ground, air, maritime	ground, air, maritime
Trajectory	ballistic, cruise	ballistic, cruise
Fuel	solid	solid
Other characteristics		
	road-mobile	road-mobile
	stealth technology	stealth technology

Sources: CSIS Missile Defense Project, 'SS-26 (Iskander)', <https://missilethreat.csis.org/missile/ss-26/>; S. Ptichkin, 'Interes k rossiiskomu oruzhiyu v mire vyros posle foruma Armiya-2015' [International Interest in Russian Weaponry Has Increased Since the Armiya-2015 Exposition], *Rossiskaya Gazeta*, 25 June 2015, <https://rg.ru/2015/06/26/a1134829.html>; A. Lisenko, 'Grom ukhilyaet'sya vid protyraket protyvnyka' [Grom Evades the Enemy's Anti-Missile Missiles], *Narodna armiya* (Kiev), 28 September 2016, <http://na.mil.gov.ua/37777-grom-uhlyayetsya-vid-protyraket-protyvnyka>; 'Takticheski i operativno-takticheskie raketnye kompleksy' [Tactical and Operational-Tactical Missile Systems], Missiles.ru (Moscow), www.missiles.ru/TBM.htm.

Note. Different sources often present variant data, and the most prevalent numbers are cited here.